



**CITY OF SURPRISE**  
**Regular City Council Meeting**  
**16000 N. Civic Center Plaza**  
**Surprise, AZ 85374**

Tuesday, February 20, 2024 @ 6:00 PM  
COUNCIL CHAMBERS

A. Call To Order

Any prayer or invocation that may be offered before the start of the Regular Council Meeting is a voluntary offering by a private resident of Surprise; has not been previously reviewed or approved by City Council or City staff; should not be considered an endorsement of any particular religion by the City or its officials, as the beliefs, viewpoint, and content are personal to the speaker; and no participation by any person in attendance is required. A list of volunteers is maintained by the office of the City Clerk and interested persons should contact the Clerk's Office for further information.

B. Roll Call

C. Pledge of Allegiance

D. Proclamation and Community Acknowledgements

2. Citywide Future Business Leaders of America City Manager Office

E. City Manager Report

The City Manager may present a brief summary of current events, including recognition of community members, employees, and programs, pursuant to A.R.S. § 38-431.02(K). The City Council will not discuss or take action on any matter within the City Manager Report.

F. City Clerk Report

G. Call To The Public

INSTRUCTIONS: In order to address the City Council, you will need to fill out a Call to the Public Form available at the front counter, and then turn it in to the City Clerk before the meeting begins. You may also [fill out the Call to the Public form online](#) If submitting form electronically, please submit to City Clerk at least one hour before the meeting start time.

Note: A.R.S. 38-431.01(H)- During this time members of the public may address City Council only on issues within the jurisdiction of the City Council which are not an item on the agenda. At the conclusion of the open call, City Council may respond to criticism, may ask staff to review the matter or may ask that the matter be put on a future agenda. No discussion or action shall take place on any item raised.

Approval of items on the Consent Agenda – all items with an asterisk (\*) are considered to be routine matters and will be enacted by one motion and one roll call vote to the City Council. There will be no separate discussion on these items unless a Councilmember requests, in which event the item will be removed from the consent agenda and considered in its normal sequence on the agenda.

Please be aware that Council Members may not discuss or respond to matters raised during call to the public that are not specifically identified on the agenda. Council Members may however, in their discretion, discuss or respond to relevant matters raised during a noticed public hearing or agenda item.

H. Regular City Council Meeting Agenda

CONSENT AGENDA:

1. Internal Consideration and action to approve the February 6, 2024 Regular City Council Meeting Minutes. Kristi Passarelli  
City Clerk
2. District 3 Consideration and action pertaining to the conditional acceptance and maintenance of certain streets and public utility improvements at Paradisi Parcel H generally located at the northwest corner of West Peoria Avenue and North Sarival Avenue; Resolution # 2024-13. Kristin Tytler  
Public Works
3. District 3 Consideration and action pertaining to the conditional acceptance and maintenance of certain streets and public utility improvements at Paradisi Parcel A, generally located at the southeast corner of West Cactus Road and North Cotton Lane; Resolution # 2024-14. Kristin Tytler  
Public Works
4. District 3 Consideration and action pertaining to the conditional acceptance and maintenance of certain streets and public utility improvements on Paradisi Parcel B, generally located at the southeast corner of West Cactus Road and North Cotton Lane; Resolution # 2024-15. Kristin Tytler  
Public Works
5. District 3 Consideration and action pertaining to the conditional acceptance and maintenance of certain streets and public utility improvements at Paradisi Parcel E, generally located at the southeast corner of West Cactus Road and North Cotton Lane; Resolution # 2024-16. Kristin Tytler  
Public Works
6. District 3 Consideration and action pertaining to the conditional acceptance and maintenance of certain streets and public utility improvements at Paradisi Parcel F, generally located at the southeast corner of West Cactus Road and North Cotton Lane; Resolution # 2024-18. Kristin Tytler  
Public Works
7. Citywide Consideration and action pertaining to approval of an amendment to the Fiscal Year 2024 budget by moving budget authority from General Contingency to the Grants Fund to Project G71030 to support an enhanced and expanded water conservation rebate program and account for acceptance of an \$159,100 grant from the Water Infrastructure Finance Authority of Arizona; Resolution #2024-02. Michael Boule  
Water Resource  
Management
8. District 1 Consideration and action pertaining to approval of the Final Plat entitled, "Asante Unit 4.2" and dated December 14, 2023, a site generally located northwest of the corner of Happy Valley Rd. and 163<sup>rd</sup> Ave; Case FS23-0830. Jani Wertin  
Community  
Development
9. District 1 Consideration and action pertaining to approval of the Final Plat entitled, "Asante Units 4.4 & 4.7" and dated December 14, 2023, a site generally located on the southwest corner of Happy Valley Rd. and 163<sup>rd</sup> Ave; Case FS23-0831. Leslie Carnie  
Community  
Development
10. District 1 Consideration and action pertaining to approval of the Final Plat entitled, "Enclave 4 at Paloma Creek", a site generally located on the north of Happy Valley Rd. and east of 163<sup>rd</sup> Ave; Case FS22-1632. Leslie Carnie  
Community  
Development



- |     |          |   |   |
|-----|----------|---|---|
| 11. | Citywide | Consideration and action pertaining to amending the Fiscal Year 2024 budget by moving budget authority of \$218,300 within the General Fund from General Contingency to the Parks and Recreation Department and amending the full-time equivalent count; Resolution #2024-17. | Holly Osborn<br>Parks and<br>Recreation |
|-----|----------|---|---|

REGULAR AGENDA ITEM - PUBLIC HEARING:

- |     |            |   |  |
|-----|------------|---|--|
| 12. | District 4 | Consideration and action pertaining to a Comprehensive Sign Program (CSP) for the NWC Dysart and Bell aka Bella Fiesta, located at the northwest corner of Bell Road and Dysart Road, zoned Community Commercial (C-2); Case FS23-0673. | Chris Sexton<br>Community<br>Development |
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REGULAR AGENDA ITEM - NON-PUBLIC HEARING:

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|-----|----------|--|---|
| 13. | Citywide | Consideration and action pertaining to approval of an amendment to the Surprise Municipal Code, Chapter 54, Article IV, relating to parking on the streets and rights-of-way within the City of Surprise; Ordinance #2024-07.  | Tracy Montgomery<br>City Manager Office |
| 14. | Citywide | Consideration and action pertaining to approval of an amendment to the Fiscal Year 2024 budget moving budget authority of \$5,000 from General Contingency to services in the Tourism Fund and approval of the Tourism Fund Reimbursement Agreement with The Vista Center for the Arts; Resolution #2024-33. | Kendra Pettis<br>Sports and Tourism     |
| 15. | Citywide | Consideration and action pertaining to adoption of the City of Surprise Land Use Assumptions and Infrastructure Improvements Plan, as amended, and directing the City Manager to provide notice of the City's intent to impose development impact fees; Resolution #2024-31.                                 | Andrea Davis<br>Finance                 |

- I. Other Business and Future Agenda Items
- J. City Council Reports
- K. Executive Session

*Consideration and action to recess into executive session in order for the City Council to consider and provide its position and instructions pertaining to the negotiation of contracts pertaining to the utilization of Surprise Stadium and related facilities pursuant to A.R.S. 38-431.03(A)(4).*

For information Purposes; Upon a public majority vote of a quorum of the City Council, the Council may hold an executive session, which will not be open to the public, but for only the following purposes:

- discussion or consideration of personnel matters (A.R.S. §38-431.03 (A)(1));
- discussion or consideration of records exempt by law from public inspection (A.R.S. §38-401.03 (A)(2));
- discussion or consultation for legal advice with the city's attorneys (A.R.S. §38-431.03 (A)(3));
- discussion or consultation with the city's attorneys regarding the city's position regarding contracts that are the subject of negotiations, in pending or contemplated litigation, or in settlement discussions conducted in order to avoid or resolve litigation (A.R.S. §38-431.03 (a)(4));

- discussion or consultation with designated representatives of the city in order to consider its position and instruct its representatives regarding negotiations with employee organizations (A.R.S. §38-431.03 (A)(5)); or
- discussion, consultation or consideration for international and interstate negotiations or for negotiations by a city or town, or its designated representatives, with members of a tribal council, or its designated representatives, of an Indian reservation located within or adjacent to the city or town. A.R.S. §38-401.03 (A)(6).
- discussing or consulting with designated representatives of the city in order to consider its position and instruct its representatives regarding negotiations for the purchase, sale or lease of real property (A.R.S. §38-431.03 (A)(7)).

Confidentiality Requirements Pursuant to A.R.S. §38-431.03(C)(D): Any person receiving executive session information pursuant to A.R.S. §38-431.02 shall not disclose that information except to the Attorney General or County Attorney by agreement of the City Council, or as otherwise ordered by a court of competent jurisdiction.

The council may vote to hold an executive session for the purpose of obtaining legal advice from the Board's attorney on any matter listed on the agenda pursuant to A.R.S. § 38-431.03(A)(3).

L. Adjournment

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KRISTI PASSARELLI, CITY CLERK

POSTED: Thursday, February 15 2024 @ 1:30 PM

**SPECIAL NOTE: PERSONS WITH SPECIAL ACCESSIBILITY NEEDS, INCLUDING LARGE PRINT MATERIALS OR INTERPRETER, SHOULD CONTACT THE CITY CLERK'S OFFICE @ 623.222.1200 OR TTY 623.222.1002, BY NO LATER THAN 24 HOURS IN ADVANCE OF THE REGULAR SCHEDULED MEETING TIME.**



**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024  
Submitting Department: City Clerk  
Staff Recommendations:

Contact Person:  
District: Internal

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Consent: No      Regular: No      Public Hearing: No      Report/Discussion: No

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**Agenda Wording:**

Invocation

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**Motion:**

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**Background:**

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**Objective Analysis:**

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**Policy Compliant:**

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**Financial Impact:**

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**Budget Impact:**

**FTE Impact:**

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**ATTACHMENTS:**

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**CITY OF SURPRISE**  
**Regular City Council Meeting**

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Council Meeting Date: February 20, 2024      Contact Person:  
Submitting Department: City Manager Office      District: Citywide  
Staff Recommendations: None

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Consent: No      Regular: Yes      Public Hearing: No      Report/Discussion: No

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**Agenda Wording:**

Future Business Leaders of America

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**Motion:**

NA

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**Background:**

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**Objective Analysis:**

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**Policy Compliant:**

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**Financial Impact:**

There is no anticipated financial impact related to this item.

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**Budget Impact:**

There is no anticipated budget impact related to this item.

**FTE Impact:**

This item does not have an impact on current staff levels.

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**ATTACHMENTS:**

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**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024  
Submitting Department:  
Staff Recommendations:

Contact Person:  
District: Citywide

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Consent: No      Regular: No      Public Hearing: No      Report/Discussion: No

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**Agenda Wording:**  
City Manager sub-text

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**Motion:**

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**Background:**

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**Objective Analysis:**

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**Policy Compliant:**

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**Financial Impact:**

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**Budget Impact:**

**FTE Impact:**

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**ATTACHMENTS:**

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**CITY OF SURPRISE**  
**Regular City Council Meeting**

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Council Meeting Date: February 20, 2024  
Submitting Department: City Clerk  
Staff Recommendations:

Contact Person: Kristi Passarelli, City Clerk  
District: Internal

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Consent: Yes      Regular: No      Public Hearing: No      Report/Discussion: No

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**Agenda Wording:**

Consideration and action to approve the February 6, 2024 Regular City Council Meeting Minutes.

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**Motion:**

I move to approve the February 6, 2024 Regular City Council Meeting Minutes.

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**Background:**

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**Objective Analysis:**

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**Policy Compliant:**

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**Financial Impact:**

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**Budget Impact:**

**FTE Impact:**

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**ATTACHMENTS:**

1. 020624 Regular City Council Minutes
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**CITY OF SURPRISE**  
**Amended Regular City Council Meeting**  
**16000 N. Civic Center Plaza**  
**Surprise, AZ 85374**

Tuesday, February 6, 2024 @ 6:00 PM  
COUNCIL CHAMBERS

**Amended on 2/5/24 (Item 10 Attachments)\***

A. Call To Order

Mayor Hall called the Regular Council Meeting of February 6, 2024 to order at 6:00 p.m., located at Surprise City Hall, 16000 N. Civic Center Plaza, Surprise, AZ 85374.

1. Invocation

Mayor Hall led a moment of silence.

B. Roll Call

In attendance with Mayor Hall were Vice-Mayor Nick Haney, Councilmembers Chris Judd, Alyson Cline, Patrick Duffy, Ken Remley and Jack Hastings.

C. Pledge of Allegiance

Ashton Ranch Middle School led the Pledge of Allegiance.

D. Proclamation and Community Acknowledgements

E. City Manager Report

2. The City Manager may present a brief summary of current events, including recognition of community members, employees, and programs, pursuant to A.R.S. § 38-431.02(K). The City Council will not discuss or take action on any matter within the City Manager Report.

City Manager Bob Wigenroth, introduced Shelby Fenwick who presented the Ashton Ranch Middle School. Jesse Jay Ramirez came to address Council.

Shelby also introduced the members of the Youth Council.

Maddie Mize, Paradise Honors

Nikki Paumi, Dysart Highschool

F. City Clerk Report

3. Consideration and action to appoint Connie Bowers to fill the vacancy on the City Audit Commission for the remainder of the term June 30, 2024.

Motion: To Appoint

Initiated By: Chris Judd

Seconded By: Nick Haney

Yes: Aly Cline, Jack Hastings, Ken Remley, Patrick Duffy, Skip Hall, Chris Judd, Nick Haney

No: None

Abstain: None

Vote Result: Passed

City Clerk Kristi Passarelli, swore in Connie Bowers to the City Audit Commission.

G. Call To The Public

## H. Regular City Council Meeting Agenda

### 4. CONSENT AGENDA:

Item 4 was pulled by Councilmember Remley.

Motion: To Approve (Minus Item 4)

Initiated By: Ken Remley

Seconded By: Nick Haney

Yes: Aly Cline, Jack Hastings, Ken Remley, Patrick Duffy, Skip Hall, Chris Judd, Nick Haney

No: None

Abstain: None

Vote Result: Passed

1. Consideration and action to approve the January 12, 2024 City Council Budget Kick Off Minutes, January 16, 2024 City Council Workshop Minutes, Regular City Council Meeting Minutes, and January 25, 2024 City Council Budget Kick Off Minutes.
2. Consideration and action pertaining to approval of the Final Plat entitled, "A Replat of Lot 1A, of Allora Surprise" and dated November 27, 2023, for property generally located at the southeast corner of Bell Road and Citrus Road; Case FS23-0676.
3. Consideration and action pertaining to approval of an amendment to the Fiscal Year 2024 budget by moving budget authority from General Contingency in the amount of \$91,300 to project G34185 in the Grants Fund and amending the Fiscal Year 2024 Contract Awarding Authority list by creating #24132 – Homeland Security Grant Program item for \$91,205 to account for acceptance of the Homeland Security grant; Resolution #2024-11.
4. Consideration and action pertaining to approval of an amendment to the Fiscal Year 2024 budget by moving budget authority in the amount of \$718,500 from General Contingency to Project P31190, and amending the Fiscal Year 2024 Contract Awarding Authority list by creating #24107 – FY24 Arizona 9-1-1 Program item for G31450 \$215,800 and #24108 - Arizona 9-1-1 Program item for P31190 \$718,500 to cover set up and monthly recurring costs for 9-1-1 equipment, maintenance, and support through FY 2028; Resolution #2024-20.

Chief Pina, came to present this item. He gave some background on the current system and the proposed changes with this resolution.

Councilmember Remley, asked how the order of things were in the old system? Chief Pina talked about the new changes and features with AT&T and the State. Councilmember Remley asked how the money being spent will be used on new equipment and annual cost? Chief Pina talked about the costs. Councilmember Remley, asked how this system would be in costs to us? Chief Pina said we weren't paying anything before, but that there was no financial impact to the City and that the state was obligated to provide the services.

Councilmember Cline asked how much the grant was in January? Chief Pina talked about the previous cost.



Motion: To Approve  
Initiated By: Ken Remley  
Seconded By: Nick Haney

Yes: None  
No: None  
Abstain: None

Vote Result: Passed

5. Consideration and action pertaining to approval of an amendment to the FY2024 budget by moving budget authority of \$62,200 from General Contingency to Project #G31245 FFY23 DEA Task Force in the Grants Fund to account for the acceptance of an addendum to the agreement with the U.S. Department of Justice Drug Enforcement Administration (DEA) Task Force; Resolution #2024-06.
  
5. REGULAR AGENDA ITEM - PUBLIC HEARING:
  
6. Consideration and action pertaining to a recommendation to the Arizona Department of Liquor Licenses and Control (DLLC) on Application No. 273271, requested by Amy S. Nations, for Cold Beers & Cheeseburgers for Series 12 Liquor License. Cold Beers & Cheeseburgers is located at 13400 N Prasada Parkway, Surprise, AZ 85388.

Motion: To Approve  
Initiated By: Patrick Duffy  
Seconded By: Aly Cline

Yes: Aly Cline, Jack Hastings, Ken Remley, Patrick Duffy, Skip Hall, Chris Judd, Nick Haney  
No: None  
Abstain: None

Vote Result: Passed

6. REGULAR AGENDA ITEM - NON-PUBLIC HEARING:
  
7. Consideration and action pertaining to initiation of the Cactus Road - Cotton to Reems Property Lien Process; Ordinance #2024-05.

Eric Boyles came to present this item. He talked about Cactus Rd Improvement Project, Lien Process, and Lien Area.

Councilmember Duffy, asked which areas were being Liened exactly? Eric said that there isn't a set and that in case we don't come to an agreement this would ensure a mechanism would be in place.

Councilmember Cline, asked how long the liens would be good for? Eric said that they liens are good for a ten year period.

Vice-Mayor Haney, said this was our way as the City to be proactive and this would let us act without being hindered and that we would be paid back later if need be. Eric Agreed.

Councilmember Remley, talked about the road in front of his house, and a lien being on the property and how it works? Eric said they would secure all the right of way when they put in the improvements.

Motion: To Approve  
Initiated By: Patrick Duffy  
Seconded By: Nick Haney

Yes: Aly Cline, Jack Hastings, Ken Remley, Patrick Duffy, Skip Hall, Chris Judd, Nick Haney  
No: None  
Abstain: None

Vote Result: Passed

8. Consideration and action pertaining to approval of an amendment to the Fiscal Year 2024 budget by moving budget authority of \$11,000,000 from general capital contingency and establishing project P65390, 163<sup>rd</sup> Ave Roadway Improvements, for the advancement of the construction phase of the project from FY2025 to FY2024 and amending the FY2024 Contract Awarding Authority List; Resolution #2024-19.

Andrea Davis and Eric Boyles presented this item. They talked about the Overview of 163rd, ADOT Improvements, and Budget Amendment for Construction.

Mayor Hall asked if it was 3 left hand turns? Eric said it was.

Andrea talked about wanting to make a master project that would have multiple sub-projects under it. This would allow the City to act more quickly on this topic.

Mayor Hall asked if this takes 163rd all the way to Jomax? Andrea said the would only go to Pat Tillman. Mayor Hall asked when they would come back for the rest? Andrea said it would be for FY25. Mayor Hall asked if there would be a traffic light at Happy Valley? Andrea said it would in the future budget. She said we were trying to plan it to have minimal impact.

Vice-Mayor Haney, asked how it will work and how are traffic signals selected for locations? Eric said they prioritize safety, that there would be roughly five signals being proposed. Vice-Mayor Haney talked about putting a stop sign at Happy Valley Road? Eric said that a stop sign could impact the flow of traffic there. Vice-Mayor Haney talked about the challenges of traffic in this area, but thanked staff for their actions.

Mayor Hall thanked bob for his efforts as well.

Motion: To Approve  
Initiated By: Nick Haney  
Seconded By: Chris Judd

Yes: Aly Cline, Jack Hastings, Ken Remley, Patrick Duffy, Skip Hall, Chris Judd, Nick Haney  
No: None  
Abstain: None

Vote Result: Passed

9. Presentation and discussion pertaining to the fiscal year 2023 annual audit and Annual Comprehensive Financial Report and associated reports.

Erick Martin, came to present this item. He introduced the external Auditor Brittany Williams. Brittany talked about meeting with the Audit Committee and gave the highlights of the findings and opinion. She said the findings were positive.

Mayor Hall asked if the annual report was included? Andrea said it was.

Councilmember Remley, said they were doing a great job. He asked, if the audit report could be in the libraries? Andrea said they could make that happen.

10. Consideration and action by City Council determining, in accordance with A.R.S. § 9-481(H), that the City of Surprise has complied with A.R.S. § 41-1494, an Arizona law which prohibits a state agency, including cities, from requiring, or expending public funds on, certain training, orientation or therapy; Resolution #2024-25.

Erick Martin also presented this item and gave the background on the item.

Motion: To Approve  
Initiated By: Chris Judd  
Seconded By: Aly Cline

Yes: Aly Cline, Jack Hastings, Ken Remley, Patrick Duffy, Skip Hall, Chris Judd, Nick Haney  
No: None  
Abstain: None

Vote Result: Passed

11. Consideration and action pertaining to updating the City's Uniform Video Service License Agreement.

Hobie Wingard, Senior Assistant City Attorney, came to present this item. He gave a history on this item. He talked about how this would revise the agreement and what has changed.

Councilmember Remley, asked about an outfit named Wired doing work within the City and if they were making upgrades? Hobie, said that they fall under a different category of service providers. Councilmember Remley asked if Wired was doing internet service only? Hobie said yes.

City Attorney Wingo, said it was confusing because there are multiple users of City's Rights of Way. He said that in this context we would be making the Video Service License uniform and that State Law defines it very narrowly. He said this would have no impact on Wired.

Motion: To Approve  
Initiated By: Jack Hastings  
Seconded By: Nick Haney

Yes: Aly Cline, Jack Hastings, Ken Remley, Patrick Duffy, Skip Hall, Chris Judd, Nick Haney  
No: None  
Abstain: None

Vote Result: Passed

- I. Other Business and Future Agenda Items
- J. City Council Reports

Councilmember Judd, thanked Chief Pina and the Citizen's Patrol for their contributions to the City. He also thanked the Chief and the Police for their efforts.

Councilmember Hastings, said he serves on Performance Evaluation of Leaders Committee, He thanked Kristi for her efforts on the Elections. He said his meet and greet is next Tuesday at the library.

Councilmember Remley, said he was working on a project with the waste water and how Ottawa

has been involved and would like an update? Cline Seconded.

Councilmember Cline, thanked Mindy Davis and Lloyd Abrams for their efforts with the Sober Living Homes. She said she has 2 meetings on the 23 at Arizona Traditions and 27th at the Grand at 10 AM. And a third meeting at Bell West Ranch March 6th at 6 pm at Cimmaron Springs Elementary School.

Councilmember Duffy, thanked staff for their efforts to meet with residents.

Vice-Mayor Haney, said he will not be having a community meeting. He said he will be monitoring his emails. He further thanked staff for helping residents.

Mayor Hall, wanted to invite everyone to the Vet Fest at Mark Coronado park this Saturday. He also said that February 21st will be the Mayor's Welcome back event for spring training.

Councilmember Remely, talked about HOAs within Surprise, he talked about going to Coyote Lakes meeting and it was impressive for their turnout.

K. Executive Session

7. Executive Session Items

8. Executive Disclaimer - Part 1

9. Executive Disclaimer - Part 2

10. Executive Disclaimer - Part 3

L. Adjournment

Motion: To Adjourn

Initiated By: Nick Haney

Seconded By: Chris Judd

Yes: Aly Cline, Jack Hastings, Ken Remley, Patrick Duffy, Skip Hall, Chris Judd, Nick Haney

No: None

Abstain: None

Vote Result: Passed

Meeting Adjourned at 7:09 PM

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Skip Hall, Mayor

**ATTEST:**

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Kristi Passarelli, City Clerk

**CERTIFICATION:**

I, Kristi Passarelli, City Clerk for the City of Surprise, Maricopa County, Arizona, do hereby verify that these are the true and correct minutes of the Regular City Council Meeting of **Tuesday, February 6, 2024.**

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Kristi Passarelli, City Clerk



**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024  
Submitting Department: Public Works  
Staff Recommendations:

Contact Person: Kristin Tytler, Department Director  
District: District 3

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Consent: Yes      Regular: No      Public Hearing: No      Report/Discussion: No

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**Agenda Wording:**

Consideration and action pertaining to the conditional acceptance and maintenance of certain streets and public utility improvements at Paradisi Parcel H generally located at the northwest corner of West Peoria Avenue and North Sarival Avenue; Resolution # 2024-13.

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**Motion:**

I move to approve Resolution #2024-13.

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**Background:**

The Public Works Department conducted the final inspection of the public improvements to Paradisi Parcel H on or about September 20, 2023, totaling 11,966 SY (approximately 3,296 LF) and determined that the infrastructure was compliant and acceptable to the city. The infrastructure includes asphalt pavement, storm drains and wastewater lines. Domestic water lines are located within the Epcor water jurisdiction.

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**Objective Analysis:**

The improvements to this property provide roadways for conveyance through the property, storm drains to convey stormwater to retention basins, and sewer lines to convey wastewater from the property to the city's public system. This action will accept the required infrastructure. The domestic water serving the property is within EPCOR water jurisdiction.

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**Policy Compliant:**

The City Code generally requires development to install public infrastructure required to serve the development. Upon completion and acceptance of such infrastructure, the infrastructure becomes the property of the City. Acceptance of this infrastructure will officially transfer ownership and future maintenance to the City.

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**Financial Impact:**

Acceptance of street, sewer and storm drain infrastructure increases the city's asset base and adds to future maintenance commitments. The total acceptance value of the infrastructure included with this item is \$1,100,971.34.

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**Budget Impact:**

Funding for the infrastructure maintenance now and in the future will be supported from the city's Transportation Operations, Wastewater Operations, and Stormwater Operations Funds. The anticipated incremental additional maintenance expense associated with the acceptance of these infrastructure items will be incorporated in future years' budgets.

**FTE Impact:**

This item does not have an impact on current staff levels.

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**ATTACHMENTS:**

1. 01\_Resolution No. 2024-13 - Infrastructure Acceptance Paradisi Parcel H -2024\_FINAL
  2. 02\_Notice of Completion Paradisi Parcel H
  3. 03\_Inspector Project Sign Off Form Paradisi Parcel H
  4. 04\_Linear Foot Verification Paradisi Parcel H
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**RESOLUTION # 2024-13**

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SURPRISE, ARIZONA, TO CONDITIONALLY ACCEPT THE PUBLIC IMPROVEMENTS AND COMMENCE MAINTENANCE AFTER TWO YEAR WARRANTY AT PARADISI PARCEL H GENERALLY LOCATED AT THE NORTHWEST CORNER OF WEST PEORIA AVENUE AND NORTH SARIVAL AVENUE ROADS.**

**WHEREAS**, the Mayor and City Council of the City of Surprise approved a final plat entitled “Final Plat Sycamore Farms (Paradisi) – Parcel H” on, June 17, 2021;

**WHEREAS**, as a condition of the preliminary plat, approval of the final plat, and in compliance with the City Code, the developer installed certain public improvements, including roadway improvements which consist of concrete sidewalks, curbs and gutters, as well as asphalt/paving, and the developer also installed sewer lines and drainage infrastructure. The roadway improvements, sewer lines and drainage infrastructure are all collectively referred to as “Public Improvements”;

**WHEREAS**, Ashton Woods Construction, LLC, the developer of Paradisi Parcel H, dedicated to the City the Public Improvements, generally located at the northwest corner of West Peoria Avenue and North Sarival Avenue;

**WHEREAS**, on or about September 20, 2023, the City of Surprise, Public Works Department, Engineering Division, completed an inspection of the Public Improvements described in this resolution and found the improvements to be in substantial compliance with the approved plans and specifications;

**WHEREAS**, the City of Surprise notes that the two-year warranty period will commence upon conditional acceptance by the City; and

**WHEREAS**, after the conclusion of the two-year warranty period, the City of Surprise will release the warranty and begin maintenance of the Public Improvements.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the City of Surprise, Arizona, as follows.

**Section 1.** The City of Surprise conditionally accepts the Public Improvements generally located as depicted on the map attached as Exhibit A and listed on Exhibit B.

**Section 2.** Upon final acceptance by the City Engineer, the City Council hereby directs the City to release warranty and begin maintenance of the Public Improvements.

**SIGNATURES ON THE FOLLOWING PAGE**



**APPROVED AND ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Skip Hall, Mayor

Attest:

Approved as to form:

\_\_\_\_\_  
Kristi Passarelli, City Clerk

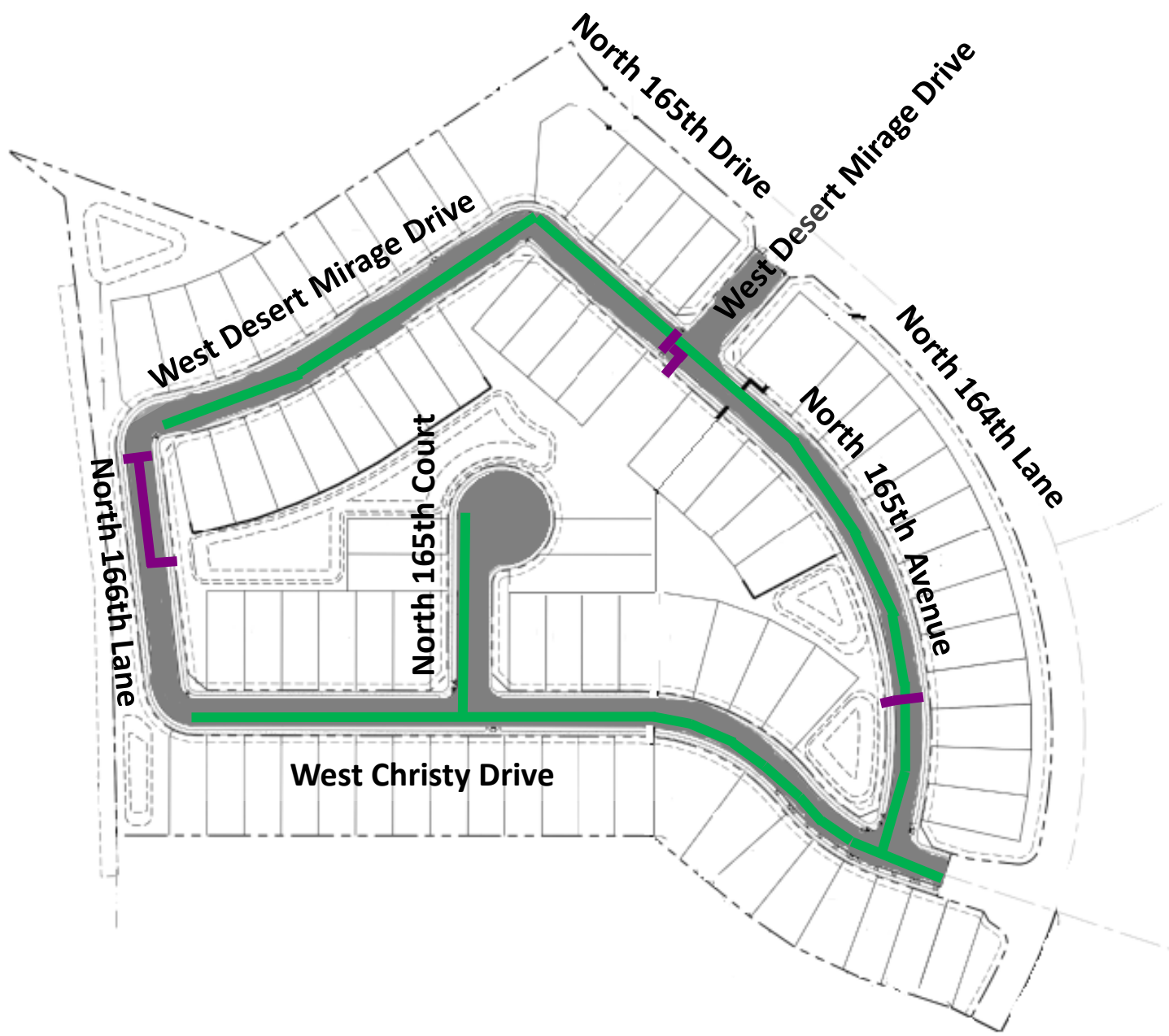
\_\_\_\_\_  
Robert Wingo, City Attorney

**Exhibit A**

Map of Infrastructure

# EXHIBIT A

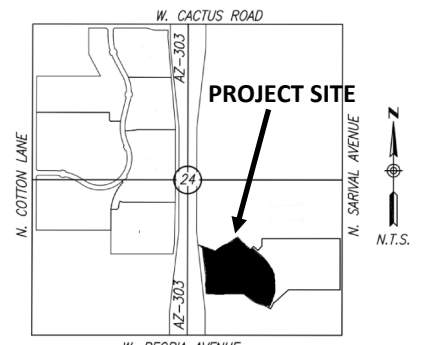
## Paradisi Parcel H



**INFRASTRUCTURE TO**

**BE ACCEPTED:**

- SEWER
- DRAINAGE
- ROADWAY  
Asphalt/Pavement,  
Concrete (Curb &  
Gutter, Sidewalk)



**VICINITY MAP**  
T.3N, R.2W, SEC. 24

**EXHIBIT B**

List and Cost of Improvements



# EXHIBIT B

ENGINEERING DIVISION  
PUBLIC WORKS  
CITY OF SURPRISE  
16000 N. CIVIC CENTER PLAZA  
SURPRISE, AZ 85374  
T. 623-222-6150

## Memorandum

**To:** City of Surprise City Council  
**From:** Public Works – Engineering Services  
**Date:** 12/28/2023  
**Re:** Paradisi Parcel H

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The public improvements for the above project have been completed and are tentatively scheduled for conditional acceptance by Council. The amounts for the infrastructure have been provided by a third party and not the City of Surprise. The following are the infrastructure improvements included with this acceptance and the corresponding valuation that the City will be accepting:

City Paving	\$381,608.14
City Concrete	\$346,193.95
City Sewer	\$298,145.25
City Drainage	\$ 75,024.00
<b>Total</b>	<b>\$1,100,971.34</b>

October 12, 2023

Brightland Homes  
1501 W Fountainhead Parkway  
Suite 150  
Tempe, AZ 85282

**RE: NOTICE OF COMPLETION AND COUNCIL ACTION REQUIREMENT FOR PARADISI PARCEL H – FS20-606**

The City of Surprise Public Works Department has completed the inspection of the public utility improvements for the above referenced project. These improvements are in substantial compliance with the approved plans and specifications. Council action is required prior to conditional acceptance and the official beginning of the warranty period. The time frame for Council action is approximately 90 days after the following items have been submitted:

- A copy of all lien releases or a title report
- Actual construction cost for related civil permits issued
- Warranty assurance in a format acceptable by the City\*

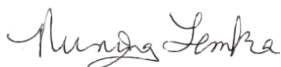
\*For the Warranty Assurance, a notice of the required assurance amount and acceptable formats will be sent via email once actual construction costs have been submitted by the applicant.

The warranty period starts upon council acceptance for a period of two (2) years; please ensure warranty assurance will not expire prior to this date. The applicant will be notified of the council date as soon as it is scheduled and the warranty financial assurance is required to be submitted to the city 10 calendar days prior to the council date. If a warranty financial assurance is not received within 10 calendar days, council action and start of the warranty period will be delayed, at a minimum, an additional two (2) weeks.

A letter of conditional acceptance and notification that the warranty period has begun will be forwarded upon the completion of council acceptance. Also, a request to release the associated completion assurance will be made; notification will be sent when assurance document is available for pick up.

If you have any questions or concerns, you can reach me at 623-222-6148 or at [nuning.lemka@surpriseaz.gov](mailto:nuning.lemka@surpriseaz.gov).

Sincerely,



Nuning Lemka, P.E.  
City Engineer

cc: Ravi Sharma, PW Engineering Manager  
Eric Boyles, Transportation Director  
Michael Boule, Water Resource Management

Robert Fields, PW Field Engineering Supervisor  
Amanda Correia, Finance  
Warren Bert, GIS



PROJECT SIGN OFF FORM
PUBLIC WORKS - ENGINEERING SERVICES, INSPECTIONS

Date Submitted: 9-20-23 Commercial Commercial w/Offsite X Residential
X COMPLETION ACCEPTANCE (End of Construction) FINAL ACCEPTANCE (End of Warranty)
4-27-23 Date of Punch-List Walk 7-7-23 Date Punch-List Completed

Case Number: FS20-606

Project Name: Paradisi Parcel H

Project Developer/Builder: (Name/Email, Address)

Ashton Woods Homes
6991 E Camelback rd A200, Scottsdale AZ 85251

Table with 2 columns: Permit No. and Permit Type. Rows include: E21P-0017 Gradeing, E21P-0018 SWPPP, E21P-0074 Concrete, E21P-0075 Dry Well, E21P-0076 Storm Drain, E21P-0077 Paving, E21P-0078 Sewer, E21P-0079 Traffic, E21P-0081 Private Water.

Additional Comments:

SUPPORTING DOCUMENTATION REQUIRED:

- Copy of Punch List
Final Certification Letter from Engineer of Record
Complete Geotechnical Testing Packet
Sewer Pressure Testing Results
Sewer Manhole Vacuum Testing Certification
Sewer Manhole Insecticide Certification
Sewer Videos with Operators Notes (inc. re-videos)
AOC
Asphalt Concrete Ticket w/ Name of Contractor
As built Documents (PDF copy)
Updated asbuilt CAD files
Fireline Sign-off (commercial)

Other (Specify)

APPROVAL:

Civil Inspector: [Signature]
Civil Engineering Supervisor: [Signature]

Date: 9-20-23
Date: 9/20/23

FS Case	Project Name	Private/Public	Classification	Roadway	Median Width (ft)	Length (ft)	Length (miles)	Length (Nearest 1/4 mile)	Lane Miles	Width (pavement)	Pavement Area (ft <sup>2</sup> )	Pavement Area (\$)	Inspector
20-606	Paradisi Parcel H	Public	Local	West Christy Drive	0	993.5	0.19	0.25	0.38	31	36,667	4,074	9/20/
20-606	Paradisi Parcel H	Public	Local	West Desert Mirage Drive	0	514.4	0.10	0.25	0.19	31	30,262	3,362	9/20/
20-606	Paradisi Parcel H	Public	Local	West Desert Mirage Drive	0	207.5	0.04	0.25	0.08	31	6,092	677	9/20/
20-606	Paradisi Parcel H	Public	Local	North 166th Lane	0	356.7	0.07	0.25	0.14	31	17,521	1,947	9/20/
20-606	Paradisi Parcel H	Public	Local	North 165th Court	0	254.0	0.05	0.25	0.10	31	8,810	979	9/20/
20-606	Paradisi Parcel H	Public	Local	North 165th Avenue	0	969.4	0.18	0.25	0.37	31	8,342	927	9/20/
					<b>Total</b>	<b>3295.5</b>							





**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024  
Submitting Department: Public Works  
Staff Recommendations:

Contact Person: Kristin Tytler, Department Director  
District: District 3

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Consent: Yes      Regular: No      Public Hearing: No      Report/Discussion: No

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**Agenda Wording:**

Consideration and action pertaining to the conditional acceptance and maintenance of certain streets and public utility improvements at Paradisi Parcel A, generally located at the southeast corner of West Cactus Road and North Cotton Lane; Resolution # 2024-14.

---

**Motion:**

I move to approve Resolution #2024-14.

---

**Background:**

The Public Works Department conducted the final inspection of the public improvements to Paradisi Parcel A on or about August 24, 2023, totaling 14,418 SY (approximately 4,186 LF) and determined that the infrastructure was compliant and acceptable to the city. The infrastructure includes asphalt pavement, storm drains and wastewater lines. Domestic water lines are located within the Epcor water jurisdiction.

---

**Objective Analysis:**

The improvements to this property provide roadways for conveyance through the property, storm drains to convey stormwater to retention basins, and sewer lines to convey wastewater from the property to the city's public system. This action will accept the required infrastructure. The domestic water serving the property is within Epcor water jurisdiction.

---

**Policy Compliant:**

The City Code generally requires development to install public infrastructure required to serve the development. Upon completion and acceptance of such infrastructure, the infrastructure becomes the property of the City. Acceptance of this infrastructure will officially transfer ownership and future maintenance to the City.

---

**Financial Impact:**

Acceptance of street, sewer and storm drain infrastructure increases the city's asset base and adds to future maintenance commitments. The total acceptance value of the infrastructure included with this item is \$1,072,826.39.

---

**Budget Impact:**

Funding for the infrastructure maintenance now and in the future will be supported from the city's Transportation Operations, Wastewater Operations and Stormwater Operations Funds. The anticipated incremental additional maintenance expense associated with the acceptance of these infrastructure items will be incorporated in future years' budgets.

**FTE Impact:**

This item does not have an impact on current staff levels.

---

**ATTACHMENTS:**

1. 01\_Resolution No. 2024-14-Infrastructure Acceptance-2024 Paradisi Parcel A\_FINAL
  2. 02\_Notice of Completion Paradisi Parcel A
  3. 03\_Inspector Project Sign Off Form Paradisi Parcel A
  4. 04\_Linear Foot Verification Paradisi Parcel A
-

**RESOLUTION # 2024-14**

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SURPRISE, ARIZONA, TO CONDITIONALLY ACCEPT THE PUBLIC IMPROVEMENTS AND COMMENCE MAINTENANCE AFTER TWO YEAR WARRANTY AT PARADISI PARCEL A GENERALLY LOCATED AT THE SOUTHEAST CORNER OF WEST CACTUS ROAD AND NORTH COTTON LANE ROADS.**

**WHEREAS**, the Mayor and City Council of the City of Surprise approved a final plat entitled “Final Plat Sycamore Farms (Paradisi) – Parcel A” on, May 4, 2021;

**WHEREAS**, as a condition of the preliminary plat, approval of the final plat, and in compliance with the City Code, the developer installed certain public improvements, including roadway improvements which consist of concrete sidewalks, curbs and gutters, as well as asphalt/paving, and the developer also installed sewer lines and drainage infrastructure. The roadway improvements, sewer lines and drainage infrastructure are all collectively referred to as “Public Improvements”;

**WHEREAS**, Taylor Morrison/Arizona Inc. the developer of Paradisi Parcel A, dedicated to the City the Public Improvements, generally located at the southeast corner of West Cactus Road and North Cotton Lane;

**WHEREAS**, on or about August 24, 2023, the City of Surprise Public Works Department Engineering Division completed an inspection of the Public Improvements described in this resolution and found the improvements to be in substantial compliance with the approved plans and specifications;

**WHEREAS**, the City of Surprise notes that the two-year warranty period will commence upon conditional acceptance by the City; and

**WHEREAS**, after the conclusion of the two-year warranty period, the City of Surprise will release the warranty and begin maintenance of the Public Improvements.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the City of Surprise, Arizona, as follows.

**Section 1.** The City of Surprise conditionally accepts the Public Improvements generally located as depicted on the map attached as Exhibit A and listed on Exhibit B.

**Section 2.** Upon final acceptance by the City Engineer, the City Council hereby directs the City to release warranty and begin maintenance of the Public Improvements.

**SIGNATURES ON THE FOLLOWING PAGE**

**APPROVED AND ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Skip Hall, Mayor

Attest:

Approved as to form:

\_\_\_\_\_  
Kristi Passarelli, City Clerk

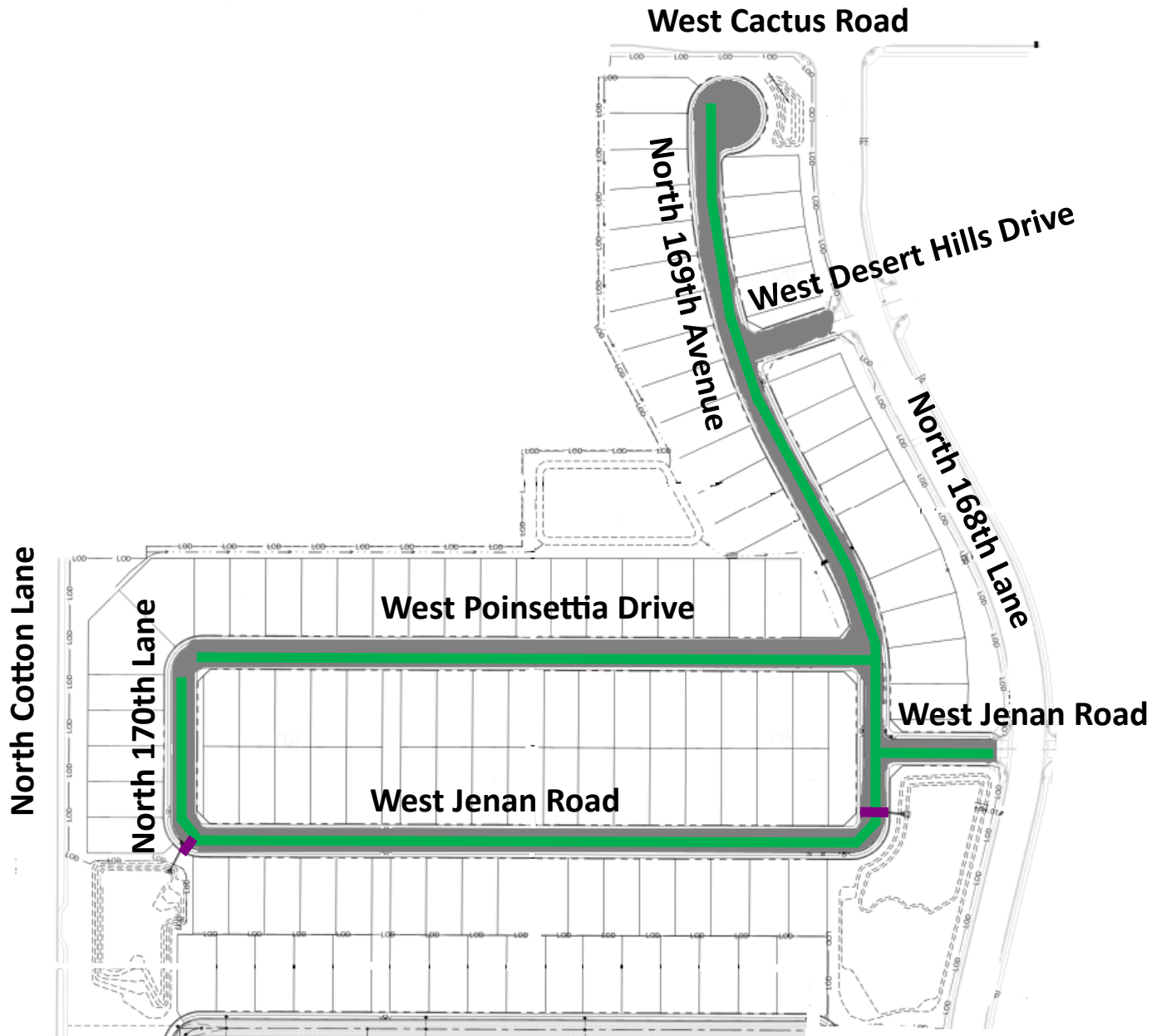
\_\_\_\_\_  
Robert Wingo, City Attorney

**Exhibit A**

Map of Infrastructure

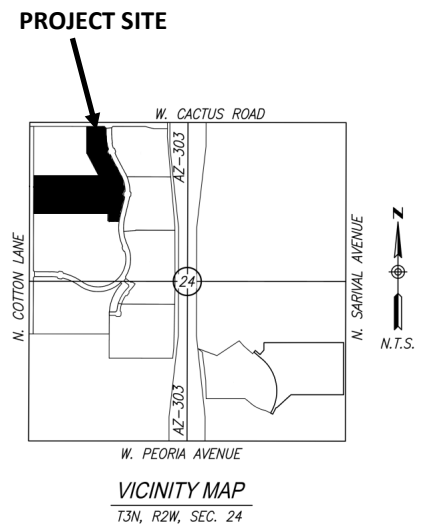
# EXHIBIT A

## Paradisi Parcel A



**INFRASTRUCTURE TO BE ACCEPTED:**

- █ SEWER
- █ DRAINAGE
- █ ROADWAY  
Asphalt/Pavement,  
Concrete (Curb &  
Gutter, Sidewalk)



**EXHIBIT B**

List and Cost of Improvements



# EXHIBIT B

ENGINEERING DIVISION  
PUBLIC WORKS  
CITY OF SURPRISE  
16000 N. CIVIC CENTER PLAZA  
SURPRISE, AZ 85374  
T. 623-222-6150

## Memorandum

**To:** City of Surprise City Council  
**From:** Public Works – Engineering Services  
**Date:** 1/2/2024  
**Re:** Paradisi Parcel A

---

The public improvements for the above project have been completed and are tentatively scheduled for conditional acceptance by Council. The amounts for the infrastructure have been provided by a third party and not the City of Surprise. The following are the infrastructure improvements included with this acceptance and the corresponding valuation that the City will be accepting:

City Paving	\$384,500.00
City Concrete	\$389,934.39
City Sewer	\$281,600.00
City Drainage	\$ 16,792.00
<b>Total</b>	<b>\$1,072,826.39</b>



November 7, 2023

Taylor Morrison/Arizona Inc.  
4900 North Scottsdale Road 2200  
Scottsdale, AZ 85251

**RE: NOTICE OF COMPLETION AND COUNCIL ACTION REQUIREMENT FOR PARADISI PARCEL A  
FS20-471**

The City of Surprise Public Works Department has completed the inspection of the public utility improvements for the above referenced project. These improvements are in substantial compliance with the approved plans and specifications. Council action is required prior to conditional acceptance and the official beginning of the warranty period. The time frame for Council action is approximately 90 days after the following items have been submitted:

- A copy of all lien releases or a title report
- Actual construction cost for related civil permits issued
- Warranty assurance in a format acceptable by the City\*

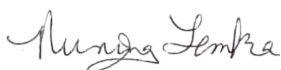
\*For the Warranty Assurance, a notice of the required assurance amount and acceptable formats will be sent via email once actual construction costs have been submitted by the applicant.

The warranty period starts upon council acceptance for a period of two (2) years; please ensure warranty assurance will not expire prior to this date. The applicant will be notified of the council date as soon as it is scheduled and the warranty financial assurance is required to be submitted to the city 10 calendar days prior to the council date. If a warranty financial assurance is not received within 10 calendar days, council action and start of the warranty period will be delayed, at a minimum, an additional two (2) weeks.

A letter of conditional acceptance and notification that the warranty period has begun will be forwarded upon the completion of council acceptance. Also, a request to release the associated completion assurance will be made; notification will be sent when assurance document is available for pick up.

If you have any questions or concerns, you can reach me at 623-222-6148 or at [nuning.lemka@surpriseaz.gov](mailto:nuning.lemka@surpriseaz.gov).

Sincerely,



Nuning Lemka, P.E.  
City Engineer

cc: Ravi Sharma, PW Engineering Manager  
Eric Boyles, Transportation Director  
Michael Boule, Water Resource Management Director

Robert Fields, PW Field Engineering Supervisor  
Amanda Correia, Finance Senior Accountant  
Warren Bert, GIS Manager



**SURPRISE**  
ARIZONA

**PROJECT SIGN OFF FORM**

**PUBLIC WORKS - ENGINEERING SERVICES, INSPECTIONS**

Date Submitted: 8-24-23 \_\_\_\_\_ Commercial \_\_\_\_\_ Commercial w/Offsite  Residential

COMPLETION ACCEPTANCE (End of Construction) \_\_\_\_\_ FINAL ACCEPTANCE (End of Warranty)

1-30-23 \_\_\_\_\_ Date of Punch-List Walk 3-23-23 \_\_\_\_\_ Date Punch-List Completed

Case Number: FS20-471

Project Name: Paradisi Parcel A

Project Developer/Builder: (Name/Email, Address)

Taylor Morrison /Arizona INC

9000 E Pima Center PKWY 350 Scottsdale AZ 85258

Permit No: <u>E21p-0028</u>	Permit Type: <u>Grading</u>
Permit No: <u>E21P-0029</u>	Permit Type: <u>SWPPP</u>
Permit No: <u>E21P-0042</u>	Permit Type: <u>Drainage</u>
Permit No: <u>E21P-0045</u>	Permit Type: <u>Traffic</u>
Permit No: <u>E21P-0046</u>	Permit Type: <u>Water</u>
Permit No: <u>E21P-0040</u>	Permit Type: <u>Concrete</u>
Permit No: <u>E21P-0043</u>	Permit Type: <u>Paving</u>
Permit No: <u>E21P-0044</u>	Permit Type: <u>Sewer</u>
Permit No: _____	Permit Type: _____
Permit No: _____	Permit Type: _____

Additional Comments:

**SUPPORTING DOCUMENTATION REQUIRED:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Copy of Punch List                                 | <input checked="" type="checkbox"/> AOC   |
| <input checked="" type="checkbox"/> Final Certification Letter from Engineer of Record | <input checked="" type="checkbox"/> Asphalt Concrete Ticket w/ Name of Contractor |
| <input checked="" type="checkbox"/> Complete Geotechnical Testing Packet               | <input checked="" type="checkbox"/> As built Documents (PDF copy)                 |
| <input checked="" type="checkbox"/> Sewer Pressure Testing Results                     | <input checked="" type="checkbox"/> Updated asbuilt CAD files                     |
| <input checked="" type="checkbox"/> Sewer Manhole Vacuum Testing Certification         | <input type="checkbox"/> Fireline Sign-off (commercial)                           |
| <input checked="" type="checkbox"/> Sewer Manhole Insecticide Certification            |   |
| <input checked="" type="checkbox"/> Sewer Videos with Operators Notes (inc. re-videos) |   |

Other \_\_\_\_\_ (Specify)

**APPROVAL:**

Civil Inspector: [Signature]

Date: 8-24-23

Civil Engineering Supervisor: [Signature]

Date: 8/24/23

A	B	C	D	E	K	L	M	N	O	P	Q	R	S
FS Case	Project Name	Private/Public	Classification	Roadway	Median Width (ft)	Length (ft)	Length (miles)	Length (Nearest 1/4 mile)	Lane Miles	Width (pavement)	Pavement Area (sq ft)	Pavement Area (\$)	Inspector Walk
20-471	Paradisi Parcel A	Public	Local	W. Jenan Road	0	1110.9	0.21	0.25	0.42	31	34,438	3,826	8/24/2023
20-471	Paradisi Parcel A	Public	Local	W. Jenan Road	0	243.4	0.05	0.25	0.09	31	7,545	838	8/24/2023
20-471	Paradisi Parcel A	Public	Local	W. Poinsettia Drive	0	1110.9	0.21	0.25	0.42	31	34,438	3,826	8/24/2023
20-471	Paradisi Parcel A	Public	Local	W. Desert Hills Drive	0	214.8	0.04	0.25	0.08	31	6,659	740	8/24/2023
20-471	Paradisi Parcel A	Public	Local	N. 170th Lane	0	280.5	0.05	0.25	0.11	31	8,696	966	8/24/2023
20-471	Paradisi Parcel A	Public	Local	N. 169th Avenue	0	1225.4	0.23	0.25	0.46	31	37,987	4,221	8/24/2023
					<b>Total</b>	<b>4185.9</b>					<b>Total</b>	<b>14,418</b>	
Page 37 of 694													



**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024  
Submitting Department: Public Works  
Staff Recommendations:

Contact Person: Kristin Tytler, Department Director  
District: District 3

---

Consent: Yes      Regular: No      Public Hearing: No      Report/Discussion: No

---

**Agenda Wording:**

Consideration and action pertaining to the conditional acceptance and maintenance of certain streets and public utility improvements on Paradisi Parcel B, generally located at the southeast corner of West Cactus Road and North Cotton Lane; Resolution # 2024-15.

---

**Motion:**

I move to approve Resolution #2024-15.

---

**Background:**

The Public Works Department conducted the final inspection of the public improvements for Paradisi Parcel B on or about August 28, 2023, totaling 18,001 SY (approximately 5,226 LF) and determined that the infrastructure was compliant and acceptable to the city. The infrastructure includes asphalt pavement, storm drains and wastewater lines. Domestic water lines are located within the Epcor water jurisdiction.

---

**Objective Analysis:**

The improvements to this property provide roadways for conveyance through the property, storm drains to convey stormwater to retention basins, and sewer lines to convey wastewater from the property to the city's public system. This action will accept the required infrastructure. The domestic water serving the property is within Epcor water jurisdiction.

---

**Policy Compliant:**

The City Code generally requires development to install public infrastructure required to serve the development. Upon completion and acceptance of such infrastructure, the infrastructure becomes the property of the City. Acceptance of this infrastructure will officially transfer ownership and future maintenance to the City.

---

**Financial Impact:**

Acceptance of street, sewer and storm drain infrastructure increases the city's asset base and adds to future maintenance commitments. The total acceptance value of the infrastructure included with this item is \$1,348,872.08.

---

**Budget Impact:**

Funding for the infrastructure maintenance now and in the future will be supported from the city's Transportation Operations, Wastewater Operations and Stormwater Operations Funds. The anticipated incremental additional maintenance expense associated with the acceptance of these infrastructure items will be incorporated in future years' budgets.

**FTE Impact:**

This item does not have an impact on current staff levels.

---

**ATTACHMENTS:**

1. 01\_Resolution No. 2024-15\_Infrastructure Acceptance Paradisi Parcel B\_FINAL
  2. 02\_Notice of Completion Paradisi Parcel B
  3. 03\_Inspector Project Sign Off Form Paradisi Parcel B
  4. 04\_Linear Foot Verification Paradisi Parcel B
-

**RESOLUTION # 2024-15**

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SURPRISE, ARIZONA, TO CONDITIONALLY ACCEPT THE PUBLIC IMPROVEMENTS AND COMMENCE MAINTENANCE AFTER TWO YEAR WARRANTY AT PARADISI PARCEL B GENERALLY LOCATED AT THE SOUTHEAST CORNER OF WEST CACTUS ROAD AND NORTH COTTON LANE ROADS.**

**WHEREAS**, the Mayor and City Council of the City of Surprise approved a final plat entitled “Final Plat Sycamore Farms (Paradisi) – Parcel B” on, May 4, 2021;

**WHEREAS**, as a condition of the preliminary plat, approval of the final plat, and in compliance with the City Code, the developer installed certain public improvements, including roadway improvements which consist of concrete sidewalks, curbs and gutters, as well as asphalt/paving, and the developer also installed sewer lines and drainage infrastructure. The roadway improvements, sewer lines and drainage infrastructure are all collectively referred to as “Public Improvements”;

**WHEREAS**, Taylor Morrison/Arizona Inc. the developer of Paradisi Parcel B, dedicated to the City the Public Improvements, generally located at the southeast corner of West Cactus Road and North Cotton Lane;

**WHEREAS**, on or about August 28, 2023, the City of Surprise Public Works Department Engineering Division completed an inspection of the Public Improvements described in this resolution and found the improvements to be in substantial compliance with the approved plans and specifications;

**WHEREAS**, the City of Surprise notes that the two-year warranty period will commence upon conditional acceptance by the City; and

**WHEREAS**, after the conclusion of the two-year warranty period, the City of Surprise will release the warranty and begin maintenance of the Public Improvements.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the City of Surprise, Arizona, as follows.

**Section 1.** The City of Surprise conditionally accepts the Public Improvements generally located as depicted on the map attached as Exhibit A and listed on Exhibit B.

**Section 2.** Upon final acceptance by the City Engineer, the City Council hereby directs the City to release warranty and begin maintenance of the Public Improvements.

**SIGNATURES ON THE FOLLOWING PAGE**

**APPROVED AND ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Skip Hall, Mayor

Attest:

Approved as to form:

\_\_\_\_\_  
Kristi Passarelli, City Clerk

\_\_\_\_\_  
Robert Wingo, City Attorney

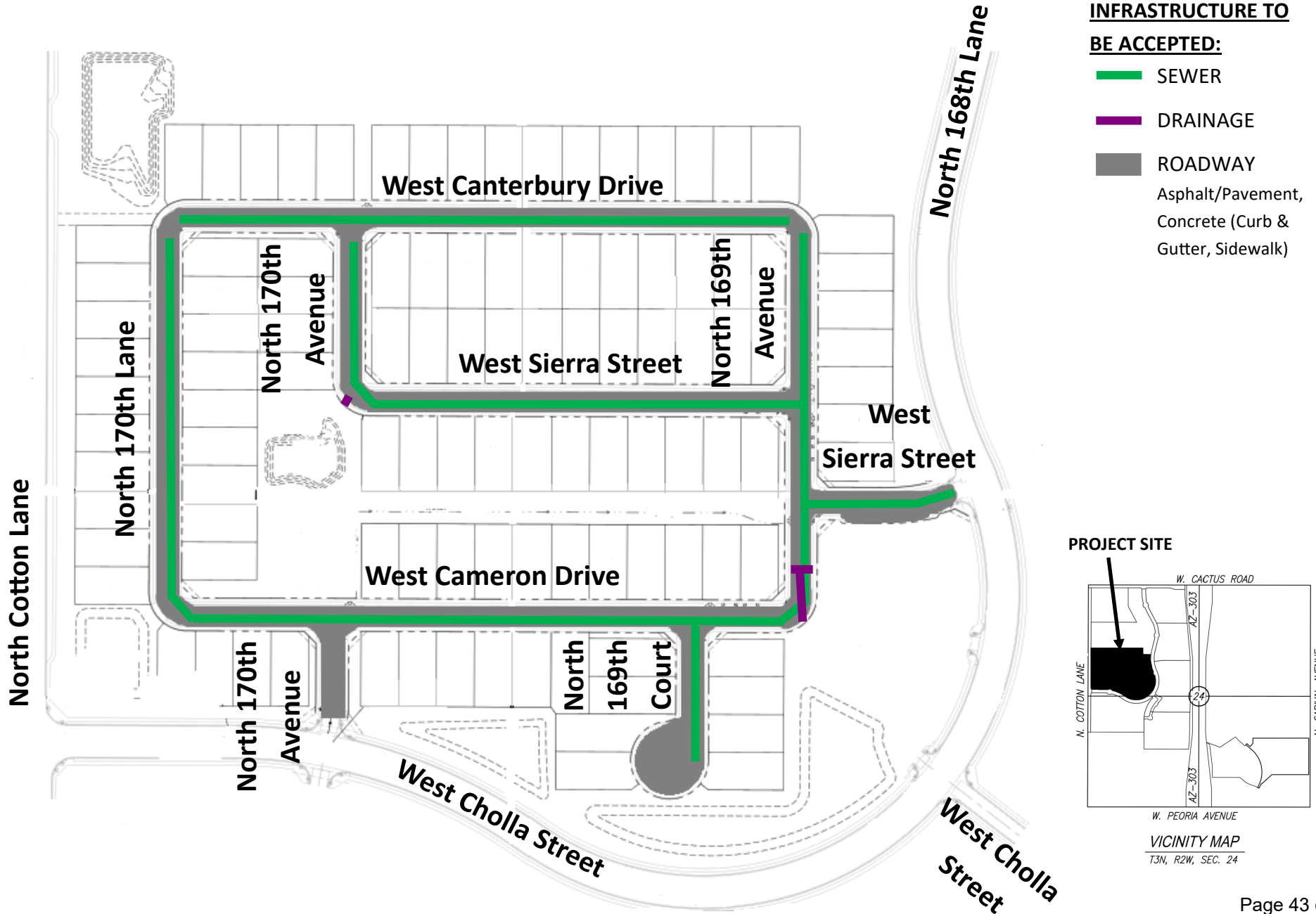
## Exhibit A

### Map of Infrastructure



# EXHIBIT A

## Paradisi Parcel B



**EXHIBIT B**

List and Cost of Improvements



# EXHIBIT B

ENGINEERING DIVISION  
PUBLIC WORKS  
CITY OF SURPRISE  
16000 N. CIVIC CENTER PLAZA  
SURPRISE, AZ 85374  
T. 623-222-6150

## Memorandum

**To:** City of Surprise City Council  
**From:** Public Works – Engineering Services  
**Date:** 1/4/2024  
**Re:** Paradisi Parcel B

---

The public improvements for the above project have been completed and are tentatively scheduled for conditional acceptance by Council. The amounts for the infrastructure have been provided by a third party and not the City of Surprise. The following are the infrastructure improvements included with this acceptance and the corresponding valuation that the City will be accepting:

City Paving	\$471,000.00
City Concrete	\$493,052.08
City Sewer	\$350,900.00
City Drainage	\$ 33,920.00
<b>Total</b>	<b>\$1,348,872.08</b>

November 7, 2023

Taylor Morrison/Arizona Inc.  
4900 North Scottsdale Road 2200  
Scottsdale, AZ 85251

**RE: NOTICE OF COMPLETION AND COUNCIL ACTION REQUIREMENT FOR PARADISI PARCEL B  
FS20-503**

The City of Surprise Public Works Department has completed the inspection of the public utility improvements for the above referenced project. These improvements are in substantial compliance with the approved plans and specifications. Council action is required prior to conditional acceptance and the official beginning of the warranty period. The time frame for Council action is approximately 90 days after the following items have been submitted:

- A copy of all lien releases or a title report
- Actual construction cost for related civil permits issued
- Warranty assurance in a format acceptable by the City\*

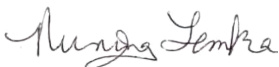
\*For the Warranty Assurance, a notice of the required assurance amount and acceptable formats will be sent via email once actual construction costs have been submitted by the applicant.

The warranty period starts upon council acceptance for a period of two (2) years; please ensure warranty assurance will not expire prior to this date. The applicant will be notified of the council date as soon as it is scheduled and the warranty financial assurance is required to be submitted to the city 10 calendar days prior to the council date. If a warranty financial assurance is not received within 10 calendar days, council action and start of the warranty period will be delayed, at a minimum, an additional two (2) weeks.

A letter of conditional acceptance and notification that the warranty period has begun will be forwarded upon the completion of council acceptance. Also, a request to release the associated completion assurance will be made; notification will be sent when assurance document is available for pick up.

If you have any questions or concerns, you can reach me at 623-222-6148 or at [nuning.lemka@surpriseaz.gov](mailto:nuning.lemka@surpriseaz.gov).

Sincerely,



Nuning Lemka, P.E.  
City Engineer

cc: Ravi Sharma, PW Engineering Manager  
Eric Boyles, Transportation Director  
Michael Boule, Water Resource Management Director

Robert Fields, PW Field Engineering Supervisor  
Amanda Correia, Finance Senior Accountant  
Warren Bert, GIS Manager



**SURPRISE**  
ARIZONA

**PROJECT SIGN OFF FORM**

**PUBLIC WORKS - ENGINEERING SERVICES, INSPECTIONS**

Date Submitted: 8-24-23 \_\_\_\_\_ Commercial \_\_\_\_\_ Commercial w/Offsite  Residential

COMPLETION ACCEPTANCE (End of Construction) \_\_\_\_\_ FINAL ACCEPTANCE (End of Warranty)

1-30-23 \_\_\_\_\_ Date of Punch-List Walk 3-23-23 \_\_\_\_\_ Date Punch-List Completed

Case Number: FS20-503

Project Name: Paradisi Parcel B

**Project Developer/Builder: (Name/Email, Address)**

Taylor Morrison /Arizona INC  
9000 E Pima Center PKWY 350 Scottsdale AZ 85258

Permit No: <u>E22P-1008</u>	Permit Type: <u>Concrete</u>
Permit No: <u>E21P-0048</u>	Permit Type: <u>Drainage</u>
Permit No: <u>E21P-0050</u>	Permit Type: <u>Paving</u>
Permit No: <u>E21P-0051</u>	Permit Type: <u>Sewer</u>
Permit No: <u>E21P-0053</u>	Permit Type: <u>Water</u>
Permit No: <u>E21P-0052</u>	Permit Type: <u>Traffic</u>
Permit No: _____	Permit Type: _____
Permit No: _____	Permit Type: _____
Permit No: _____	Permit Type: _____
Permit No: _____	Permit Type: _____

Additional Comments: \_\_\_\_\_

**SUPPORTING DOCUMENTATION REQUIRED:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Copy of Punch List                                 | <input checked="" type="checkbox"/> AOC   |
| <input checked="" type="checkbox"/> Final Certification Letter from Engineer of Record | <input checked="" type="checkbox"/> Asphalt Concrete Ticket w/ Name of Contractor |
| <input checked="" type="checkbox"/> Complete Geotechnical Testing Packet               | <input checked="" type="checkbox"/> As built Documents (PDF copy)                 |
| <input checked="" type="checkbox"/> Sewer Pressure Testing Results                     | <input checked="" type="checkbox"/> Updated asbuilt CAD files                     |
| <input checked="" type="checkbox"/> Sewer Manhole Vacuum Testing Certification         | <input type="checkbox"/> Fireline Sign-off (commercial)                           |
| <input checked="" type="checkbox"/> Sewer Manhole Insecticide Certification            |   |
| <input checked="" type="checkbox"/> Sewer Videos with Operators Notes (inc. re-videos) |   |

Other \_\_\_\_\_ (Specify)

**APPROVAL:**

Civil Inspector: [Signature]

Date: 8-24-23

Civil Engineering Supervisor: [Signature]

Date: 8/28/23

FS Case	Project Name	Private/Public	Classification	Roadway	Median Width (ft)	Length (ft)	Length (miles)	Length (Nearest 1/4 mile)	Lane Miles	Width (pavement)	Pavement Area (sq ft)	Pavement Area (\$)	Inspector W
20-503	Paradisi Parcel B	Public	Local	W. Cameron Drive	0	1032.5	0.20	0.25	0.39	31	32,008	3,556	8/28/2023
20-503	Paradisi Parcel B	Public	Local	W. Sierra Street	0	302.5	0.06	0.25	0.11	31	9,378	1,042	8/28/2023
20-503	Paradisi Parcel B	Public	Local	W. Sierra Street	0	743.4	0.14	0.25	0.28	31	23,045	2,561	8/28/2023
20-503	Paradisi Parcel B	Public	Local	W. Canterbury Drive	0	1032.5	0.20	0.25	0.39	31	32,008	3,556	8/28/2023
20-503	Paradisi Parcel B	Public	Local	N. 170th Lane	0	650.5	0.12	0.25	0.25	31	20,166	2,241	8/28/2023
20-503	Paradisi Parcel B	Public	Local	N. 170th Avenue	0	228.2	0.04	0.25	0.09	31	7,074	786	8/28/2023
20-503	Paradisi Parcel B	Public	Local	N. 170th Avenue	0	307.3	0.06	0.25	0.12	31	9,526	1,058	8/28/2023
20-503	Paradisi Parcel B	Public	Local	N. 169th Court	0	278.6	0.05	0.25	0.11	31	8,637	960	8/28/2023
20-503	Paradisi Parcel B	Public	Local	N. 169th Avenue	0	650.5	0.12	0.25	0.25	31	20,166	2,241	8/28/2023
					<b>Total</b>	<b>5226.0</b>					<b>Total</b>	<b>18,001</b>	<b>Page 48 of 694</b>



**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024  
Submitting Department: Public Works  
Staff Recommendations:

Contact Person: Kristin Tytler, Department Director  
District: District 3

---

Consent: Yes      Regular: No      Public Hearing: No      Report/Discussion: No

---

**Agenda Wording:**

Consideration and action pertaining to the conditional acceptance and maintenance of certain streets and public utility improvements at Paradisi Parcel E, generally located at the southeast corner of West Cactus Road and North Cotton Lane; Resolution # 2024-16.

---

**Motion:**

I move to approve Resolution #2024-16.

---

**Background:**

The Public Works Department conducted the final inspection of the public improvements to Paradisi Parcel E on or about August 28, 2023, totaling 10,991 SY (approximately 3,191 LF) and determined that the infrastructure was compliant and acceptable to the city. The infrastructure includes asphalt pavement, storm drains and wastewater lines. Domestic water lines are located within the Epcor water jurisdiction.

---

**Objective Analysis:**

The improvements to this property provide roadways for conveyance through the property, storm drains to convey stormwater to retention basins, and sewer lines to convey wastewater from the property to the city's public system. This action will accept the required infrastructure. The domestic water serving the property is within Epcor water jurisdiction.

---

**Policy Compliant:**

The City Code generally requires development to install public infrastructure required to serve the development. Upon completion and acceptance of such infrastructure, the infrastructure becomes the property of the City. Acceptance of this infrastructure will officially transfer ownership and future maintenance to the City.

---

**Financial Impact:**

Acceptance of street, sewer and storm drain infrastructure increases the city's asset base and adds to future maintenance commitments. The total acceptance value of the infrastructure included with this item is \$984,615.74.

---

**Budget Impact:**

Funding for the infrastructure maintenance now and in the future will be supported by the city's Transportation Operations, Wastewater Operations and Stormwater Operations Funds. The anticipated incremental additional maintenance expense associated with the acceptance of these infrastructure items will be incorporated in future years' budgets.

**FTE Impact:**

This item does not have an impact on current staff levels.

---

**ATTACHMENTS:**

1. 01\_Resolution No. 2024-16\_Infrastructure Acceptance Paradisi Parcel E\_FINAL
  2. 02\_Notice of Completion Paradisi Parcel E
  3. 03\_Inspector Project Sign Off Form Paradisi Parcel E
  4. 04\_Linear Foot Verification Paradisi Parcel E
-



**RESOLUTION # 2024-16**

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SURPRISE, ARIZONA, TO CONDITIONALLY ACCEPT THE PUBLIC IMPROVEMENTS AND COMMENCE MAINTENANCE AFTER TWO YEAR WARRANTY AT PARADISI PARCEL E, GENERALLY LOCATED AT THE SOUTHEAST CORNER OF WEST CACTUS ROAD AND NORTH COTTON LANE ROADS.**

**WHEREAS**, the Mayor and City Council of the City of Surprise approved a final plat entitled “Final Plat Sycamore Farms (Paradisi) – Parcel E” on, May 18, 2021;

**WHEREAS**, as a condition of the preliminary plat, approval of the final plat, and in compliance with the City Code, the developer installed certain public improvements, including roadway improvements which consist of concrete sidewalks, curbs and gutters, as well as asphalt/paving, and the developer also installed sewer lines and drainage infrastructure. The roadway improvements, sewer lines and drainage infrastructure are all collectively referred to as “Public Improvements”;

**WHEREAS**, Taylor Morrison/Arizona Inc. the developer of Paradisi Parcel E, dedicated to the City the Public Improvements, generally located at the southeast corner of West Cactus Road and North Cotton Lane;

**WHEREAS**, on or about August 28, 2023, the City of Surprise Public Works Department Engineering Division completed an inspection of the Public Improvements described in this resolution and found the improvements to be in substantial compliance with the approved plans and specifications;

**WHEREAS**, the City of Surprise notes that the two-year warranty period will commence upon conditional acceptance by the City; and

**WHEREAS**, after the conclusion of the two-year warranty period, the City of Surprise will release the warranty and begin maintenance of the Public Improvements.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the City of Surprise, Arizona, as follows.

**Section 1.** The City of Surprise conditionally accepts the Public Improvements generally located as depicted on the map attached as Exhibit A and listed on Exhibit B.

**Section 2.** Upon final acceptance by the City Engineer, the City Council hereby directs the City to release warranty and begin maintenance of the Public Improvements.

**SIGNATURES ON THE FOLLOWING PAGE**

**APPROVED AND ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Skip Hall, Mayor

Attest:

Approved as to form:

\_\_\_\_\_  
Kristi Passarelli, City Clerk

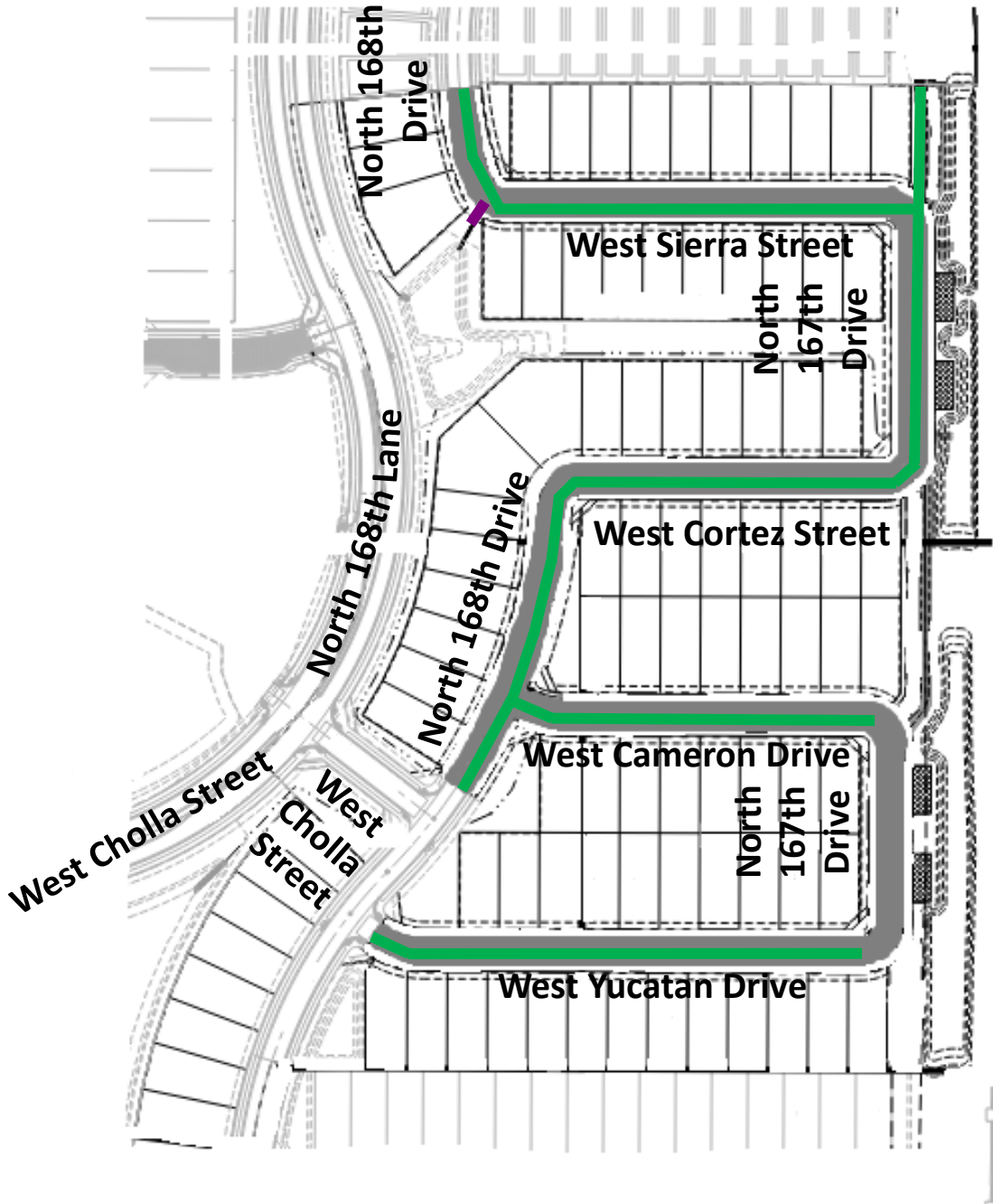
\_\_\_\_\_  
Robert Wingo, City Attorney

## Exhibit A

### Map of Infrastructure

# EXHIBIT A

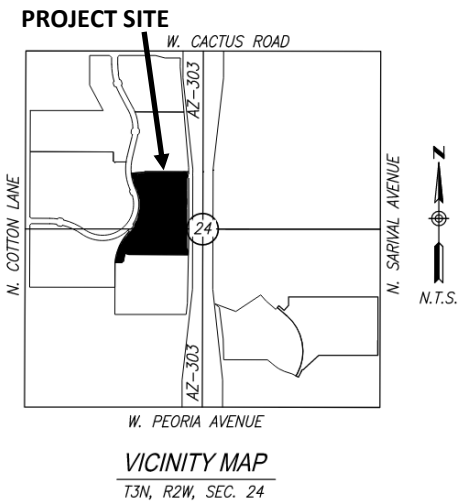
## Paradisi Parcel E



### INFRASTRUCTURE TO

### BE ACCEPTED:

- SEWER
- DRAINAGE
- ROADWAY  
Asphalt/Pavement,  
Concrete (Curb &  
Gutter, Sidewalk)



**EXHIBIT B**

List and Cost of Improvements



# EXHIBIT B

ENGINEERING DIVISION  
PUBLIC WORKS  
CITY OF SURPRISE  
16000 N. CIVIC CENTER PLAZA  
SURPRISE, AZ 85374  
T. 623-222-6150

## Memorandum

**To:** City of Surprise City Council  
**From:** Public Works – Engineering Services  
**Date:** 1/5/2024  
**Re:** Paradisi Parcel E

---

The public improvements for the above project have been completed and are tentatively scheduled for conditional acceptance by Council. The amounts for the infrastructure have been provided by a third party and not the City of Surprise. The following are the infrastructure improvements included with this acceptance and the corresponding valuation that the City will be accepting:

City Paving	\$295,300.00
City Concrete	\$416,033.74
City Sewer	\$266,412.00
City Drainage	\$ 6,870.00
<b>Total</b>	<b>\$984,615.74</b>

November 8, 2023

Taylor Morrison/Arizona Inc.  
4900 North Scottsdale Road 2200  
Scottsdale, AZ 85251

**RE: NOTICE OF COMPLETION AND COUNCIL ACTION REQUIREMENT FOR PARADISI PARCEL E  
FS20-525**

The City of Surprise Public Works Department has completed the inspection of the public utility improvements for the above referenced project. These improvements are in substantial compliance with the approved plans and specifications. Council action is required prior to conditional acceptance and the official beginning of the warranty period. The time frame for Council action is approximately 90 days after the following items have been submitted:

- A copy of all lien releases or a title report
- Actual construction cost for related civil permits issued
- Warranty assurance in a format acceptable by the City\*

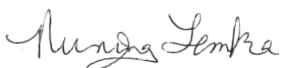
\*For the Warranty Assurance, a notice of the required assurance amount and acceptable formats will be sent via email once actual construction costs have been submitted by the applicant.

The warranty period starts upon council acceptance for a period of two (2) years; please ensure warranty assurance will not expire prior to this date. The applicant will be notified of the council date as soon as it is scheduled and the warranty financial assurance is required to be submitted to the city 10 calendar days prior to the council date. If a warranty financial assurance is not received within 10 calendar days, council action and start of the warranty period will be delayed, at a minimum, an additional two (2) weeks.

A letter of conditional acceptance and notification that the warranty period has begun will be forwarded upon the completion of council acceptance. Also, a request to release the associated completion assurance will be made; notification will be sent when assurance document is available for pick up.

If you have any questions or concerns, you can reach me at 623-222-6148 or at [nuning.lemka@surpriseaz.gov](mailto:nuning.lemka@surpriseaz.gov).

Sincerely,



Nuning Lemka, P.E.  
City Engineer

cc: Ravi Sharma, PW Engineering Manager  
Eric Boyles, Transportation Director  
Michael Boule, Water Resource Management Director

Robert Fields, PW Field Engineering Supervisor  
Amanda Correia, Finance Senior Accountant  
Warren Bert, GIS Manager



**PROJECT SIGN OFF FORM**  
**PUBLIC WORKS - ENGINEERING SERVICES, INSPECTIONS**

Date Submitted: 8-24-23      \_\_\_ Commercial    \_\_\_ Commercial w/Offsite    X Residential

X COMPLETION ACCEPTANCE (End of Construction)      \_\_\_ FINAL ACCEPTANCE (End of Warranty)

1-27-23      Date of Punch-List Walk      3-23-23      Date Punch-List Completed

Case Number: FS20-525

Project Name: Paradisi Parcel E

**Project Developer/Builder: (Name/Email, Address)**

Taylor Morrison /Arizona INC  
9000 E Pima Center PKWY 350 Scottsdale AZ 85258

Permit No: <u>E21P-0025</u>	Permit Type: <u>SWPPP</u>
Permit No: <u>E21P-0054</u>	Permit Type: <u>Concrete</u>
Permit No: <u>E21P-0058</u>	Permit Type: <u>Traffic</u>
Permit No: <u>E21P-0055</u>	Permit Type: <u>Drainage</u>
Permit No: <u>E21P-0057</u>	Permit Type: <u>Paving</u>
Permit No: <u>E21P-0059</u>	Permit Type: <u>Water</u>
Permit No: <u>E21P-0082</u>	Permit Type: <u>Sewer</u>
Permit No: <u>E21P-0024</u>	Permit Type: <u>Grading</u>
Permit No: _____	Permit Type: _____
Permit No: _____	Permit Type: _____

Additional Comments: \_\_\_\_\_

**SUPPORTING DOCUMENTATION REQUIRED:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Copy of Punch List                                 | <input checked="" type="checkbox"/> AOC   |
| <input checked="" type="checkbox"/> Final Certification Letter from Engineer of Record | <input checked="" type="checkbox"/> Asphalt Concrete Ticket w/ Name of Contractor |
| <input checked="" type="checkbox"/> Complete Geotechnical Testing Packet               | <input checked="" type="checkbox"/> As built Documents (PDF copy)                 |
| <input checked="" type="checkbox"/> Sewer Pressure Testing Results                     | <input checked="" type="checkbox"/> Updated asbuilt CAD files                     |
| <input checked="" type="checkbox"/> Sewer Manhole Vacuum Testing Certification         | <input type="checkbox"/> Fireline Sign-off (commercial)                           |
| <input checked="" type="checkbox"/> Sewer Manhole Insecticide Certification            |   |
| <input checked="" type="checkbox"/> Sewer Videos with Operators Notes (inc. re-videos) |   |

Other \_\_\_\_\_ (Specify)

**APPROVAL:**

Civil Inspector: [Signature]  
 Civil Engineering Supervisor: [Signature]

Date: 8-24-23  
 Date: 8/28/23







**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024  
Submitting Department: Public Works  
Staff Recommendations:

Contact Person: Kristin Tytler, Department Director  
District: District 3

---

Consent: Yes      Regular: No      Public Hearing: No      Report/Discussion: No

---

**Agenda Wording:**

Consideration and action pertaining to the conditional acceptance and maintenance of certain streets and public utility improvements at Paradisi Parcel F, generally located at the southeast corner of West Cactus Road and North Cotton Lane; Resolution # 2024-18.

---

**Motion:**

I move to approve Resolution #2024-18.

---

**Background:**

The Public Works Department conducted the final inspection of the public improvements for Paradisi Parcel F on or about August 28, 2023, totaling 8,736 SY (approximately 2,536 LF) and determined that the infrastructure was compliant and acceptable to the city. The infrastructure includes asphalt pavement, storm drains and wastewater lines. Domestic water lines are located within the Epcor water jurisdiction.

---

**Objective Analysis:**

The improvements to this property provide roadways for conveyance through the property, storm drains to convey stormwater to retention basins, and sewer lines to convey wastewater from the property to the city's public system. This action will accept the required infrastructure. The domestic water serving the property is within Epcor water jurisdiction.

---

**Policy Compliant:**

The City Code generally requires development to install public infrastructure required to serve the development. Upon completion and acceptance of such infrastructure, the infrastructure becomes the property of the City. Acceptance of this infrastructure will officially transfer ownership and future maintenance to the City.

---

**Financial Impact:**

Acceptance of street, sewer and storm drain infrastructure increases the city's asset base and adds to future maintenance commitments. The total acceptance value of the infrastructure included with this item is \$842,987.13.

---

**Budget Impact:**

Funding for the infrastructure maintenance now and in the future will be supported from the city's Transportation Operations, Wastewater Operations and Stormwater Operations Funds. The anticipated incremental additional maintenance expense associated with the acceptance of these infrastructure items will be incorporated in future years' budgets.

**FTE Impact:**

This item does not have an impact on current staff levels.

---

**ATTACHMENTS:**

1. 01\_Resolution No. 2024-18\_Infrastructure Acceptance Paradisi Parcel F\_FINAL
  2. 02\_Notice of Completion Paradisi Parcel F
  3. 03\_Inspector Project Sign Off Form Paradisi Parcel F
  4. 04\_Linear Foot Verification Paradisi Parcel F
-

**RESOLUTION # 2024-18**

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SURPRISE, ARIZONA, TO CONDITIONALLY ACCEPT THE PUBLIC IMPROVEMENTS AND COMMENCE MAINTENANCE AFTER TWO YEAR WARRANTY AT PARADISI PARCEL F, GENERALLY LOCATED AT THE SOUTHEAST CORNER OF WEST CACTUS ROAD AND NORTH COTTON LANE ROADS.**

**WHEREAS**, the Mayor and City Council of the City of Surprise approved a final plat entitled “Final Plat Sycamore Farms (Paradisi) – Parcel F” on, May 18, 2021;

**WHEREAS**, as a condition of the preliminary plat, approval of the final plat, and in compliance with the City Code, the developer installed certain public improvements, including roadway improvements which consist of concrete sidewalks, curbs and gutters, as well as asphalt/paving, and the developer also installed sewer lines and drainage infrastructure. The roadway improvements, sewer lines and drainage infrastructure are all collectively referred to as “Public Improvements”;

**WHEREAS**, Taylor Morrison/Arizona Inc. the developer of Paradisi Parcel F, dedicated to the City the Public Improvements, generally located at the southeast corner of West Cactus Road and North Cotton Lane;

**WHEREAS**, on or about August 28, 2023, the City of Surprise Public Works Department Engineering Division completed an inspection of the Public Improvements described in this resolution and found the improvements to be in substantial compliance with the approved plans and specifications;

**WHEREAS**, the City of Surprise notes that the two-year warranty period will commence upon conditional acceptance by the City; and

**WHEREAS**, after the conclusion of the two-year warranty period, the City of Surprise will release the warranty and begin maintenance of the Public Improvements.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the City of Surprise, Arizona, as follows.

**Section 1.** The City of Surprise conditionally accepts the Public Improvements generally located as depicted on the map attached as Exhibit A and listed on Exhibit B.

**Section 2.** Upon final acceptance by the City Engineer, the City Council hereby directs the City to release warranty and begin maintenance of the Public Improvements.

**SIGNATURES ON THE FOLLOWING PAGE**

**APPROVED AND ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Skip Hall, Mayor

Attest:

Approved as to form:

\_\_\_\_\_  
Kristi Passarelli, City Clerk

\_\_\_\_\_  
Robert Wingo, City Attorney

## Exhibit A

### Map of Infrastructure

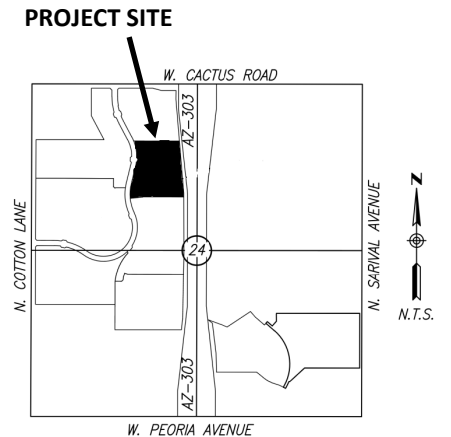
# EXHIBIT A

## Paradisi Parcel F



**INFRASTRUCTURE TO  
BE ACCEPTED:**

- █ SEWER
- █ DRAINAGE
- ROADWAY  
Asphalt/Pavement,  
Concrete (Curb &  
Gutter, Sidewalk)



W. PEORIA AVENUE

VICINITY MAP  
T3N, R2W, SEC. 24

**EXHIBIT B**

List and Cost of Improvements





# EXHIBIT B

ENGINEERING DIVISION  
PUBLIC WORKS  
CITY OF SURPRISE  
16000 N. CIVIC CENTER PLAZA  
SURPRISE, AZ 85374  
T. 623-222-6150

## Memorandum

**To:** City of Surprise City Council  
**From:** Public Works – Engineering Services  
**Date:** 01/10/2024  
**Re:** Paradisi Parcel F

---

The public improvements for the above project have been completed and are tentatively scheduled for conditional acceptance by Council. The amounts for the infrastructure have been provided by a third party and not the City of Surprise. The following are the infrastructure improvements included with this acceptance and the corresponding valuation that the City will be accepting:

City Paving	\$267,000.00
City Concrete	\$341,767.13
City Sewer	\$223,140.00
City Drainage	\$ 11,080.00
<b>Total</b>	<b>\$842,987.13</b>

November 8, 2023

Taylor Morrison/Arizona Inc.  
4900 North Scottsdale Road 2200  
Scottsdale, AZ 85251

**RE: NOTICE OF COMPLETION AND COUNCIL ACTION REQUIREMENT FOR PARADISI PARCEL F  
FS20-544**

The City of Surprise Public Works Department has completed the inspection of the public utility improvements for the above referenced project. These improvements are in substantial compliance with the approved plans and specifications. Council action is required prior to conditional acceptance and the official beginning of the warranty period. The time frame for Council action is approximately 90 days after the following items have been submitted:

- A copy of all lien releases or a title report
- Actual construction cost for related civil permits issued
- Warranty assurance in a format acceptable by the City\*

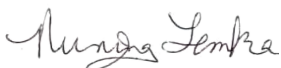
\*For the Warranty Assurance, a notice of the required assurance amount and acceptable formats will be sent via email once actual construction costs have been submitted by the applicant.

The warranty period starts upon council acceptance for a period of two (2) years; please ensure warranty assurance will not expire prior to this date. The applicant will be notified of the council date as soon as it is scheduled and the warranty financial assurance is required to be submitted to the city 10 calendar days prior to the council date. If a warranty financial assurance is not received within 10 calendar days, council action and start of the warranty period will be delayed, at a minimum, an additional two (2) weeks.

A letter of conditional acceptance and notification that the warranty period has begun will be forwarded upon the completion of council acceptance. Also, a request to release the associated completion assurance will be made; notification will be sent when assurance document is available for pick up.

If you have any questions or concerns, you can reach me at 623-222-6148 or at [nuning.lemka@surpriseaz.gov](mailto:nuning.lemka@surpriseaz.gov).

Sincerely,



Nuning Lemka, P.E.  
City Engineer

cc: Ravi Sharma, PW Engineering Manager  
Eric Boyles, Transportation Director  
Michael Boule, Water Resource Management Director

Robert Fields, PW Field Engineering Supervisor  
Amanda Correia, Finance Senior Accountant  
Warren Bert, GIS Manager



**SURPRISE**  
ARIZONA

**PROJECT SIGN OFF FORM**

**PUBLIC WORKS - ENGINEERING SERVICES, INSPECTIONS**

Date Submitted: 8-24-23 Commercial Commercial w/Offsite  Residential

COMPLETION ACCEPTANCE (End of Construction) FINAL ACCEPTANCE (End of Warranty)

1-27-23 Date of Punch-List Walk 3-23-23 Date Punch-List Completed

Case Number: FS20-544

Project Name: Paradisi Parcel F

Project Developer/Builder: (Name/Email, Address)

Taylor Morrison /Arizona INC

9000 E Pima Center PKWY 350 Scottsdale AZ 85258

Permit No: <u>E21P-0023</u>	Permit Type: <u>SWPPP</u>
Permit No: <u>E21P-0061</u>	Permit Type: <u>Drainage</u>
Permit No: <u>E21P-0062</u>	Permit Type: <u>Storm Drainage</u>
Permit No: <u>E21P-0065</u>	Permit Type: <u>Traffic</u>
Permit No: <u>E21P-0063</u>	Permit Type: <u>Paving</u>
Permit No: <u>E21P-0066</u>	Permit Type: <u>Water</u>
Permit No: <u>E21P-0060</u>	Permit Type: <u>Concrete</u>
Permit No: <u>E21P-0064</u>	Permit Type: <u>Sewer</u>
Permit No: <u>E21P-0022</u>	Permit Type: <u>Grading</u>
Permit No: _____	Permit Type: _____

Additional Comments:

**SUPPORTING DOCUMENTATION REQUIRED:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Copy of Punch List                                 | <input checked="" type="checkbox"/> AOC   |
| <input checked="" type="checkbox"/> Final Certification Letter from Engineer of Record | <input checked="" type="checkbox"/> Asphalt Concrete Ticket w/ Name of Contractor |
| <input checked="" type="checkbox"/> Complete Geotechnical Testing Packet               | <input checked="" type="checkbox"/> As built Documents (PDF copy)                 |
| <input checked="" type="checkbox"/> Sewer Pressure Testing Results                     | <input checked="" type="checkbox"/> Updated asbuilt CAD files                     |
| <input checked="" type="checkbox"/> Sewer Manhole Vacuum Testing Certification         | <input type="checkbox"/> Fireline Sign-off (commercial)                           |
| <input checked="" type="checkbox"/> Sewer Manhole Insecticide Certification            |   |
| <input checked="" type="checkbox"/> Sewer Videos with Operators Notes (inc. re-videos) |   |

Other \_\_\_\_\_ (Specify)

**APPROVAL:**

Civil Inspector: [Signature]

Date: 8-24-23

Civil Engineering Supervisor: [Signature]

Date: 8/28/23





**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024

Contact Person: Michael Boule, ASST  
DIRECTOR-UTILITY OPERATION

Submitting Department: Water Resource  
Management

District: Citywide

Staff Recommendations:

---

Consent: Yes

Regular: No

Public Hearing: No

Report/Discussion: No

---

**Agenda Wording:**

Consideration and action pertaining to approval of an amendment to the Fiscal Year 2024 budget by moving budget authority from General Contingency to the Grants Fund to Project G71030 to support an enhanced and expanded water conservation rebate program and account for acceptance of an \$159,100 grant from the Water Infrastructure Finance Authority of Arizona; Resolution #2024-02.

---

**Motion:**

I move to approve Resolution #2024-02.

---

**Background:**

On November 15, 2023, the City's water conservation rebate program was awarded \$159,100 in funds from the Water Infrastructure Finance Authority of Arizona's Water Conservation Grant Fund in order to expand the scope of the City's existing water conservation rebate program. Currently, the City's water conservation rebate program is limited to applicants residing in the City's water service area. This grant funding will enable the Water Resource Management Department to expand the eligible applicant pool to all residents and commercial customers located in the City's municipal boundaries, regardless of water service provider, and also increase the quantity of rebates that the City is able to award.

---

**Objective Analysis:**

This grant will allow the Water Resource Management Department to extend its existing water conservation rebate to residents outside of the city's water service area without impacting its rate payers. The resources associated with administering the rebate program are already in place and capable of absorbing the increased volume of applications anticipated.

---

**Policy Compliant:**

This action is consistent with the City's Budget Amendment Policies and Procedures adopted in May, 2020, and with the City's External Grant Policy and Application Procedure, adopted in April, 2017.

---

**Financial Impact:**

Water Resource Management will utilize \$40,042 in funds from its current operating budget, the equivalent of the required match. Proposed reallocation of \$159,100 from grant contingency to Project G71030 to account for spending authority associated with the grant project.

---

**Budget Impact:**

This action represents a transfer of spending authority and does not increase or decrease the total adopted citywide expenditure budget.

**FTE Impact:**

This item does not have an impact on current staff levels.

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**ATTACHMENTS:**

1. 23.12.13 WCGF Grant Agreement - Surprise WC1-050-2023\_Submitted (3)
  2. 24.01.16 WIFA Resolution-Budget Amendment FY24-final (3)
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AGREEMENT: \_\_\_\_\_

**WATER CONSERVATION GRANT FUND AGREEMENT**

**BETWEEN**

\_\_\_\_\_  
**AND**

**The Water Infrastructure Finance Authority of Arizona**

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**THIS GRANT AGREEMENT** (the “**Agreement**”) is made effective as of the date of signature of the last signatory hereto (the “**Effective Date**”), by and between the Water Infrastructure Finance Authority of Arizona (the “**Authority**”), a body corporate and politic, and \_\_\_\_\_ (the “**Grantee**”). The Authority and the Grantee may individually be referred to as “**Party**” or collectively as the “**Parties.**”

**RECITALS**

**WHEREAS**, Title VI of the Social Security Act (42 § U.S.C. 801 et seq.) (the “**Act**”) was amended by section 9901 of the American Rescue Plan Act (“**ARPA**”), Pub. L. No. 117-2 (March 11, 2021), to add section 602, which authorizes the United States Department of Treasury’s (“**Treasury**”) to make payments from the Coronavirus State and Local Fiscal Recovery Funds (“**SLFRF**”), and

**WHEREAS**, the funds are purposed for use in responding to the COVID-19 public health emergency and its economic impacts through the categories of eligible uses and activities described in 31 C.F.R. Part 35, Subpart A, including for making necessary investments in water, sewer, and broadband infrastructure, and

**WHEREAS**, the source of funding for the Award is the ARPA, specifically the SLFRF, with Catalog of Federal Domestic Assistance (“**CFDA**”) Assistance Listing 21.027 for all activity pursuant to this Agreement, and

**WHEREAS**, the State of Arizona established the Water Conservation Grant Fund (“**WCGF**”) under Title 49, Chapter 8, Article 5 of the Arizona Revised Statutes. A.R.S. §§ 49-1331 – 1335, to be administered by the Authority, and

**WHEREAS**, the Office of the Governor, in fulfilling its duty to administer the Coronavirus State and Local Fiscal Recovery Funds allocated to the State of Arizona, entered into an Interagency Service Agreement (ISA-ARPA-WIFA-070122-01), as amended on November 3, 2023, to provide funding to the Authority through the WCGF to support COVID-19 related activities in accordance with State Fiscal Recovery Fund Expenditure Category 5.8 Clean Water: Water Conservation, and

**WHEREAS**, the Authority is authorized to issue grants from the WCGF to eligible entities for water conservation programs and projects that are expected to result in: (1) long-term reductions in water use; (2) improvements in water use efficiency; or (3) improvements in water reliability. And

**WHEREAS**, WCGF grants may be issued for any of the purposes specified in A.R.S. § 49-1332(B), and

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**WHEREAS**, Grantee meets the Treasury’s definition of a subrecipient and has applied for a grant, pursuant to the Application attached to this Agreement as Exhibit A [*Grant Application*]; and

**WHEREAS**, by the Board resolution attached to this Agreement as Exhibit B [*Board Resolution*], the Authority has determined Grantee is eligible for financial assistance from the WCGF and has reviewed and approved the Grantee’s Application in accordance with the requirements of A.R.S. §§ 49-1331 – 1335.

**NOW THEREFORE**, in consideration of the mutual promises and covenants set forth below, the Authority and Grantee agree as follows:

**ARTICLE I - Definitions**

- 1.1. “Act” means Title VI of the Social Security Act (42 § U.S.C. 801 et seq.), as amended.
- 1.2. “Application” means the Grantee’s application for financial assistance from the Water Conservation Grant Fund, attached to this Agreement as Exhibit A [*Grant Application*] and incorporated herein.
- 1.3. “ARPA” means the American Rescue Plan, Pub. L. No. 117-2 (March 11, 2021), as amended.
- 1.4. “Authority” or “WIFA” means the Water Infrastructure Finance Authority of Arizona
- 1.5. “Authorized Officer” means the Director of the Authority, or any other person or persons designated by the Director to act on behalf of the Authority, with respect to this Agreement.
- 1.6. “Award” means the specific grant amount awarded to Grantee as described in this Agreement.
- 1.7. “Scope of Work” means the program or project described in Exhibit C [*Scope of Work*], attached to this Agreement and incorporated herein.
- 1.8. “SLFRF” means the Coronavirus State and Local Fiscal Recovery Funds.
- 1.9. “Treasury” means the United States Department of Treasury.
- 1.10. Any capitalized terms used and not defined herein shall have the meanings ascribed to such terms in the Exhibits.

**ARTICLE II - Award**

- 2.1. The Award. The Authority hereby agrees to provide the Grantee with an award in the amount of \_\_\_\_\_ (\$ \_\_\_\_\_) (the “Award”), subject to the terms and conditions set forth in this Agreement and availability of funds. The Authority shall make the Award available to Grantee upon execution of this Agreement by the parties. Subject to the Grantee’s compliance with all terms and conditions of this Agreement, and the continued non-existence of a breach or default, or any event, circumstance, act, or omission which with the giving of notice, the passage of time, or both would constitute a breach, default or give rise to the termination of this Agreement, the Authority agrees to disburse the Award to the Grantee in accordance with the provisions of Article III [*Disbursement and Funding*].
- 2.2. Acceptance of Award. Grantee hereby accepts the Award under the terms and conditions of this Agreement, and agrees to execute and return this Agreement to the Authority within thirty (30)



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- calendar days of receipt unless Grantee receives a written waiver of this requirement by the Authority.
- 2.3. Purpose and Use of Award. Grantee agrees to undertake and complete the Scope of Work in a timely manner, and to receive and expend the Award in accordance with this Agreement. Grantee agrees to utilize the Award only for the purpose of implementing the Scope of Work. Any expenditure deviating from the Scope of Work shall require the Authority's prior written approval. Supporting documents and attachments from the Application are incorporated herein by reference. If content in the Application differs from or conflicts with terms presented elsewhere in this Agreement, this Agreement takes precedence.
  - 2.4. Prior Costs Incurred. The Award may be used for costs incurred prior to the Effective Date of this Agreement, but may not be used for costs incurred or for which commitment was made before July 6, 2022.
  - 2.5. Time of Performance. Grantee may use the Award for costs incurred and activities performed between July 6, 2022, and June 30, 2026.
    - 2.5.1. Grantee shall complete the Scope of Work no later than June 30, 2026.
    - 2.5.2. Grantee shall make sufficient progress on the Scope of Work, in good faith and in manner acceptable to the Authority. For purposes of this section, unless otherwise agreed to by the Authority in writing, "sufficient progress" means the Grantee has, at a minimum, complied with all schedules and deadlines listed in the Scope of Work.
    - 2.5.3. Grantee may submit to the Authority a written request to amend a Scope of Work's schedule, which the Authority may, but is not required to approve. The written request shall detail: (1) the nature of the delay(s); (2) the amended schedule dates; and (3) any efforts to be implemented to adhere to the amended schedule.
  - 2.6. Benchmarks. Failure to adhere to the benchmarks listed below shall constitute a breach of this Agreement and may result in the loss of all or part of the Award. In addition to any schedule or deadline identified in the Scope of Work, Grantee shall, at a minimum, comply with the following benchmarks:
    - 2.6.1. Expend 5% of the Award by December 2, 2024.
    - 2.6.2. Expend 50% of the Award by December 31, 2025.
    - 2.6.3. Expend 75% of the Award by March 31, 2026.
  - 2.7. Term of Agreement. This Agreement remains in effect until all reporting requirements described in this Agreement have been fulfilled by the Grantee and accepted by the Authority (the "**Term**").
  - 2.8. Grantee Obligations. This Agreement constitutes the valid and binding obligations of the Grantee, enforceable in accordance with its terms. The obligation and utilization of the Award provided through this Agreement are subject to the proper observation of the Agreement and any requirements incorporated by reference.

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- 2.8.1. Assignments. The Grantee agrees not to transfer, assign, or pledge any right or interest in any payment or advance due pursuant to this Agreement, or any of the other benefits thereof, without the prior written consent of the Authority. Any such assignment made or attempted by the Grantee without the prior written consent of the Authority shall be void and of no effect. No consent by the Authority to an assignment by the Grantee shall release the Grantee as the party primarily obligated and liable under the terms of this Agreement, unless the Authority specifically releases the Grantee in writing.
- 2.8.2. Compliance with Applicable Laws. The Grantee shall perform all activities under this Agreement in accordance with all applicable (whether present or future) laws, ordinances, rules, regulations, requirements and orders of any governmental or administrative authority having or claiming jurisdiction over the Grantee's activities. The Parties further agree to cooperate in all ways reasonable and necessary to comply with the applicable statutes, including amending this Agreement as needed in the future and making any refunds or payments that might be required to bring the Parties into full compliance with applicable law.
- 2.8.3. Subcontractors. Grantee shall require any subcontracting entities to observe and follow all provisions of this Agreement.
- 2.9. Exhibits. The terms and conditions of this Agreement include the terms and conditions set forth in the Exhibits, which are part of this Agreement.
- 2.10. Fund Availability. Any action by the Parties under this Agreement requiring the expenditure of funds is conditioned upon the availability of funds appropriated, assigned, and allocated for the payment of such obligation. If funds are not appropriated, assigned, allocated, and available or if the appropriation is changed by the legislature or the Governor's Office resulting in funds no longer being available for the continuance of this Agreement, this Agreement may be terminated by the Parties at the end of the period for which funds are available. No liability shall accrue to the Parties in the event this provision is exercised, and the Parties shall not be obligated or liable for any future payments or for any damages as a result of termination under this paragraph.
- 2.11. Notices. All notices required or permitted under this Agreement, including technical correspondence, invoices, and reports from Grantee, or other communications hereunder shall be sufficiently given and shall be deemed given when hand delivered, mailed by registered or certified mail, or emailed to Grantee or the Authority at the following addresses:

**WIFA Project Manager**  
Laurie Gehlsen, Grants Coordinator  
Water Infrastructure Finance Authority of Arizona  
100 N 7<sup>th</sup> Ave, Suite 130  
Phoenix, AZ 85007  
Direct: (480) 647-4462  
[LGehlsen@azwifa.gov](mailto:LGehlsen@azwifa.gov)

**Grantee Project Manager**

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Either Party may designate any further or different addresses to which subsequent notices or other communications shall be sent, by notice in writing given to the other Party.

**ARTICLE III - Disbursement and Funding**

- 3.1. **Reimbursement Basis.** The Authority shall disburse the Award on a reimbursement basis, upon presentation of accurate and complete claims to the Authority. Except as hereinafter provided, disbursements shall be made only:
  - 3.1.1. For reimbursement of expenses incurred in accordance with this Agreement; and
  - 3.1.2. When a request for reimbursement is submitted in substantially the form provided by the Authority and is accompanied by the necessary certifications and documentation as required by the Authority; and
  - 3.1.3. When an Authorized Officer of the Authority has determined that such disbursement is proper.
- 3.2. **Request for Reimbursement.** Grantee shall submit requests for reimbursement to the Authority using forms provided by the Authority on a monthly basis, unless otherwise approved by the Authority in writing. Requests for reimbursement shall be submitted to the Authority no later than the fifteenth (15<sup>th</sup>) day of each month. The Authority shall not distribute the Award to the Grantee until the Authority has received and processed a request for reimbursement. The Authority shall verify the request and claimed expenses against the reports required in this Agreement. To receive payment, requests for reimbursement for work performed during the term of this Agreement must be submitted no later than June 15, 2026, unless otherwise approved by the Authority in writing. A request for reimbursement must contain:
  - 3.2.1. An itemized accounting of grant expenses incurred;
  - 3.2.2. Receipts, vendor invoices, documentation of in-kind labor, and other documentation of costs incurred;
  - 3.2.3. Certification that: the reimbursement amount requested is a proper cost as evidenced by attached invoices;
  - 3.2.4. Certification that the signatory is duly authorized to submit the reimbursement request; and
  - 3.2.5. Any additional documents or information deemed necessary by the Authority.
- 3.3. **Method of Disbursement.** The Authority may disburse the Award by check, electronic means, warrant, or other transfer medium basis within thirty (30) calendar days of the Authority's receipt

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of the request for reimbursement, subject to funding availability. An Authorized Officer of the Authority shall approve disbursements directly to Grantee and shall provide Grantee with a copy of the approval and the date approved.

- 3.4. Affirmation of Representations and Warranties. Each request for reimbursement, disbursement, or the receipt of the Award funds requested by the Grantee, shall constitute Grantee’s affirmation that all representations and warranties of the Grantee as described in this Agreement or any Exhibit therein, are true and correct as of the date thereof and throughout the Term of the Agreement, unless the Grantee notifies the Authority to the contrary in writing prior to the request for reimbursement or release of the disbursement.
- 3.5. Withholding Disbursements. The Authority may elect in its sole discretion to withhold payment of the Award in whole or in part if Grantee breaches any provision of this Agreement or any Exhibit therein.
- 3.6. Required Notice. Grantee shall provide the Authority with immediate written notification:
  - 3.6.1. Of any inability to expend the Award in accordance with the Scope of Work; and
  - 3.6.2. Prior to any expenditure of the Award deviating from the Scope of Work.
- 3.7. Inspections – Expenses and Operations. Subject and pursuant to the provisions of Section 2.2 of the General Terms and Conditions included in Exhibit D, the Authority shall have the option to undertake an inspection of the Grantee’s expenses and operations at any time to verify the information included in and with any and/or all requests for reimbursements under this Agreement.

**ARTICLE IV - Representations and Warranties**

4.1. Grantee hereby represents and warrants that it is a: (check appropriate)

- |  |  |
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| <ul style="list-style-type: none"> <li><input type="checkbox"/> Municipal water delivery system as defined in A.R.S. § 42-5301.</li> <li><input type="checkbox"/> County water augmentation authority established under A.R.S. Title 45, Chapter 11.</li> <li><input type="checkbox"/> County water authority established under A.R.S. Title 45, Chapter 13.</li> <li><input type="checkbox"/> An Indian Tribe.</li> <li><input type="checkbox"/> Community facilities district as established by A.R.S. Title 48, Chapter 4.</li> <li><input type="checkbox"/> Public water system as prescribed in A.R.S. § 49-532.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Natural resource conservation district.</li> <li><input type="checkbox"/> City, town, county, district, commission, authority or other public entity that is organized and that exists under the statutory law of this state or under a voter-approved charter or initiative of Arizona.</li> <li><input type="checkbox"/> Nongovernment organization that focuses on water conservation or environmental protection who has partnered with _____, an eligible entity as defined under A.R.S. § 49-1301. <i>If selected, Grantee must submit a completed Partnership Certification with this Agreement.</i></li> </ul> |
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4.2. Conflicts of Interest. The Parties each represent that, as of the date of execution of this Agreement, they are not aware of any facts or circumstances which would give rise to a cancellation right in

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- favor of any Party pursuant to A.R.S. § 38-511. Grantee represents and warrants that there exists no actual or potential conflict of interest between the Grantee's performance under this Agreement and the Grantee's engagement or involvement in any other personal or professional activities. In the event such conflict or potential conflict arises during the Term of this Agreement, or any extension thereof, the Grantee shall immediately notify the Authority in writing.
- 4.3. Adverse Proceedings. Grantee represents and warrants that there are no proceedings pending or, so far as the Grantee knows, threatened, before any court or administrative agency that will materially adversely affect the Grantee's ability to fully perform the Scope of Work. During the Term of this Agreement, should proceedings arise that will materially adversely affect Grantee's ability to fully perform the Scope of Work, the Grantee shall promptly notify the Authority in writing.
- 4.4. Authority to Sign. Grantee represents and warrants that the Grantee and the person signing on behalf of the Grantee have the full power and authority to enter into and execute this Agreement, to legally bind the Grantee and to perform and comply with the terms and conditions set forth herein.
- 4.5. Debarment, Suspension, U.S. Government Restricted Party Lists. Grantee warrants that it is not, and its contractors or subcontractors are not, on the U.S. government's Denied Parties List, the Unverified List, the Entities List, the Specifically Designated Nationals and Blocked Parties List, and neither the Grantee nor any contractors or subcontractors are presently debarred, suspended, proposed for debarment or otherwise declared ineligible for award of federal contracts or participation in federal assistance programs or activities.
- 4.6. Grantee Matching. Pursuant to A.R.S. § 49-1333(B)(4), at least a twenty-five percent (25%) match is required for each water conservation program or project.
- 4.6.1. Funds provided under one federal program may not be used to meet a non-federal match or cost-share requirements of another federal program. 2 CFR 200.306(b)(5).
- 4.6.2. As stated in the Treasury's SLFRF Final Rule, Grantees may fund a program or project "with both SLFRF funds and other sources of funding provided that the costs are eligible costs under each source program and are compliant with all other related statutory and regulatory requirements and policies."
- 4.6.3. Grantee's match requirement under this Agreement is a state requirement; matching is not required by ARPA. Grantee represents and warrants that Grantee has satisfied or will satisfy the state match requirement using permissible funding sources. Grantee's matching contribution may include cash contributions or in-kind contributions. Grantee's matching contribution may not include any monies provided by the Authority.
- 4.6.4. Failure to adhere to the state matching requirement under A.R.S. § 49-1333(B)(4) shall constitute a breach of this Agreement and may result in the loss of all or part of the Award.
- 4.7. Indemnification. Grantee shall protect, defend, indemnify, and hold harmless the Authority and its board and committees, the State of Arizona, its elected and appointed officials, its agents, commissions, officers, directors, employees, volunteers and affiliates and each of them from any and all claims, demands, causes of action, damages, costs, expenses, attorney's fees, consultant's fees, expert fees, losses or liability, in law or in equity, of every kind and nature whatsoever arising out of or in connection with this Agreement, Grantee's performance hereunder, Grantee's or Grantee's subcontractor's negligence including active or passive, or strict liability including but not

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limited to bodily injury, emotional injury, sickness or disease, or death to persons and/or damage to property of anyone, including loss of use thereof, caused or alleged to be caused by any act or omission of Grantee, or any subcontractor, or anyone directly or indirectly employed by any of them or anyone for the full period of time allowed by the law, regardless of any limitation of coverage by insurance, with the exception of the sole negligence or willful misconduct of the Authority. The provisions of this section shall survive the expiration or termination of this Agreement.

- 4.8. Liability. Failure on the part of the Authority in any instance or under any circumstance to observe or perform fully any obligation assumed by or imposed upon the Authority by this Agreement or by law shall not make the Authority liable in damages to Grantee or relieve Grantee from fully performing any other obligation required of it under this Agreement; provided, however, that Grantee may have and pursue any and all other remedies provided by law for compelling performance by the Authority of such obligation assumed by or imposed upon the Authority. Neither the Authority nor its board or committees, the State of Arizona, its elected and appointed officials, its agents, commissions, officers, directors, employees, volunteers or affiliates shall in any event be liable for damages, if any, for the nonperformance of any obligation or agreement of any kind whatsoever set forth in this Agreement.
- 4.9. Permits. Grantee represents and warrants that all permits necessary or required in connection with the award have been or will be obtained, and all fees and bonds required in connection therewith have been or will be paid and/or posted as the circumstances may require.

**ARTICLE V – Records and Reports**

- 5.1. Financial Records. Grantee shall maintain satisfactory financial accounts, books, records, documents, and other evidence sufficient to properly reflect the amount, receipt, and expenditure of the Award and to comply with section 602(c) of the Act and Treasury’s regulations implementing that section and guidance regarding the eligible uses of funds. Records shall be maintained by the Grantee for a period of five years after the Award funds have been expended or returned to Treasury, whichever is later. Failure to maintain proper financial records required under this Agreement as required is cause for termination of this Agreement or withholding of future disbursements.
- 5.2. Reporting Requirements. Grantee shall provide reports of all activities related to this Agreement both as identified in the Agreement and as requested by the Authority. Grantee shall also provide to the Authority any additional written information requested by the Authority in a timely manner and within reasonable deadlines as shall be set by the Authority.
- 5.2.1. All financial reports required under this Agreement shall be prepared in accordance with GAAP standards, and shall be in form and substance satisfactory to the Authority and as may be required by the United States Department of Treasury.
- 5.2.2. If there is any amount of the Award remaining after the Scope of Work is completed, Grantee shall report the remaining balance to the Authority.
- 5.2.3. Grantee shall comply with and abide by the U.S. Department of the Treasury’s Project and Expenditure Report User Guide – State and Local Fiscal Recovery Funds, available at <https://home.treasury.gov/system/files/136/Apr-2023-PE-Report-User-Guide.pdf>.
- 5.2.4. Grantee shall provide the following performance metrics required for water-related infrastructure projects:



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- Projected/actual construction start date (month/year);
- Projected/actual initiation of operations date (month/year);
- Location;
- Whether the project prioritizes local hires;
- Whether the project has a Community Benefit Agreement, with a description of any such agreement;
- National Pollutant Discharge Elimination System (NPDES) Permit Number (if applicable; for projects aligned with the Clean Water State Revolving Fund);
- Public Water System (PWS) ID number (if applicable; for projects aligned with the Drinking Water State Revolving Fund);
- Median Household Income of service area; and
- Lowest Quintile Income of the service area.

5.2.5. Failure to provide reports required under this Agreement as required is cause for termination of this Agreement or withholding of future disbursements.

5.3. Monthly Reports. Grantee shall report to the Authority on Grantee's expenditure of the Grant and the status of the Scope of Work on the fifteenth (15<sup>th</sup>) day of each month following the date of this Agreement, and on the fifteenth (15<sup>th</sup>) day of every month thereafter until Grantee expends the entire Award or completes the Scope of Work, whichever is first. Monthly reports shall be in a form acceptable to the Authority. The Authority may revise the form of the monthly report from time to time. The Authority reserves the right to request additional reports relating to the expenditure of the Award or additional information as needed for ARPA reporting requirements.

5.4. Final Report. Audit. Grantee shall provide a final report (the "**Final Report**") in a form acceptable to the Authority.

5.4.1. The Final Report shall be submitted to the Authority within thirty (30) calendar days of one of the following occurrences: (1) the Award funds have been expended; (2) the Scope of Work has been completed; or (3) the Agreement has otherwise been terminated. Notwithstanding the foregoing, the Final Report shall be submitted to the Authority no later than June 15, 2026.

5.4.2. The Final Report shall contain the information deemed necessary by the Authority.

5.4.3. Following the receipt and approval of the Final Report, the Authority will notify Grantee in writing that the Agreement is administratively closed.

5.4.4. After the project is administratively closed, Grantee shall submit all required audits to the Authority. All audits for fiscal years in which Grantee received Award funds from the Authority must be received, reviewed, and found to be satisfactory by the Authority.

5.4.5. In the event that the Authority determines that any project costs described in a post-funding audit are unjustified or describe ineligible activities, Grantee shall refund such monies back to the Authority.

**ARTICLE VI - Enforcement & Remedies**

- 6.1. **Breach.** The Parties agree that all conditions set forth herein are material to this and the occurrence of any of the following events is a Grantee breach under this Agreement:
  - 6.1.1. Any certification, statement, representation, or warranty contained in this Agreement or report required under this Agreement, the Application, or any other document related to the award which the Authority determines at any time to be incorrect or misleading in any material respect either on the date when made or on the date when reaffirmed.
  - 6.1.2. The Grantee 's failure to comply with each and every term, covenant, condition, and/or agreement contained in this Agreement.
  - 6.1.3. The Grantee's failure to make sufficient progress on the Scope of Work, in good faith and in manner acceptable to the Authority in accordance with sections 2.5 and 2.6 of this Agreement.
  - 6.1.4. The Grantee's use of the Award proceeds for any purpose other than as authorized under the provisions of this Agreement.
  - 6.1.5. The Grantee fails to comply with any law, ordinance, code, order, rule, or regulation of any governmental or administrative authority having jurisdiction over the Scope of Work within thirty (30) calendar days after notice in writing of such failure to comply has been given to the Grantee from such governmental or administrative authority.
- 6.2. **Notice of Breach. Cure Period.** Upon the occurrence of a breach, the Authority shall issue a written notice of breach, identifying the nature of the breach and providing thirty (30) calendar days (or a lesser or additional time as may be agreed to by the Parties) in which the Grantee shall have an opportunity to cure the breach. Time allowed for cure does not diminish or eliminate Grantee's liability for damages.
- 6.3. **Default.** If Grantee fails to cure a breach within the period specified in the written notice, Grantee is in default of its obligations, and the Authority may exercise any or all of the following remedies:
  - 6.3.1. Withhold applicable payment until the default is remedied;
  - 6.3.2. Terminate this Agreement, in whole or in part;
  - 6.3.3. Recapture Award funds provided to Grantee under this Agreement, in whole or in part;
  - 6.3.4. Suspend or de-obligate the Grantee's authority to receive any undisbursed proceeds of the award; and/or;
  - 6.3.5. Proceed at any time, or from time to time, to protect and enforce all rights and remedies available to the Authority, including demanding repayment of Award funds, by suit or other appropriate proceedings, whether for specific performance of any covenant, term, or condition set forth in this Agreement, or for damages or other relief, or proceed to take any action authorized or permitted under applicable law, regulation, or in equity.



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- 6.4. Good Faith. The Parties will attempt in good faith to resolve all disputes, disagreements, or claims relating to this Agreement.
- 6.5. De-obligation. The Authority may de-obligate Award funds under this Agreement upon written notice to Grantee. The Authority may de-obligate and reduce Award funds under the following circumstances:
  - 6.5.1. Grantee has completed performance under the Scope of Work without using all of the Award provided by the Authority under this Agreement;
  - 6.5.2. This Agreement expires and all Award funds have not been expended;
  - 6.5.3. Grantee, with the consent of the Authority, cancelled or changed an activity required under the Scope of Work for reasons other than nonperformance;
  - 6.5.4. This Agreement has otherwise been terminated in whole or in part; or
  - 6.5.5. Mutual consent by the Parties.
- 6.6. Disallowed Costs. An expenditure that is reimbursed under this Agreement and that does not comply with this Agreement shall constitute a disallowed cost and be subject to recapture by the Authority and repayment to the Authority. Within fourteen (14) calendar days of the date of the Authority's written notice to Grantee, unless a longer period is approved by the Authority in writing, Grantee shall repay the Authority any portion of the Award paid by the Authority which the Authority has in its sole discretion determined constitutes a disallowed cost.
- 6.7. Repayment. Grantee agrees to repay the Award in whole or in part if the Authority determines that Grantee has failed to use the Award in compliance with the terms of this Agreement or the requirements of applicable laws and regulations. The Authority may specify, in writing, the terms of the repayment or alternative terms in lieu of repayment, however, in no such case shall repayment or alternative terms be accomplished later than one hundred eighty (180) calendar days following the written determination of non-compliance by the Authority. This section does not apply to a Grantee's failure to make sufficient progress on the Scope of Work of this Agreement, provided Grantee made good faith efforts to complete the Scope of Work within the time for performance.
- 6.8. Remedies Cumulative and Concurrent. No remedy herein conferred upon or reserved to the Authority is intended to be exclusive of any other remedies provided for in this Agreement, and each and every such remedy shall be cumulative, and shall be in addition to every other remedy given hereunder, or under this Agreement, or now or hereafter existing at law or in equity by statute. Every right, power, and remedy given to the Authority shall be concurrent and may be pursued separately, successively, or together against the Grantee, and every right, power, and remedy given the Authority may be exercised from time to time as often as may be deemed expedient by the Authority.
- 6.9. Strict Performance. No delay or omission of the Authority to exercise any right, power, or remedy accruing upon the happening of a Default shall impair any such right, power, or remedy, or shall be construed to be a waiver of any such Default or any acquiescence therein. No delay or omission on the part of the Authority to exercise any option granted to the Authority under this Agreement, in any one or more instances, shall constitute a waiver of any such Default and each such option shall remain continuously in full force and effect.

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- 6.10. Attorneys' Fees and Costs. In the event of Grantee's breach of this Agreement, Grantee agrees to pay any and all costs and expenses, including attorneys' fees, incurred by the Authority in connection with the enforcement of this Agreement. If the Authority terminates this Agreement for cause, any costs incurred shall be the Grantee's responsibility.

**ARTICLE VII - Miscellaneous**

- 7.1. Amendments and Modifications. This Agreement may be amended by mutual agreement in writing between Grantee and the Authority. Any request to amend this Agreement by Grantee must be in writing and state the amendment request and reason for the request. Grantee shall make requests in a timely manner and in no event less than thirty (30) calendar days before the effective date of the proposed amendment. Any amendment, modification, or extension of this Agreement must be submitted through the Sub-recipient Management Tool (SRM), eCivis, and approved by both Parties.
- 7.2. Insurance. Grantee agrees to comply with the Insurance Requirements set forth in Exhibit D [General Terms and Conditions]. Failure to maintain the required insurance at all times shall constitute a breach of this Agreement that is subject to penalties up to and including suspension of payments and/or termination of this Agreement.
- 7.3. Permits/Licenses/Authorizations. It shall be the Grantee's responsibility to obtain all permits, licenses, or authorizations required from government authorities prior to initiation of the Scope of Work or required to be obtained by the time of completion of the Scope of Work to be eligible for reimbursement funds under this Agreement.
- 7.4. No Implied Duties. This Agreement does not create a duty or responsibility unless the intention to do so is clearly and unambiguously stated in this Agreement. This Agreement shall not relieve the Parties of any obligation or responsibility imposed on it by law. This Agreement does not imply Authority to perform any tasks or accept any responsibility not expressly stated in this Agreement.
- 7.5. No Obligation of State General Appropriations Funds. Nothing herein shall be construed as obligating state general appropriation funds for payment of any debt or liability or any nature arising hereunder. The parties expressly recognize that payments to be made by the Authority under this Agreement may come from federal funds made available to the Authority for this purpose.
- 7.6. Survival. Those articles, sections, and subsections of this Agreement which by their nature are intended to survive, including, but not limited to, the Grantee's Representations and Warranties and Indemnification, shall survive the completion of the Scope of Work and the expiration or earlier termination of this Agreement.
- 7.7. Time of the Essence. Time is of the essence with regard to each provision of this Agreement as to which time is an element.
- 7.8. Acknowledgment of Funding Source. Unless otherwise agreed upon in writing between the Parties, Grantee agrees that any publications, studies, or reports which are made possible by or derived, in whole or in part, from this Agreement, and any news articles, brochures, seminars, or other promotional materials or media or events through which Grantee publicizes the Scope of Work funded in whole or in part by this Agreement will acknowledge the Authority's support in the following manner: "Funding has been provided by/contributed by the Water Infrastructure Finance Authority of Arizona."

**Water Conservation Grant Fund**

7.9. Entire Agreement. This Agreement and any attached Exhibits shall constitute the entire agreement of the Parties relating to the Award and supersedes all prior and contemporaneous agreements, understandings, and inducements, whether express or implied, oral, or written.

- Exhibit A** Grant Application
- Exhibit B** Board Resolution
- Exhibit C** Scope of Work
- Exhibit D** General Terms and Conditions
- Exhibit E** Federal Provisions
- Exhibit F** Affidavit
- Exhibit G** Reimbursement Request & Monthly Reporting Form
- Exhibit H** Partnership Certification (*if applicable*)

**ARTICLE VIII - Certification & Signatures**

The Grantee, \_\_\_\_\_, hereby accepts this Agreement according to the above terms and conditions. I hereby certify that I represent a legal entity with authority to enter into this Agreement.

I further certify that the Scope of Work complies with all applicable state, local, and federal laws and regulations, and that I am authorized to enter into and sign a binding Agreement with the Authority

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name and Title

For: \_\_\_\_\_ Tax ID No.: \_\_\_\_\_  
Grantee Name

**IN WITNESS WHEREOF**, the parties have caused this Agreement to be executed by their duly authorized officers or officials, all as of the date first above written.

Signature
Chuck Podolak
Printed Name
Director, Water Infrastructure Finance Authority
Title
Date

Signature
Printed Name
Title
Date

# **EXHIBIT A**

## **Application**

[See attached]

# Applications: Enhanced Water Conservation Rebate Program

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**Profile**

sandra.hurlbut@surpriseaz.gov

**Entity Name:**

City of Surprise

I. General Information

**1. Title of Project:**

Enhanced Water Conservation Rebate Program

**2.Type of Conservation Activity (A.R.S. § 49-1332(B)):**

Programs and projects that reduce water use Per A.R.S. 49-1332(B)(2)

Note: for the purpose of the application, the term project and program will be referred to as “conservation activity”

**3. Is this for an individual Water Conservation Project or a general Water Conservation Program?**

Water Conservation Program

**Please describe the specific components that make it a program.**

The City of Surprise (CoS) is applying for WIFA funding to expand and enhance its water conservation rebate program. We consider our proposal a program because it has distinct measurable activities with a long term outlook. We anticipate using WIFA funding to support this program over the City's 2024 and 2025 Fiscal Years.

The current water conservation program was initiated in 2018 and presently includes rebates for the following: 1) WaterSense labeled Smart Irrigation Controllers; 2) Residential Turf Removal with Xeriscape Replacement Landscaping; 3) Single Family New Home Xeriscape Landscape Installation; and 4) HOA, Commercial, & Multifamily Turf Removal with Xeriscape Replacement Landscaping.

The primary goals for this application are to 1) expand water conservation rebates to ALL residents in the City of Surprise, and to 2) increase the turf rebate cash amount to entice more people to apply because turf removal offers the greatest volume of water savings. The city intends to use WIFA funding to support its water conservation rebate program for the Fiscal Years 2024 and 2025 with expenditures complete by June 30, 2026; well before the December 2026 expenditure deadline.

## 4. What is the location of conservation activity?

**City:**

Surprise

**County:**

Maricopa

**Program/Project Congressional District (check all that apply)**

8

**Program/Project Legislative District (check all that apply)**

28

**Watershed**

New River and Aqua Fria watershed

**Active Management Area (if applicable):**

Phoenix Active Management Area

**Irrigation Non-Expansion area (if applicable):**

N/A

## 5. Conservation Activity Cost

**Amount requested from the WCGF for this activity:**

\$159,100.00

**Amount of matching funds:**

\$40,042.00

**Total conservation activity cost:**

\$199,142.00

***When applying for the grant, note that a single water conservation program grant may not exceed \$3,000,000. A single water conservation project grant may not exceed \$250,000. The WCGF requires at least a twenty-five percent match for each water conservation program or project.***

**6. What is the estimated water savings in acre-feet per year?**

14

**Explain calculation:**

Smart Irrigation controllers: 120 controllers x 15,680 gallons/yr = 1,881,600 gallons or 5.77 acre feet. Xeriscaping at New Homes: 22.2 gals/ sq ft X 9,000 sq. ft = 199,800 gallons or 0.61 acre feet. SFR Turf Removal: 23.1 gals/sq ft X 18,000 sq. ft = 416,316 gallons or 1.28 acre feet. HOA/Commercial/Multifamily Turf Removal: 37 gals X 54,000 sq ft = 1,988,000 gallons or 6.13 acre feet. Combined savings = 13.79 acre feet.

**7. What is the expected duration of the conservation activity?**

The City of Surprise intends to implement this grant over Fiscal Years 2024 and 2025. Our Fiscal Year starts on July 1st and ends on June 30. This coincides nicely with American Rescue Plan Act (ARPA) funds Obligation Deadline of June 2024 and the Expenditure Deadline of December 2026. All WIFA water conservation grant funds should be submitted for reimbursement by June 30, 2026, well in advance of the expenditure deadline.

## II. Conservation Activity Benefits and Results

**8. What is the water conservation activity you propose to fund with grant monies? Describe in detail.**

The City of Surprise's current Water Conservation Rebate program will be expanded to include ALL city residents, which the Census Bureau estimates to be 149,191 people as of 2021. It may be helpful to note that Surprise is one of the fastest growing cities in Arizona. Expanding this program to all residents will greatly enhance customer service and provide a more consistent and equitable message on water conservation. Currently, the city experiences communications challenges among Surprise residents who don't understand why the city does not provide water conservation rebates for all its residents.

The communications challenge is exacerbated by the fact that it is in the rather unique position of having 12 different water providers within city limits. These providers range in size from small community wells to large, multinational private utilities. Currently, Surprise water conservation rebates are limited to customers in the city's water service areas, since funds from those customer accounts fund the rebate program.

The City's water department currently serves about one-third of the city's population. Approximately two-thirds of the city's population are served by one large, multinational private utility which does not offer water conservation rebates for turf removal or smart controllers. Upon full build out, the city of Surprise will become the largest water provider.

Receiving WIFA funding for our conservation program will allow us to expand the program to all Surprise residents for the next two years as well as increase our rebate amounts for turf removal, making it a more enticing to customers while simultaneously increasing our water savings.

Specifically, we are projecting to enhance and expand our Water Conservation Rebate program to meet these goals:

1. Distribute and Inspect installation of 120 WaterSense Smart Irrigation Controllers.
2. Confirm and Inspect the installation of Xeriscape Landscapes at 9 New Home Purchase locations.
3. Process and inspect Turf Removal activities at 18 Single Family Residences
4. Process and inspect Turf Removal activities at 9 HOA, Commercial, or Multi-family properties.

**9. What is the source of the water that will be conserved? If it is mainstem Colorado River water or Colorado River water delivered through the Central Arizona Project, please clearly indicate so.**

The City of Surprise pumps approximately 9,000 acre-feet of groundwater each year. We also have an allocation of 10,249 acre-feet of Colorado River water delivered via the Central Arizona Project. Both groundwater and Colorado River water will be conserved using funds from the Water Conservation Grant.

**10. Describe the community (population size, demographics, principal economic activities, etc.) impacted by the conserved water.**

The City of Surprise is currently the tenth largest city in Arizona with a Census Bureau estimated population of 149,191 (2021). According to our Development Department data, Surprise increased its population 22% between 2010 and 2020.

The U.S. Census Bureau lists the city's demographics as follows:

- A. White alone, not Hispanic or Latino - 67.8%
- B. Hispanic or Latino - 20.7% (Census Bureau note: Hispanics may be of any race, so also are included in applicable race categories.)
- C. Two or more races - 7.3%
- D. Black or African American, alone 5.3%
- E. Asian, alone - 2.4%
- F. American Indian and Alaska Native, alone - 0.4%
- G. Native Hawaiian and other Pacific Islander, alone - 0.1%
- H. White, alone - 80.4%

The 2021 American Community Survey (ACS) estimated a five-year rate of "persons in poverty" at 7.5% within the city of Surprise.

In terms of economic activities, Educational services, and health care and social assistance comprise 24% of Surprise's civilian employment. Followed by Retail trade at 15.2%, Finance and insurance, and real estate and rental and leasing at 10.5%, Professional, scientific, and management, and administrative and waste management services at 9.0%. Rounding out the top five categories is Arts, entertainment, and recreation, and accommodation and food service at 8.7%.

Other categories include: Construction - 6.3%; Manufacturing - 6.4%; Public administration - 5.4%; Wholesale Trade - 1.9%; Transportation and warehousing, and utilities - 5.5%; Information - 1.8%; Other service, except public administration - 4.8%; and Agriculture, Forestry, Fishing and Hunting, and Mining - 0.5%.

**11. What is the extent to which your water conservation activity achieves one or more of the following (select all that apply):**

Long-term reductions in water use, Improvements in water use efficiency

**Describe:**

Surprise's Enhanced Water Conservation Rebate program will produce long-term reductions in water use. Multiple sources state Smart Irrigation Controllers are expected to last 5-10 years, or longer, with proper maintenance. Therefore, water savings from Smart Irrigation Controller rebates can reasonably be assumed for that duration. The City ensures proper controller installation and operation by hiring a third party contractor who inspects the system. The contractor confirms that the controller functions correctly and shows the homeowner how to operate and program the system. The inspector also ensures the controller's app has been downloaded to the homeowner's cellphone for ease of use. Based upon feedback from our contractor, most residents have the app downloaded and are aware of how to use their new controller before the inspector arrives. These actions help assure long term reductions in water use will be achieved.

In addition, the Smart Irrigation Controller Rebate component of the Enhanced Water Conservation Rebate program will improve water efficiency by replacing worn out or older controller models with state of the art technology that is easier to use and manage than conventional controllers. Customers can easily change their watering schedule using their cell phone, thereby eliminating the need to go out to the controller box to manually adjust their watering programs. To support changes in watering schedules, the city plans on using its utility billing software platform to remind homeowners to change their irrigation programs on a regular basis. Ideally controllers should be reprogrammed on a monthly basis, or at least seasonal basis.

Turf reductions with replacement xeriscape installation at Single Family Residences (SFRs) or HOAs, Commercial, or Multifamily homes will also lead to a long term reduction in water use. The University of Arizona estimates that a 15' by 15' section (225 square feet) of Bermuda grass will use 5,000 gallons of water per year, or 22.2 gallons per square foot per year. However, this figure reflects the quantity of water Bermuda grass needs and not the actual volume most homeowners use to irrigate turf.

The Water Use it Wisely (WUIW) Regional Partnership in the Metropolitan Phoenix area, promotes warm season (Bermuda) grass watering guidelines of once every 3-6 days in the summer months and once every 15-30 days in the winter months. More often than not, our Surprise water resource personnel and others (e.g. resident complaints) have observed homeowners, HOA's, and other entities needlessly watering their turf daily, or even multiple times per day, which is a complete waste of water.

Turf sprinkler systems put out varying quantities of water in units of gallons per minute (GPM). In contrast, replacement xeriscape landscaping requires minimal or no water use after the native or desert adapted plants are established. The City of Surprise supports the WUIW landscape watering guidelines which encourages drip irrigation for xeriscape gardens. WUIW promotes landscape watering of only once every 7 to 21 days for desert adapted plants and once every 14-30 days for cactus during the hottest time of the year. Drip irrigation delivers water to plants in units of gallons per hour (GPH.), as opposed to gallons per minute for turf. This fact alone will result in a substantial reduction of water use.

Similarly, supporting new home buyers with the purchase and subsequent installation of xeriscape gardening will minimize any remaining yard space for turf and therefore reduce outdoor water use. The beautiful aesthetics and low maintenance features of xeriscape gardens may also influence new homeowners and deter them from adding turf. Installation of a xeriscape garden readily lends itself to an improvement in water efficiency by limiting the amount of yard space available to grow high water use plants.

Please see Question 28 for more complete details on projected water savings for this program.

**12. What is the extent to which your water conservation activity addresses one of more of the following:**

Water supply shortages, Reliance on non-renewable water supplies, Groundwater depletion



**Describe:**

As previously stated, the City of Surprise has 12 different water services providers. The three largest providers, EPCOR Utilities, Liberty Utilities, and the City of Surprise all have Colorado River allocations from the Central Arizona Project (CAP). In August, 2021, the federal government issued the first-ever Tier 1 water shortage for the Colorado River. This prompted mandatory water cuts in Arizona which are being felt by Central Arizona Project (CAP) water users.

All three of the largest water provider's within the City of Surprise use groundwater as their primary source. Continued reductions in Colorado River water will only increase reliance on groundwater, adding more stress to the groundwater system. Arizona groundwater, when viewed on a macro scale, can be considered a non-renewable water supply. The 1980 Groundwater Management Act was established to prevent continued depletion of groundwater in several Active Management Areas (AMAs) within the state. The City of Surprise is within the boundaries of the Phoenix Active Management Area and is required to meet provisions within the Fourth Management Plan to help achieve safe yield for our aquifers.

Expanding and enhancing the existing water conservation rebate program to include all residents of Surprise will lessen the water utility reliance on the Colorado River and therefore reduce water supply shortages. The rebate program is intended to curb outdoor water use. This is "one-time-use" water from the utility's perspective, because it is water that once applied cannot be recaptured in the sewer system and the effluent treated and reclaimed for further use.

**13. How will your water conservation activity align with a local, regional, or statewide water plan or integrated resource management plan?**

The Surprise Enhanced Water Conservation Rebate program aligns with several local, county, regional and statewide water plans. Locally, the City of El Mirage, EPCOR Utilities, and Liberty Utilities have all offered to support and collaborate on this water conservation rebate program by marketing the program to Surprise residents within their water service areas. (Please see attached Letters of Support.)

We have built a solid partnership with the Maricopa County Master Gardener program. Their West Valley location meets in our Water Education Center (WEC) at City Hall to offer free advice on plants. They also support our WEC programs by offering occasional presentations on desert adapted plants and landscaping and other niche topics supportive of water efficient irrigation practices. We have also recently started a "train the trainer program" with the Master Gardeners, teaching them how to lead a professionally developed Xeriscape Garden Tours. The first Master Gardener Xeriscape Tour was delivered on April 29th and had 18 participants from a local gardening club. The goal is to offer Xeriscape Tours monthly, weather permitting.

Regionally, Surprise is a relative newcomer to water conservation efforts. The City has only had one full time water conservation specialist since 2019. We are grateful our conservation program has continued to be supported and encouraged by many other municipalities whom we've borrowed heavily from to build a formal conservation program. We are a member of Arizona Water Association which has a water conservation subcommittee which meets on a monthly basis. The Arizona Water Conservation Subcommittee supports municipal and private water providers by encouraging them to share ideas and information on water conservation, water waste code enforcement, as well as discuss other new initiatives and ideas to save water. We are hoping that we will be able to share data from our Enhanced Water Conservation Rebate program with our regional colleagues at the next annual Arizona Water Association Annual Conference. Being part of this organization makes our efforts regional and statewide in nature.

#### **14. What are the costs and benefits of your water conservation activity, including any environmental impacts?**

The costs and benefits of our water conservation rebate for the two-year period are:

Costs (all figures are rounded):

- Cost of controllers: \$15,000. 120 rebates will be allocated for Smart Irrigation Controller at \$125 price point.
- Cost of Single Family Residential Turf Removal Rebates: \$36,000. 18 rebates will be allocated for up to 1,000 square feet of turf at \$2/ square foot removed
- Cost of HOA/Commercial/Multifamily Turf Removal Rebates: \$108,000. 9 rebates of up to 6,000 square feet of turf at \$2/ square foot removed
- Cost of New Home Xeriscape Installation Rebates: \$3,600. 9 rebates will be allocated for \$400 for up to 1,000 square feet of xeriscaping
- Water Conservation staff: 500 hours @ \$30/hr = \$14,990 plus fringe benefits of \$5,241
- Communication Team Support (marketing & outreach): 28 hours @ \$36/hr = \$1,010 plus fringe benefit of \$215
- Cost of Aqueous rebate software subscription = \$9,296 annually
- Cost of Controller Inspections: 120 inspections @ \$40/controller = \$4,800

Benefits:

- Long term reduction in water use of an estimated 14 acre feet/year
- Improvements in water use efficiency using state of the art Smart Irrigation Controllers
- Positive customer perception
- More equitable approach to rebate process
- Enhanced community service - servicing whole community vs only water service area

Environmental impacts:

- Lower costs to pump water out of the aquifer. Our Operations Department Lead estimates that the cost to pump water out of the ground is roughly \$600 per acre feet. These rebates should save the city \$600 x 14 acre/feet = \$8,400 per year.  
Note: The pumping cost assumption looked at only the five largest costs for the water treatment division. These included: water resource department labor, cost of electricity, the cost of treatment chemicals, cost of fuel and the cost of equipment/asset replacement.
- Less water waste via evapotranspiration - water which will not be captured and reclaimed by the city's waste water treatment plant.
- Less water wasted overall
- More consistent approach to water use reduction across the City of Surprise

#### **15. How will you measure the effectiveness of the conservation activity?**

The Water Conservation Specialist (WCS) will measure the effectiveness of the Enhanced Water Conservation Rebate Program by performing a rebate analysis. The City of Surprise uses Advanced Metering Infrastructure (aka Smart Meters) and can directly quantify how much water has been saved by water conservation program participants. A recent Smart Controller rebate analysis looking at before and after water consumption data on rebates issued between 2018 to early 2022 quantified the average water savings at over 15,680 gallon per household per year. The WCS plans to continue to monitor water consumption over time.

The City's current turf removal program was started in 2022 and only three turf removals were completed in FY2023. We attribute the low response to ineffective/limited marketing, very low turf rebate payout, and confusion over the inclusion of a shade requirement using native or desert-adapted plants to help mitigate the heat island effect. Several turf applications received were dismissed by homeowners or rejected by the city. One common concern from applicants was that the low rebate amount per square foot wasn't worth the hassle of adding the shade plants, so applicants simply dismissed their application.

By researching other municipality's turf rebate programs, listening to feedback from homeowners, and collaborating with other WCS colleagues, the city strongly believes the turf removal and replacement component of our proposed Enhanced Water Conservation Rebate Program will be highly effective, primarily due to the much higher payout amount which will greatly offset the turf removal costs, making it more appealing to all applicants.

As with the smart controller rebates, the city will be able to track success of the turf removal components of the Enhanced Water Conservation Rebate Program by researching before and after water consumption values using its Smart Meter technology. The city will also coordinate with its supporting utility partners and hopes to gather water consumption data applicable to rebate applicants from those water service areas. As with the Smart Controller rebate component, the WCS plans to continue to monitor water consumption over time.

### III. Funding Sources

**16. If your water conservation activity is eligible for funding from WIFA's Long-Term Water Augmentation Fund or Water Supply Development Fund, does the nature of your conservation activity make funding from those funds impractical, and why?**

The Enhanced Water Conservation Rebate Program activities do not meet the criteria for the Long-Term Water Augmentation Fund or the Water Supply Development Fund. The intention of the rebate program is to promote long-term reductions in water use and to increase efficiency in existing water supplies, not to augment or develop new supplies.

**17. Would the conservation activity be otherwise implemented without this grant funding? Explain.**

Without this grant funding, the city would only be able to maintain the existing level of support for residents in its water service areas, which only covers roughly one-third of the city, and also maintain the same level of low funding for the turf removal rebate component. Offering rebates for a small subset of specific residents has created a perception of inconsistency and unfairness with residents outside of the city's water service area. Having the additional resources to increase turf rebate amounts and expand the program to all city residents, supports greater equity among all residents and dramatically increases the likelihood that a larger amount of turf will be removed which will result in a definite reduction in water consumption, not only in our water service area, but in those of other water providers as well. This is a win-win-win scenario for residents, water providers, and the environment.

**18. To what extent will your water conservation activity maximize or leverage multiple available funding sources, including federal funding?**

The costs related to the Enhanced Water Conservation Rebate Program are relatively small in comparison to water conservation infrastructure projects which the city has embarked upon in the past. The city has enough internal resources to meet the in-kind matching criteria for this proposed two-year program. In fact, we think our actual cost share will be greater than 25% and closer to 35%.

At this point, the city's main goal is to increase equity among its citizens by expanding the water conservation rebate program to all city residents and provide a larger incentive to remove turf. Additional funding from other sources, such as the Bureau of Reclamation's WaterSmart program has been looked into. Water Conservation staff scheduled a webinar with the WaterSmart representatives in February and they suggested another source of funding might be a better fit.

This Water Conservation Grant Fund is expressly for grants to governmental and non-governmental organizations for projects that promote conservation and decrease water use. This is exactly what the Enhanced Water Conservation Rebate program is meant to do.

**19. Are there cost-sharing opportunities with other applicants or other parties? Explain.**

Early discussions on this rebate program were held with other water providers and it was quickly determined that it made more sense for the city to administer the program since it has an overarching interest in the equity and well-being of all its citizens, and it already has a Smart Controller, Xeriscape, and Turf Removal rebate program that can be scaled up. As previously stated, the scale of the rebate project and the matching criteria for funding allowed the city to move forward without securing additional external funding. In addition, the wide-ranging regional footprint of the other water providers would have made it extremely difficult for them to participate in a more functional manner.

The city considers the proposed Enhanced Water Conservation Rebate program the second stage of expanding its water conservation presence throughout the city. If this program is successful, the city may once again seek mutual collaboration and funding support from other state or federal agencies or possibly further enlist the larger water service providers with customers within city limits.

**20. What is the source and amount of the match (including in-kind match)?**

The City is contributing a both a monetary and in-kind combined match of 25%, as required. The total cost share contribution is \$40,042 as previously stated in Question 5. The in-kind match includes staff time and fringe benefits for approximately one-quarter of the Water Conservation Specialist's time for program administration and oversight as well as approximately 2-3 hours per month of staff time and benefits from our communications team for marketing and outreach. Included in the in-kind match are the annual subscription fee for our Water Rebate Software Platform and the cost of Smart Controller inspections by our third part contractor, Outdoor Systems Management. Also included is a small amount for pre and post inspection travel. The monetary match is \$3,500. The source of the funding is the City of Surprise Water Utility Enterprise Fund.

Based upon preliminary calculations, the city's actual match to run this rebate program is really closer to 35%, which would allow for a higher Water Conservation Fund award. However, funding at that higher level was not needed for the program and therefore not requested.

IV. Capacity, Feasibility, & Public Comment

**21. What qualifications and capacity do you have for completing your proposed water conservation activity? Include any past managerial deficiencies and provide the name(s) and qualifications of the individual(s) or entities who will be managing this activity.**

The Enhanced Water Conservation Rebate Program will be administered by the City's Water Conservation Specialist, Sandra Hurlbut. Ms. Hurlbut has been with the city for less than a year, but has brought a wealth of water and natural resources experience with her. She has multiple degrees in science and one in public affairs and has enabled her former employer to receive grants from the Arizona Department of Water Resources, Water Management Assistance Program and the Environmental Protection Agency's Environmental Education Grant Program. She most recently served a Senior Program Coordinator for Arizona Project WET, Arizona's premier K-12 water education program offered through the University of Arizona. Prior to that she was a Senior Instructional Specialist with the Water Wise program at the Cochise County Cooperative Extension. Water Wise provided water conservation education and support for the cities of Sierra Vista, Bisbee, and Cochise County as a whole. Ms. Hurlbut activities and performance will be overseen by Amy Peterson, Water Resource Analyst and former Water Conservation Specialist for the city.

Amy Peterson has been a Water Resource Analyst for the City of Surprise since 2021. Prior to her current role, she served as the Water Conservation Specialist for two years. Over the last four years, she has been directly involved in coordinating the City's water conservation programs, including the construction of a new, 2-acre Xeriscape demonstration garden. She is also responsible for maintaining the city's water resource portfolio, preparing annual water use reports for compliance with Arizona's groundwater code, managing groundwater withdrawal and recharge permits, and long-range planning activities related to the city's Designation of Assured Water Supply. Amy also participates in the city's land development and entitlement process and finds value in applying a water conservation mindset to design review in order to encourage water-efficient development practices.

Michael Boule is the Director of the Water Resource Management Department for the City of Surprise. Mr. Boule will offer higher level oversight for this program, if needed.

Andrea Davis is the Director of Finance for the City of Surprise and will offer financial oversight and support for this program, as needed.

**22. Will there be significant management impacts as the result of the proposed conservation activity, or any technology associated with the conservation activity? (For example: additional costs or staffing requirements)**

There will not be significant management impacts as a result of the proposed conservation activity. The Water Conservation Specialist will be running the program and minimal oversight is expected. The increase in staff time dedicated to processing and tracking the additional water conservation rebates and for enhanced marketing and outreach have been estimated and accounted for in the attached budget.

**23. Will the proposed conservation activity promote collaborative partnerships to address water-related issues?**

**Explain.**

The Enhanced Water Conservation Rebate Program will be administered in collaboration with three other water service providers: EPCOR Utilities, the City of El Mirage, and Liberty Utilities. Of the three, EPCOR is currently the largest water provider in the city and services approximately two-thirds of all Surprise residents. EPCOR does not have an active smart irrigation controller or turf removal rebate program.

The City of El Mirage services a minority of residents but they are an important part of this program as they service the area in Surprise known as the "old homestead" or "ole town". Liberty Utilities recently purchased another water provider within the city limits and the actual number of Surprise residents they serve is not known at this time.

**24. What is the stakeholder involvement in the conservation activity planning process?**

All three water service providers have agreed to support this program by providing outreach and communication to Surprise residents in their water service areas. (Please see attached Letters of Support.)

**25. Will the proposed conservation activity include public outreach and opportunities for the public to learn about the conservation activity? Explain.**

The Enhanced Water Conservation Rebate Program will include opportunities for the public to learn about all the different types of rebates. The City of Surprise has multiple mechanisms for outreach:

- a. New Home Builders: We plan on offering a \$400 rebate to residents who have purchased a brand new home and choose to install xeriscape landscaping. We already collaborate with all the new home builders in Surprise to get new residents a "Welcome Kit" which includes information on water conservation rebates. The kit includes a welcome letter from the Water Resources Department, a listing of upcoming water conservation classes, a Watering by the Numbers booklet, general water conservation information, and some swag from the water department. The new home builders have been including our "Welcome Kits" in with their house closing materials.
- b. Surprise Regional Library: Once per month we support an outreach table at the Surprise Regional Library. The main goal of this table is to have an opportunity for additional one-on-one connections with Surprise residents. The objective is to tell residents about our rebates and the free classes we hold on water efficient landscaping, proper irrigation techniques, and other water conservation related topics. This approach has been very rewarding and fosters a lot of goodwill with our residents.
- c. Water Education Center: Surprise has a Water Education Center (WEC) located adjacent to our xeriscape demonstration garden. Our Water Conservation Specialist holds regular office hours in WEC to answer any rebate or water conservation questions citizens may have. We also hold many of our regular water conservation education classes in the center.
- d. Progress Magazine & Social Media: The Water Resources Department has a great relationship with our City's Communication Team. The Communication Team regularly features the Water Resources Department activities in a beautifully crafted, one to two page section in its Progress Magazine. They also generate regular social media posts on Facebook, Twitter, and Instagram for the conservation program. This partnership has helped foster much more interest in rebates and classes offered by the conservation program.
- e. Class/Event Surveys: The Communications Team has also supported the water conservation program by creating online surveys for every class and event held. Surveys are sent out to participants after every event and the results are viewed and used to plan future events or make modifications to programs.
- f. Utility Billing Emails: A newer initiative has been to do outreach via our WaterSmart billing system. Although we have just started using this system for outreach, we've already reaped the rewards of additional participation from residents who were unaware of some of our offerings. We experienced a 20-25% increase in class participation after residents were notified about our conservation program offerings. We expect to experience a similar uptick when we begin rebate outreach.

**26. Is there community and/or sector support for the conservation activity? Explain.**

Based upon our history of offering rebates for the last 5 years, there is definitely community support for continuing this program. In fact, the water conservation program is regularly questioned as to why the rebates are not offered to all City of Surprise residents. Also, customers from other water providers have tried to apply for the program only to have their application rejected. This grant funding will allow the City of Surprise to make our rebate program more equitable by expanding it to all the residents within the city.

**27. How feasible is it to complete your water conservation activity? Explain.**

It is very feasible to expand our rebate program to all city residents, provided we have enough funding. The city already has a water conservation rebate program and a formal rebate system already exists. WIFA Water Conservation Grant Funding will enable the city to scale up the rebate program and allow many more residents and qualified entities to participate. Increasing the number of rebates received and processed will also support the growth of the overall water conservation program and possibly provide justification for increasing staffing in the future.

**28. If the conservation activity is a continuation of ongoing activities, has the activity been shown to be effective? If a new activity, has the proposed project, technology, or technique previously been implemented?**

The proposed Enhanced Water Conservation Rebate program is an expansion and enhancement of ongoing activities. A recent analysis of smart irrigation controller rebates issued in the first four years of the program indicated an overall average savings of 15,680 gallons per year per rebate. To determine these savings, we researched the volume of water used at each household a year prior to controller installation and a year after controller installation. The results were double our assumption of 7,500 gallons per year for each rebate. We consider this conservation activity to be very effective.

For this program, the Smart Irrigation Controller component should offer water savings of: 120 controllers X 15,680 gallons/year = 1,881,600 gallons saved or 5.77 acre feet per year.

It is more challenging to quantify the water savings from xeriscape installation. The few applications we received were rejected because applicants did not fully follow the rebate requirements. However, if we assume that the installed xeriscape landscape will replace warm season grass, we can use the University of Arizona Bermuda grass watering needs as a basis for calculating annual water savings. As stated previously, assuming 5,000 gallons of water are needed for a 15' x 15' (225 square feet) Bermuda grass lawn, xeriscape landscape installation will save a minimum of 22.2 gallons per square foot. Using the 22.2 gallon/square foot figure, the projected minimum water savings would be 9,000 square feet x 22.2 gallons = 199,800 gallons, or 0.61 acre feet saved every year for xeriscape landscaping installation. Again, this figure is likely to be very low due to overwatering. However, avoiding turf installation using xeriscape is an effective means of continuing water conservation, especially when considering the low cost to support this rebate.

We do not have any actual water savings data for the Single Family Residential turf removal program as we only recently started that type of rebate. As it stands now, only three turf removal rebates were issued in 2023. Not enough time has gone by to fully analyze the water consumption result. However, using residential data from our WaterSmart system reveals residents with small outdoor areas (3,001 - 4,000 square feet) use an average of 221.8 GPD of water or 80,950 gallons per year. This equals a usage of 23.1 gallons per square foot per year. If we multiply that value by the projected rebate turf removal value of 18,000 square feet, we get a water savings of 416,316 gallons per year or 1.28 acre feet.

Diving deeper into some of our water use data for the HOA, Commercial, and Multifamily rebates water savings values, we know the city assigns an irrigation demand per commercial account of 5,231 gallons per day (GPD) for future commercial development purposes. Looking at the irrigation account data from our WaterSmart system for last year, 82% of commercial irrigators were above the city's irrigation daily demand value of 5,231 GPD. Forty-seven percent had more than double the daily demand and twenty percent had more than quadruple the daily demand. The highest demand was 20 times the daily irrigation demand estimation! The average daily demand for all irrigators is 12,538 GPD. Looking at this data it is clear irrigators are significantly overwatering their turf areas.

Looking at a subset of data from our WaterFluence system, exclusively for HOA large turf facilities, the average area of turf at these facilities is 560,000 square feet and the average GPD per square foot of turf is 37 gallons. If this figure is representative of our HOA/Commercial/Multifamily turf rebate recipients then, our projected water savings would be 37 GPD x 54,000 square feet = 1,998,000 gallons = 6.13 acre feet/year. If results consistent with these assumptions are correct, the HOA, Commercial and Multifamily rebate may prove to be our most productive conservation technique of the four proposed.

The combined rebate program is projected to save 13.79 acre feet of water per year.

**29. Will the proposed conservation activity implement an established Best Management Practice? Explain.**

Water conservation rebate programs are an established Best Management Practices required by the Arizona Department of Water Resources in the Fourth Management Plan for the Phoenix Active Management Area. Specifically, Best Management Practices are found in Section 5.3: Municipal Conservation Program Description, Subsection 5.3.1.6 Best Management Practices (BMP), Appendix 5C, Category 6: Rebates/Incentives.

Rebate programs included under Appendix 5C, Category 6 are:

For Residents:

- 6.3 Smart Irrigation Technology Rebate or Incentive Program,
- 6.7 Landscape Conversion Rebate or Incentive Program,
- 6.8 Installing Xeriscapes in New Landscapes Rebate or Incentive Program

ADWR 4th Management Plan Link: [https://new.azwater.gov/sites/default/files/media/FULL%20FINAL%20PHX%204MP\\_1.pdf](https://new.azwater.gov/sites/default/files/media/FULL%20FINAL%20PHX%204MP_1.pdf)

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**Additional Supporting Documentation (pdf, jpg, word, excel)**

Surprise WCGF Budget-Final.xlsx

**Additional Supporting Documentation (pdf, jpg, word, excel)**

Letter of Support - El Mirage.pdf

**Additional Supporting Documentation (pdf, jpg, word, excel)**

Letter of Support Liberty Utilities.pdf

**Additional Supporting Documentation (pdf, jpg, word, excel)**

Letter of Support-EPCOR.pdf

**Additional Supporting Documentation (pdf, jpg, word, excel)**

**Average Score**

**# of Reviews**

0

**# of Denials**

0

Please use the following link to view the Budget

**Budget Worksheet**

**View Budget Worksheet**

<https://portal.ecivis.com/#/peerBudget/102E4755-33C5-4AA9-9CAD-B0E462A68E7C>

**Application Goals**

**View Application Goals**

<https://portal.ecivis.com/#/peerGoals/85CC2A1B-B627-437F-894C-FE0206CAAADF>

## **EXHIBIT B**

### **Board Resolution**

[See attached]



***Grant Resolution 2024-053– City of Surprise***  
***Water Infrastructure Finance Authority of Arizona***

**Section 1: Resolution**

WHEREAS, the Water Infrastructure Finance Authority of Arizona (the “*Authority*”) has received from City of Surprise (the “*Local Grantee*”) a request (the “*Grant Application*”) for the Water Conservation Grant Fund (the “*Grant*”); and

WHEREAS, the Authority has determined that the Local Grantee has met the applicable requirements of the American Rescue Plan Act (“ARPA”), and Arizona Revised Statutes §§ 41-2702 et seq. and 49-1331 et. seq.; and

WHEREAS the terms and conditions under which the Grant will be made and the obligations of the Local Grantee will be set forth in a grant agreement (the “*Grant Agreement*”) to be executed by the Local Grantee and the Authority.

NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE AUTHORITY AS FOLLOWS:

The Board approves the Grant Application.


The Director of the Authority is hereby authorized and directed to execute the Grant Agreement with the Local Grantee to evidence a Grant in accordance with all applicable laws, the Grant Application, and the Summary detailed in Section 2 of this Grant Resolution.

The Director and other Authority officials, as appropriate, are authorized and directed to sign any document and take such actions as necessary and appropriate to consummate the transactions contemplated by this Resolution.

This Resolution shall take effect immediately.

Dated: September 20, 2023

By: David Beckham  
David Beckham (Sep 20, 2023 12:58 PDT)  
Chairman

Attest:   
Director

***Grant Resolution 2024-053– City of Surprise***  
***Water Infrastructure Finance Authority of Arizona***

**Section 2: Summary**

**2.1 Grant Number**

**WC1-050-2023**

**2.2 Description**

This conservation activity will expand the City’s water conservation rebate program by adding 120 irrigation controllers, xeriscape landscaping, and turf removal.

**2.3 Grant Amount Requested**

**\$159,100**

## EXHIBIT C Scope of Work

Program/Project Title:	
Grant Award:	
Match Amount and Source of Match (Cash and/or In-kind):	<i>(Breakdown the amount of cash and/or in-kind match being provided)</i>
Scope of Work:	
Purpose of project/program:	

### Scope of Work Schedule

Estimated grant draws by month for the fiscal period beginning November 2023 and ending June 2026

Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
N/A	N/A	N/A	N/A	\$	\$
Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
\$	\$	\$	\$	\$	\$

Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
\$	\$	\$	\$	\$	\$
Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
\$	\$	\$	\$	\$	\$

Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
\$	\$	\$	\$	\$	\$
Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26
\$	\$	\$	\$	\$	\$

**Total \$ 159,100.00 -**

*Note all grants must adhere to the following benchmarks as described in section 2.6.3 of this grant agreement.*

- *Expend 5% of the Award by December 2, 2024.*
- *Expend 50% of the Award by December 31, 2025.*
- *Expend 75% of the Award by March 31, 2026.*

<b>Scope of Work Schedule Narrative:</b>
<i>(Describe timelines, expectations of when projects will start/complete, etc.)</i>

## **EXHIBIT D**

### **General Terms and Conditions**

All defined terms used herein that are not otherwise defined or described herein, shall have the meanings ascribed to them in the Agreement attached hereto.

1. Agreement Interpretation.

- 1.1. Captions and Headings. The captions and headings contained in this Agreement are included for convenience of reference only and are not intended to limit or enlarge the terms of this Agreement.
- 1.2. Choice of Law. The substantive laws of Arizona shall govern the interpretation, validity, performance and enforcement of this Agreement. A tribal government, by executing this Agreement, hereby waives any defense it may have of tribal sovereign immunity for the limited purpose of providing for the enforcement of this Agreement in accordance with its terms.
- 1.3. Date Calculation. If the last day of any time stated herein shall fall on a Saturday, Sunday, or legal holiday in the State of Arizona, then the duration of such time shall be extended so that it shall end on the next succeeding day which is not a Saturday, Sunday, or legal holiday.
- 1.4. Implied Agreement Terms. Each provision of law and any terms required by law to be in this Agreement are a part of this Agreement as if fully stated in it.
- 1.5. Order of Precedence. In the event of a conflict in the provisions of the Agreement, as accepted by the Grantee and the Authority, and as they may be amended from time to time, the following shall prevail in the order set forth below:
  - 1.5.1. Federal provisions;
  - 1.5.2. Agreement Amendments;
  - 1.5.3. Agreement; then
  - 1.5.4. General Terms and Conditions.
- 1.6. Relationship of Parties. Neither Party to this Agreement shall be deemed to be the employee or agent of the other Party to the Agreement.
- 1.7. Severability. If any provision of this Agreement or the application thereof is held invalid, that invalidity shall not affect other provisions or applications of this Agreement which can be given effect without the invalid provision or application, and to this end the provisions of this Agreement are severable.
- 1.8. Third-Party Rights. Nothing in this Agreement is intended to create any third-party beneficiary rights; and Grantee and the Authority expressly state that this Agreement does not create any third-party rights of enforcement.
- 1.9. Waivers. No term or provision hereof will be considered waived by either Party, and no breach is excused or consented to by either Party, unless such waiver or consent is in writing and signed on behalf of the Party against whom the waiver is asserted. No express or implied consent by either Party to, waiver of, or failure of a Party to enforce its rights with respect to a breach by the other Party shall constitute consent to or, waiver of any subsequent or other breach by the other Party. Neither the failure nor the delay of the Authority to exercise any right, power or privilege under this Agreement

shall operate as a waiver thereof or shall any single or partial exercise of any right, power or privilege preclude any further exercise of any other right, power or privilege.

2. Agreement Administration and Operation.

- 2.1. Accounting. Grantee shall maintain for the purposes of this Agreement an accounting system or procedures and practices that conforms to generally accepted accounting procedures.
- 2.2. Audits and Inspections. The Authority shall have the right of access to records of the Grantee in order to conduct audits or other investigations. Upon request, the Authority's authorized representatives shall be provided with access and shall have the right to examine all documents, financial records, facilities, and activities related to Grantee's performance of this Agreement and to the receipt and expenditure of the Award. Grantee agrees to rectify issues identified in audits within the Authority prescribed time periods. Failure to comply with the request for audit or inspection, or a lack of documentation and records, is cause for termination of this Agreement or withholding of future disbursements.
- 2.3. Audit Exceptions. If federal or state audit exceptions are made relating to this Agreement, Grantee shall reimburse all costs incurred by the State of Arizona and the Authority associated with defending against the audit exception or performing an audit or follow-up audit including but not limited to: audit fees, court costs, attorney's fees, travel costs, penalty assessments, and all other costs of whatever nature. Immediately upon notification from the Authority, Grantee shall reimburse the amount of the audit exception and any other related costs directly to the Authority as specified by the Authority in the notification.
- 2.4. Procurement. Procurement of labor, services, supplies, materials, and equipment shall be conducted according to applicable federal, state, and local statutes. The Authority may review any procurement solicitations that Grantee issues. The Authority's review and comments will not constitute an approval of the solicitation. Regardless of the Authority's review, the Grantee remains bound by all applicable laws, regulations, and Agreement terms. If during its review, the Authority identifies any deficiencies, then the Authority shall communicate those deficiencies to the Grantee within seven (7) business days.
- 2.5. Retention. Pursuant to A.R.S. § 35-214 and 35-215, Grantee shall retain all records relating to this Agreement for a period of five years from the date of final payment to Grantee or as required by applicable law, whichever is longer.

3. Insurance. Grantee and its subcontractors shall procure and maintain, until all of their obligations have been discharged, including any warranty periods under this Agreement, insurance against claims for injury to persons or damage to property arising from, or in connection with, the performance of the work hereunder by the Grantee, its agents, representatives, employees or subcontractors.

- 3.1. The Insurance Requirements herein are minimum requirements for this Agreement and in no way limit the indemnity covenants contained in this Contract. The State of Arizona in no way warrants that the minimum limits contained herein are sufficient to protect the Grantee from liabilities that arise out of the performance of the work under this Agreement by the Grantee, its agents, representatives, employees or subcontractors, and the Grantee is free to purchase additional insurance.
- 3.2. Minimum Scope and Limits of Insurance. Grantee shall provide coverage with limits of liability not less than those stated below.

**Water Conservation Grant Fund**

3.2.1. Commercial General Liability (CGL) – Occurrence Form. Policy shall include bodily injury, property damage, and broad form contractual liability coverage.

- General Aggregate \$2,000,000
- Products – Completed Operations Aggregate \$1,000,000
- Personal and Advertising Injury \$1,000,000
- Damage to Rented Premises \$50,000
- Each Occurrence \$1,000,000

3.2.1.1. The policy shall be endorsed, as required by this written agreement, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the Grantee.

3.2.1.2. The policy shall contain a waiver of subrogation endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Grantee.

3.2.2. Business Automobile Liability. Bodily Injury and Property Damage for any owned, hired, and/or non-owned automobiles used in the performance of this Contract.

- Combined Single Limit (CSL) \$1,000,000

3.2.2.1. The policy shall be endorsed, as required by this written agreement, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by, or on behalf of, the Grantee involving automobiles owned, hired and/or non- owned by the Grantee.

3.2.2.2. The policy shall contain a waiver of subrogation endorsement as required by this written agreement in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Grantee.

3.2.3. Workers' Compensation and Employers' Liability.

- Workers' Compensation Statutory
- Employers' Liability
  - o Each Accident \$1,000,000
  - o Disease – Each Employee \$1,000,000
  - o Disease – Policy Limit \$1,000,000

3.2.3.1. The policy shall contain a waiver of subrogation endorsement, as required by this written agreement, in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Grantee.

3.2.3.2. This requirement shall not apply to any entity that is exempt under A.R.S. § 23-901, and when such entity executes the appropriate waiver form (Sole Proprietor or Independent Contractor).

**Water Conservation Grant Fund**

- 3.3. Additional Insurance Requirements. The policies shall include, or be endorsed to include, as required by this written agreement, the following provisions:
- 3.3.1. The Grantee’s policies, as applicable, shall stipulate that the insurance afforded the Grantee shall be primary and that any insurance carried by the Authority, its agents, officials, employees or the State of Arizona shall be excess and not contributory insurance, as provided by A.R.S. § 41-621(E).
- 3.3.2. Insurance provided by the Grantee shall not limit the Grantee’s liability assumed under the indemnification provisions of this Agreement.
- 3.4. Notice of Cancellation. Applicable to all insurance policies required within the Insurance Requirements of this Agreement, Grantee’s insurance shall not be permitted to expire, be suspended, be canceled, or be materially changed for any reason without thirty (30) days prior written notice to the State of Arizona. Within two (2) business days of receipt, Grantee must provide notice to the State of Arizona if they receive notice of a policy that has been or will be suspended, canceled, materially changed for any reason, has expired, or will be expiring. Such notice shall be sent directly to the Department and shall be mailed, emailed, hand delivered or sent by facsimile transmission to (State Representative’s Name, Address & Fax Number).
- 3.5. Acceptability of Insurers. Grantee’s insurance shall be placed with companies licensed in the State of Arizona or hold approved non-admitted status on the Arizona Department of Insurance List of Qualified Unauthorized Insurers. Insurers shall have an “A.M. Best” rating of not less than A- VII. The State of Arizona in no way warrants that the above-required minimum insurer rating is sufficient to protect the Grantee from potential insurer insolvency.
- 3.6. Verification of Coverage. Contractor shall furnish the Authority with certificates of insurance (valid ACORD form or equivalent approved by the State of Arizona) evidencing that Grantee has the insurance as required by this Contract. An authorized representative of the insurer shall sign the certificates. All such certificates of insurance and policy endorsements must be received by the State before work commences. The Authority’s receipt of any certificates of insurance or policy endorsements that do not comply with this written agreement shall not waive or otherwise affect the requirements of this agreement. Each insurance policy required by this Agreement must be in effect at, or prior to, commencement of work under this Agreement. Failure to maintain the insurance policies as required by this Agreement, or to provide evidence of renewal, is a material breach of the Agreement. All certificates required by this Agreement shall be sent directly to the Authority. The State of Arizona project/Agreement number and project description shall be noted on the certificate of insurance. The Authority reserves the right to require complete copies of all insurance policies required by this Agreement at any time.
- 3.7. Subcontractors. Grantee’s certificate(s) shall include all subcontractors as insureds under its policies or Grantee shall be responsible for ensuring and/or verifying that all subcontractors have valid and collectable insurance as evidenced by the certificates of insurance and endorsements for each subcontractor. All coverages for subcontractors shall be subject to the minimum Insurance Requirements identified above. The Authority reserves the right to require, at any time throughout the life of this contract, proof from the Grantee that its subcontractors have the required coverage.
- 3.8. Exceptions. In the event the Grantee or subcontractor(s) is/are a public entity, then the Insurance Requirements shall not apply. Such public entity shall provide a certificate of self- insurance. If the Grantee or subcontractor(s) is/are a State of Arizona agency, board, commission, or university, none of the above shall apply.



**Water Conservation Grant Fund**

4. Certifications Required by State Law.

- 4.1. If the Grantee is a Company as defined in A.R.S. § 35-393, the Grantee certifies that it is not currently engaged in a boycott of Israel as described in A.R.S. § 35-393 and will refrain from any such boycott for the duration of this Agreement.
  - 4.2. The Grantee further certifies that it shall comply with A.R.S. § 35-394, regarding use of the forced labor of ethnic Uyghurs, as applicable.
  - 4.3. Immigration Laws. Grantee certifies and warrants that it is in compliance with A.R.S. § 41-4401 and further acknowledges that any contractor or subcontractor who is contracted by Grantee to perform work related to this Agreement shall warrant its compliance with all federal immigration laws and regulations that relate to its employees and its compliance with A.R.S. § 23-214(A). Any breach of this warranty shall be deemed a material breach of this Agreement that is subject to penalties up to and including termination of this Agreement. The Authority retains the legal right to inspect the employment records of any employee of any contractor or subcontractor who performs work related to this Agreement to ensure that the contractor or subcontractor is complying with the warranty in this paragraph and that the contractor agrees to make all employment records of said employee available during normal working hours to facilitate such an inspection.
  - 4.4. Non-Discrimination. Grantee certifies and warrants that it shall comply with the provisions of State Executive Order 2009-9. In performing this Agreement, Grantee shall not, and shall ensure that any and all contractors, subcontractors, employees, agents, volunteers, officers, officials, directors, volunteers, and affiliates, also shall not discriminate, harass, or allow harassment against any person on the basis of sex, race, color, ancestry, religious cred, national origin, physical disability, mental disability, medical condition, age, marital status, or any other basis prohibited under law. Grantee shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under this Agreement.
5. Reversion of Remaining Funds. Upon expiration or termination of this Agreement, Grantee shall transfer to the Authority any unexpended funds provided to Grantee by the Authority under this Agreement.

**Acknowledgment**

The Grantee, \_\_\_\_\_, hereby acknowledges and accepts the above terms and conditions. I hereby certify that I represent a legal entity with authority to enter into this Agreement.

By: \_\_\_\_\_  
Signature

Date: \_\_\_\_\_

\_\_\_\_\_  
Print Name and Title

For: \_\_\_\_\_  
Grantee Name

Tax ID No.: \_\_\_\_\_

## **EXHIBIT E**

### **Federal Provisions**

As a condition of receipt of federal financial assistance from the Department of the Treasury, the Grantee provides the assurances stated herein. The federal financial assistance may include federal grants, loans and contracts to provide assistance to the Grantee's beneficiaries, the use or rent of Federal land or property at below market value, Federal training, a loan of Federal personnel, subsidies, and other arrangements with the intention of providing assistance.

Federal financial assistance does not encompass contracts of guarantee or insurance, regulated programs, licenses, procurement contracts by the Federal government at market value, or programs that provide direct benefits. The assurances apply to all federal financial assistance from, or funds made available through the Department of the Treasury, including any assistance that the Grantee may request in the future. The Civil Rights Restoration Act of 1987 provides that the provisions of the assurances apply to all of the operations of the Grantee's program(s) and activity(ies), so long as any portion of the Grantee's program(s) or activity(ies) is federally assisted in the manner prescribed above.

All defined terms used herein that are not otherwise defined or described herein, shall have the meanings ascribed to them in the Agreement attached hereto.

#### **ARTICLE I - ARPA Terms and Conditions**

- 1.1. **Accounting.** Grantee shall maintain for the purposes of this Agreement an accounting system or procedures and practices that conforms to Generally Accepted Accounting Principles. As defined by 2 C.F.R. Part 200, Subpart A, GAAP "has the meaning specified in accounting standards issued by the Government Accounting Standards Board and the Financial Accounting Standards Board.
- 1.2. **Use of Funds.** Grantee understands and agrees that the funds disbursed under this award may only be used in compliance with section 603(c) of the Social Security Act (the Act), Treasury's regulations implementing that section, and guidance issued by Treasury regarding the foregoing.
- 1.3. **Capabilities.** Grantee will determine prior to engaging in any project using this assistance that it has the institutional, managerial, and financial capability to ensure proper planning, management, and completion of such project.
- 1.4. **Reporting.** The Grantee agrees to comply with any reporting obligations established by Treasury as they relate to this award.
- 1.5. **Maintenance of and Access to Records.** Grantee shall maintain records and financial documents sufficient to evidence compliance with section 603(c) of the Act, Treasury's regulations implementing that section, and guidance issued by Treasury regarding the foregoing. The Treasury Office of the Inspector General and the Government Accountability Office, or their authorized representatives, shall have the right of access to records (electronic and otherwise) of Grantee in order to conduct audits or other investigations. Records shall be maintained by Grantee for a period of five (5) years after all funds have been expended or returned to Treasury, whichever is later.
- 1.6. **Pre-Award Costs.** Pre-award costs are allowable only to the extent permitted in 2 C.F.R. § 200.458. Pursuant to the Treasury's SLFRF FAQ, Section 2.6, the ARPA final rule permits funds to be used to cover costs incurred beginning on March 3, 2021. Pre-award costs shall be allowable subject to the terms and conditions of the Agreement.

- 1.7. Administrative Costs. Grantee may use funds provided under this award to cover both direct and indirect costs.
- 1.8. Compliance with Applicable Law and Regulations. Grantee agrees to comply with the requirements of section 603 of the Act, regulations adopted by Treasury pursuant to section 603(f) of the Act, and guidance issued by Treasury regarding the foregoing. Grantee also agrees to comply with all other applicable federal statutes, regulations, and executive orders, and Grantee shall provide for such compliance by other parties in any agreements it enters into with other parties relating to this award. Federal regulations applicable to this award include, without limitation, the following:
  - 1.8.1. Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 C.F.R. Part 200, other than such provisions as Treasury may determine are inapplicable to this Award and subject to such exceptions as may be otherwise provided by Treasury. Subpart F – Audit Requirements of the Uniform Guidance, implementing the Single Audit Act, shall apply to this award.
  - 1.8.2. Universal Identifier and System for Award Management (SAM), 2 C.F.R. Part 25, pursuant to which the award term set forth in Appendix A to 2 C.F.R. Part 25 is hereby incorporated by reference.
  - 1.8.3. Reporting Subaward and Executive Compensation Information, 2 C.F.R. Part 170, pursuant to which the award term set forth in Appendix A to 2 C.F.R. Part 170 is hereby incorporated by reference.
  - 1.8.4. OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement), 2 C.F.R. Part 180, including the requirement to include a term or condition in all lower tier covered transactions (contracts and subcontracts described in 2 C.F.R. Part 180, subpart B) that the award is subject to 2 C.F.R. Part 180 and Treasury’s implementing regulation at 31 C.F.R. Part 19.
  - 1.8.5. Grantee Integrity and Performance Matters, pursuant to which the award term set forth in 2 C.F.R. Part 200, Appendix XII to Part 200 is hereby incorporated by reference.
  - 1.8.6. Governmentwide Requirements for Drug-Free Workplace, 31 C.F.R. Part 20.
  - 1.8.7. New Restrictions on Lobbying, 31 C.F.R. Part 21.
  - 1.8.8. Generally applicable federal environmental laws and regulations.
- 1.9. Statutes and regulations prohibiting discrimination applicable to this award include, without limitation, the following:
  - 1.9.1. Title VI of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d et seq.) and Treasury’s implementing regulations at 31 C.F.R. Part 22, which prohibit discrimination on the basis of race, color, or national origin under programs or activities receiving federal financial assistance.
  - 1.9.2. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability under any program or activity receiving federal financial assistance;

- 1.9.3. The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101 et seq.), and Treasury’s implementing regulations at 31 C.F.R. Part 23, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance;
  - 1.9.4. Title II of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. §§ 12101 et seq.), which prohibits discrimination on the basis of disability under programs, activities, and services provided or made available by state and local governments or instrumentalities or agencies thereto; and
  - 1.9.5. The Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328), which limit certain political activities of State or local government employees whose principal employment is in connection with an activity financed in whole or in part by this federal assistance.
- 1.10. Remedial Actions. In the event of Grantee’s noncompliance with section 603 of the Act, other applicable laws, Treasury’s implementing regulations, guidance, or any reporting or other program requirements, Treasury may impose additional conditions on the receipt of a subsequent tranche of future award funds, if any, or take other available remedies as set forth in 2 C.F.R. § 200.339. In the case of a violation of section 603(c) of the Act regarding the use of funds, previous payments shall be subject to recoupment as provided in section 603(e) of the Act.
  - 1.11. False Statements. Grantee understands that making false statements or claims in connection with this award is a violation of federal law and may result in criminal, civil, or administrative sanctions, including fines, imprisonment, civil damages and penalties, debarment from participating in federal awards or contracts, and/or any other remedy available by law.
  - 1.12. Publications. Any publications produced with funds from this award must display the following language: “This project [is being] [was] supported, in whole or in part, by federal award number [enter project FAIN] awarded to [name of Grantee] by the U.S. Department of the Treasury.”
  - 1.13. Debts Owed the Federal Government. Any funds paid to Grantee: (1) in excess of the amount to which Grantee is finally determined to be authorized to retain under the terms of this award; (2) that are determined by the Treasury Office of Inspector General to have been misused; or (3) that are determined by Treasury to be subject to a repayment obligation pursuant to section 603(e) of the Act and have not been repaid by Grantee shall constitute a debt to the federal government. Any debts determined to be owed the federal government must be paid promptly by Grantee. A debt is delinquent if it has not been paid by the date specified in Treasury’s initial written demand for payment, unless other satisfactory arrangements have been made or if the Grantee knowingly or improperly retains funds that are a debt as defined in paragraph 14(a). Treasury will take any actions available to it to collect such a debt.
  - 1.14. Disclaimer. The United States expressly disclaims all responsibility or liability to Grantee or third persons for the actions of Grantee or third persons resulting in death, bodily injury, property damages, or any other losses resulting in any way from the performance of this award or any other losses resulting in any way from the performance of this award or any contract, or subcontract under this award. The acceptance of this award by Grantee does not in any way establish an agency relationship between the United States and Grantee.
  - 1.15. Protections for Whistleblowers. In accordance with 41 U.S.C. § 4712, Grantee may not discharge, demote, or otherwise discriminate against an employee in reprisal for disclosing to any of the list of persons or entities provided below, information that the employee reasonably believes is evidence of

gross mismanagement of a federal contract or grant, a gross waste of federal funds, an abuse of authority relating to a federal contract or grant, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to a federal contract (including the competition for or negotiation of a contract) or grant. The list of persons and entities referenced in the paragraph above includes the following:

- 1.15.1. A member of Congress or a representative of a committee of Congress.
  - 1.15.2. An Inspector General.
  - 1.15.3. The Government Accountability Office.
  - 1.15.4. A Treasury employee responsible for contract or grant oversight or management. An authorized official of the Department of Justice or other law enforcement agency;
  - 1.15.5. A court or grand jury; or
  - 1.15.6. A management official or other employee of Grantee, contractor, or subcontractor who has the responsibility to investigate, discover, or address misconduct.
  - 1.15.7. Grantee shall inform its employees in writing of the rights and remedies provided under this section, in the predominant native language of the workforce.
- 1.16. Increasing Seat Belt Use in the United States. Pursuant to Executive Order 13043, 62 FR 19217 (Apr. 18, 1997), Grantee should encourage its contractors to adopt and enforce on-the job seat belt policies and programs for their employees when operating company-owned, rented or personally owned vehicles.
  - 1.17. Reducing Text Messaging While Driving. Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Grantee should encourage its employees, subrecipients, and contractors to adopt and enforce policies that ban text messaging while driving, and Grantee should establish workplace safety policies to decrease accidents caused by distracted drivers.

## **ARTICLE II – Civil Rights Compliance**

- 2.1. Grantee ensures its current and future compliance with Title VI of the Civil Rights Act of 1964, as amended, which prohibits exclusion from participation, denial of the benefits of, or subjection to discrimination under programs and activities receiving federal financial assistance, of any person in the United States on the ground of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury Title VI regulations at 31 CFR Part 22 and other pertinent executive orders such as Executive Order 13166, directives, circulars, policies, memoranda, and/or guidance documents.
- 2.2. Grantee acknowledges that Executive Order 13166, “Improving Access to Services for Persons with Limited English Proficiency,” seeks to improve access to federally assisted programs and activities for individuals who, because of national origin, have Limited English proficiency (LEP). Grantee understands that denying a person access to its programs, services, and activities because of LEP is a form of national origin discrimination prohibited under Title VI of the Civil Rights Act of 1964 and the Department of the Treasury’s implementing regulations. Accordingly, Grantee shall initiate reasonable steps, or comply with the Department of the Treasury’s directives, to ensure that LEP persons have meaningful access to its programs, services, and activities. Grantee understands and

- agrees that meaningful access may entail providing language assistance services, including oral interpretation and written translation where necessary, to ensure effective communication in the Grantee's programs, services, and activities.
- 2.3. Grantee agrees to consider the need for language services for LEP persons when Grantee develops applicable budgets and conducts programs, services, and activities. As a resource, the Department of the Treasury has published its LEP guidance at 70 FR 6067. For more information on taking reasonable steps to provide meaningful access for LEP persons, please visit <http://www.lep.gov>. OMB Approved No. 1505-0271 Expiration Date: April 30, 2025.
  - 2.4. Grantee acknowledges and agrees that compliance with the assurances constitutes a condition of continued receipt of federal financial assistance and is binding upon Grantee and Grantee's successors, transferees, and assignees for the period in which such assistance is provided.
  - 2.5. Grantee acknowledges and agrees that it must require any sub-grantees, contractors, subcontractors, successors, transferees, and assignees to comply with assurances 1-4 above, and agrees to incorporate the following language in every contract or agreement subject to Title VI and its regulations between the Grantee and the Grantee's sub-grantees, contractors, subcontractors, successors, transferees, and assignees: The sub-grantee, contractor, subcontractor, successor, transferee, and assignee shall comply with Title VI of the Civil Rights Act of 1964, which prohibits Grantees of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury's Title VI regulations, 31 CFR Part 22, which are herein incorporated by reference and made a part of this contract (or agreement). Title VI also includes protection to persons with "Limited English Proficiency" in any program or activity receiving federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by the Department of the Treasury's Title VI regulations, 31 CFR Part 22, and herein incorporated by reference and made a part of this contract or agreement.
  - 2.6. Grantee understands and agrees that if any real property or structure is provided or improved with the aid of federal financial assistance by the Department of the Treasury, this assurance obligates the Grantee, or in the case of a subsequent transfer, the transferee, for the period during which the real property or structure is used for a purpose for which the federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is provided, this assurance obligates the Grantee for the period during which it retains ownership or possession of the property.
  - 2.7. Grantee shall cooperate in any enforcement or compliance review activities by the Department of the Treasury of the aforementioned obligations. Enforcement may include investigation, arbitration, mediation, litigation, and monitoring of any settlement agreements that may result from these actions. The Grantee shall comply with information requests, on-site compliance reviews and reporting requirements.
  - 2.8. Grantee shall maintain a complaint log and inform the Department of the Treasury of any complaints of discrimination on the grounds of race, color, or national origin, and limited English proficiency covered by Title VI of the Civil Rights Act of 1964 and implementing regulations and provide, upon request, a list of all such reviews or proceedings based on the complaint, pending or completed, including outcome. Grantee also must inform the Department of the Treasury if Grantee has received no complaints under Title VI.
  - 2.9. Grantee must provide documentation of an administrative agency or court's findings of non-



compliance of Title VI and efforts to address the non-compliance, including any voluntary compliance or other OMB Approved No. 1505-0271 Expiration Date: April 30, 2025, agreements between the Grantee and the administrative agency that made the finding. If the Grantee settles a case or matter alleging such discrimination, the Grantee must provide documentation of the settlement. If Grantee has not been the subject of any court or administrative agency finding of discrimination, please so state.

- 2.10. If the Grantee makes sub-awards to other agencies or other entities, the Grantee is responsible for ensuring that sub-recipients also comply with Title VI and other applicable authorities covered in this document. State agencies that make sub-awards must have in place standard grant assurances and review procedures to demonstrate that they are effectively monitoring the civil rights compliance of subrecipients. The United States of America has the right to seek judicial enforcement of the terms of this assurances document and nothing in this document alters or limits the federal enforcement measures that the United States may take in order to address violations of this document or applicable federal law. Under penalty of perjury, the undersigned official(s) certifies that official(s) has read and understood the Grantee's obligations as herein described, that any information submitted in conjunction with this assurances document is accurate and complete, and that the Grantee is in compliance with the aforementioned nondiscrimination requirements.

### **ARTICLE III - Conflicts of Interest Acknowledgment**

- 3.1. **Conflicts of Interest.** Grantee understands and agrees it must maintain a conflict of interest policy consistent with 2 C.F.R. § 200.318(c) and that such conflict of interest policy is applicable to each activity (program or project) funded under this award. Grantee must disclose in writing to the Authority, as appropriate, any potential conflict of interest affecting the awarded funds in accordance with 2 C.F.R. § 200.112.
  - 3.1.1. The Grantee must maintain standards of conduct covering conflicts of interest and governing the actions of its employees engaged in the selection, award, and administration of contracts. The standards of conduct must provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the Grantee.
  - 3.1.2. Such a conflict of interest would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from a firm considered for a contract.
  - 3.1.3. The officers, employees, and agents of the Grantee may neither solicit nor accept gratuities, favors, or anything of monetary value from contractors or parties to subcontracts. No employee, officer, or agent may participate in the selection, award, or administration of a contract supported by a federal award if he or she has a real or apparent conflict of interest. However, Grantees may set standards for situations in which the financial interest is not substantial, or the gift is an unsolicited item of nominal value.

### **ARTICLE IV - Debarment and SAM.GOV Certification**

- 4.1. The Grantee certifies that, neither the Grantee nor any owner, partner, director, officer, or principal of the Grantee, nor any person in a position with management responsibility or responsibility for the administration of federal funds:
  - 4.1.1. Is presently debarred, suspended, proposed for debarment, and declared ineligible or

**Water Conservation Grant Fund**

voluntarily excluded from covered transactions by any federal or state department/agency;

- 4.1.2. Has within a three-year period preceding this certification been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract (federal, state, or local); violation of federal or state antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - 4.1.3. Is presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (b) above; or
  - 4.1.4. Has within a three-year period preceding this certification had one or more public transactions or contracts (federal, state, or local) terminated for cause or default.
- 4.2. The Grantee is “Actively” registered with SAMS (Service for Award Management) and has been assigned the following UEI Number: \_\_\_\_\_ found at [www.sam.gov](http://www.sam.gov).  
Include            date            SAM.GOV            registration            begins            and            ends  
\_\_\_\_\_.
- 4.3. The Grantee further certifies that it shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency.

**ARTICLE V - Lobbying Certificate Disclosure**

- 5.1. For each bid, request for reimbursement, or offer, that exceeds \$100,000, the Grantee certifies, to the best of his or her knowledge and belief, that:
  - 5.1.1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the Grantee, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
  - 5.1.2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the Grantee shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.
  - 5.1.3. The Grantee shall require that the language paragraph 1 and 2 of this anti-lobbying certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.
- 5.2. This certification is a material representation of the fact upon which reliance was placed when this



transaction was made or entered into. Submission of this certification is a prerequisite for making or entering this transaction imposed by 31 CFR Part 21.

#### **ARTICLE VI - Audit Statement**

- 6.1. Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 CFR Part 200, other than such provisions as Treasury may determine are inapplicable to this Award and subject to such exceptions as may be otherwise provided by Treasury. [Subpart F – Audit Requirements](#) of the Uniform Guidance, implementing the Single Audit Act, shall apply to this award.
- 6.2. If Grantee expends more than seven hundred and fifty thousand dollars (\$750,000) in federal awards during a fiscal year, Grantee will be subject to an audit under the Single Audit Act and its implementing regulation at 2 C.F.R. Part 200, Subpart F regarding audit requirements and Grantee must:
  - 6.2.1. Provide a copy of Grantee’s single audit in the eCivis file reporting area; and
  - 6.2.2. Upload a copy of Grantee’s alternative audit or financial budget audit in the eCivis file reporting area.

#### **ARTICLE VII – Non-supplanting Certification**

- 7.1. Supplanting. Federal funds must be used to supplement existing funds for program activities and must not replace those funds that have been appropriated for the same purpose. Supplanting shall be the subject of application review, as well as pre-award review, post-award monitoring, and audit. If the Authority has reason to believe supplanting has or will occur, the Grantee shall supply documentation demonstrating that the reduction in non-federal resources occurred for reasons other than the receipt or expected receipt of federal funds.
- 7.2. Certification. By signing this Agreement, the Grantee certifies that any funds awarded under this Agreement shall be used to supplement existing funds for activities contemplated under this Agreement and will not supplant or replace nonfederal funds that have been appropriated for the purposes and goals of the Agreement.
- 7.3. Penalties. The Grantee understands that supplanting violations may result in a range of penalties, including but not limited to suspension of future funds awarded under the Agreement, suspension or debarment from federal grants, recoupment of monies provided under this Agreement, and civil and/or criminal penalties.

#### **ARTICLE VIII – Miscellaneous**

- 8.1. Small and Minority Businesses, Women’s Business Enterprises, and Labor Surplus Area Firms. Grantee shall take affirmative steps to solicit and include small, minority, and women owned businesses, when possible, in an effort to encourage participation and fair competition in providing supplies/services described in this solicitation. As set forth in 2 C.F.R. § 200.321(b)(1)-(5), such affirmative steps must include: (1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists; (2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources; (3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum

participation by small and minority businesses, and women's business enterprises; (4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and (5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce. If subcontracts are to be let, Grantee shall take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used as required by 2 C.F.R. § 200.321.

**ARTICLE IX - Acknowledgment**

The Grantee, \_\_\_\_\_, hereby acknowledges and accepts the above terms and conditions. I hereby certify that I represent a legal entity with authority to enter into this Agreement.

By: \_\_\_\_\_  
Signature

Date: \_\_\_\_\_

\_\_\_\_\_  
Print Name and Title

For: \_\_\_\_\_  
Grantee Name

Tax ID No.: \_\_\_\_\_

**EXHIBIT F**  
**Affidavit**

**AUTHORIZED REPRESENTATIVE**

I HEREBY AFFIRM THAT:

I am the [title] \_\_\_\_\_ and the duly authorized representative of the Grantee and that I possess the legal authority to make this Affidavit on behalf of myself and the Grantee for which I am acting.

**AFFIRMATION REGARDING BRIBERY CONVICTIONS**

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Grantee, nor any of its officers, directors, partners, or any of its employees, if any and as applicable, directly involved in obtaining or performing under agreements, contracts, loans, grants, or awards with public bodies, has been convicted of, or has had probation before judgment imposed, or has pleaded nolo contendere to a charge or bribery, attempted bribery, or conspiracy to bribe in violation of Arizona law, or the law of any other state, or federal law, except as follows *[indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the Grantee]:*

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**AFFIRMATION REGARDING OTHER CONVICTIONS**

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Grantee, nor any of its officers, directors, partners, or any of its employees, if any and as applicable, directly involved in obtaining or performing under agreements, contracts, loans, grants, or awards with public bodies, has:

1. Been convicted under state or federal statute of a criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract, fraud, embezzlement, theft, forgery, falsification or destruction of records, or receiving stolen property.
2. Been convicted of any criminal violation of a state or federal antitrust statute.
3. Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. § 1961, et seq., or the Mail Fraud Act, 18 U.S.C. § 1341, et seq., for acts arising out of the submission of bids or proposals for a public or private contract.

**Water Conservation Grant Fund**

4. Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsection (1), (2), or (3) above.
5. Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of bids or proposals for a public or private contract.
6. Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts, or omissions that would constitute grounds for conviction or liability under any law or statute described above, except as follows ***[list each debarment or suspension, providing the dates of the suspension or debarment, the name of the public entity and the status of the proceeding, the name(s) of the person(s) involved and their current positions and responsibilities with the Grantee, and the status of any debarment]:***

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**AFFIRMATION REGARDING DEBARMENT**

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Grantee, nor any of its officers, directors, partners, or any of its employees, if any and as applicable, directly involved in obtaining or performing under agreements, contracts, loans, grants, or awards with public bodies, has ever been suspended or debarred (including being issued a limited denial of participation) by any public entity, except as follows ***[indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the Grantee, the grounds of the debarment or suspension, and the details of each person's involvement in any activity that formed the grounds of the debarment or suspension]:***

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**SUBCONTRACT AFFIRMATION**

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Grantee, has knowingly entered into a contract with a public body under which a person debarred or suspended will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

**AFFIRMATION REGARDING COLLUSION**

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the Grantee, nor any of its officers, directors, partners, or any of its employees, if any and as applicable, have in any way:

1. Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the award that is being entered into with the Authority.
2. In any manner, directly or indirectly, entered into any agreement of any kind to fix the bid price or price proposal of the Grantee or of any competitor, or otherwise take any action in restraint of free competitive bidding in connection with the award that is being entered into with the Authority.
3. Colluded with anyone to obtain information concerning the award that would give the Grantee an unfair advantage over others.

### **ACKNOWLEDGMENT**

I ACKNOWLEDGE THAT this Affidavit is to be furnished to the Authority and may be distributed to units of the State of Arizona and the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Arizona, both criminal and civil, and that nothing in this Affidavit or any contract resulting from the submission of this application for an award shall be construed to supersede, amend, modify, or waive the exercise of any statutory right or remedy conferred by the Constitution and the laws of Arizona with respect to any misrepresentation made or any violation of the obligations, terms, and covenants undertaken by the Grantee with respect to this Affidavit, the award, and other Affidavits comprising part of this Agreement.

I DECLARE AND AFFIRM UNDER THE PENALTY OF PERJURY, UNDER THE LAWS OF THE STATE OF ARIZONA, THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Date: \_\_\_\_\_

By: \_\_\_\_\_

Name:

Title:

*(Authorized Representative and Affiant)*

## EXHIBIT G

### Reimbursement Request & Monthly Reporting Form

*This Reimbursement Request & Monthly Reporting Form is included as an example of the type of report Grantee should expect to submit on a monthly basis. The Authority reserves the right to request additional information and to modify this form.*

<b>Grantee Information (Subrecipient)</b>			
Organization		Grant No.	
Contact Person		Contact Title	
Physical Address		City, State, Zip	
Phone Number		Email	
Sam.Gov UEI #			
Organization Internal Account Number:			
Median Household Income of service area			
Lowest Quintile Income of the service area			
<b>Project/Program Information</b>			
Grant Amount			
Match Amount			
Total Project Cost			
Since the previous disbursement request have total project/program cost estimates changed by 5% or more due to a Change Order or other project/program event? If Yes, explain	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Projected/actual construction start date (month/year)			
Projected/actual initiation of operations date (month/year)			
Project/Program Location (address, City, and zipcode)			
Does the project/program prioritize local hires?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Does the project/program have a Community Benefit Agreement? If yes include a description of any such agreement	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Is this project aligned with another federal award? If yes, provide the federal award information and the PWS # for drinking water projects or the NPDES # for clean water projects	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Federal Grant: PWS: NPDES:		
<b>Award Information (Subaward) – One per vendor</b>			
Obligated Amount/Contract Amount			
Date Obligated/Contract Executed Date			
Vendor Name			
Vendor Physical Address			
Vendor City, State, Zip			
Vendor Sam.Gov UEI #			
Vendor Debarment Statement Y or N			
Expenditure during this reporting period (attach invoices for payment)			
Remaining contract amount			

All procurement documentation of Award expenditures has been maintained and can be produced upon request?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Invoices, Receipts, and other Payment Tracking – One per receipt / invoice / request for funds</b>	
List of each contractor, subcontractor, or vendor that provided supplies, equipment, construction, or other goods or services included in this disbursement request.	
List of each invoice number and invoice date	
The amount being requested from grant proceeds	
The amount the grantee will provide as part of the 25% match requirement and the source of the match	
The total invoice amount (the amount requested, plus the match amount must equal the total invoice amount)	
<b>Performance Measures &amp; Outcomes</b>	
Have you started the program/project?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If you answered Yes, what date did program/project start?	
Is the program/project 25% complete?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the program/project 50% complete?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the program/project 75% complete?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the program/project on schedule to complete the Scope of Work as described in the grant agreement? <i>If no, please note an amended Scope of Work Schedule must be submitted</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Actual water savings in acre-feet associated with this grant award (as available)	
Projected water savings in acre- feet associated with this grant award (if changed from original application)	
Most recent reported system deliveries:	
<b>Narrative – Description of how the funds were used and what was accomplished.</b>	

**To receive reimbursement:**

- **Grantee must attach invoices for costs incurred;**
- **Vendors must be registered through SAM.GOV and have an active Unique Entity Identifier (UEI) Number.**

**Grantee Representative Signature**

Printed Name			
Title			
Signature		Date	



**RESOLUTION # 2024-02**

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SURPRISE, ARIZONA, ACCEPTING A GRANT IN THE AMOUNT OF \$159,100, AMENDING THE FISCAL YEAR 2024 BUDGET BY MOVING BUDGET AUTHORITY FROM GENERAL CONTINGENCY TO THE GRANTS FUND TO PROJECT G71030 TO SUPPORT AN ENHANCED AND EXPANDED WATER CONSERVATION REBATE PROGRAM,**

**WHEREAS**, the City of Surprise Water Resource Management Department (WRM) applied for a water conservation grant in the amount of \$159,100 from the Water Infrastructure Finance Authority of Arizona (WIFA) for use in responding to the COVID-19 public health emergency, including making necessary investments in water, sewer, and broadband infrastructure;

**WHEREAS**, the City of Surprise desires to accept the WIFA grant funding to expand the current water conservation rebate program to include all City residents, including the purchase of Smart Irrigation Controllers, the installation of xeriscape landscaping, and the removal of turf from residences and commercial properties;

**WHEREAS**, the City of Surprise will expand its existing Water Conservation Rebate Program by offering rebates to all residents within city limits. Currently rebates are only offered to City of Surprise water customers whose population covers approximately one-third of the city. This agreement covers the following rebates:

1) 120 Smart Irrigation Controller rebates at \$125 each, 2) 18 Single Family Residence Turf Removal Rebates of up to 1,000 square feet at \$2/square foot, 3) 9 HOA/Commercial/Multifamily Turf Removal Rebates of up to 6,000 square feet of turf at \$2/ square foot removed, 4) 9 New Home Xeriscape Installation Rebates of \$400 for up to 1,000 square feet of xeriscaping. The city will utilize funds from our current operating budget in the amount of \$40,042 the equivalent of the required match.

**WHEREAS**, the FY2024 budget was adopted by Surprise City Council Resolution #2023-85 on June 6, 2023;

**WHEREAS**, this action will necessitate a budget amendment;

**WHEREAS**, the City of Surprise Administrative Policies requires the approval of the Mayor and Council for budget amendments of this nature; and

**WHEREAS**, the City of Surprise Procurement Code §2-338 (d) requires the authority of the Mayor and Council when the cost to the city is greater than \$50,000.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the City of Surprise, Arizona, as follows.

**Section 1.** That the statements and schedules attached as *Exhibit A* and incorporated by reference are adopted, amending the budget of the City of Surprise, Arizona for the fiscal year July 1, 2023 through June 30, 2024.

**Section 2.** The Water Conservation Grant Fund Agreement attached as *Exhibit B* and incorporated by reference is hereby approved.

**Section 3.** The City is hereby authorized to accept the grant funding if awarded from the Water Infrastructure Finance Authority of Arizona. The City Manager, or his designees, is authorized to conduct all negotiations and to execute and submit all documents and other necessary or desirable instruments in connection with said agreement.

**APPROVED AND ADOPTED** this \_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Skip Hall, Mayor

Attest:

Approved as to form:

\_\_\_\_\_  
Kristi Passarelli, City Clerk

\_\_\_\_\_  
Robert Wingo, City Attorney

## RESOLUTION # 2024-02

1. Appropriation - The allocation listed below represents a movement of budget authority in the amount of \$159,100 within the Contingency Fund to Project G71030 to establish a budget for Project G71030 WIFA Water Conservation Grant Fund Expanded Rebate Program. This action represents a transfer of spending authority and does not increase or decrease the total adopted citywide expenditure limit. To cover the projected expenditures associated with the purchase of Smart Irrigation Controllers, the installation of xeriscape landscaping, and the removal of turf from residences and commercial properties. This action represents a transfer of spending authority and does not increase or decrease the total adopted citywide expenditure budget.

<b>Fund</b>	<b>Department</b>	<b>Project/Category</b>	<b>Rev / Exp</b>	<b>Current Budget</b>	<b>Increase/ (Decrease)</b>	<b>Amended Budget</b>
Contingency	General Operations	Contingency	E	71,064,200	(159,100)	70,905,100
Grants	Water Resource Management	Supplies	E	-	159,100	159,100
Contingency	General Operations	Other	R	75,219,900	(159,100)	75,060,800
Grant	General Operations	#G71030 FY24 WIFA Water Conservation Grant	R	75,046,600	159,100	159,100
<b>Expense Total</b>				<b>71,237,500</b>	<b>-</b>	<b>71,237,500</b>
<b>Revenue Total</b>				<b>75,219,900</b>	<b>-</b>	<b>75,219,900</b>



**CITY OF SURPRISE**  
**Regular City Council Meeting**

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Council Meeting Date: February 20, 2024      Contact Person: Jani Wertin  
Submitting Department: Community Development      District: District 1  
Staff Recommendations:

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Consent: Yes      Regular: No      Public Hearing: No      Report/Discussion: No

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**Agenda Wording:**

Consideration and action pertaining to approval of the Final Plat entitled, “Asante Unit 4.2” and dated December 14, 2023, a site generally located northwest of the corner of Happy Valley Rd. and 163<sup>rd</sup> Ave; Case FS23-0830.

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**Motion:**

I move to approve the Final Plat entitled, “Asante Unit 4.2” and dated December 14, 2023.

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**Background:**

Michael Park of Atwell, LLC, on behalf of Asante Development Partners, LLC, seeks approval of a Final Plat for Asante 4.2. The proposed Final Plat includes the subdivision of one (1) parcel, approximately 18.20 net acres, into 136 parcels for a single-family residential division within the Asante PAD.

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**Objective Analysis:**

The subject Final Plat meets the requirements of the Asante PAD, in addition to other requirements as set forth in the Surprise Municipal Code. All city reviewing departments have reviewed the request and expressed no concerns.

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**Policy Compliant:**

This proposed Final Plat is consistent with the Surprise General Plan 2035, Asante PAD, and the Land Development Ordinance.

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**Financial Impact:**

While this item does not have an immediate or direct financial impact, ongoing development activity in the city will inevitably have a future financial impact as additional resources are needed to provide city services.

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**Budget Impact:**

There is no anticipated budget impact related to this item.

**FTE Impact:**

This item does not have an impact on current staffing levels.

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**ATTACHMENTS:**

1. 00 - FS23-0830 Asante Unit 4.2 Final Plat - Staff Report
  2. 01 – FS23-0830 Asante Unit 4.2 Final Plat – Vicinity Map
  3. 02 – FS23-0830 Asante Unit 4.2 Final Plat – Zoning Map
  4. 03 – FS23-0830 Asante Unit 4.2 Final Plat – Final Plat
  5. 04 – FS23-0830 Asante Unit 4.2 Final Plat – Luke Letter
  6. FS23-0830 Asante Unit 4.2 Final Plat Presentation
-

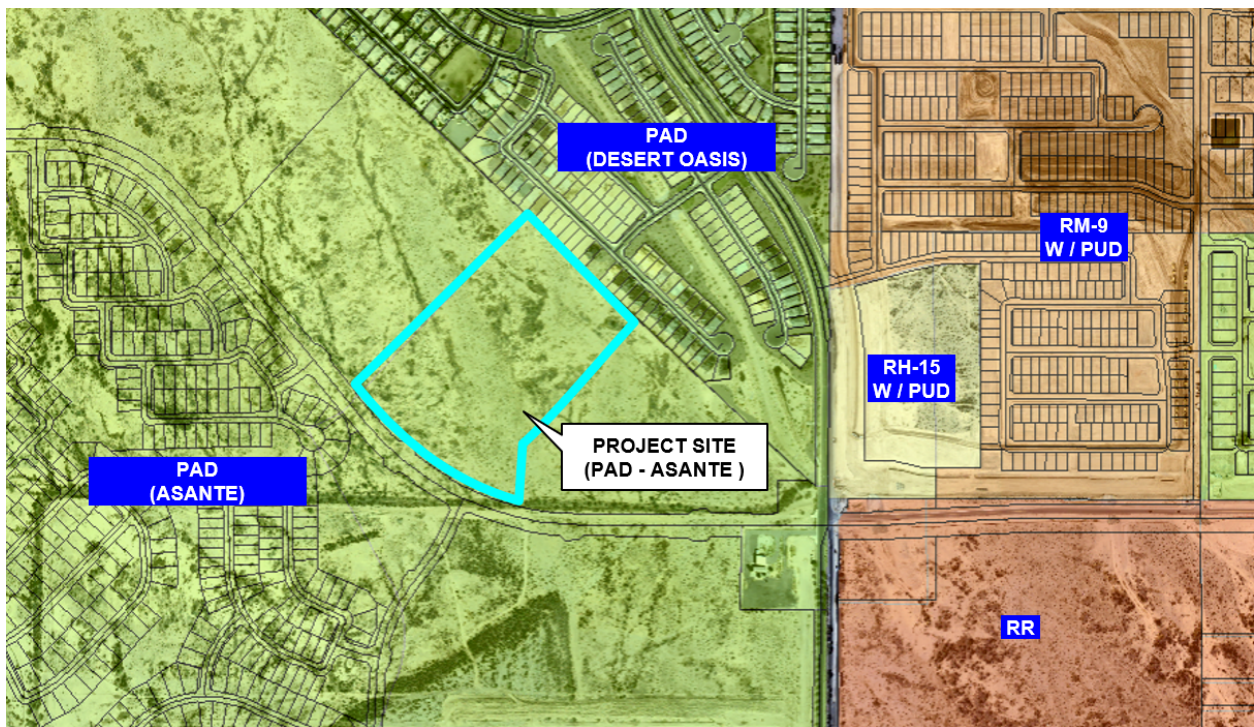
1	<b>Case:</b>	<b>FS23-0830</b>
2		
3	<b>Project Name:</b>	Asante Unit 4.2 – Final Plat
4		
5	<b>Council District:</b>	1 - Acacia
6		
7	<b>City Council Date:</b>	February 20, 2024
8		
9	<b>Planner:</b>	Jani Wertin, Planner II
10		
11	<b>Owner:</b>	Asante Development Partners, LLC
12		
13	<b>Applicant:</b>	Michael Park of Atwell, LLC
14		
15	<b>Request:</b>	Final Plat to subdivide one (1) parcel, approximately 18.20 net acres, into 136 parcels for a single-family residential division within the Asante PAD.
16		
17		
18		
19	<b>Site Location:</b>	Located west of the intersection of Happy Valley Road and 163rd Avenue.
20		
21		
22	<b>Site Size:</b>	18.20 Net Acres
23		
24	<b>Net Density:</b>	7.47 Du/Ac
25		
26	<b>General Plan</b>	
27	<b>Conformance:</b>	The proposed Final Plat is consistent with the Surprise General Plan 2035.
28		
29		
30	<b><u>Findings:</u></b>	
31		
32		<ul style="list-style-type: none"><li>• The proposed Final Plat is consistent with the Asante PAD.</li></ul>
33		<ul style="list-style-type: none"><li>• The proposed Final Plat is consistent with the Preliminary Plat, case FS22-1459.</li></ul>
34		<ul style="list-style-type: none"><li>• The proposed Final Plat is consistent with the applicable City of Surprise regulations.</li></ul>
35		<ul style="list-style-type: none"><li>• The reviewing agencies have indicated no objections to the request.</li></ul>
36		
37	<b>Alternative Actions:</b>	<b>Approve</b> – Approval of the proposed Final Plat will allow the applicant the ability to subdivide the property as proposed.
38		
39		
40		<b>Deny</b> – Denial of the requested Final Plat will prevent the applicant from subdividing the property as proposed.
41		
42		

43 **PROJECT DESCRIPTION:**

44  
 45 Michael Park of Atwell, LLC, on behalf of Asante Development Partners, LLC, seeks  
 46 approval of a Final Plat for Asante 4.2. The applicant seeks to subdivide the subject  
 47 property into 136 total single-family lots over approximately 18.20 net acres for a net  
 48 density of 7.47 DU/Ac. The proposed subdivision will be integrated into the larger Asante  
 49 Community. The subject parcel is generally located west of the intersection of Happy Valley  
 50 Road and 163rd Avenue.

51  
 52 **SURROUNDING LAND ZONING:**

53  
 54 The following map depicts the existing zoning of the subject site and its surrounds:  
 55



56  
 57  
 58

PAD – Asante	PAD – Desert Oasis	PAD – Asante
PAD – Asante	<b>PAD – Asante</b>	PAD – Asante
PAD – Asante	PAD – Asante	PAD – Asante

59  
 60 **BACKGROUND:**

61  
 62 **November 3, 1988:** The City Council approved the annexation (Ordinance 88-24) of the  
 63 subject property.

64  
 65 **November 24, 2004:** The City Council approved Ordinance 04-41 for the Asante Planned  
 66 Area Development under case PAD04-124.

67  
68 **August 29, 2022:** A minor amendment to the Asante PAD was approved administratively  
69 under case FS22-0756 to modify street alignments, school and amenity site locations, and  
70 development standards.

71  
72 **August 15, 2023:** A minor amendment to the Asante PAD approved administratively under  
73 case FS23-0574 to modify the development standards and typical layout for cluster lots.  
74

75 **September 7, 2023:** The Planning and Zoning Commission approved a Preliminary Plat for  
76 Asante Planning Area 4.2 under case FS22-1459.

77  
78 **September 12, 2023:** The applicant filed the subject case, FS23-0830.  
79

80 **ANALYSIS AND DISCUSSION:**

81  
82 The subject request includes a Final Plat for Unit 4.2 within the Asante PAD. This Final  
83 Plat consists of 136 lots, 134 of which are Cluster Type “Alley Loaded” lots with the  
84 remaining two being single-family residential lots (Lot Category B). This is consistent with  
85 the Preliminary Plat and the Asante PAD requirements.  
86

87 ***Access***

88 Access to the development will be limited to one entrance off of Happy Valley Road.  
89 Secondary access for emergency vehicles will be provided at northeast corner of the site.  
90 The secondary access will be gated and connect to Happy Valley Road via a 26' D.G. access  
91 road that traverses the adjacent parcel.  
92

93 ***Open Space & Landscaping***

94 There is a total of approximately 3.94 acres of open space within Unit 4.2. Of this total,  
95 approximately 0.67 acres are active open space, and approximately 3.27 acres are  
96 passive open space. Landscaping will incorporate native and low water use plants, as  
97 required by the city, and will be consistent with the overall Asante Development.  
98

99 Residents within Unit 4.2 will have access to the clubhouse planned for Unit 3.10A within  
100 Asante Planning Area 3.  
101

102 **Utility and Services Table:**

103

Water:	City of Surprise
Wastewater:	City of Surprise
School District:	Dysart Unified School District

104  
105 **Conformance with Adopted Plans:**

106 The Surprise General Plan shows the subject property as lying within the Neighborhood  
107 Character Area, which supports residential development of up to 8 dwelling units/acre or  
108 more. At a net density of 7.47 dwelling units/acre, this development is consistent with the  
109 General Plan in this regard.



110  
111 This request is also consistent with the General Plan in that it promotes connectivity to  
112 existing and future development within the Asante PAD for a range of mobility options.  
113

114 **Reviewing Agencies:**

115  
116 In addition to the standard city reviewing agencies, who indicate no objections to the  
117 request, Luke Air Force Base and the Maricopa Water District were included in the routing  
118 of the case and indicate no objections.  
119

120 **Summary:**

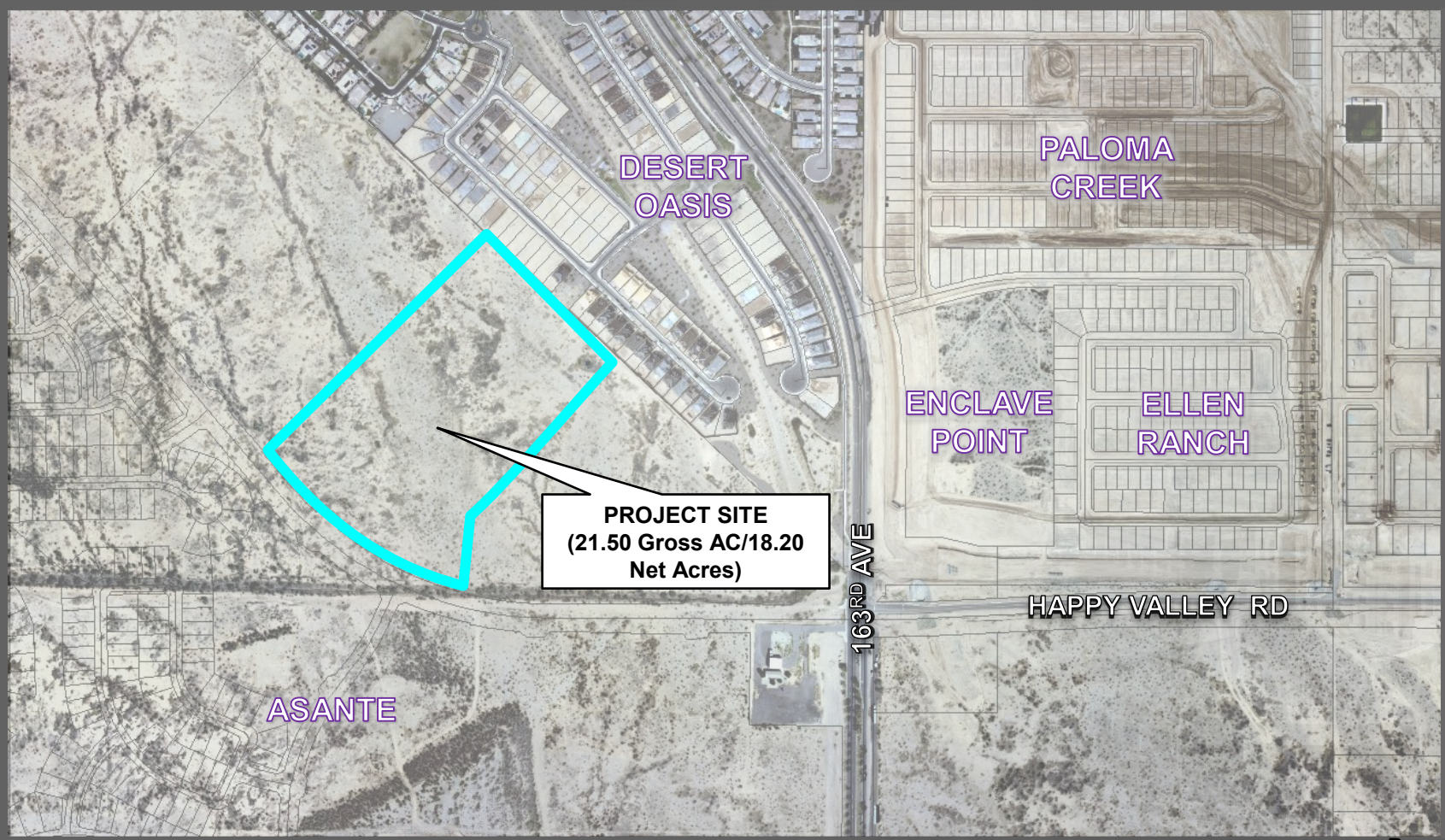
121  
122 The subject Final Plat meets the requirements of the Asante PAD, in addition to other  
123 applicable requirements. All city reviewing departments have reviewed the request and  
124 expressed no concerns.  
125

126 **Findings:**

- 127
- 128 • The proposed Final Plat is consistent with the Asante PAD.
  - 129 • The proposed Final Plat is consistent with the Preliminary Plat, case FS22-1459.
  - 130 • The proposed Final Plat is consistent with the applicable City of Surprise regulations.
  - 131 • The reviewing agencies have indicated no objections to the request.

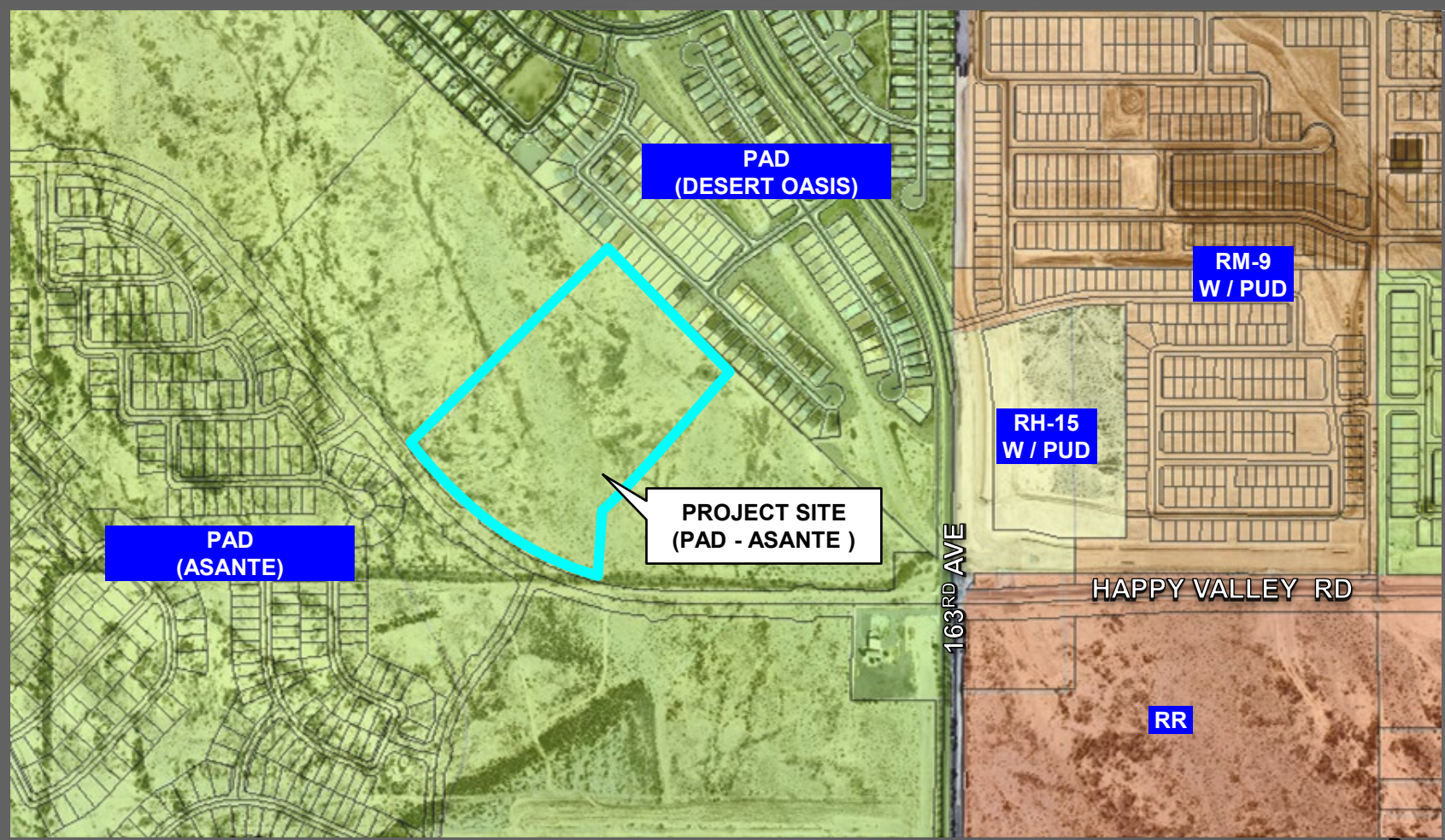
132 **Attachments:**

- 133  
134 01 Vicinity Map  
135 02 Zoning Map  
136 03 Final Plat  
137 04 Luke AFB Letter  
138 PPT  
139



**PROJECT SITE**  
(21.50 Gross AC/18.20  
Net Acres)





**FS23-0830 ZONING MAP**



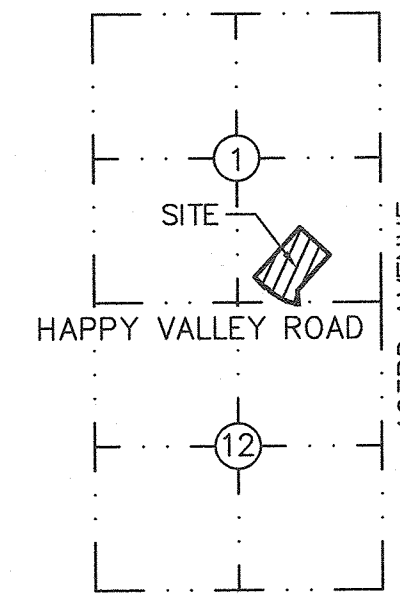
# FINAL PLAT OF ASANTE UNIT 4.2

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 1 &  
THE NORTHEAST QUARTER OF SECTION 12,  
TOWNSHIP 4 NORTH, RANGE 2 WEST,  
OF THE GILA AND SALT RIVER BASE AND MERIDIAN,  
CITY OF SURPRISE, MARICOPA COUNTY, ARIZONA

### OWNER

ASANTE DEVELOPMENT PARTNERS, LLC,  
A DELAWARE LIMITED LIABILITY COMPANY  
1665 W. ALAMEDA DRIVE SUITE 130  
TEMPE, ARIZONA 85282  
PHONE 480-322-6674  
CONTACT: JOAN SCARBROUGH AND  
JORGE VILLASENOR  
JOAN.SCARBROUGH@LENNAR.COM  
JORGE.VILLASENOR@LENNAR.COM

N.T.S.  
**VICINITY MAP**  
SECTION 1 & 12, T.4N., R.2W.



### DEDICATION

STATE OF ARIZONA: )  
COUNTY OF MARICOPA: ) SS

KNOW ALL PERSONS BY THESE PRESENTS:

- THAT ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, HEREINAFTER "OWNER", HAS SUBDIVIDED UNDER THE NAME "ASANTE UNIT 4.2", LOCATED WITHIN A PORTION OF THE SOUTHEAST QUARTER OF SECTION 1 & THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, CITY OF SURPRISE, MARICOPA COUNTY, ARIZONA AS SHOWN AND PLATTED HEREON AND DOES HEREBY PUBLISH THIS PLAT AS AND FOR THE PLAT OF "ASANTE UNIT 4.2" AND DECLARES THAT THIS PLAT SETS FORTH THE LOCATION AND GIVES THE DIMENSIONS OF EACH LOT, TRACT, STREET, AND EASEMENT CONSTITUTING SAME, AND THAT EACH LOT, TRACT, STREET AND EASEMENT SHALL BE KNOWN BY THE NUMBER, LETTER, AND/OR NAME GIVEN TO EACH RESPECTIVELY AS SHOWN ON THIS PLAT.
- "OWNER" HEREBY DEDICATES TO THE CITY OF SURPRISE FEE TITLE TO ALL PUBLIC RIGHTS-OF-WAY AS SHOWN ON THE FINAL PLAT.
- OWNER HEREBY GRANTS TO THE CITY OF SURPRISE A PERPETUAL NON-EXCLUSIVE EASEMENT OVER, UNDER, UPON, AND ACROSS ALL AREAS DESIGNATED ON THE PLAT AS WATER/SEWER LINES, MANHOLES, FIRE HYDRANTS AND WATER METERS FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, MAINTAINING, REPAIRING, REPLACING, AND UTILIZING THE WATER/SEWER LINES, MANHOLES, FIRE HYDRANTS AND WATER METERS.
- "OWNER" HEREBY GRANTS TO THE CITY OF SURPRISE A PERPETUAL EASEMENT ACROSS THE FINAL PLAT INCLUDING ROADS AND STREETS, OPEN SPACES, COMMUNITY FACILITIES, TRACTS, SIDEWALKS, DRAINAGE BASINS AND ANY PROPERTY WITHIN THE FINAL PLAT OWNED BY THE HOMEOWNERS ASSOCIATION FOR THE PURPOSE OF PROVIDING CONTINUOUS AND UNINTERRUPTED INGRESS AND EGRESS FOR TRASH COLLECTION VEHICLES AND EMERGENCY VEHICLES.
- "OWNER" HEREBY GRANTS TO THE PUBLIC A PERPETUAL NON-EXCLUSIVE EASEMENT IN, UPON, OVER, UNDER, THROUGH, AND ACROSS THE AREAS DESIGNATED AS PUBLIC UTILITY EASEMENTS AS SHOWN ON THE FINAL PLAT FOR THE PURPOSE OF ACCESSING, INSTALLING, CONSTRUCTING, MAINTAINING, REPAIRING, REPLACING AND UTILIZING PUBLIC UTILITIES.
- "OWNER" HEREBY GRANTS TO THE CITY OF SURPRISE A PERPETUAL NON-EXCLUSIVE EASEMENT OVER, UPON AND ACROSS THE AREAS DESIGNATED AS SIGHT VISIBILITY TRIANGLES FOR THE PURPOSE OF ENSURING THAT THESE AREAS REMAIN FREE OF SIGHT VISIBILITY OBSTRUCTIONS.
- "OWNER" HEREBY GRANTS TO THE UNITED STATES OF AMERICA DEPARTMENT OF THE AIR FORCE ("USAF") AN AVIGATION EASEMENT OVER AND ACROSS THIS FINAL PLAT AND EVERY LOT AND PARCEL THEREOF, WHICH EASEMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE RIGHT OF FLIGHT OF AIRCRAFT OVER THIS FINAL PLAT, TOGETHER WITH ITS ATTENDANT NOISE, VIBRATIONS, FUMES, DUST, FUEL AND LUBRICANT PARTICLES, AND ALL OTHER EFFECTS THAT MAY BE CAUSED BY THE OPERATION OF AIRCRAFT LANDING AT, OR TAKING OFF FROM, OR OPERATING AT OR ON LUKE AIR FORCE BASE AND AUXILIARY FIELD.
- THE EASEMENTS GRANTED WITHIN THIS DEDICATION ARE PERMANENT AND PERPETUAL AND SHALL RUN WITH THE LAND AND BE BINDING UPON OWNER AND ITS HEIRS, ASSIGNS, AND SUCCESSORS IN INTEREST TO THIS FINAL PLAT OR ANY PARCEL THEREOF.
- "OWNER" HEREBY GRANTS TO THE CITY OF SURPRISE A PERPETUAL NON-EXCLUSIVE PEDESTRIAN ACCESS AND SIDEWALK CONSTRUCTION AND MAINTENANCE EASEMENT OVER, UPON, AND ACROSS THE AREAS DESIGNATED AS SIDEWALK EASEMENTS AS SHOWN ON THE PLAT.
- "OWNER" HEREBY GRANTS TO THE CITY OF SURPRISE AN ODOR EASEMENT OVER, UPON AND ACROSS THIS PLAT AND EVERY LOT AND PARCEL THEREOF, WHICH EASEMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE RIGHT TO INVADE WITH ODORS, FUMES, SMELLS, AND PHYSICAL AIRBORNE PARTICULATES CAUSED BY THE OPERATION AND MAINTENANCE OF THE CITY'S WATER RECLAMATION FACILITIES.
- ALL IMPROVEMENTS, FOR STREETS AND PUBLIC UTILITIES OWNED AND OPERATED BY THE CITY, INSTALLED OR CONSTRUCTED BY "OWNER" WITHIN THE PUBLIC RIGHTS-OF-WAY, THE EASEMENTS, OR ANY TRACTS OR PARCELS HEREBY DEDICATED TO THE CITY OF SURPRISE SHALL BE DEEMED TO HAVE BEEN DEDICATED BY OWNER TO THE CITY UPON THEIR COMPLETION; HOWEVER, SUCH TRANSFER SHALL NOT OCCUR UNTIL THE CITY COUNCIL FOR THE CITY OF SURPRISE MANIFESTS ITS ACCEPTANCE BY SEPARATE FORMAL COUNCIL ACTION.
- THE VEHICULAR NON ACCESS EASEMENTS "VNAE" ARE HEREBY DEDICATED TO THE ASANTE PHASE 2 COMMUNITY ASSOCIATION, ITS SUCCESSORS AND ASSIGNS AND IS INTENDED TO PREVENT VEHICULAR TRAFFIC BETWEEN TRACTS AND LOTS WITH THE EXCEPTION OF PUBLIC UTILITY USES. SAID "VNAE" AS DEDICATED HEREON WILL CROSS PUBLIC UTILITY EASEMENTS "PUE" ALSO GRANTED HEREON, IN MULTIPLE LOCATIONS. THESE "VNAE" ARE NOT INTENDED TO PREVENT AUTHORIZED AGENTS OF THE PUBLIC UTILITY COMPANIES FROM CROSSING SAID "VNAE" DURING THE COURSE OF INSTALLATION, USE, MAINTENANCE AND REPAIR OF THE UTILITIES LOCATED IN SAID PUBLIC UTILITY EASEMENT "PUE".
- "OWNER" HEREBY WARRANTS AND REPRESENTS TO THE CITY OF SURPRISE THAT IT IS THE SOLE OWNER OF THE PROPERTY COVERED BY THIS FINAL PLAT, AND THAT EVERY LENDER, EASEMENT HOLDER OR OTHER PERSON OR ENTITY HAVING ANY INTEREST THAT IS ADVERSE TO OR INCONSISTENT WITH THE FOREGOING DEDICATION, OR ANY OTHER REAL PROPERTY INTEREST CREATED OR TRANSFERRED BY THIS FINAL PLAT, HAS CONSENTED TO OR JOINED IN THIS FINAL PLAT AS EVIDENCED BY INSTRUMENTS WHICH ARE RECORDED WITH THE MARICOPA COUNTY RECORDERS OFFICE OR WHICH OWNER WILL RECORD NOT LATER THAN THE DATE ON WHICH THIS FINAL PLAT IS RECORDED.
- ALL TRACTS ARE NOT DEDICATED TO THE PUBLIC, BUT ARE PLATTED AS COMMON PROPERTY FOR THE USE AND ENJOYMENT OF THE ASANTE PHASE 2 COMMUNITY ASSOCIATION, AS MORE FULLY SET FORTH IN THE DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS.
- TRACTS PLATTED HEREON ARE DEDICATED FOR THE PURPOSES AS NOTED IN THE TRACT TABLE ON THIS FINAL PLAT AND SHALL BE MAINTAINED BY ASANTE PHASE 2 COMMUNITY ASSOCIATION.

IN WITNESS WHEREOF:

ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AS OWNER, HAS HEREUNTO CAUSED ITS CORPORATE NAME TO BE SIGNED AND ITS CORPORATE SEAL TO BE AFFIXED BY THE UNDERSIGNED DULY AUTHORIZED OFFICER  
THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY.

BY: LENNAR COMMUNITIES DEVELOPMENT, LLC, A DELAWARE LIMITED LIABILITY COMPANY.

ITS: MANAGER

NAME: JEFF GUNDERSON

TITLE: VICE PRESIDENT

### NOTARY ACKNOWLEDGEMENT

STATE OF ARIZONA: )  
COUNTY OF MARICOPA: ) SS

ON THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_ BEFORE ME, PERSONALLY APPEARED JEFF GUNDERSON WHO ACKNOWLEDGED HIMSELF TO BE THE VICE PRESIDENT OF LENNAR COMMUNITIES DEVELOPMENT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, THE MANAGER OF ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AND ACKNOWLEDGED THAT HE, AS SUCH OFFICER BEING DULY AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES CONTAINED THEREIN.

IN WITNESS WHEREOF, I HEREBY SET MY HAND AND OFFICIAL SEAL

\_\_\_\_\_  
NOTARY PUBLIC MY COMMISSION EXPIRES \_\_\_\_\_

### LENDERS CONSENT

THE UNDERSIGNED, WHICH IS THE BENEFICIARY AND ADMINISTRATIVE AGENT ON BEHALF OF ITSELF AND OTHER LENDERS AS DEFINED IN THE LOAN AGREEMENT OF EVEN DATE WITH THE DEED OF TRUST ("LENDERS"), UNDER THAT CERTAIN CONSTRUCTION DEED OF TRUST AND FIXTURE FILING (WITH ASSIGNMENT OF LEASES AND RENTS AND SECURITY AGREEMENT) RECORDED ON NOVEMBER 10, 2022, AT DOCUMENT NO. 20220831563 0 THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, OF ARIZONA ("DEED OF TRUST") AS A FIRST LIEN ON THE PROPERTY DESCRIBED IN THE DEED OF TRUST ("LENDERS' LIEN"), FOR AND BEHALF ON THE LENDERS AND THEIR SUCCESSORS AND ASSIGNS, HEREBY (A) CONSENTS TO THE RECORDED OF THIS FINAL PLAT ("FINAL PLAT"), AND EACH AND EVERY DEDICATION, EASEMENT, RIGHT-OF-WAY, COVENANT, CONDITION AND RESTRICTION MORE SPECIFICALLY SET FORTH IN THIS FINAL PLAT; (B) AGREES THAT, UPON THE RECORDED OF THIS FINAL PLAT, THE LENDERS LIEN WITH RESPECT TO THE PROPERTY DESCRIBED IN THIS FINAL PLAT IS HEREBY DEEMED SUBJECT AND SUBORDINATE TO THIS FINAL PLAT; WITH LENDERS' LIEN CONTINUING IN EFFECT AGAINST SUCH PROPERTY AS SUCH LEGAL DESCRIPTION HAS BEEN MODIFIED BY RECORDED OF THIS FINAL PLAT; AND (S) AGREES THAT UPON THE RECORDED OF THIS FINAL PLAT ALL PROPERTY DEDICATED TO THE CITY OF SURPRISE HEREUNDER IS RELEASED FROM THE LENDERS' LIEN.

DATED: \_\_\_\_\_, 20\_\_\_\_

ZIONS BANCORPORATION, N.A. DBA CALIFORNIA BANK AND TRUST

BY: \_\_\_\_\_

NAME: \_\_\_\_\_

ITS: \_\_\_\_\_

### ACKNOWLEDGMENT FOR LENDERS' CONSENT

A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY, OR VALIDITY OF THAT DOCUMENT.

STATE OF CALIFORNIA

COUNTY OF \_\_\_\_\_

ON \_\_\_\_\_ BEFORE ME, \_\_\_\_\_ PERSONALLY APPEARED \_\_\_\_\_ WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE OF THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE/THEY EXECUTED EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES), AND THAT BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.  
WITNESS MY HAND AND OFFICIAL SEAL.

SIGNATURE \_\_\_\_\_

### ASANTE COMMUNITY ASSOCIATION RATIFICATION

BY THIS RATIFICATION, \_\_\_\_\_ AS THE DULY ELECTED PRESIDENT OF THE ASANTE PHASE 2 COMMUNITY ASSOCIATION, AN ARIZONA NONPROFIT CORPORATION ACKNOWLEDGES THE RESPONSIBILITIES OF SAID ASSOCIATION AS SET FORTH HEREIN.

BY: \_\_\_\_\_ ITS \_\_\_\_\_

### NOTARY ACKNOWLEDGEMENT

STATE OF ARIZONA: )  
COUNTY OF MARICOPA: ) SS

ON THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_ PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, WHO ACKNOWLEDGED HIMSELF/HERSELF TO BE THE \_\_\_\_\_ OF THE ASANTE PHASE 2 COMMUNITY ASSOCIATION, AND THAT HE/SHE, AS \_\_\_\_\_, EXECUTED THIS INSTRUMENT FOR THE PURPOSES HEREIN CONTAINED.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND OFFICIAL SEAL.

BY: \_\_\_\_\_ MY COMMISSION EXPIRES \_\_\_\_\_ DATE \_\_\_\_\_

### APPROVALS

#### CITY OF SURPRISE ENGINEER APPROVAL

DATA ON THIS PLAT REVIEWED AND APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_, BY THE CITY ENGINEER OF SURPRISE, ARIZONA.

APPROVED \_\_\_\_\_ CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

#### CITY OF SURPRISE COUNCIL APPROVAL

APPROVED BY THE CITY COUNCIL OF THE CITY OF SURPRISE, ARIZONA.  
THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

ATTEST:

\_\_\_\_\_  
MAYOR \_\_\_\_\_ DATE \_\_\_\_\_

\_\_\_\_\_  
CITY CLERK \_\_\_\_\_ DATE \_\_\_\_\_

### SHEET INDEX

DESCRIPTION	SHEET NO
COVER SHEET	1
KEY MAP, LEGAL DESCRIPTION	2
PLAT SHEETS	3-9

### RELEASE OF LIABILITY

- ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY "OWNER" DOES HEREBY (1) RELEASE AND DISCHARGE THE CITY OF SURPRISE, (2) INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CITY OF SURPRISE, OF AND FROM ANY LIABILITY FOR ANY AND ALL CLAIMS FOR DAMAGES OF ANY KIND TO PERSONS OR PROPERTY THAT MAY ARISE AT ANY TIME IN THE FUTURE OVER, OR IN CONNECTION WITH THE AREAS LOCATED WITHIN THE NEWLY DEDICATED RIGHT-OF-WAY AS DEPICTED ON THIS PLAT UNTIL SUCH TIME THE RIGHT-OF-WAY IS IMPROVED TO CITY STANDARDS AND THOSE IMPROVEMENTS ARE APPROVED AND ACCEPTED BY THE CITY COUNCIL. THE MAINTENANCE OF THE AREA WITHIN ANY NEWLY DEDICATED RIGHT-OF-WAY AS SHOWN ON THIS PLAT SHALL BE THE RESPONSIBILITY OF THE ADJACENT OWNER/OR SUBSEQUENT ADJACENT OWNERS WITHIN THE BOUNDARY OF SAID PLAT UNTIL SUCH TIME THAT THE AREA WITHIN THE RIGHT-OF-WAY IS IMPROVED TO CITY STANDARD AND ACCEPTED BY THE CITY OF SURPRISE.
- ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY "OWNER" HEREBY FURTHER AGREES TO INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CITY OF SURPRISE FROM ANY AND ALL CLAIMS FOR DAMAGES OF ANY KIND TO PERSONS OR PROPERTY LOCATED THAT MAY ARISE IN CONNECTION WITH THE USE OF THE SIDEWALKS LOCATED WITHIN THE RIGHT OF WAY, UNTIL SUCH TIME THE CITY OF SURPRISE HAS ACCEPTED THE SIDEWALKS.
- ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY "OWNER" DOES HEREBY (1) RELEASE AND DISCHARGE THE UNITED STATES OF AMERICA DEPARTMENT OF THE AIR FORCE (USAF) AND THE CITY OF SURPRISE, AND (2) INDEMNIFY, DEFEND, AND HOLD HARMLESS THE USAF AND THE CITY OF SURPRISE, OF AND FROM ANY LIABILITY FOR ANY AND ALL CLAIMS FOR DAMAGES OF ANY KIND TO PERSONS OR PROPERTY THAT MAY ARISE AT ANY TIME IN THE FUTURE OVER, OR IN CONNECTION WITH AIRCRAFT OVERFLIGHTS FROM AIRCRAFT UTILIZING LUKE AIR FORCE BASE, WHETHER SUCH DAMAGE SHALL ORIGINATE FROM NOISE, VIBRATION, FUMES, DUST, FUEL AND LUBRICANT PARTICLES, AND ALL OTHER EFFECTS THAT MAY BE CAUSED BY THE OPERATION OF AIRCRAFT LANDING AT, OR TAKING OFF FROM, OR OPERATING AT OR ON LUKE AIR FORCE BASE AND ITS AUXILIARY FIELDS. THIS INSTRUMENT SHALL RUN WITH THE LAND AND BE BINDING UPON OWNER AND ITS HEIRS, ASSIGNS, AND SUCCESSORS IN INTEREST TO THIS PLAT OR ANY PARCEL OR LOT THEREOF. THIS INSTRUMENT DOES NOT RELEASE THE USAF FROM LIABILITY FOR DAMAGE OR INJURY TO PERSON OR PROPERTY CAUSED BY FALLING AIRCRAFT OR FALLING PHYSICAL OBJECTS FROM AIRCRAFT, EXCEPT AS STATED HEREIN WITH RESPECT TO NOISE, FUMES, DUST, FUEL, AND LUBRICANT PARTICLES.

### PUBLIC NOTICE

THE LOTS DEPICTED ON THIS PLAT ARE LOCATED WITHIN THE VICINITY OF LUKE AIR FORCE BASE AND MAY BE SUBJECT TO OVERFLIGHTS BY JET AIRCRAFT. ALL STRUCTURES WITHIN THIS PLAT SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE SOUND ATTENUATION STANDARDS ADOPTED BY THE CITY OF SURPRISE. A MAP DEPICTING THE MOST CURRENT ADOPTED MAG NOISE CONTOURS IN RELATION TO THIS PLAT SHALL BE DISPLAYED IN ALL SALES OFFICES. ADDITIONAL INFORMATION MAY BE OBTAINED BY CONTACTING THE CITY OF SURPRISE COMMUNITY DEVELOPMENT DEPARTMENT.

### 100 YEAR ASSURED WATER SUPPLY LANGUAGE

THE AREA PLATTED HEREON LIES WITHIN THE DOMESTIC WATER SERVICE AREA OF CITY OF SURPRISE DESERT OASIS PUBLIC WATER SYSTEM 04-07-523 WHICH IS DESIGNATED AS HAVING AN ASSURED WATER SUPPLY PURSUANT A.R.S. § 45-576.

### GENERAL NOTES

- THE MAINTENANCE OF LANDSCAPING WITHIN THE OPEN SPACES, LANDSCAPED TRACTS, RETENTION BASINS, AND PARKS SHALL BE THE RESPONSIBILITY OF THE OWNER OR THE HOMEOWNERS' ASSOCIATION FORMED BY THE OWNER.
- THE MAINTENANCE OF LANDSCAPING WITHIN THE ADJACENT PUBLIC RIGHTS-OF-WAY, INCLUDING LANDSCAPED MEDIANS WITHIN COLLECTORS AND LOCAL STREETS, AND LANDSCAPED AREAS BETWEEN THE CURB AND THE DETACHED SIDEWALK, SHALL BE THE RESPONSIBILITY OF THE ADJACENT PROPERTY OWNER OR THE HOMEOWNERS' ASSOCIATION FORMED BY THE ADJACENT PROPERTY.
- LANDSCAPING MAINTENANCE OF THE MEDIANS WITHIN THE PUBLIC RIGHT-OF-WAY WITHIN ANY ARTERIAL OR PARKWAY STREET CLASSIFICATION SHALL BE THE RESPONSIBILITY OF THE CITY OF SURPRISE AFTER ACCEPTANCE.
- SPRINKLERS ARE REQUIRED IN ALL ONE AND TWO FAMILY DWELLINGS BUILT IN AREAS WHICH DO NOT HAVE AN ADEQUATE WATER SUPPLY OF 2000 GPM @ 2 HOURS @ 20 PSI RESIDUAL.
- NO ON-SITE GRADING OR EXCAVATION SHALL OCCUR WITHOUT FIRST OBTAINING A PERMIT FROM THE CITY OF SURPRISE.
- A PORTION OF THE PROPERTY IS LOCATED WITHIN THE AREA HAVING FLOOD ZONES "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, ON FLOOD INSURANCE RATE MAPS NO. 04013C1210L WITH A DATE OF IDENTIFICATION OF OCTOBER 16, 2013, FOR COMMUNITY NO. 040053, IN MARICOPA COUNTY, STATE OF ARIZONA, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED.
- IN ACCORDANCE WITH A.R.S. § 9-461.07, THE CITY OF SURPRISE HAS DETERMINED THAT ALL DEDICATIONS OCCURRING WITH THIS FINAL PLAT ARE IN CONFORMANCE WITH THE CITY OF SURPRISE GENERAL PLAN.
- PURSUANT TO A.R.S. § 42-11102, THE CITY OF SURPRISE, A POLITICAL SUBDIVISION OF THE STATE OF ARIZONA, IS EXEMPT FROM ALL TAXES AND ASSESSMENTS BASED ON ASSESSED VALUE EXCEPT FOR SPECIAL DISTRICTS #14751 AND #14710, WHEN APPLICABLE.
- THIS FINAL PLAT IS IN SUBSTANTIAL CONFORMANCE WITH THE PRELIMINARY PLAT APPROVED BY THE CITY OF SURPRISE UNDER CASE FS22-1459.

### BASIS OF BEARING

THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, OF THE GILA AND SALT RIVER MERIDIAN WHICH BEARS N00°45'20"E A DISTANCE OF 2634.06 FEET PER RECORDED DOCUMENT 87-117172 AND UNRECORDED ALTA SURVEY BY HILGART WILSON.

### SURVEYOR'S CERTIFICATION

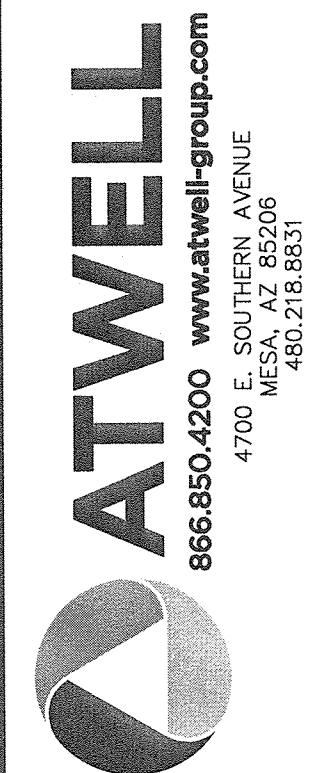
I, JAMES G. SPRING, PLS 22282, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR IN THE STATE OF ARIZONA; THAT THIS PLAT CONSISTING OF NINE SHEETS REPRESENTS A SURVEY PREPARED UNDER MY SUPERVISION DURING THE MONTH OF SEPTEMBER, 2023; THAT THE SURVEY IS CORRECT AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE EXTERIOR BOUNDARY MONUMENTS ACTUALLY EXIST AS SHOWN AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

JAMES G. SPRING, PLS 22282  
ATWELL, LLC  
4700 EAST SOUTHERN AVENUE  
MESA, ARIZONA 85206



NOTE:  
A.R.S. § 32-151 STATES THAT THE USE OF THE WORD "CERTIFY" OR "CERTIFICATION" BY A PERSON OR FIRM THAT IS REGISTERED OR CERTIFIED BY THE BOARD IS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING FACTS OR FINDINGS THAT ARE SUBJECT OF THE CERTIFICATION AND DOES NOT CONSTITUTE AN EXPRESS OR IMPLIED WARRANTY OR GUARANTEE.

CASE NO. FS23-0830

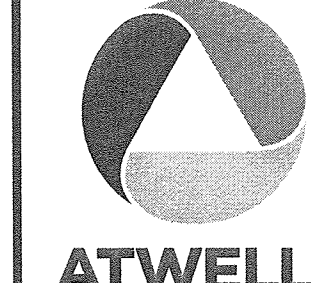


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

FINAL PLAT  
ASANTE UNIT 4.2  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



PM. J. SPRING  
DR. R. GILES  
JOB NO.  
22003507

N.T.S.

22003507 ASANTE 4.2 FP.DWG

SHEET NO.

1 OF 9



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**LEGAL DESCRIPTION**

LOCATED WITHIN A PORTION OF THE SOUTHEAST QUARTER OF SECTION 1, TOWNSHIP 4 NORTH, RANGE 2 WEST AND A PORTION OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A FOUND MONUMENT CAP FLUSH STAMPED CITY OF SURPRISE, ACCEPTED AS THE EAST QUARTER CORNER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, FROM WHICH A FOUND MONUMENT CAP FLUSH STAMPED CITY OF SURPRISE, ACCEPTED AS THE SOUTHEAST CORNER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, THEREOF BEARS S00°45'20"W A DISTANCE OF 2634.00 FEET;

THENCE, ALONG THE EAST LINE OF SAID SECTION 12, N00°44'56"E A DISTANCE OF 2603.38 FEET;

THENCE, LEAVING THE EAST LINE OF SAID SECTION 12, N90°00'00"W A DISTANCE OF 1515.70 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE RIGHT ALSO BEING THE POINT OF BEGINNING;

THENCE, WESTERLY ALONG SAID CURVE AN ARC LENGTH OF 390.69 FEET, WITH A RADIUS OF 1345.00 FEET AND THE RADIAL BEARING OF N13°11'13"E AND A CENTRAL ANGLE OF 16°38'35";

THENCE, N29°49'49"E A DISTANCE OF 5.00 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE RIGHT;

THENCE, NORTHWESTERLY ALONG SAID CURVE AN ARC LENGTH OF 205.21 FEET, WITH A RADIUS OF 1340.00 FEET AND THE RADIAL BEARING OF N29°49'49"E AND A CENTRAL ANGLE OF 08°46'28";

THENCE, N05°00'20"W A DISTANCE OF 27.81 FEET;

THENCE, N53°07'52"W A DISTANCE OF 70.18 FEET;

THENCE, S86°54'59"W A DISTANCE OF 27.81 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE RIGHT;

THENCE, NORTHWESTERLY ALONG SAID CURVE AN ARC LENGTH OF 163.90 FEET, WITH A RADIUS OF 1345.00 FEET AND THE RADIAL BEARING OF N43°17'59"E AND A CENTRAL ANGLE OF 06°58'55";

THENCE, N39°43'06"W A DISTANCE OF 104.30 FEET;

THENCE, N43°31'09"E A DISTANCE OF 1228.77 FEET;

THENCE, S46°28'51"E A DISTANCE OF 741.52 FEET;

THENCE, S43°31'09"W A DISTANCE OF 883.26 FEET;

THENCE, S03°58'14"E A DISTANCE OF 270.87 FEET TO THE POINT OF BEGINNING.

**LEGEND**

	SUBDIVISION BOUNDARY
	PROPOSED RIGHT OF WAY LINE
	EXISTING RIGHT OF WAY LINE
	CENTERLINE
	PROPOSED EASEMENT LINE
	SECTION LINE
	20' PRIVATE DRIVE INGRESS-EGRESS, DRAINAGE ESMT, AND WATER-SEWER ESMT
	SUBDIVISION CORNER TO BE SET
	FOUND MONUMENT AS NOTED
	CENTERLINE MONUMENT (TO BE SET BY CITY OF SURPRISE STANDARDS)
	20'x20' SIGHT VISIBILITY EASEMENT
	VNAE
	VEHICULAR NON-ACCESS EASEMENT
	PUE
	PUBLIC UTILITY EASEMENT
	MCR
	MARICOPA COUNTY RECORDER
	RIGHT-OF-WAY
	DELTA
	C1
	CURVE TABLE NUMBER
	L1
	LINE TABLE NUMBER
	RIGHT OF WAY PER BK 1733, PG 02, MCR

**LINE TABLE**

LINE #	DIRECTION	LENGTH
L1	N29°49'49"E	5.00'
L2	N05°00'20"W	27.81'
L3	N53°07'52"W	70.18'
L4	S86°54'59"W	27.81'
L5	S39°43'06"E	104.30'

**CURVE TABLE**

CURVE #	LENGTH	RADIUS	DELTA
C1	390.69'	1345.00'	016°38'35"
C2	205.21'	1340.00'	008°46'28"
C3	163.90'	1345.00'	006°58'55"

**AREA CALCULATIONS**

LANDSCAPE TRACTS	171,608 SQ.FT.	3.94 AC
LOT AREA (LOTS 1-136)	559,991 SQ.FT.	12.86 AC
RIGHT OF WAY	143,865 SQ.FT.	3.30 AC
DRIVEWAY TRACT	61,077 SQ.FT.	1.40 AC
<b>TOTAL</b>	<b>936,541 SQ.FT.</b>	<b>21.50 AC</b>

**LANDSCAPE TRACT TABLE**

TRACT	AREA SQ FT	AREA ACRES	USAGE
ACCESS TRACT	1,718	0.04	EMERGENCY ACCESS, UTILITIES, PUE & WATER ESMT
TRACT A	670	0.02	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT B	1,012	0.02	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT C	787	0.02	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT D	2,613	0.06	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT E	62,901	1.44	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT F	76,395	1.75	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT G	25,512	0.59	DRAINAGE, OPEN SPACE, UTILITIES & PUE
<b>TOTAL</b>	<b>171,608</b>	<b>3.94</b>	

**DRIVEWAY TRACT TABLE**

TRACT	AREA SQ FT	AREA ACRES	USAGE
TRACT DW-1	3,718	0.09	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-2	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-3	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-4	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-5	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-6	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-7	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-8	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-9	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-10	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-11	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-12	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-13	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-14	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-15	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-16	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-17	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-18	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-19	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-20	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-21	2,656	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-22	1,728	0.04	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-23	2,656	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
<b>TOTAL</b>	<b>61,077</b>	<b>1.40</b>	

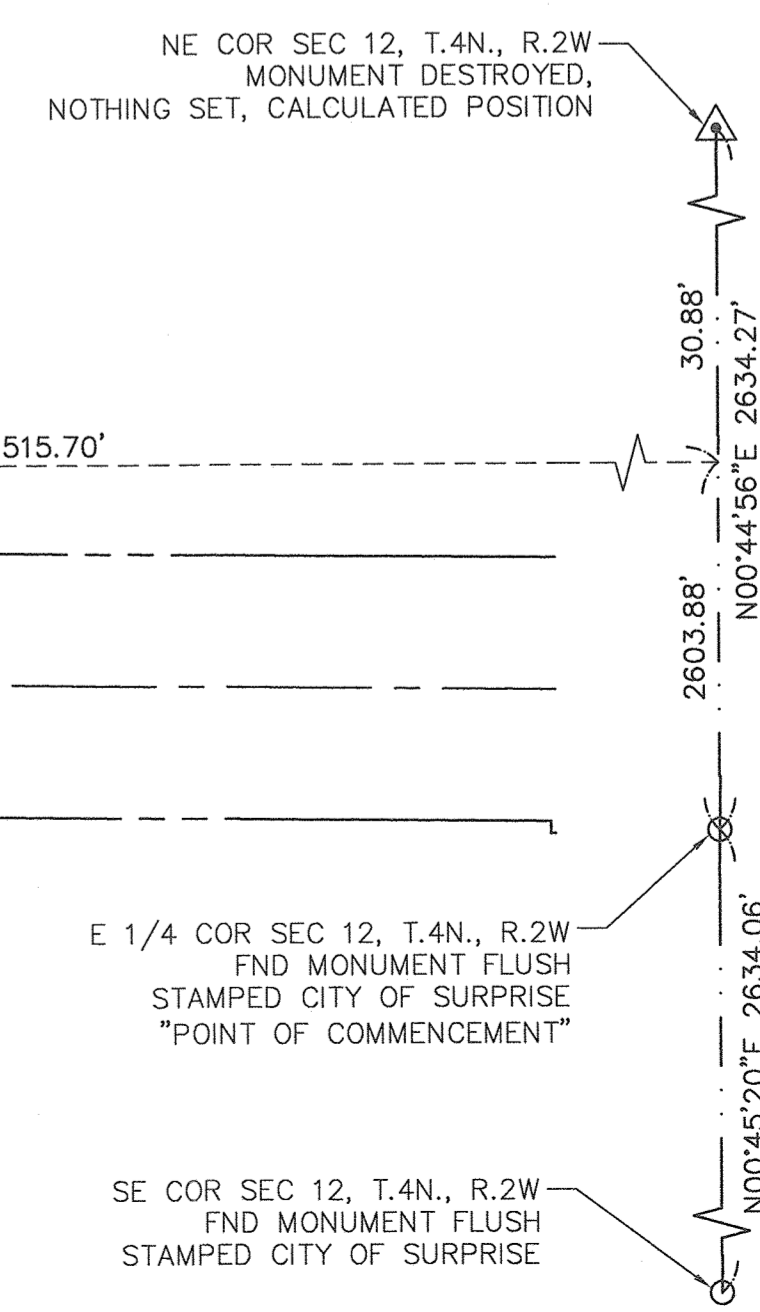
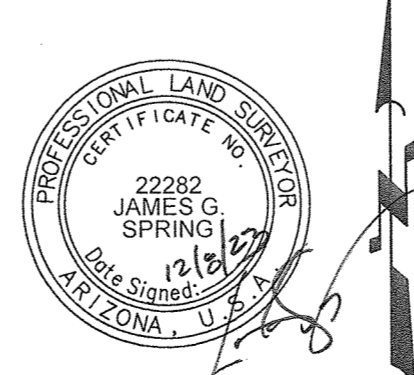
**OPEN SPACE TABLE**

TYPE	ACREAGE	PERCENTAGE OF TOTAL OPEN SPACE
ACTIVE	0.67	17.00%
PASSIVE	3.27	83.00%
<b>TOTAL</b>	<b>3.94</b>	<b>100.00%</b>

% OF TOTAL OPEN SPACE IN PLAT 18.32%

**SITE DATA**

GROSS SITE AREA	21.50 ACRES
RIGHT OF WAY	3.30 ACRES
NET SITE AREA	18.20 ACRES
NUMBER OF LOTS	136 LOTS
NET DENSITY	7.47 DU/AC
ARTERIAL RIGHT OF WAY ZONING	0.00 ACRES PAD

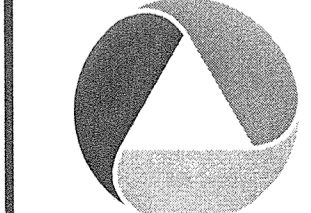


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNIT 4.2**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



PM. J. SPRING  
DR. R. GILES  
JOB NO. 22003507

SCALE 0 40 80  
1" = 80 FEET

22003507 ASANTE 4.2 FINAL

SHEET NO. **2 OF 9**

CASE NO. FS23-0830

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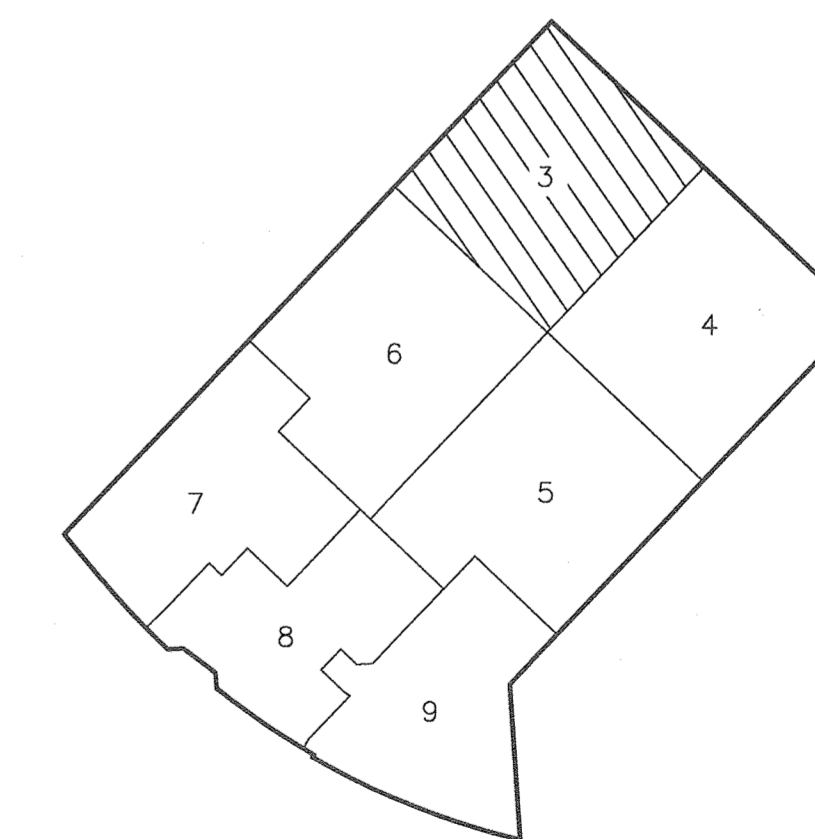




LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
39	4182	0.096	58	4182	0.096
40	3772	0.087	59	3772	0.087
41	4246	0.097	60	4246	0.097
42	4246	0.097	61	4246	0.097
43	3772	0.087	62	3772	0.087
44	4169	0.096	63	4182	0.096
51	4182	0.096	64	4182	0.096
52	3772	0.087	65	3772	0.087
53	4246	0.097	66	4246	0.097
54	4246	0.097	67	4246	0.097
55	3772	0.087	68	3772	0.087
56	4162	0.096	69	4182	0.096
57	5945	0.136			

LINE TABLE			LINE TABLE		
LINE #	DIRECTION	LENGTH	LINE #	DIRECTION	LENGTH
L1	N43°31'09"E	14.58'	L8	N43°31'09"E	20.00'
L2	N46°28'51"W	20.00'	L9	N43°31'09"E	20.00'
L3	N46°28'51"W	82.00'	L10	N46°28'51"W	14.58'
L4	S46°28'51"E	8.87'	L11	N88°31'09"E	28.28'
L5	S46°28'51"E	5.86'	L12	N46°28'51"W	20.00'
L6	N43°31'09"E	34.60'	L13	N43°31'09"E	14.58'
L7	N46°28'51"W	14.58'			

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C1	31.42'	20.00'	090°00'00"
C2	62.83'	40.00'	090°00'00"
C3	84.03'	35.00'	137°33'03"
C4	20.75'	25.00'	047°33'03"
C5	54.98'	35.00'	090°00'00"



SITE KEY MAP



CASE NO. FS23-0830

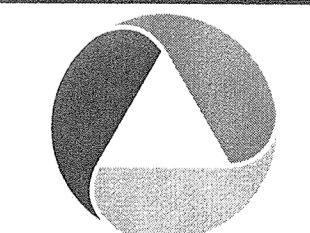


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

FINAL PLAT  
ASANTE UNIT 4.2  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



PM. J. SPRING  
DR. R. GILES  
JOB NO. 22003507

SCALE 0 15 30  
1" = 30 FEET

22003507 ASANTE 4.2 FP.DWG

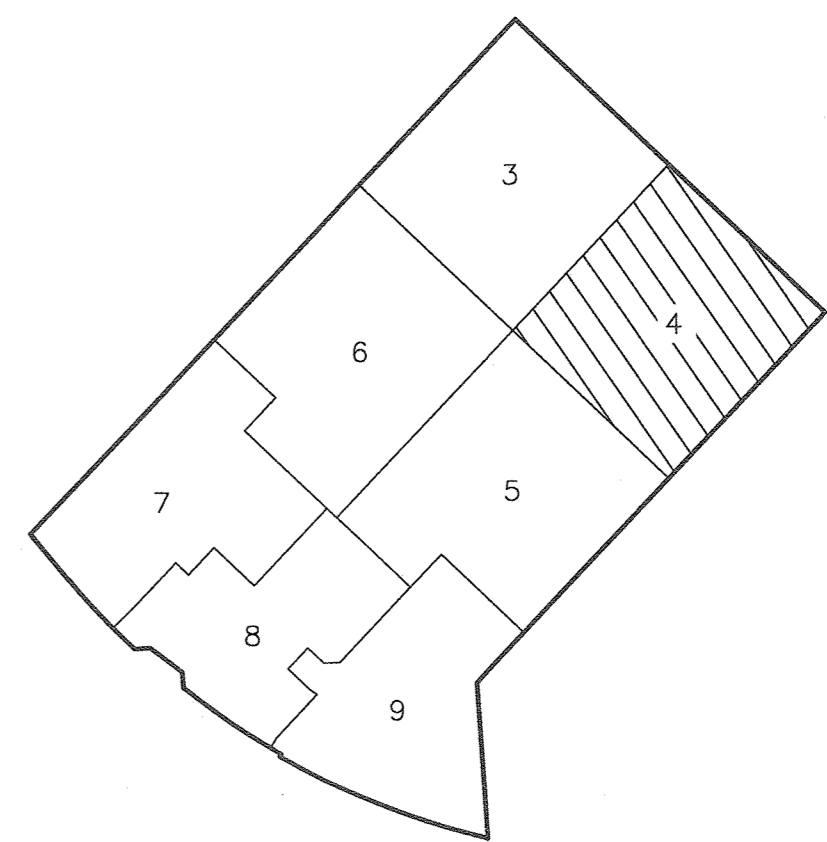
SHEET NO. 3 OF 9



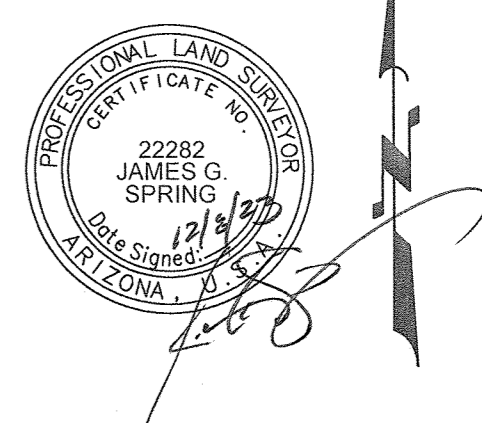
LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
70	4182	0.096	82	4170	0.096
71	3772	0.087	83	3772	0.087
72	4246	0.097	84	4246	0.097
73	4246	0.097	85	4246	0.097
74	3772	0.087	86	3772	0.087
75	4182	0.096	87	4182	0.096
76	4182	0.096	94	4170	0.096
77	3772	0.087	95	3772	0.087
78	4246	0.097	96	4246	0.097
79	4522	0.104	97	4246	0.097
80	4026	0.092	98	3772	0.087
81	4463	0.102	99	4182	0.096

LINE TABLE			LINE TABLE		
LINE #	DIRECTION	LENGTH	LINE #	DIRECTION	LENGTH
L14	N43°31'09"E	14.58'	L21	N46°28'51"W	87.52'
L15	N46°28'51"W	20.00'	L22	N88°31'09"E	28.28'
L16	N43°31'09"E	14.58'	L23	N01°28'51"W	28.28'
L17	N46°28'51"W	20.00'	L24	N46°28'51"W	14.58'
L18	N43°31'09"E	50.00'	L25	N43°31'09"E	20.00'
L19	S46°28'51"E	38.00'	L26	N43°31'09"E	20.00'
L20	N46°28'51"W	32.00'	L27	N46°28'51"W	14.58'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C6	24.84'	55.00'	025°52'20"
C7	36.04'	35.00'	058°59'50"
C8	54.98'	35.00'	090°00'00"



SITE KEY MAP



CASE NO. FS23-0830

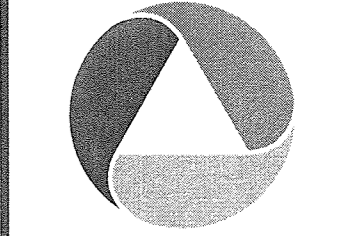


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNIT 4.2**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



PM. J. SPRING  
DR. R. GILES  
JOB NO.  
22003507

SCALE 0 15 30  
1" = 30 FEET

22003507 ASANTE 4.2 FP.DWG

SHEET NO.  
**4 OF 9**

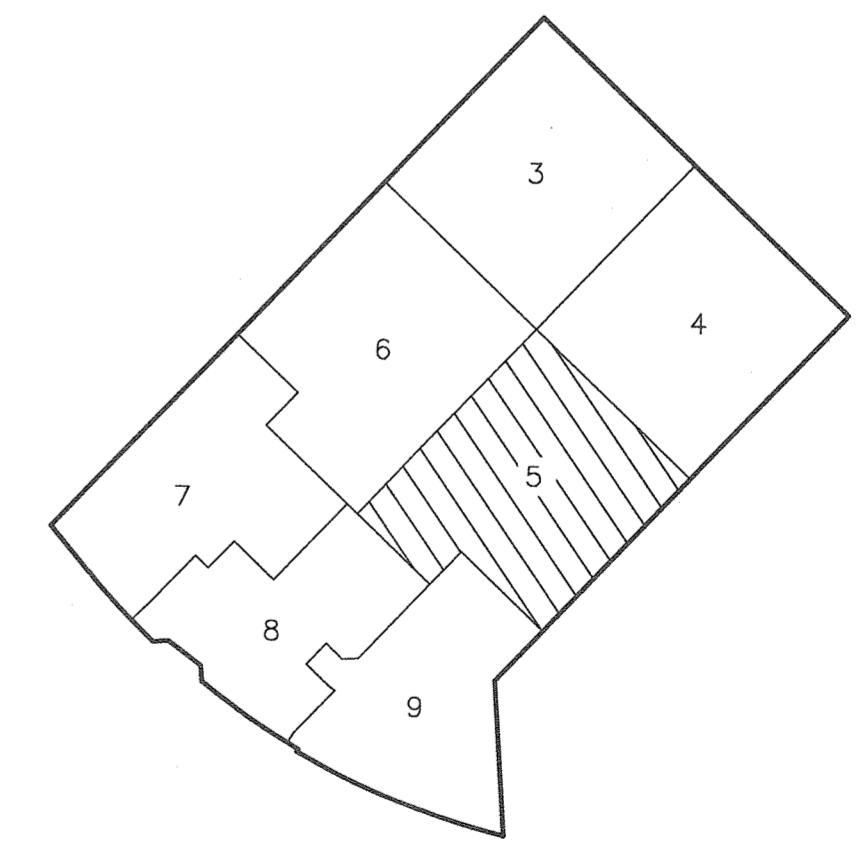


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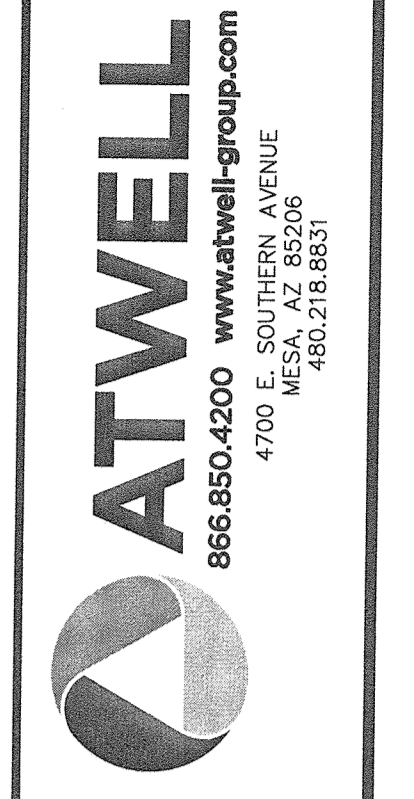


LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
88	4182	0.096	106	4182	0.096
89	3772	0.087	107	3772	0.087
90	4246	0.097	108	4246	0.097
91	4246	0.097	109	4246	0.097
92	3772	0.087	110	3772	0.087
93	4182	0.096	111	4182	0.096
100	4182	0.096	112	4182	0.096
101	3772	0.087	113	3772	0.087
102	4246	0.097	114	4246	0.097
103	4246	0.097	115	4246	0.097
104	3772	0.087	116	3772	0.087
105	4182	0.096	117	4182	0.096

LINE TABLE		
LINE #	DIRECTION	LENGTH
L28	N46°28'51"W	14.58'
L29	N43°31'09"E	20.00'
L30	N46°28'51"W	14.58'
L31	N43°31'09"E	20.00'
L32	N46°28'51"W	14.58'
L33	N43°31'09"E	20.00'
L34	N46°28'51"W	14.58'
L35	N43°31'09"E	20.00'



SITE KEY MAP

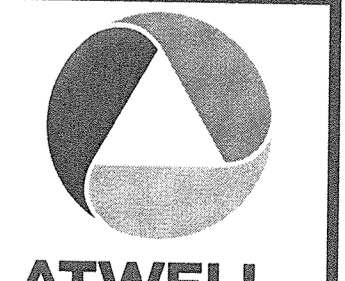


COUNTY: MARICOPA  
 SECTION: 12  
 TOWNSHIP: 4 NORTH  
 RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNIT 4.2**  
 CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



PM. J. SPRING  
 DR. R. GILES  
 JOB NO. 22003507

SCALE 0 15 30  
 1" = 30 FEET

22003507 ASANTE 4.2 FP.DWG  
 SHEET NO.

5 OF 9

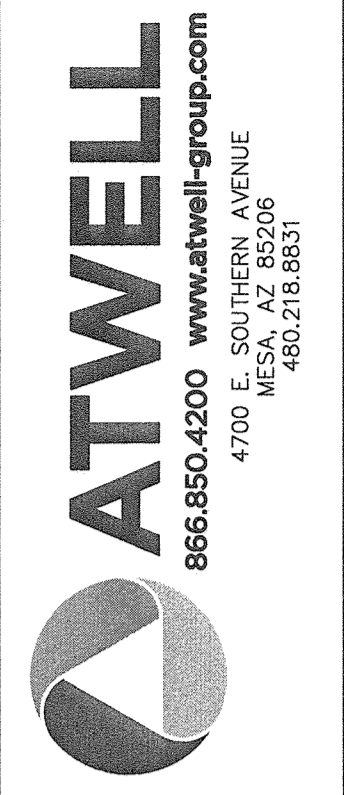
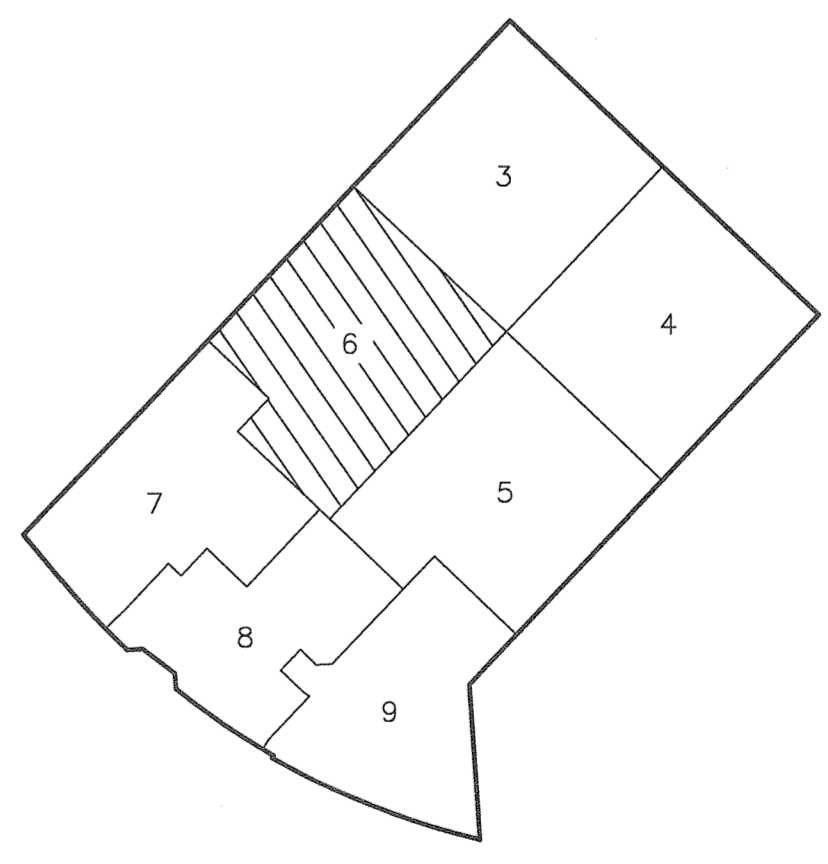
CASE NO. FS23-0830





LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
21	4182	0.096	33	4182	0.096
22	3772	0.087	34	3772	0.087
23	4246	0.097	35	4246	0.097
24	4246	0.097	36	4246	0.097
25	3772	0.087	37	3772	0.087
26	4182	0.096	38	4182	0.096
27	4182	0.096	45	4182	0.096
28	3772	0.087	46	3772	0.087
29	4246	0.097	47	4246	0.097
30	4246	0.097	48	4246	0.097
31	3772	0.087	49	3772	0.087
32	4182	0.096	50	4182	0.096

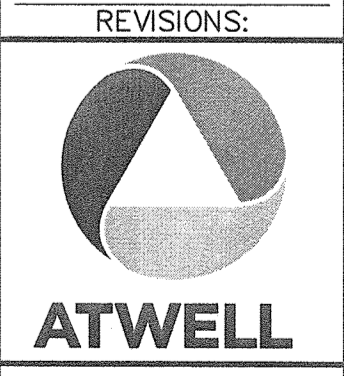
LINE TABLE		
LINE #	DIRECTION	LENGTH
L36	N43°31'09"E	20.00'
L37	N46°28'51"W	14.58'
L38	N43°31'09"E	20.00'
L39	N46°28'51"W	14.58'
L40	N46°28'51"W	14.58'
L41	N43°31'09"E	20.00'
L42	N46°28'51"W	14.58'
L43	N43°31'09"E	20.00'



COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNIT 4.2**  
CITY OF SURPRISE, ARIZONA

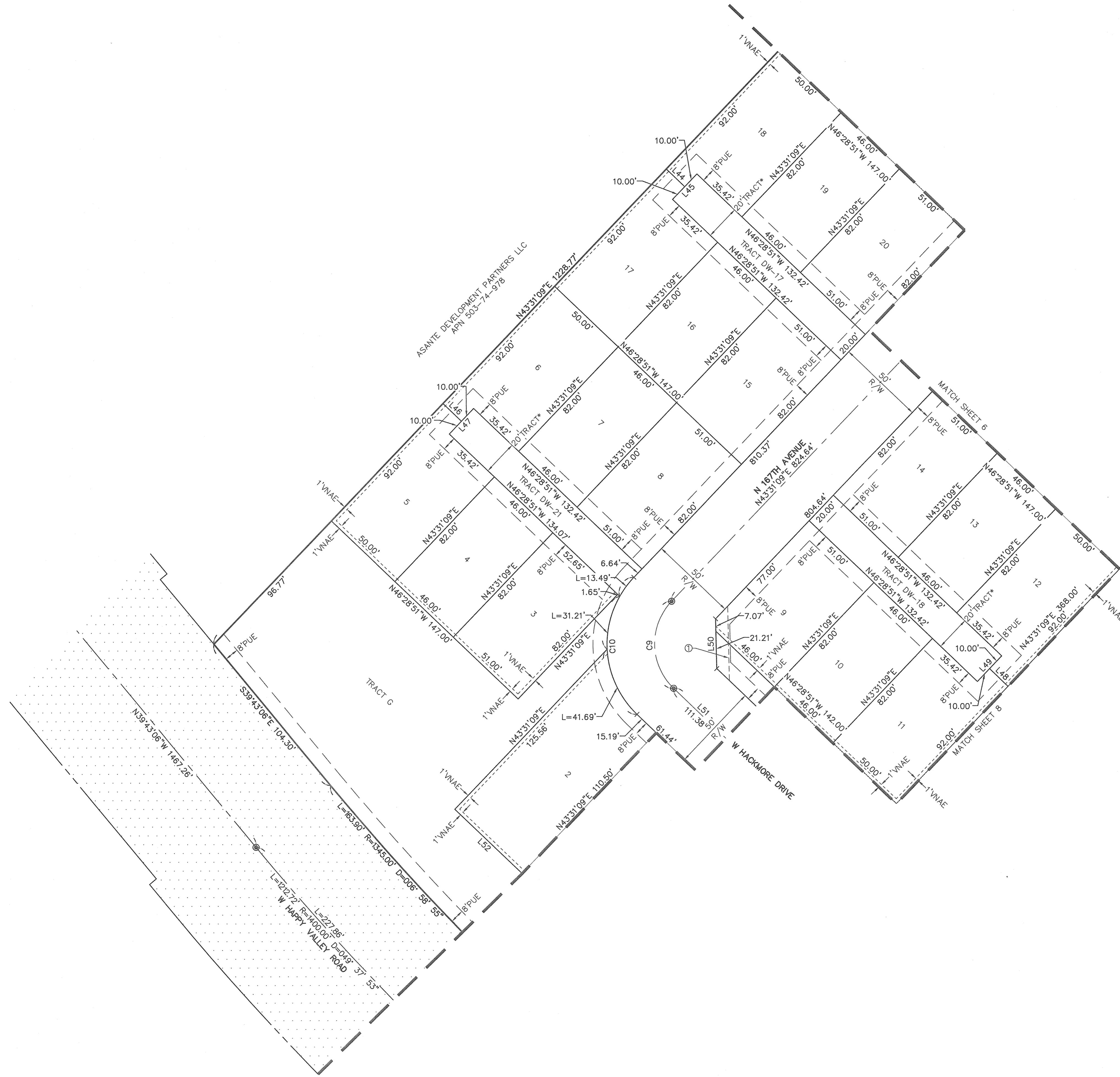
DECEMBER 2023



PM. J. SPRING  
DR. R. GILES  
JOB NO. 22003507  
SCALE 1" = 30 FEET  
22003507 ASANTE 4.2.FP.DWG  
SHEET NO. 6 OF 9

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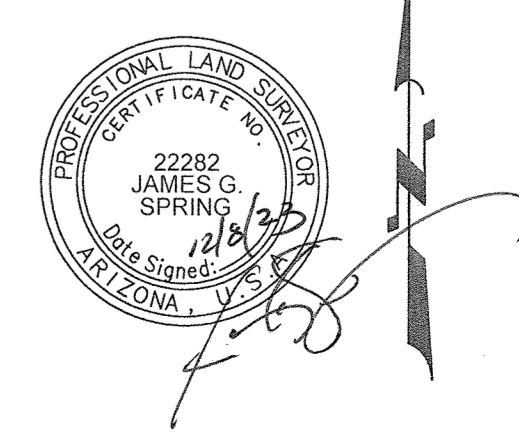
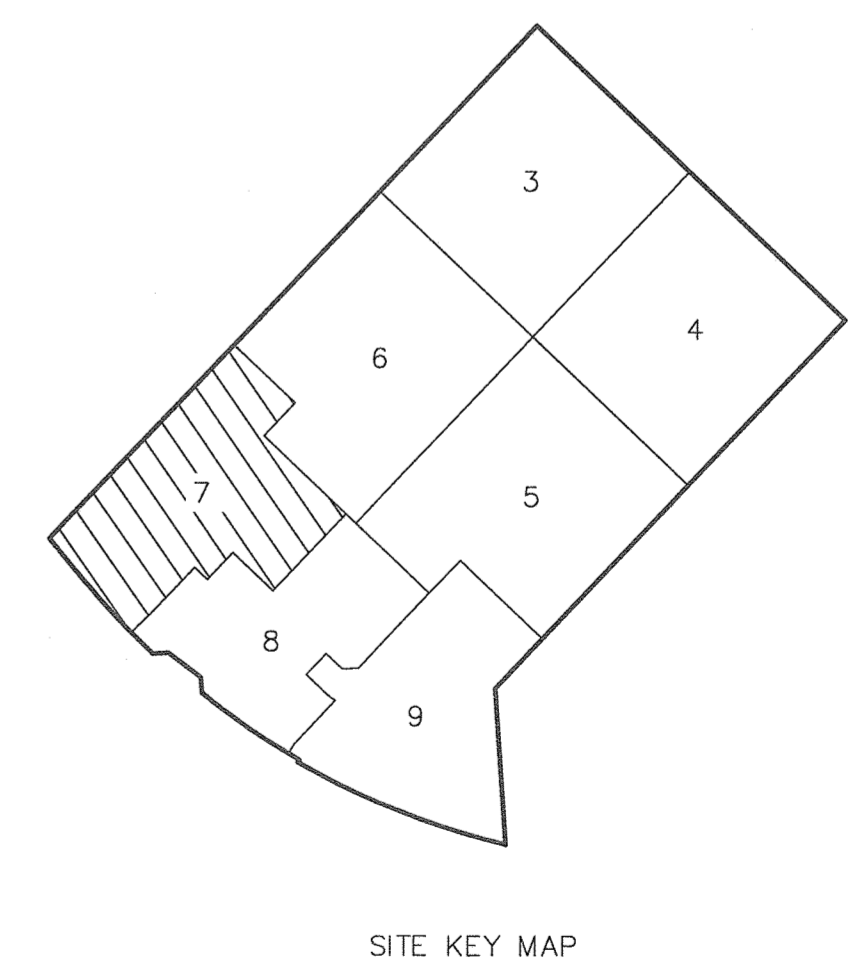
K:\22003507\UWD\SURVEY\FINAL PLAT\4.2 22003507 ASANTE 4.2 FP.DWG. SAVEDATE:12/8/2023 9:27 AM PLOTDATE:12/8/2023 9:39 AM



LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
2	6034	0.139	12	4246	0.097
3	4182	0.096	13	3772	0.087
4	3772	0.087	14	4182	0.096
5	4246	0.097	15	4182	0.096
6	4246	0.097	16	3772	0.087
7	3772	0.087	17	4246	0.097
8	4182	0.096	18	4246	0.097
9	4169	0.096	19	3772	0.087
10	3772	0.087	20	4182	0.096
11	4246	0.097			

LINE TABLE		
LINE #	DIRECTION	LENGTH
L44	N46°28'51"W	14.58'
L45	N43°31'09"E	20.00'
L46	N46°28'51"W	14.58'
L47	N43°31'09"E	20.00'
L48	N46°28'51"W	14.58'
L49	N43°31'09"E	20.00'
L50	N01°28'51"W	28.28'
L51	N46°28'51"W	327.52'
L52	N46°28'51"W	106.00'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C9	54.98'	35.00'	090°00'00"
C10	86.39'	55.00'	090°00'00"

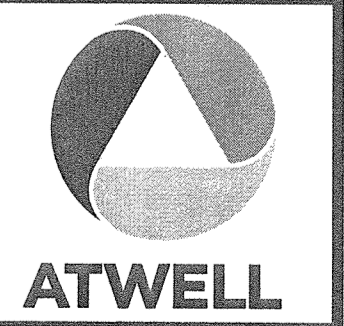


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNIT 4.2**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



PM. J. SPRING  
DR. R. GILES  
JOB NO. 22003507

SCALE 0 15 30  
1" = 30 FEET

22003507 ASANTE 4.2 FP.DWG

SHEET NO. **7 OF 9**

CASE NO. FS23-0830

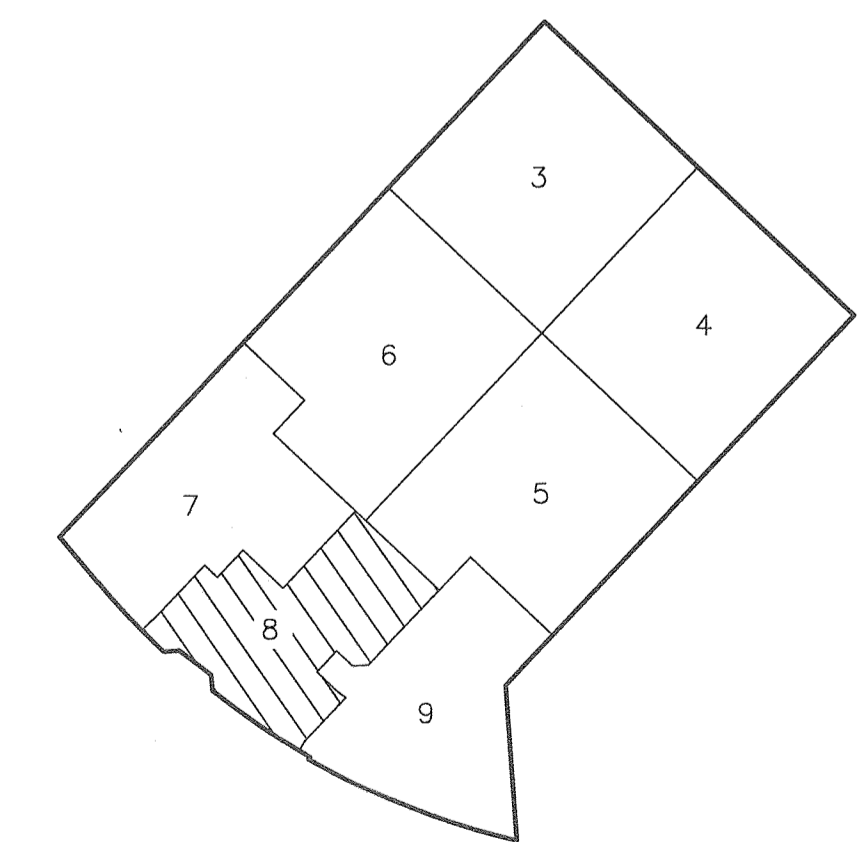




LOT TABLE		
LOT	AREA SQ FT	AREA ACRES
1	5834	0.134
124	4182	0.096
125	3772	0.087
126	4246	0.097
127	4246	0.097
128	3772	0.087
129	4169	0.096
133	4191	0.096
134	4246	0.097
135	4246	0.097
136	4175	0.096

LINE TABLE		
LINE #	DIRECTION	LENGTH
L53	N46°28'51"W	14.58'
L54	N43°31'09"E	20.00'
L55	N88°37'07"E	28.33'
L56	N43°31'09"E	43.55'
L57	N01°23'03"W	28.24'
L58	N46°28'51"W	106.00'
L59	N86°54'59"E	27.81'
L60	S53°07'52"E	70.18'
L61	S05°00'20"E	27.81'
L62	S40°57'24"W	4.16'
L63	N43°31'09"E	14.58'
L64	N46°28'51"W	20.00'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C11	111.93'	2535.00'	002°31'48"
C12	111.82'	2500.00'	002°33'46"
C13	108.80'	2465.00'	002°31'44"
C14	163.90'	1345.00'	006°58'55"



SITE KEY MAP

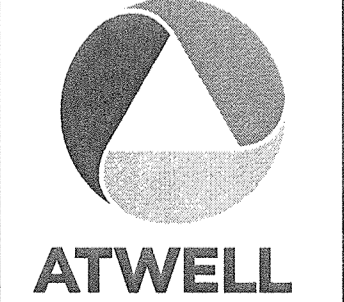


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNIT 4.2**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:

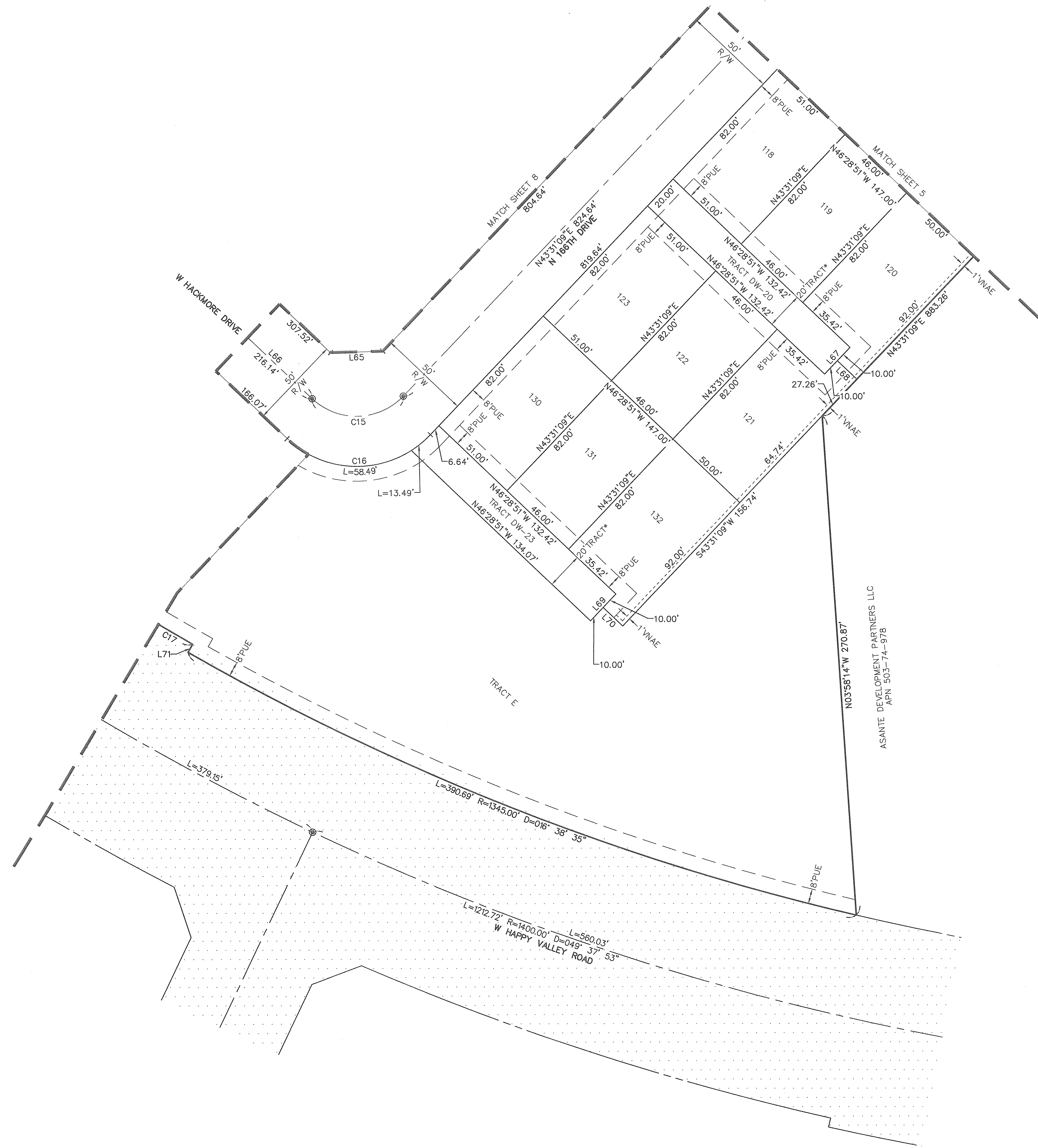


PM. J. SPRING  
DR. R. GILES  
JOB NO.  
22003507

SCALE 0 15 30  
1" = 30 FEET

22003507 ASANTE 4.2 FP.DWG

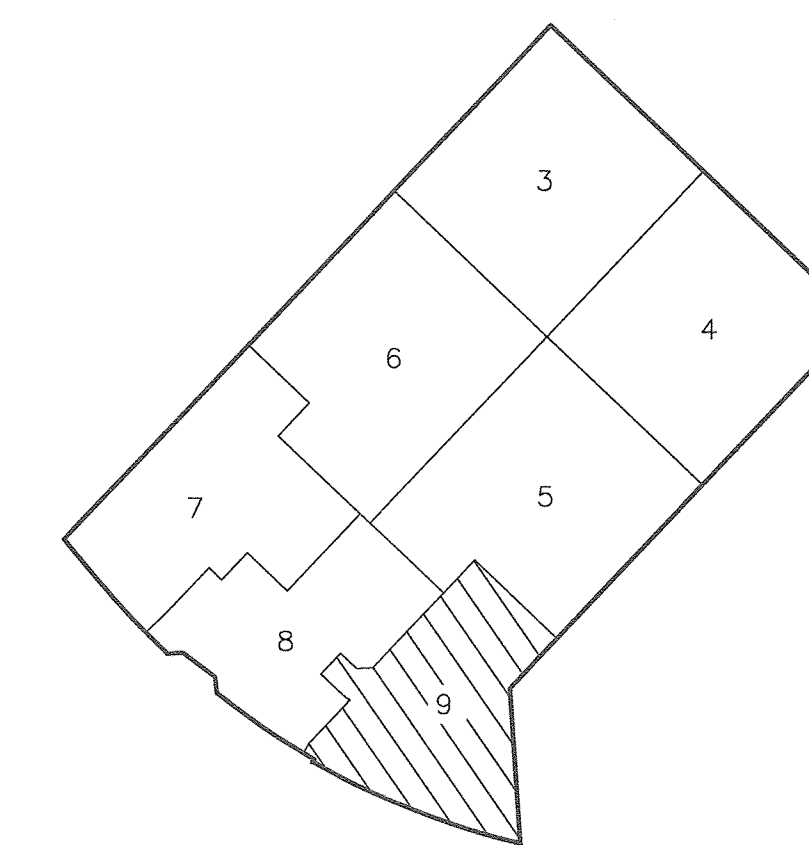
SHEET NO.  
**8 OF 9**



LOT TABLE		
LOT	AREA SQ FT	AREA ACRES
118	4182	0.096
119	3772	0.087
120	4246	0.097
121	4246	0.097
122	3772	0.087
123	4182	0.096
130	4182	0.096
131	3772	0.087
132	4246	0.097

LINE TABLE		
LINE #	DIRECTION	LENGTH
L65	N88°31'09"E	28.28'
L66	N46°28'51"W	327.52'
L67	N43°31'09"E	20.00'
L68	N46°28'51"W	14.58'
L69	N43°31'09"E	20.00'
L70	N46°28'51"W	14.58'
L71	S29°49'49"W	5.00'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C15	54.98'	35.00'	090°00'00"
C16	86.39'	55.00'	090°00'00"
C17	205.21'	1340.00'	008°46'28"



SITE KEY MAP



CASE NO. FS23-0830

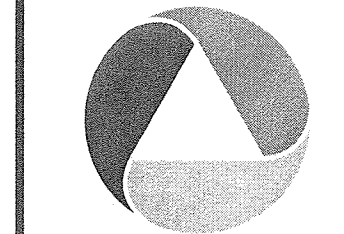


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNIT 4.2**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



PM. J. SPRING  
DR. R. GILES  
JOB NO.  
22003507

SCALE 0 15 30  
1" = 30 FEET

22003507 ASANTE 4.2 FP.DWG

SHEET NO.  
**9 OF 9**

**From:** [RAHN, JENNIFER L CIV USAF AETC 56 FW/CVE](#)  
**To:** [Nichole Flores](#)  
**Cc:** [56 FW/CIT Community Initiative](#)  
**Subject:** RE: FS23-0830 Asante JV Unit 4.2 Final Plat - New Digital Submittal 09.12.23  
**Date:** Monday, September 18, 2023 2:31:50 PM

---

**\*\*\*The e-mail below is from an external source. Please do not open attachments or click links from an unknown or suspicious origin.\*\*\***

Good afternoon Ms. Flores,

Thank you for the opportunity to provide comments on the final site application for the Asante JV Unit 4.2 Final Plat. A concept review for this parcel was not previously received. Per the site plan provided, the proposed development is located on approximately 21.50 acres and is generally located near 163<sup>rd</sup> Avenue and Happy Valley Road in Surprise, AZ. The application requests 136 residential single-family lots. The site is 3.07 miles outside the Luke AFB Aux-1 2004 65 Ldn, "high noise or accident potential zone" as identified by A.R.S. § 28-8461 and is within the "territory in the vicinity of a military airport" also defined by A.R.S. § 28-8461.

In an effort to promote a more compatible co-existence, Luke AFB follows the guidelines in the Graduated Density Concept (GDC). The GDC proposes, in the absence of a more restrictive state, county or municipal general or comprehensive plan, graduating densities away from the 65 Ldn as follows: a maximum of 2 du/ac from the 65 Ldn to 1/2 mile, a maximum of 4 du/ac from 1/2 to 1 mile, and a maximum of 6 du/ac from 1 to 3 miles. The proposal for the property as stated in the narrative, consisting of 6.33 du/ac on the property meets the GDC due to being outside of the 3-mile boundary.

As described in the application, this project will not negatively impact the flying operations at Luke AFB. Since the site will be located within the "territory in the vicinity of a military airport," it will be subjected to approximately 170 over flights per day. We also recommend a strong notification program on the part of the applicant to inform any potential occupant(s) about Luke AFB operations.

Respectfully,

*Jenn Rahn*

Senior Planner, Community Initiatives Team  
56th Fighter Wing  
Luke AFB AZ 85309  
Office: 623-856-9981  
DSN: 896-9981

**From:** Nichole Flores <Nichole.Flores@surpriseaz.gov>

**Sent:** Tuesday, September 12, 2023 10:44 AM

**To:** 56 FW/CIT Community Initiative <56FW.CIT.CommunityInitiative@us.af.mil>; Afshin Houraiyan (Flood Control District of Maricopa County) <Afshin.Houraiyan@Maricopa.Gov>; Alex Garza (Maricopa Assoc of Governments) <AGarza@azmag.gov>; Aspasia Angelou (Nadaburg School District) <aangelou@nadaburgsd.org>; Barbara J Remondini, Ph.D. (Wickenburg School District) <bremondini@wusd9.org>; Bryce Christo (bchristo@cityofelmirage.org) <bchristo@cityofelmirage.org>; Chris Cain (Maricopa Water District) <chrisc@mwdaz.com>; Darren V Gerard (Maricopa County Planning) <Darren.Gerard@maricopa.gov>; Debbie Trasancos (Maricopa Water District) <debbiet@mwdaz.com>; Douglas Kirkland (Epcor) <dkirkland@epcor.com>; Ernest (USPS) <Ernest.L.James@usps.gov>; Eva Pierce <eva.pierce@dysart.org>; Gregory McDowell (MCDOT) <Gregory.McDowell@maricopa.gov>; Ibeth - USPS <lbeth.L.Roman@usps.gov>; RAHN, JENNIFER L CIV USAF AETC 56 FW/CVE <jennifer.rahm@us.af.mil>; Jerome Choy (ADOT) <jchoy@azdot.gov>; John Willett (City of Buckeye) <jwillett@buckeyeaz.gov>; Jorge Gastelum (City of El Mirage) <jgastelum@cityofelmirage.org>; Judy Lopez - Beardsley Water Company <managefnm365@aol.com>; Kevin Shipman <kevin.shipman@dysart.org>; Leslie - MWD <lesliej@mwdaz.com>; Mark Frago <fragom@mail.maricopa.gov>; Mary Orta - Surprise Chamber <mary.orta@surpriseregionalchamber.com>; MCDOT (MCDOTPlanning@maricopa.gov) <MCDOTPlanning@maricopa.gov>; Raoul Sada - Surprise Chamber <raoul@surpriseregionalchamber.com>; Rovell Foggy (Liberty Utilities) <Rovell.Foggy@libertyutilities.com>; Shelby Rios (MWD) <shelbyr@mwdaz.com>; Victor.Schaum <Victor.Schaum@cox.com>; Yvonne Aguirre <yvonne.aguirre@swgas.com>

**Cc:** Tierney Farago <Tierney.Farago@surpriseaz.gov>

**Subject:** [Non-DoD Source] FS23-0830 Asante JV Unit 4.2 Final Plat - New Digital Submittal 09.12.23

Good morning,

Attached please find the **application**, **narrative**, and **final plat** for the above referenced project.

Please feel free to contact us with any questions.

Best regards,

Nichole Flores

Planning Project Coordinator

City of Surprise | Community Development

16000 N Civic Center Plz | Surprise AZ 85374

(623) 222-3244 Direct

***\*Effective 6/26/23, we are now using Camino (<https://app.oncamino.com/surprise-az/login>) for ALL submittals.***

***\*Please note effective August 3, 2022, we will be adding a 2-business day out-processing for ALL notices***

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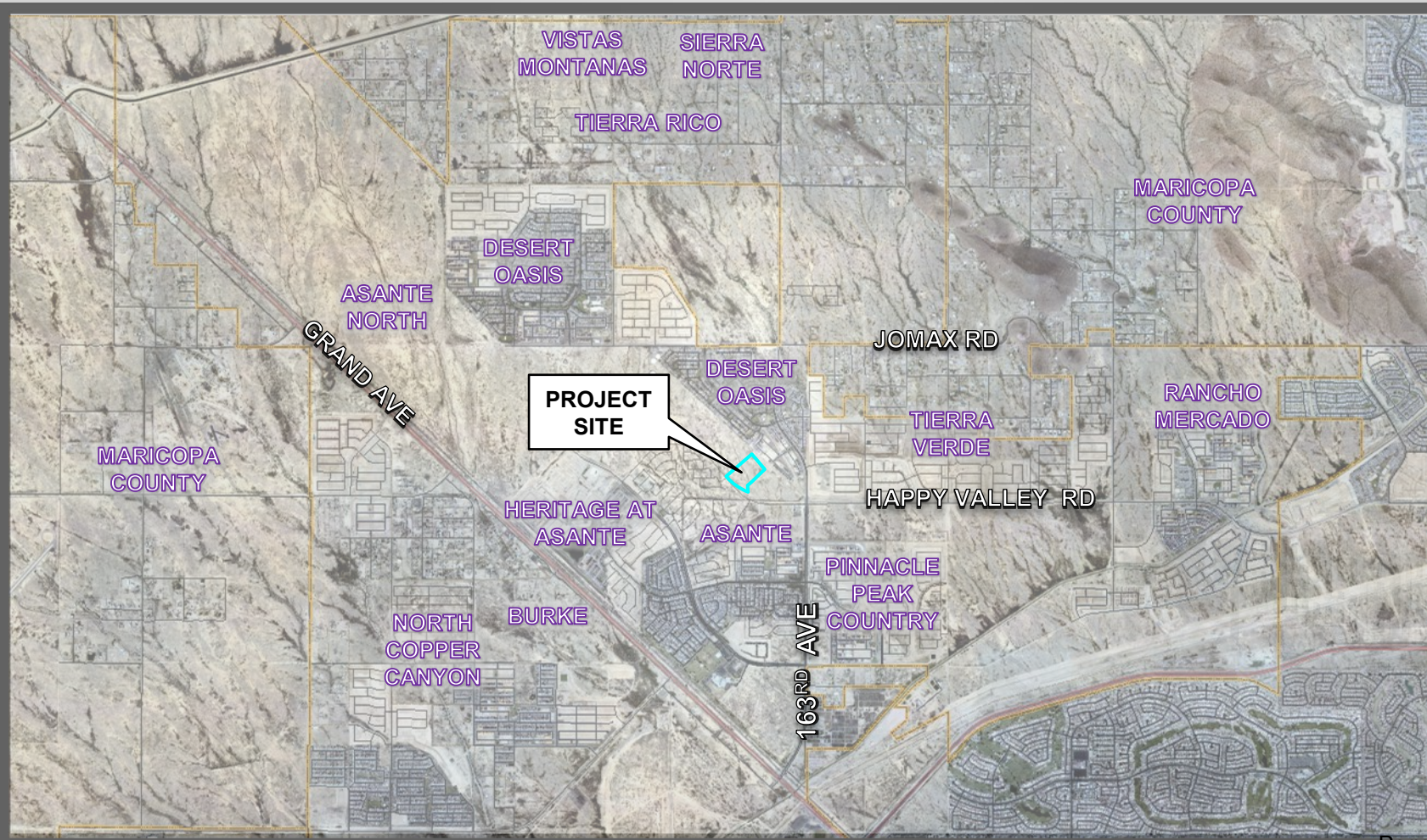


**SURPRISE**  
ARIZONA

**FS23-0830**  
**Asante Unit 4.2**  
**Final Plat**

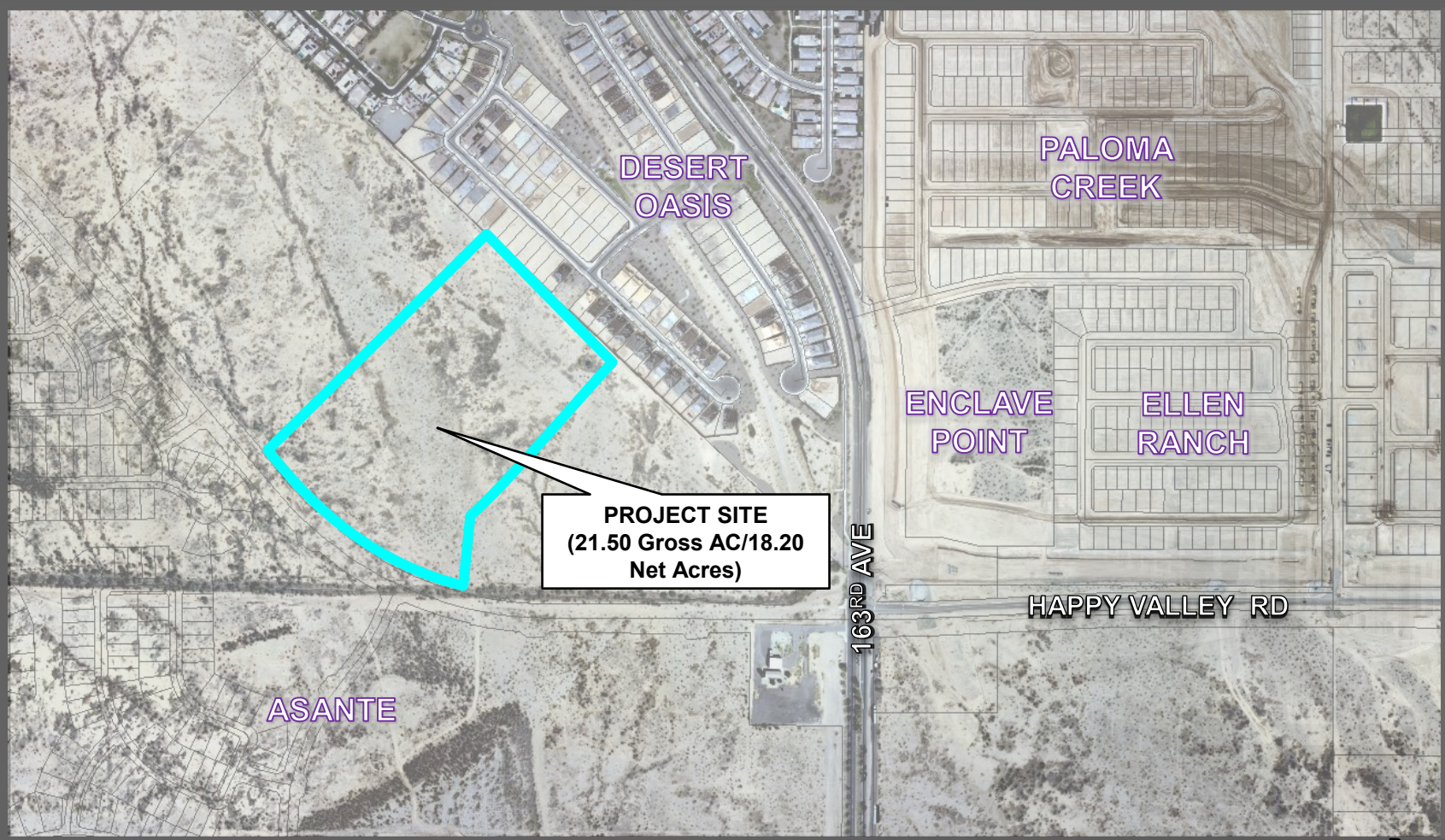
City Council  
February 20, 2024





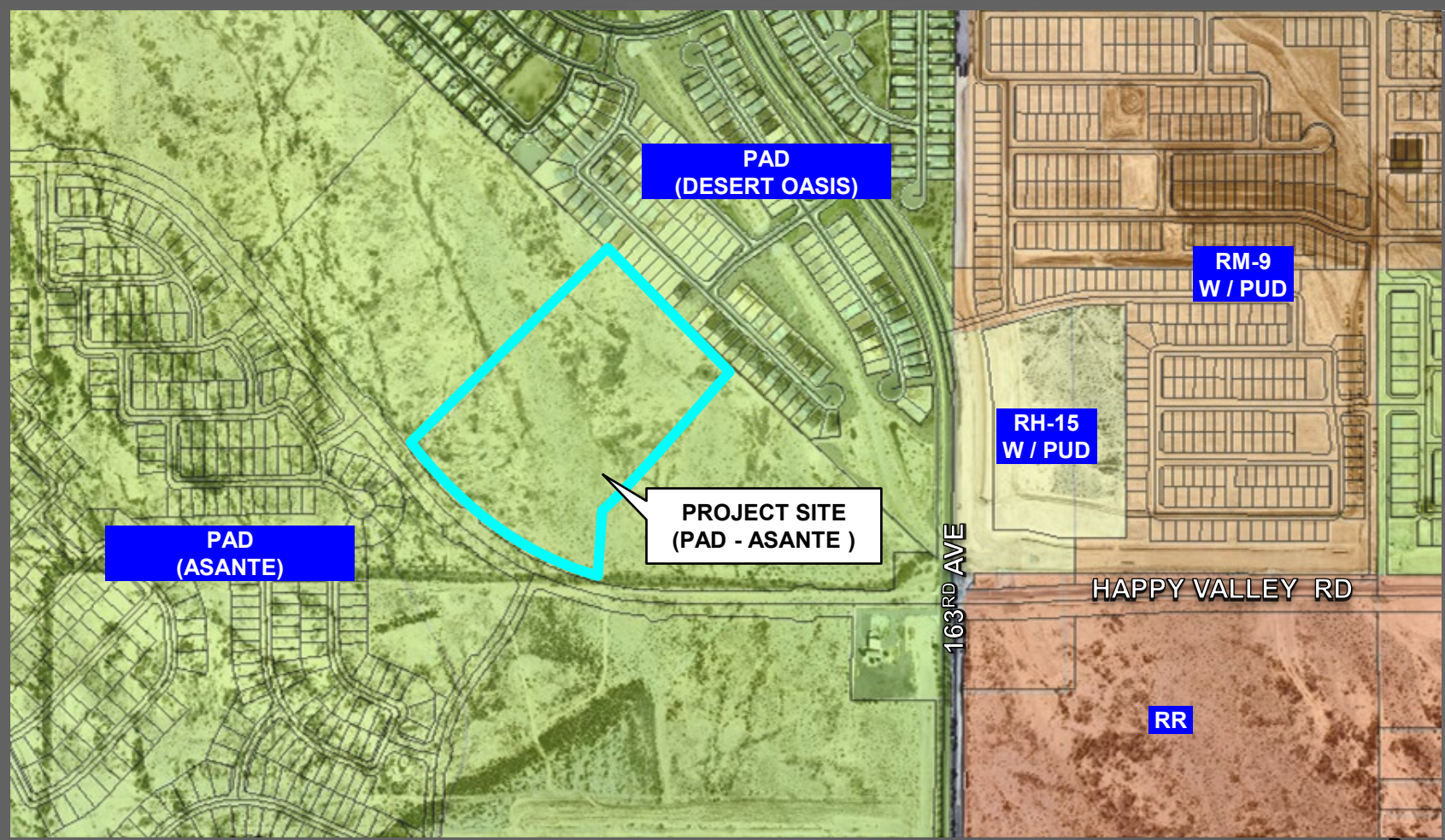
# FS23-0830 VICINITY MAP





**FS23-0830 VICINITY MAP**





**PAD  
(DESERT OASIS)**

**RM-9  
W / PUD**

**RH-15  
W / PUD**

**PAD  
(ASANTE)**

**PROJECT SITE  
(PAD - ASANTE )**

**163RD AVE**

**HAPPY VALLEY RD**

**RR**

**FS23-0830 ZONING MAP**





CONSULT THE SURVEYOR'S OFFICE FOR THE LOCATION OF ALL UTILITIES. THE LOCATION OF UTILITIES SHALL BE MARKED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

**LEGAL DESCRIPTION**

LOCATED WITHIN A PORTION OF THE SOUTHWEST QUARTER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST AND A PORTION OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, OF THE 6th & 8th MAIN ST. HIGHWAY AND MARICOPA COUNTY, MARICOPA COUNTY, ARIZONA.

WORK PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A FOUND MONUMENT CAP PLUGS STAMPED CITY OF SURPRISE, ACCEPTED AS THE EAST QUARTER CORNER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, FROM WHICH A FOUND MONUMENT CAP PLUGS STAMPED CITY OF SURPRISE, ACCEPTED AS THE EAST QUARTER CORNER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, THEREOF BEARS S00°45'00"W A DISTANCE OF 2834.00 FEET;

THENCE, ALONG THE EAST LINE OF SAID SECTION 12, N00°44'46"E A DISTANCE OF 2603.38 FEET;

THENCE, LEAVING THE EAST LINE OF SAID SECTION 12, N00°45'00"W A DISTANCE OF 1053.20 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE RIGHT ALONG THE RIGHT-OF-WAY;

THENCE, WESTERLY ALONG SAID CURVE AN ARC LENGTH OF 390.69 FEET WITH A RADIUS OF 1340.00 FEET AND THE RADIAL BEARING OF N11°11'31"E AND A CENTRAL ANGLE OF 16°08'21";

THENCE, N42°49'44"E A DISTANCE OF 5.00 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE RIGHT;

THENCE, NORTHWESTERLY ALONG SAID CURVE AN ARC LENGTH OF 205.21 FEET, WITH A RADIUS OF 1340.00 FEET AND THE RADIAL BEARING OF N42°49'44"E AND A CENTRAL ANGLE OF 09°28'21";

THENCE, N02°02'00"W A DISTANCE OF 97.81 FEET;

THENCE, N03°07'02"W A DISTANCE OF 70.18 FEET;

THENCE, S86°54'09"W A DISTANCE OF 27.81 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE RIGHT;

THENCE, NORTHWESTERLY ALONG SAID CURVE AN ARC LENGTH OF 143.80 FEET, WITH A RADIUS OF 1340.00 FEET AND THE RADIAL BEARING OF N43°17'59"E AND A CENTRAL ANGLE OF 07°58'51";

THENCE, N43°07'00"W A DISTANCE OF 104.30 FEET;

THENCE, N43°31'09"W A DISTANCE OF 128.77 FEET;

THENCE, S46°28'51"E A DISTANCE OF 741.52 FEET;

THENCE, S43°31'09"W A DISTANCE OF 883.26 FEET;

THENCE, S03°56'14"E A DISTANCE OF 270.87 FEET TO THE POINT OF BEGINNING.

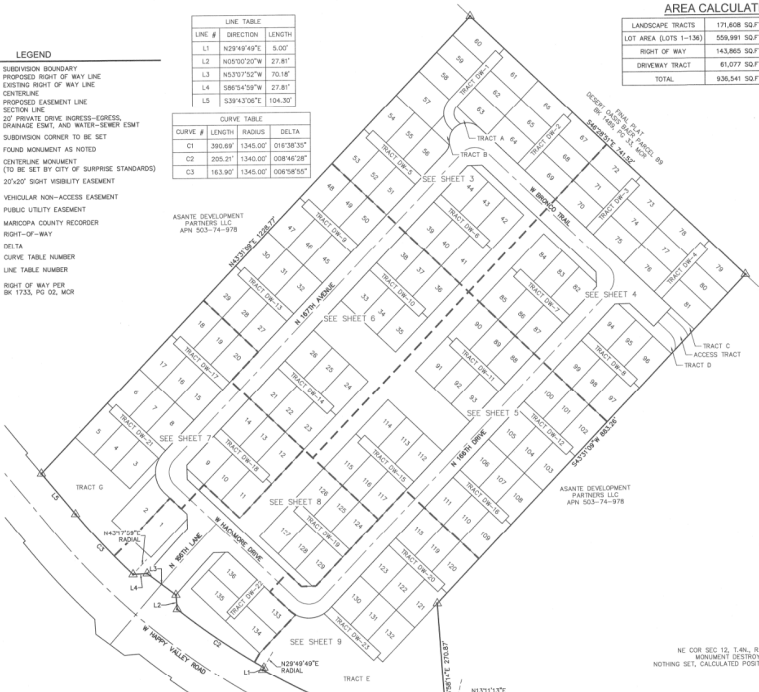
LANDSCAPE TRACT TABLE			
TRACT	AREA SQ FT	AREA ACRES	USAGE
ACCESS TRACT	1,718	0.04	EMERGENCY ACCESS, UTILITIES, PUE & WATER ESMT
TRACT A	670	0.02	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT B	1,012	0.02	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT C	787	0.02	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT D	2,613	0.06	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT E	62,901	1.44	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT F	76,395	1.75	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TRACT G	25,512	0.59	DRAINAGE, OPEN SPACE, UTILITIES & PUE
TOTAL	171,680	3.94	

DRIVEWAY TRACT TABLE			
TRACT	AREA SQ FT	AREA ACRES	USAGE
TRACT DW-1	3,718	0.09	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-2	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-3	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-4	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-5	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-6	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-7	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-8	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-9	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-10	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-11	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-12	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-13	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-14	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-15	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-16	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-17	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-18	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-19	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-20	2,648	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-21	2,658	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-22	1,728	0.04	PRIVATE DRIVEWAY, UTILITIES & PUE
TRACT DW-23	2,658	0.06	PRIVATE DRIVEWAY, UTILITIES & PUE
TOTAL	61,077	1.40	

OPEN SPACE TABLE		
TYPE	AREAZEE	PERCENTAGE OF TOTAL OPEN SPACE
ACTIVE	0.67	11.00%
PASSIVE	3.27	83.00%
TOTAL	3.94	100.00%

% OF TOTAL OPEN SPACE IN PLAT 18.32%

SITE DATA	
GROSS SITE AREA	21.50 ACRES
RIGHT OF WAY	3.30 ACRES
NET SITE AREA	18.20 ACRES
NUMBER OF LOTS	136 LOTS
NET DENSITY	7.47 DU/AC
ARTERIAL RIGHT OF WAY	0.00 ACRES
ZONING	PAD



LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	N29°49'44"E	5.00'
L2	N00°00'20"W	27.81'
L3	N03°07'02"W	70.18'
L4	S86°54'09"W	27.81'
L5	S31°43'05"E	104.30'

CURVE TABLE			
CURVE #	LENGTH	ANGULS	DELTA
C1	390.69	1345.00'	016°38'30"
C2	205.21	1340.00'	028°46'28"
C3	163.90	1345.00'	008°58'50"

AREA CALCULATIONS		
LANDSCAPE TRACTS	171,680 SQ.FT.	3.94 AC
LOT AREA (LOTS 1-136)	556,991 SQ.FT.	12.86 AC
RIGHT OF WAY	143,860 SQ.FT.	3.30 AC
DRIVEWAY TRACT	61,077 SQ.FT.	1.40 AC
TOTAL	936,511 SQ.FT.	21.50 AC



COUNTY: MARICOPA  
 SECTION: 12  
 TOWNSHIP: 4 NORTH  
 RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNIT 4.2**  
 CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS

PLOT # SPRING  
 JOB # 22003507  
 SCALE 1" = 80 FEET  
 SHEET NO. 2 OF 9

**FS23-0830 FINAL PLAT**



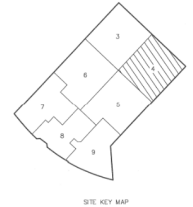
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LOT TABLE				LOT TABLE			
LOT	AREA SQ. FT.	AREA ACRES	LOT	AREA SQ. FT.	AREA ACRES		
70	4182	0.096	82	4170	0.096		
71	3772	0.087	83	3772	0.087		
72	4246	0.097	84	4246	0.097		
73	4246	0.097	85	4246	0.097		
74	3772	0.087	86	3772	0.087		
75	4182	0.096	87	4182	0.096		
76	4182	0.096	88	4170	0.096		
77	3772	0.087	89	3772	0.087		
78	4246	0.097	90	4246	0.097		
79	4246	0.097	91	4246	0.097		
80	4028	0.092	98	3772	0.087		
81	4463	0.102	99	4182	0.096		

LINE TABLE				LINE TABLE			
LINE #	DIRECTION	LENGTH	LINE #	DIRECTION	LENGTH		
L14	N43°31'09\"	14.98'	L21	N44°28'51\"	87.32'		
L15	N46°28'51\"	20.00'	L22	N88°31'08\"	28.20'		
L16	N43°31'09\"	14.98'	L23	N01°28'51\"	28.20'		
L17	N46°28'51\"	20.00'	L24	N46°28'51\"	14.58'		
L18	N43°31'09\"	50.00'	L25	N43°31'09\"	20.00'		
L19	S46°28'51\"	38.00'	L26	N43°31'09\"	20.00'		
L20	N46°28'51\"	33.00'	L27	N46°28'51\"	14.58'		

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C6	24.84'	55.00'	029°53'20\"
C7	36.04'	35.00'	058°59'50\"
C8	54.98'	35.00'	080°00'00\"



CASE NO. FS23-0830



COUNTY: MARICOPA  
SECTION 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

FINAL PLAT  
ASANTE UNIT 4.2  
CITY OF TEMPE, ARIZONA

DECEMBER 2023



PLM: J. SPRING  
CIVIL: M. GALEA  
JOB NO.: 220003507  
SCALE: 1" = 30 FEET  
30000 DATE: 12/13/23  
SHEET NO.: 4 OF 9

# FS23-0830 FINAL PLAT

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LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
88	4182	0.096	106	4182	0.096
89	3772	0.087	107	3772	0.087
90	4246	0.097	108	4246	0.097
91	4246	0.097	109	4246	0.097
92	3772	0.087	110	3772	0.087
93	4182	0.096	111	4182	0.096
100	4182	0.096	112	4182	0.096
101	3772	0.087	113	3772	0.087
102	4246	0.097	114	4246	0.097
103	4246	0.097	115	4246	0.097
104	3772	0.087	116	3772	0.087
105	4182	0.096	117	4182	0.096

LINE TABLE		
LINE #	DIRECTION	LENGTH
L101	N40°28'51"W	14.58'
L102	N43°31'09"W	20.00'
L103	N40°28'51"W	14.58'
L104	N43°31'09"W	20.00'
L105	N40°28'51"W	14.58'
L106	N43°31'09"W	20.00'
L107	N40°28'51"W	14.58'
L108	N43°31'09"W	20.00'



SITE KEY MAP





**ATWELL**  
LANDSCAPE ARCHITECTURE & ENGINEERING  
10000 N. CENTRAL AVENUE, SUITE 100  
DENVER, COLORADO 80231

---

**FINAL PLAT**

**ASANTE UNIT 4, 2**

CITY OF BURLINGAME, ARIZONA

COUNTY: MARICOPA

SECTION: 12

TOWNSHIP: NORTH

RANGE: 2 WEST

---

DECEMBER 2023

---

REVISIONS:



DATE: J. SPRING

DR. R. GILES

JOB NO. 22003507

---

SCALE: 1" = 30 FEET

DATE: APRIL 12, 2011

SHEET NO. 5 OF 9

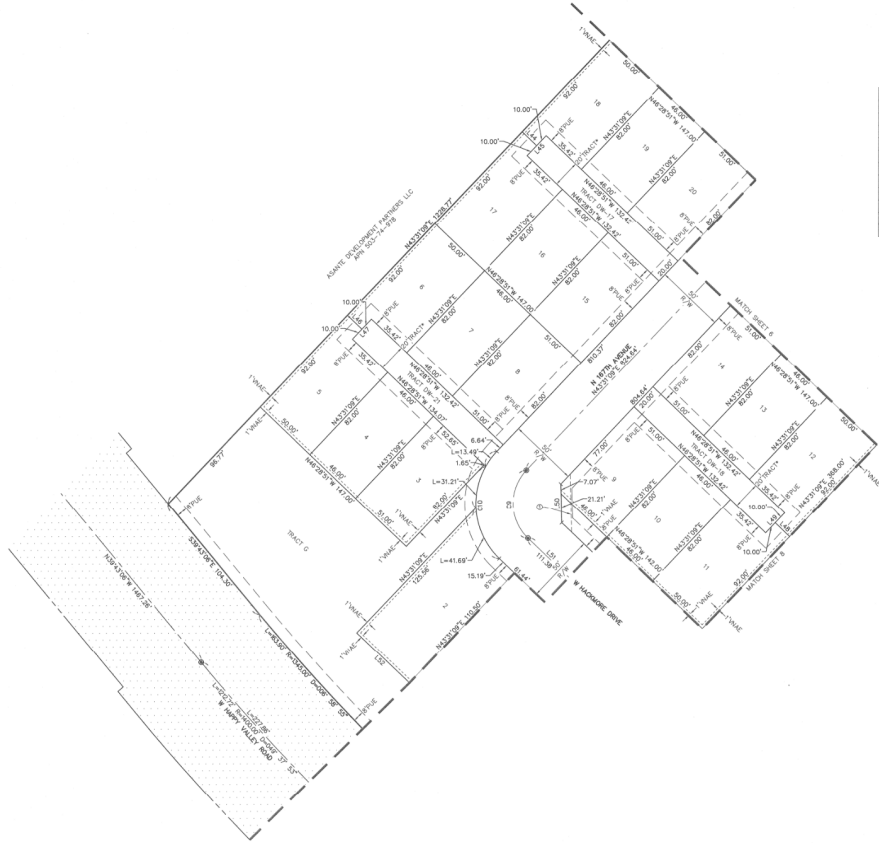
CASE NO. FS23-0830

# FS23-0830 FINAL PLAT





A:\22003507\APR08\0805\FINAL PLAN\1325003507 ASANTE 4.2 PLN.DWG (DATE: 12/20/2012 9:39 AM) PLOT: 1325003507 ASANTE 4.2 PLN.DWG (DATE: 12/20/2012 9:39 AM)



LOT TABLE			LOT TABLE		
LOT	AREA SQ. FT.	AREA ACRES	LOT	AREA SQ. FT.	AREA ACRES
2	6034	0.139	12	4246	0.097
3	4182	0.096	13	3772	0.087
4	3772	0.087	14	4182	0.096
5	4246	0.097	15	4182	0.096
6	4246	0.097	16	3772	0.087
7	3772	0.087	17	4246	0.097
8	4182	0.096	18	4246	0.097
9	4169	0.096	19	3772	0.087
10	3772	0.087	20	4182	0.096
11	4246	0.097			

LINE #	DIRECTION	LENGTH
L44	N46°28'51"W	14.58'
L45	N43°31'09"E	20.00'
L46	N46°28'51"W	14.58'
L47	N43°31'09"E	20.00'
L48	N46°28'51"W	14.58'
L49	N43°31'09"E	20.00'
L50	N01°58'51"W	28.24'
L51	N46°28'51"W	327.52'
L52	N46°28'51"W	106.00'


CURVE #	LENGTH	RADIUS	DELTA
C9	54.98'	35.00'	090°00'00"
C10	86.39'	55.00'	090°00'00"



SITE KEY MAP



CASE NO. FS23-0830



**ATWELL**  
 465.650.0000 [www.atwell-engineers.com](http://www.atwell-engineers.com)  
 1000 W. UNIVERSITY BLVD.  
 SUITE 100  
 AUSTIN, TEXAS 78702

---

COUNTY: TARRANT  
 SECTION: 12  
 TOWNSHIP: 4 NORTH  
 RANGE: 2 WEST

---

**FINAL PLAT**  
**ASANTE UNIT 4.2**  
 CITY OF SURFERS GROVE

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
DECEMBER 2013

---

REVISIONS

NO. 2 SPRING  
 DR. W. GILES  
 JOB NO.  
 22003507

---

SCALE  
  
 1" = 30 FEET

---

DRAWN BY: JI FINE  
 SALES  
 NO.

---

7 OF 9

# FS23-0830 FINAL PLAT

PLAT PREPARED BY: JAMES L. HAYES, JR., PROFESSIONAL LAND SURVEYOR, LICENSE NO. 12473, STATE OF ARIZONA

DATE OF SURVEY: 12/15/2023



LOT TABLE

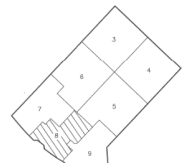
LOT #	AREA SQ. FT.	AREA ACRES
1	2834	0.134
124	4182	0.096
125	3772	0.087
126	4246	0.097
127	4246	0.097
128	3772	0.087
129	4169	0.096
133	4191	0.096
134	4246	0.097
135	4246	0.097
136	4175	0.096

LINE TABLE

LINE #	DIRECTION	LENGTH
L53	N44°31'29.7\"	11.587'
L54	N43°31'29.7\"	20.002'
L55	N88°31'07.1\"	28.331'
L56	N43°31'09.7\"	43.552'
L57	N01°23'03.7\"	28.244'
L58	N46°28'51.7\"	108.202'
L59	N88°31'09.7\"	27.871'
L60	S53°31'52.7\"	70.148'
L61	S09°50'20.7\"	27.871'
L62	S42°31'24.7\"	4.161'
L63	N43°31'09.7\"	14.567'
L64	N46°28'51.7\"	20.002'

CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
C11	111.93'	2550.00'	002°31'44\"
C12	111.80'	2500.00'	002°33'44\"
C13	108.80'	2465.00'	002°31'44\"
C14	163.90'	1345.00'	006°58'50\"



SITE KEY MAP



CASE NO. FS23-0830

**ATWELL**  
LAND SURVEYING & MAPPING  
1000 W. WILLOW STREET  
TULSA, OKLAHOMA 74119-1212

---

COUNTY: MARICOPA    SECTION: 13    TOWNSHIP: 4 NORTH    RANGE: 2 WEST

---

**FINAL PLAT**  
**ASANTE UNIT 4.2**  
CITY OF SURPRISE, ARIZONA

---

DECEMBER 2023

---

REQUESTOR

---

**ATWELL**  
PREPARED BY: JAMES L. HAYES, JR.  
DATE: 12/15/2023  
SCALE: 1" = 30 FEET  
SHEET NO. 8 OF 9

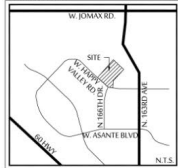
# FS23-0830 FINAL PLAT



**NOTES:**

1. DUE TO PLANT MATERIAL AVAILABILITY, SUBSTITUTIONS FOR PLANT MATERIAL LISTED ABOVE MAY BE USED. ANY ALTERNATES OR SUBSTITUTIONS MUST BE ON THE AWARD LOW WATER USE PLANT LIST.
2. SUB-SPECIES OR HYBRIDS OF PLANT MATERIAL LISTED ABOVE MAY BE USED AS ALTERNATES/SUBSTITUTIONS.
3. ADDITIONAL PLANT MATERIAL MAY BE ADDED TO THE LIST ABOVE DUE TO UTILITY COMPANY OR H.O.A. REQUESTS AND/OR PLANTING RESTRICTIONS WITHIN UTILITY EASEMENTS.
4. NO TREES TO BE LOCATED WITHIN THE P.U.E. OR ANY OTHER NOTED EASEMENTS.
5. FIRE HYDRANTS TO HAVE 6 FT CLEARANCE.
6. SIGHT DISTANCE REQUIREMENTS ON MATERIALS AND COLLECTORS WILL ADHERE TO SURPRISE DETAIL 4.01. SIGHT VISIBILITY WITHIN THE UNOBSTRUCTED VIEW EASEMENT AREA AND IN FRONT OF STOP SIGNS MUST MEET OR EXCEED REQUIREMENTS IN SURPRISE DETAIL 4.01 AND 4.02. TREES, SHRUBS, AND OTHER LANDSCAPING ARE PERMITTED WITHIN THE SIGHT VISIBILITY TRIANGLE PROVIDED LIMBS, LEAVES, NEEDLES OR OTHER FOLIAGE ARE KEPT BELOW 30 INCHES OR ABOVE 84 INCHES, PER SURPRISE DETAIL 4.01.

**VICINITY MAP**



**PLANT LEGEND**

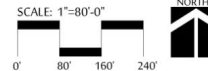
SYMBOL	BOTANICAL NAME - COMMON NAME
<b>TREES - 24" BOX MIN</b>	
	ACACIA ANEURA - MUEGA ACACIA
	ULMUS PARVIFOLIA - CHINESE ELM
	PARKINSONIA X 'DESERT MUSEUM' - DESERT MUSEUM PALM VIBRID
	PISTACIA LENTISCUS - MASTIC TREE
	PISTACIA X 'RED PUSH' - RED PUSH PISTACHE
	QUERCUS VIRGINIANA - SOUTHERN LIVE OAK
<b>SHRUBS - 5 GALLON MIN</b>	
	BOUGAINVILLEA TILIACE - BUSH BOUGAINVILLEA
	CAESALPINIA PULCHERRIMA - RED BIRD OF PARADISE
	ENCELIA FARINOSA - BRITTLEBUSH
	EREMOPHILA GLABRA SSP. CARINOSA - WINTER BLAZE
	LEUCOPHYLLUM X 'HEAVENLY CLOUD' - HEAVENLY SAGE SAGE
	LEUCOPHYLLUM LAEVIGATUM - CHIHUAHUA SAGE
	LEUCOPHYLLUM LANGHAMIAE - LYNNE'S LEGACY - LYNNE'S LEGACY TEXAS SAGE
	RUELLIA PENINSULARIS - BAJA RUELLIA
	CALLIANDRA PENINSULARIS - FAIRY DUSTER
	SALVIA GREGGII - AUTUMN SAGE
	SPHAERALCEA AMBIGUA - GLOBE MALLOW
	TECOMA STANS 'SPARKLETTE' - SPARKLETTE BELLS
<b>ACCENTS - 5 GALLON MIN</b>	
	AGAVE AMERICANA - CENTURY PLANT
	BOULEOULA GRACILIS - BLONDE AMBITION GRASS
	DASYLIRION ACROSTICHUM - GREEN DESERT SPOON
	EUPHORBIA ANTISYPHILITICA - CANDELELLA
	EUPHORBIA BIGLANDULOSA - GOPHER PLANT
	HESPERALOE PARVIFLORA - RED HESPERALOE
	MUHLENBERGIA RIGENS - DEER GRASS
<b>GROUND COVERS - 5 GALLON MIN</b>	
	LANTANA MONTEVIDENSIS - PURPLE TRAILING LANTANA
	LANTANA X 'NEW GOLD' - NEW GOLD LANTANA
	ROSMARINUS OFFICINALIS PROSTRATUS - DWARF ROSEMARY
	DECOMPOSED GRANITE - 1" SCREENED, COLOR 'APACHE BROWN'
	MID-IRON BERMEUDA TURF

**LANDSCAPE ARCHITECT**  
 MCGOUGH ADAMSON  
 533 E. NICKELPLUM RD., SUITE 131  
 MESA, AZ 85203  
 (602) 997-4903  
 CONTACT: NICK ADAMSON, RLA  
 nicka@mg-az.com

**LANDSCAPE ARCHITECTS**  
 Landscaping  
 Land Planning  
 Irrigation

**ASANTE 4.2**  
**PRELIMINARY PLANTING PLAN**  
 N. 166TH DR. & HAPPY VALLEY ROAD SURPRISE, AZ 85387  
 JULY 5, 2023

SHEET 11



FS22-1459

**FS23-0830 LANDSCAPE**



**SURPRISE**  
ARIZONA

**QUESTIONS OR  
COMMENTS?**

**Thank You**





**CITY OF SURPRISE**  
**Regular City Council Meeting**

---

Council Meeting Date: February 20, 2024      Contact Person: Leslie Carnie  
Submitting Department: Community Development      District: District 1  
Staff Recommendations:

---

Consent: Yes      Regular: No      Public Hearing: No      Report/Discussion: No

---

**Agenda Wording:**

Consideration and action pertaining to approval of the Final Plat entitled, “Asante Units 4.4 & 4.7” and dated December 14, 2023, a site generally located on the southwest corner of Happy Valley Rd. and 163<sup>rd</sup> Ave; Case FS23-0831.

---

**Motion:**

I move to approve the Final Plat entitled, “Asante Units 4.4 & 4.7” and dated December 14, 2023.

---

**Background:**

Michael Park, with Atwell, seeks approval of a Final Plat of Asante Units 4.4 & 4.7. The proposed Final Plat includes the subdivision of 44.92 gross acres into 300 single-family lots and 7.15 acres of ROW for a net density of 6.67 DU/Ac

---

**Objective Analysis:**

The subject Final Plat meets the requirements of the Asante PAD, in addition to other requirements as set forth in the Surprise Municipal Code. All city reviewing departments have reviewed the request and expressed no concerns.

---

**Policy Compliant:**

This proposed Final Plat is consistent with the Surprise General Plan 2035, Asante PAD, and the Land Development Ordinance.

---

**Financial Impact:**

While this item does not have an immediate or direct financial impact, ongoing development activity in the City will inevitably have a future financial impact as additional resources are needed to provide city services.

---

**Budget Impact:**

There is no anticipated budget impact related to this item.

**FTE Impact:**

This item does not have an impact on current staffing levels.

---

**ATTACHMENTS:**

1. 00 - FS23-0831 Asante Units 4.4 & 4.7 - Staff Report
  2. 01-FS23-0831 Asante Units 4.4 & 4.7 - Final Plat - Vicinity Map
  3. 02-FS23-0831 Asante Units 4.4 & 4.7 - Final Plat - Zoning Map
  4. 03-FS23-0831 Asante Units 4.4 & 4.7 - Final Plat - Final Plat
  5. 04-FS23-0831 Asante Units 4.4 & 4.7 - Final Plat - Luke AFB
  6. FS23-0831 - Asante Units 4.4 & 4.7 Final Plat - PowerPoint
-



1	<b>Case:</b>	<b>FS23-0831</b>
2		
3	<b>Project Name:</b>	Asante Unit 4.4 & 4.7 – Final Plat
4		
5	<b>Council District:</b>	1 - Acacia
6		
7	<b>City Council Date:</b>	February 20, 2024
8		
9	<b>Planner:</b>	Leslie Carnie, Planner II
10		
11	<b>Owner:</b>	Asante Development Partners, LLC
12		
13	<b>Applicant:</b>	Michael Park of Atwell, LLC
14		
15	<b>Request:</b>	Final Plat to subdivide an approx. 44.92-acre parcel into 300
16		single-family residential lots.
17		
18	<b>Site Location:</b>	Located on the southwest corner of Happy Valley Rd. and
19		163 <sup>rd</sup> Ave.
20		
21	<b>Site Size:</b>	Approx. 44.92 Gross Acres
22		
23	<b>Net Density:</b>	6.67 Du/Ac (Net)
24		
25	<b>General Plan</b>	
26	<b>Conformance:</b>	The proposed Final Plat is consistent with the Surprise
27		General Plan 2035.
28		
29	<b><u>Findings:</u></b>	
30		
31		<ul style="list-style-type: none"><li>• The proposed Final Plat is consistent with the Asante PAD.</li></ul>
32		<ul style="list-style-type: none"><li>• The proposed Final Plat is consistent with the Preliminary Plat, case FS22-1454.</li></ul>
33		<ul style="list-style-type: none"><li>• The proposed Final Plat is consistent with the applicable City of Surprise regulations.</li></ul>
34		<ul style="list-style-type: none"><li>• The reviewing agencies have indicated no objections to the request.</li></ul>
35		
36	<b>Alternative Actions:</b>	<b>Approve</b> – Approval of the proposed Final Plat will allow the
37		applicant the ability to subdivide the property as proposed.
38		
39		<b>Deny</b> – Denial of the requested Final Plat will prevent the
40		applicant from subdividing the property as proposed.
41		
42		
43		

44 **PROJECT DESCRIPTION:**

45  
 46 Michael Park, with Atwell, seeks approval of a Final Plat of Asante Units 4.4 & 4.7. The  
 47 proposed Final Plat includes the subdivision of 44.92 gross acres into 300 single-family  
 48 lots and 7.15 acres of ROW for a net density of 6.67 DU/Ac. The site is generally located  
 49 on the southwest corner of Happy Valley Rd. and 163<sup>rd</sup> Ave.  
 50

51 **SURROUNDING LAND ZONING:**

52 The following map depicts the existing zoning of the subject site and its surrounds:  
 53



54  
 55

PAD – Asante	PAD – Asante	RH-15
PAD – Asante	<b>PAD – Asante</b>	RR
PAD – Asante	PAD – Asante	PAD – Pinnacle Peak

56  
 57 **BACKGROUND:**

58  
 59 **November 3, 1988:** The City Council approved the annexation (Ordinance 88-24) of the  
 60 subject property.  
 61

62 **November 24, 2004:** The City Council approved Ordinance 04-41 for the Asante Planned  
 63 Area Development under case PAD04-124.  
 64

65 **August 29, 2022:** A minor amendment to the Asante PAD was approved administratively  
66 under case FS22-0756 to modify street alignments, school and amenity site locations, and  
67 development standards.

68  
69 **August 15, 2023:** A minor amendment to the Asante PAD approved administratively under  
70 case FS23-0574 to modify the development standards and typical layout for cluster lots.

71  
72 **September 7, 2023:** The Planning and Zoning Commission approved a Preliminary Plat for  
73 Asante Units 4.4 & 4.7 under case FS22-1454.

74  
75 **September 08, 2023:** The applicant filed the subject case, FS23-0831.

76  
77 **ANALYSIS AND DISCUSSION:**

78  
79 The subject request includes a Final Plat for Units 4.4 & 4.7 within the Asante PAD. This  
80 Final Plat consists of 300 lots that are either Cluster Type “Alley Loaded” or Zero Lots “Z-  
81 Lots”. This is consistent with the Preliminary Plat and the Asante PAD requirements.

82  
83 **Access**

84 Two full access points are provided into this development: Main access is taken from  
85 Happy Valley Rd. via 165<sup>th</sup> Ave. and a secondary access point is taken from 166<sup>th</sup> Dr. via  
86 Chama Dr.

87  
88 **Open Space & Landscaping**

89 The Asante PAD requires 20% open space for Medium/High Density residential  
90 developments. The subject plat includes a total of 12.93 acres dedicated to open space,  
91 which equates to 28.78% of the overall net area. Of that, 3.65 acres is Active Open Space,  
92 and 9.28 acres is Passive Open Space. Within these open spaces is a network of trails,  
93 pocket parks, stormwater retention areas, and landscaping. The site is to be landscaped with  
94 native and low water use plants allowed by the PAD and consistent with the overall Asante  
95 development.

96  
97 Residents within Units 4.4 & 4.7 will have access to the clubhouse planned for Unit 3.10A  
98 within Asante Planning Area 3.

99  
100 **Utility and Services Table:**

101

Water:	City of Surprise
Wastewater:	City of Surprise
School District:	Dysart Unified School District

102  
103  
104  
105  
106  
107

108 **Conformance with Adopted Plans:**

109  
110 The Surprise General Plan shows the subject property as lying within the Neighborhood  
111 Character Area, which supports residential development of up to 8 DU/Ac or more. At a  
112 net density of 6.67 DU/Ac, this development is consistent with the General Plan in this  
113 regard.

114  
115 This request is also consistent with the General Plan in that it promotes connectivity to  
116 existing and future development within the Asante PAD for a range of mobility options.

117  
118 **Reviewing Agencies:**

119  
120 In addition to the standard city reviewing agencies, who indicate no objections to the  
121 request, Luke Air Force Base and the Maricopa Water District were included in the routing  
122 of the case and indicate no objections.

123  
124 **Summary:**

125  
126 The subject Final Plat meets the requirements of the Asante PAD, in addition to other  
127 applicable requirements. All city reviewing departments have reviewed the request and  
128 expressed no concerns.

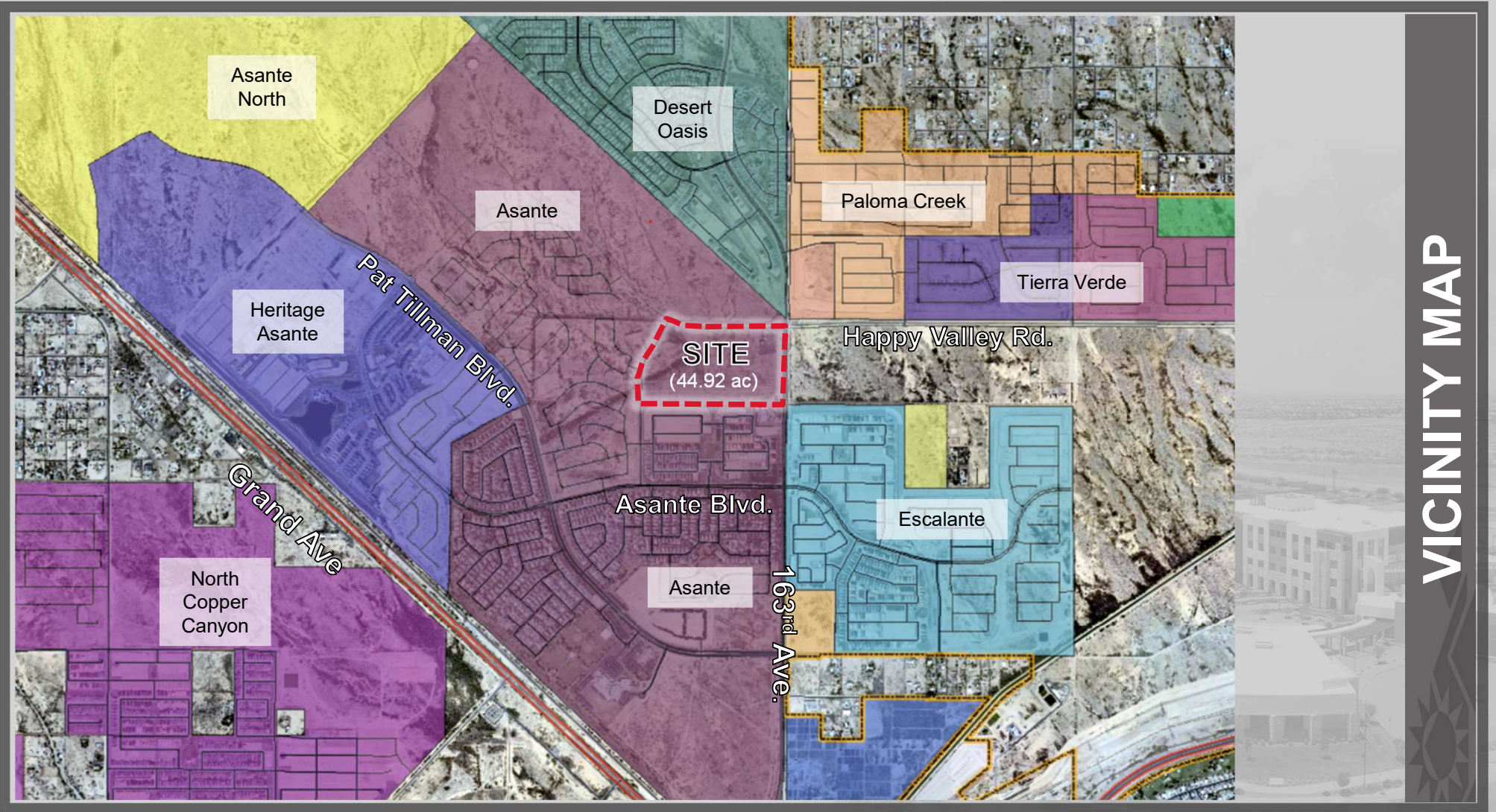
129  
130 **Findings:**

- 131
- 132 • The proposed Final Plat is consistent with the Asante PAD.
  - 133 • The proposed Final Plat is consistent with the Preliminary Plat, case FS22-1454.
  - 134 • The proposed Final Plat is consistent with the applicable City of Surprise regulations.
  - 135 • The reviewing agencies have indicated no objections to the request.
- 136

137 **Attachments:**

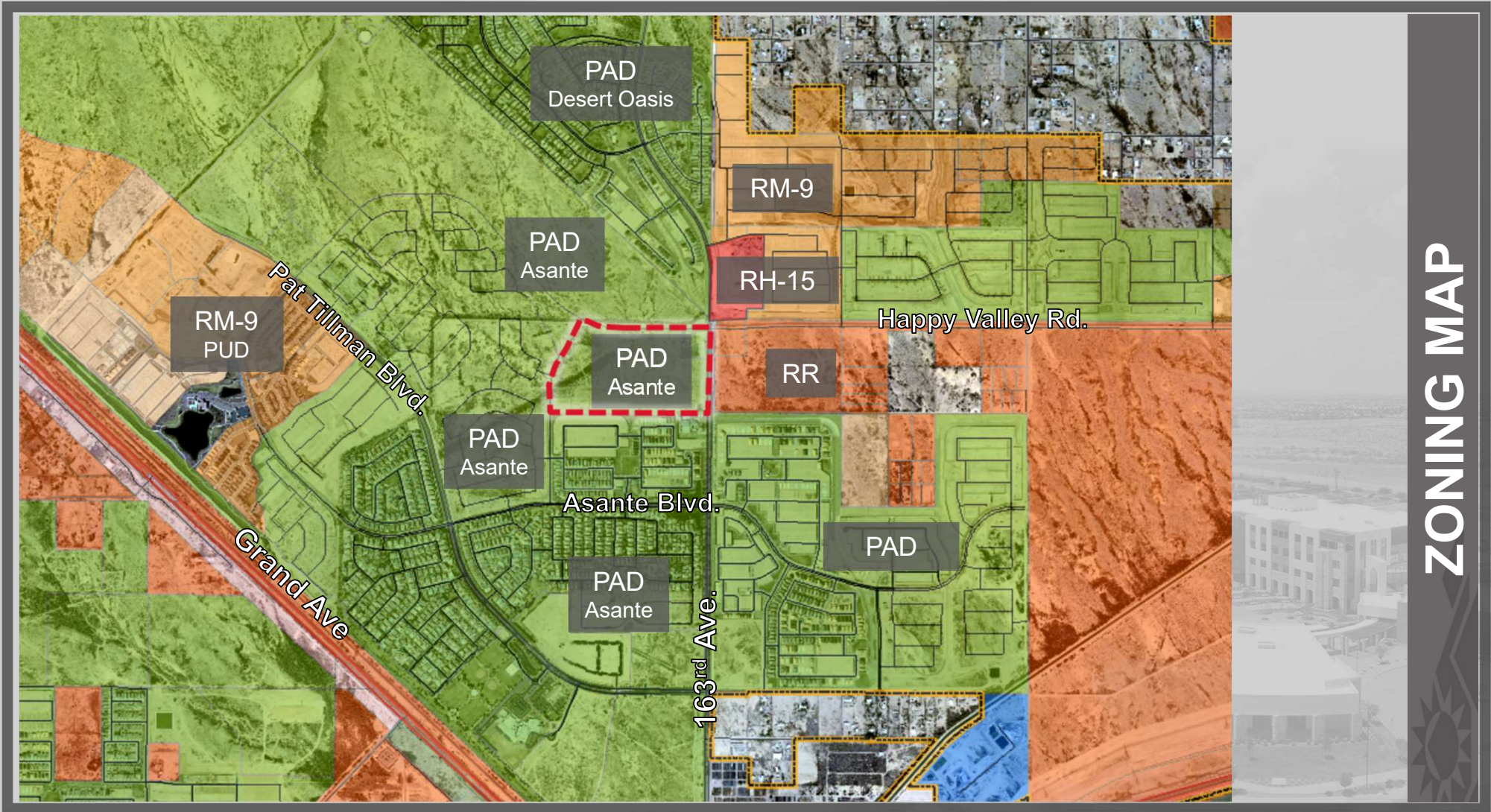
- 138
- 139 01 Vicinity Map
  - 140 02 Zoning Map
  - 141 03 Final Plat
  - 142 04 Luke AFB Letter
  - 143 PPT





VICINITY MAP





**ZONING MAP**

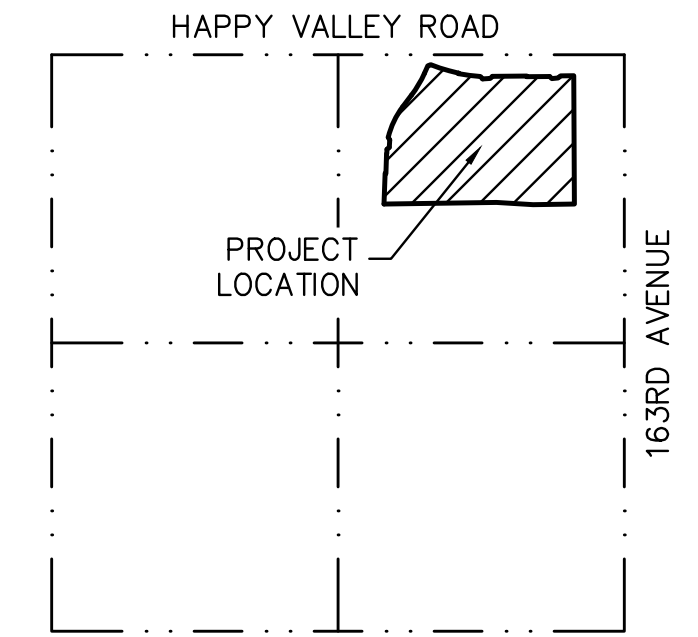


# FINAL PLAT

## OF

# ASANTE UNITS 4.4 & 4.7

### A PORTION OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, CITY OF SURPRISE, MARICOPA COUNTY, ARIZONA



#### OWNER

ASANTE DEVELOPMENT PARTNERS, LLC,  
A DELAWARE LIMITED LIABILITY COMPANY  
1665 W. ALAMEDA DRIVE SUITE 130  
TEMPE, ARIZONA 85282  
PHONE 480-322-6674  
CONTACT: JOAN SCARBROUGH AND  
JORGE VILLASENOR  
JOAN.SCARBROUGH@LENNAR.COM  
JORGE.VILLASENOR@LENNAR.COM

#### RELEASE OF LIABILITY

- ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY "OWNER" DOES HEREBY (1) RELEASE AND DISCHARGE THE CITY OF SURPRISE, (2) INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CITY OF SURPRISE, OF AND FROM ANY LIABILITY FOR ANY AND ALL CLAIMS FOR DAMAGES OF ANY KIND TO PERSONS OR PROPERTY THAT MAY ARISE AT ANY TIME IN THE FUTURE OVER, OR IN CONNECTION WITH THE AREAS LOCATED WITHIN THE NEWLY DEDICATED RIGHT-OF-WAY AS DEPICTED ON THIS PLAT UNTIL SUCH TIME THE RIGHT-OF-WAY IS IMPROVED TO CITY STANDARDS AND THOSE IMPROVEMENTS ARE APPROVED AND ACCEPTED BY THE CITY COUNCIL. THE MAINTENANCE OF THE AREA WITHIN ANY NEWLY DEDICATED RIGHT-OF-WAY AS SHOWN ON THIS PLAT SHALL BE THE RESPONSIBILITY OF THE ADJACENT OWNER/OR SUBSEQUENT ADJACENT OWNERS WITHIN THE BOUNDARY OF SAID PLAT UNTIL SUCH TIME THAT THE AREA WITHIN THE RIGHT-OF-WAY IS IMPROVED TO CITY STANDARD AND ACCEPTED BY THE CITY OF SURPRISE.
- ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY "OWNER" HEREBY FURTHER AGREES TO INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CITY OF SURPRISE FROM ANY AND ALL CLAIMS FOR DAMAGES OF ANY KIND TO PERSONS OR PROPERTY LOCATED WITHIN THE RIGHT OF WAY THAT MAY ARISE IN CONNECTION WITH THE USE OF THE SIDEWALKS LOCATED WITHIN THE RIGHT OF WAY, UNTIL SUCH TIME THE CITY OF SURPRISE HAS ACCEPTED THE SIDEWALKS.
- ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY "OWNER" DOES HEREBY (1) RELEASE AND DISCHARGE THE UNITED STATES OF AMERICA DEPARTMENT OF THE AIR FORCE (USAF) AND THE CITY OF SURPRISE, AND (2) INDEMNIFY, DEFEND, AND HOLD HARMLESS THE USAF AND THE CITY OF SURPRISE, OF AND FROM ANY LIABILITY FOR ANY AND ALL CLAIMS FOR DAMAGES OF ANY KIND TO PERSONS OR PROPERTY THAT MAY ARISE AT ANY TIME IN THE FUTURE OVER, OR IN CONNECTION WITH AIRCRAFT OVERFLIGHTS FROM AIRCRAFT UTILIZING LUKE AIR FORCE BASE, WHETHER SUCH DAMAGE SHALL ORIGINATE FROM NOISE, VIBRATION, FUMES, DUST, FUEL AND LUBRICANT PARTICLES, AND ALL OTHER EFFECTS THAT MAY BE CAUSED BY THE OPERATION OF AIRCRAFT LANDING AT, OR TAKING OFF FROM, OR OPERATING AT OR ON LUKE AIR FORCE BASE AND ITS AUXILIARY FIELDS. THIS INSTRUMENT SHALL RUN WITH THE LAND AND BE BINDING UPON OWNER AND ITS HEIRS, ASSIGNS, AND SUCCESSORS IN INTEREST TO THIS PLAT OR ANY PART OR LOT THEREOF. THIS INSTRUMENT DOES NOT RELEASE THE USAF FROM LIABILITY FOR DAMAGE OR INJURY TO PERSON OR PROPERTY CAUSED BY FALLING AIRCRAFT OR FALLING PHYSICAL OBJECTS FROM AIRCRAFT, EXCEPT AS STATED HEREIN WITH RESPECT TO NOISE, FUMES, DUST, FUEL, AND LUBRICANT PARTICLES.

#### PUBLIC NOTICE

THE LOTS DEPICTED ON THIS PLAT ARE LOCATED WITHIN THE VICINITY OF LUKE AIR FORCE BASE AND MAY BE SUBJECT TO OVERFLIGHTS BY JET AIRCRAFT. ALL STRUCTURES WITHIN THIS PLAT SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE SOUND ATTENUATION STANDARDS ADOPTED BY THE CITY OF SURPRISE. A MAP DEPICTING THE MOST CURRENT ADOPED MAG NOISE CONTOURS IN RELATION TO THIS PLAT SHALL BE DISPLAYED IN ALL SALES OFFICES. ADDITIONAL INFORMATION MAY BE OBTAINED BY CONTACTING THE CITY OF SURPRISE COMMUNITY DEVELOPMENT DEPARTMENT.

#### 100 YEAR ASSURED WATER SUPPLY LANGUAGE

THE AREA PLATTED HEREON LIES WITHIN THE DOMESTIC WATER SERVICE AREA OF CITY OF SURPRISE DESERT OASIS PUBLIC WATER SYSTEM 04-07-523 WHICH IS DESIGNATED AS HAVING AN ASSURED WATER SUPPLY PURSUANT A.R.S. § 45-576.

#### GENERAL NOTES

- THE MAINTENANCE OF LANDSCAPING WITHIN THE OPEN SPACES, LANDSCAPED TRACTS, RETENTION BASINS, AND PARKS SHALL BE THE RESPONSIBILITY OF THE OWNER OR THE HOMEOWNERS' ASSOCIATION FORMED BY THE OWNER.
- THE MAINTENANCE OF LANDSCAPING WITHIN THE ADJACENT PUBLIC RIGHTS-OF-WAY, INCLUDING LANDSCAPED MEDIANS WITHIN COLLECTORS AND LOCAL STREETS, AND LANDSCAPED AREAS BETWEEN THE CURB AND THE DETACHED SIDEWALK, SHALL BE THE RESPONSIBILITY OF THE ADJACENT PROPERTY OWNER OR THE HOMEOWNERS' ASSOCIATION FORMED BY THE ADJACENT PROPERTY.
- LANDSCAPING MAINTENANCE OF THE MEDIANS WITHIN THE PUBLIC RIGHT-OF-WAY WITHIN ANY ARTERIAL OR PARKWAY STREET CLASSIFICATION SHALL BE THE RESPONSIBILITY OF THE CITY OF SURPRISE AFTER ACCEPTANCE.
- SPRINKLERS ARE REQUIRED IN ALL ONE AND TWO FAMILY DWELLINGS BUILT IN AREAS WHICH DO NOT HAVE AN ADEQUATE WATER SUPPLY OF 2000 GPM @ 2 HOURS @ 20 PSI RESIDUAL.
- NO ON-SITE GRADING OR EXCAVATION SHALL OCCUR WITHOUT FIRST OBTAINING A PERMIT FROM THE CITY OF SURPRISE.
- A PORTION OF THE PROPERTY IS LOCATED WITHIN THE AREA HAVING FLOOD ZONES "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, ON FLOOD INSURANCE RATE MAPS NO. 04013C1210L WITH A DATE OF IDENTIFICATION OF OCTOBER 16, 2013, FOR COMMUNITY NO. 040053, IN MARICOPA COUNTY, STATE OF ARIZONA, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED, AS MAY BE AMENDED FROM TIME TO TIME.
- IN ACCORDANCE WITH A.R.S. § 9-461.07, THE CITY OF SURPRISE HAS DETERMINED THAT ALL DEDICATIONS OCCURRING WITH THIS FINAL PLAT ARE IN CONFORMANCE WITH THE CITY OF SURPRISE GENERAL PLAN.
- PURSUANT TO A.R.S. § 42-11102, THE CITY OF SURPRISE, A POLITICAL SUBDIVISION OF THE STATE OF ARIZONA, IS EXEMPT FROM ALL TAXES AND ASSESSMENTS BASED ON ASSESSED VALUE EXCEPT FOR SPECIAL DISTRICTS #14751 AND #14710, WHEN APPLICABLE.
- THIS FINAL PLAT IS IN SUBSTANTIAL CONFORMANCE WITH THE PRELIMINARY PLAT APPROVED BY THE CITY OF SURPRISE UNDER CASE NO. FS23-0831.

#### BASIS OF BEARING

THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, OF THE GILA AND SALT RIVER MERIDIAN WHICH BEARS N00°45'20"E A DISTANCE OF 2634.06 FEET PER RECORDED DOCUMENT 87-117172 AND UNRECORDED ALTA SURVEY BY HILGART WILSON.

#### SURVEYOR'S CERTIFICATION

I, JAMES G. SPRING, PLS 22282, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR IN THE STATE OF ARIZONA; THAT THIS PLAT CONSISTING OF THIRTEEN SHEETS REPRESENTS A SURVEY PREPARED UNDER MY SUPERVISION DURING THE MONTH OF SEPTEMBER, 2023; THAT THE SURVEY IS CORRECT AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE EXTERIOR BOUNDARY MONUMENTS ACTUALLY EXIST AS SHOWN AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

JAMES G. SPRING, PLS 22282  
ATWELL, LLC  
4700 EAST SOUTHERN AVENUE  
MESA, ARIZONA 85206



NOTE:  
A.R.S. § 32-151 STATES THAT THE USE OF THE WORD "CERTIFY" OR "CERTIFICATION" BY A PERSON OR FIRM THAT IS REGISTERED OR CERTIFIED BY THE BOARD IS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING FACTS OR FINDINGS THAT ARE SUBJECT OF THE CERTIFICATION AND DOES NOT CONSTITUTE AN EXPRESS OR IMPLIED WARRANTY OR GUARANTEE.

CASE NO. FS23-0831

#### DEDICATION

STATE OF ARIZONA: )  
COUNTY OF MARICOPA: ) SS

KNOW ALL PERSONS BY THESE PRESENTS:

- THAT ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, HEREINAFTER "OWNER", HAS SUBDIVIDED UNDER THE NAME "ASANTE UNITS 4.4-4.7", LOCATED WITHIN A PORTION OF THE SOUTHEAST QUARTER OF SECTION 12 & THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, CITY OF SURPRISE, MARICOPA COUNTY, ARIZONA AS SHOWN AND PLATTED HEREON AND DOES HEREBY PUBLISH THIS PLAT AS AND FOR THE PLAT OF "ASANTE UNITS 4.4-4.7" AND DECLARES THAT THIS PLAT SETS FORTH THE LOCATION AND GIVES THE DIMENSIONS OF EACH LOT, TRACT, STREET, AND EASEMENT CONSTITUTING SAME, AND THAT EACH LOT, TRACT, STREET AND EASEMENT SHALL BE KNOWN BY THE NUMBER, LETTER, AND/OR NAME GIVEN TO EACH RESPECTIVELY AS SHOWN ON THIS PLAT.
- "OWNER" HEREBY DEDICATES TO THE CITY OF SURPRISE FEE TITLE TO ALL PUBLIC RIGHTS-OF-WAY AS SHOWN ON THE FINAL PLAT.
- "OWNER" HEREBY GRANTS TO THE CITY OF SURPRISE A PERPETUAL NON-EXCLUSIVE EASEMENT OVER, UNDER, UPON, AND ACROSS ALL AREAS DESIGNATED ON THE PLAT AS WATER/SEWER LINES, MANHOLES, FIRE HYDRANTS AND WATER METERS FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, MAINTAINING, REPAIRING, REPLACING, AND UTILIZING THE WATER/SEWER LINES, MANHOLES, FIRE HYDRANTS AND WATER METERS.
- "OWNER" HEREBY GRANTS TO THE CITY OF SURPRISE A PERPETUAL EASEMENT ACROSS THE FINAL PLAT INCLUDING ROADS AND STREETS, OPEN SPACES, COMMUNITY FACILITIES, TRACTS, SIDEWALKS, DRAINAGE BASINS AND ANY PROPERTY WITHIN THE FINAL PLAT OWNED BY THE HOMEOWNERS ASSOCIATION FOR THE PURPOSE OF PROVIDING CONTINUOUS AND UNINTERRUPTED INGRESS AND EGRESS FOR TRASH COLLECTION VEHICLES AND EMERGENCY VEHICLES.
- "OWNER" HEREBY GRANTS TO THE PUBLIC A PERPETUAL NON-EXCLUSIVE EASEMENT IN, UPON, OVER, UNDER, THROUGH, AND ACROSS THE AREAS DESIGNATED AS PUBLIC UTILITY EASEMENTS AS SHOWN ON THE FINAL PLAT FOR THE PURPOSE OF ACCESSING, INSTALLING, CONSTRUCTING, MAINTAINING, REPAIRING, REPLACING AND UTILIZING PUBLIC UTILITIES.
- "OWNER" HEREBY GRANTS TO THE CITY OF SURPRISE A PERPETUAL NON-EXCLUSIVE EASEMENT OVER, UPON AND ACROSS THE AREAS DESIGNATED AS SIGHT VISIBILITY TRIANGLES FOR THE PURPOSE OF ENSURING THAT THESE AREAS REMAIN FREE OF SIGHT VISIBILITY OBSTRUCTIONS.
- "OWNER" HEREBY GRANTS TO THE UNITED STATES OF AMERICA DEPARTMENT OF THE AIR FORCE ("USAF") AN AVIGATION EASEMENT OVER AND ACROSS THIS FINAL PLAT AND EVERY LOT AND PARCEL THEREOF, WHICH EASEMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE RIGHT OF FLIGHT OF AIRCRAFT OVER THIS FINAL PLAT, TOGETHER WITH ITS ATTENDANT NOISE, VIBRATIONS, FUMES, DUST, FUEL AND LUBRICANT PARTICLES, AND ALL OTHER EFFECTS THAT MAY BE CAUSED BY THE OPERATION OF AIRCRAFT LANDING AT, OR TAKING OFF FROM, OR OPERATING AT OR ON LUKE AIR FORCE BASE AND AUXILIARY FIELD.
- THE EASEMENTS GRANTED WITHIN THIS DEDICATION ARE PERMANENT AND PERPETUAL AND SHALL RUN WITH THE LAND AND BE BINDING UPON OWNER AND ITS HEIRS, ASSIGNS, AND SUCCESSORS IN INTEREST TO THIS FINAL PLAT OR ANY PARCEL THEREOF.
- "OWNER" HEREBY GRANTS TO THE CITY OF SURPRISE A PERPETUAL NON- EXCLUSIVE PEDESTRIAN ACCESS AND SIDEWALK CONSTRUCTION AND MAINTENANCE EASEMENT OVER, UPON, AND ACROSS THE AREAS DESIGNATED AS SIDEWALK EASEMENTS AS SHOWN ON THE PLAT.
- "OWNER" HEREBY GRANTS TO THE CITY OF SURPRISE AN ODOR EASEMENT OVER, UPON AND ACROSS THIS PLAT AND EVERY LOT AND PARCEL THEREOF, WHICH EASEMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE RIGHT TO INVADE WITH ODORS, FUMES, SMELLS, AND PHYSICAL AIRBORNE PARTICULATES CAUSED BY THE OPERATION AND MAINTENANCE OF THE CITY'S WATER RECLAMATION FACILITIES.
- ALL IMPROVEMENTS, FOR STREETS AND PUBLIC UTILITIES OWNED AND OPERATED BY THE CITY, INSTALLED OR CONSTRUCTED BY "OWNER" WITHIN THE PUBLIC RIGHTS-OF-WAY, THE EASEMENTS, OR ANY TRACTS OR PARCELS HEREBY DEDICATED TO THE CITY OF SURPRISE SHALL BE DEEMED TO HAVE BEEN DEDICATED BY OWNER TO THE CITY UPON THEIR COMPLETION; HOWEVER, SUCH TRANSFER SHALL NOT OCCUR UNTIL THE CITY COUNCIL FOR THE CITY OF SURPRISE MANIFESTS ITS ACCEPTANCE BY SEPARATE FORMAL COUNCIL ACTION.
- THE VEHICULAR NON ACCESS EASEMENTS "VNAE " ARE HEREBY DEDICATED TO THE ASANTE PHASE 2 COMMUNITY ASSOCIATION, ITS SUCCESSORS AND ASSIGNS AND IS INTENDED TO PREVENT VEHICULAR TRAFFIC BETWEEN TRACTS AND LOTS WITH THE EXCEPTION OF PUBLIC UTILITY USES. SAID "VNAE " AS DEDICATED HEREON WILL CROSS PUBLIC UTILITY EASEMENTS "PUE" ALSO GRANTED HEREON, IN MULTIPLE LOCATIONS. THESE "VNAE " ARE NOT INTENDED TO PREVENT AUTHORIZED AGENTS OF THE PUBLIC UTILITY COMPANIES FROM CROSSING SAID "VNAE " DURING THE COURSE OF INSTALLATION, USE, MAINTENANCE AND REPAIR OF THE UTILITIES LOCATED IN SAID PUBLIC UTILITY EASEMENT "PUE".
- "OWNER" HEREBY WARRANTS AND REPRESENTS TO THE CITY OF SURPRISE THAT IT IS THE SOLE OWNER OF THE PROPERTY COVERED BY THIS FINAL PLAT, AND THAT EVERY LENDER, EASEMENT HOLDER OR OTHER PERSON OR ENTITY HAVING ANY INTEREST THAT IS ADVERSE TO OR INCONSISTENT WITH THE FOREGOING DEDICATION, OR ANY OTHER REAL PROPERTY INTEREST CREATED OR TRANSFERRED BY THIS FINAL PLAT, HAS CONSENTED TO OR JOINED IN THIS FINAL PLAT AS EVIDENCED BY INSTRUMENTS WHICH ARE RECORDED WITH THE MARICOPA COUNTY RECORDERS OFFICE OR WHICH OWNER WILL RECORD NOT LATER THAN THE DATE ON WHICH THIS FINAL PLAT IS RECORDED.
- ALL TRACTS ARE NOT DEDICATED TO THE PUBLIC, BUT ARE PLATTED AS COMMON PROPERTY FOR THE USE AND ENJOYMENT OF THE ASANTE PHASE 2 COMMUNITY ASSOCIATION, AS MORE FULLY SET FORTH IN THE DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS.
- TRACTS PLATTED HEREON ARE DEDICATED FOR THE PURPOSES AS NOTED IN THE TRACT TABLE ON THIS FINAL PLAT AND SHALL BE MAINTAINED BY ASANTE PHASE 2 COMMUNITY ASSOCIATION.

IN WITNESS WHEREOF:

ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AS OWNER, HAS HEREUNTO CAUSED ITS CORPORATE NAME TO BE SIGNED AND ITS CORPORATE SEAL TO BE AFFIXED BY THE UNDERSIGNED DULY AUTHORIZED OFFICER THIS \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_.

ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY.

BY: LENNAR COMMUNITIES DEVELOPMENT, LLC, A DELAWARE LIMITED LIABILITY COMPANY.

ITS: MANAGER

NAME: JEFF GUNDERSON

TITLE: VICE PRESIDENT

#### NOTARY ACKNOWLEDGEMENT

STATE OF ARIZONA: )  
COUNTY OF MARICOPA: ) SS

ON THIS THE \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_ BEFORE ME, PERSONALLY APPEARED JEFF GUNDERSON WHO ACKNOWLEDGED HIMSELF TO BE THE VICE PRESIDENT OF LENNAR COMMUNITIES DEVELOPMENT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, THE MANAGER OF ASANTE DEVELOPMENT PARTNERS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AND ACKNOWLEDGED THAT HE, AS SUCH OFFICER BEING DULY AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES CONTAINED THEREIN.

IN WITNESS WHEREOF, I HEREBY SET MY HAND AND OFFICIAL SEAL

\_\_\_\_\_  
NOTARY PUBLIC MY COMMISSION EXPIRES \_\_\_\_\_

#### LENDERS CONSENT

THE UNDERSIGNED, WHICH IS THE BENEFICIARY AND ADMINISTRATIVE AGENT ON BEHALF OF ITSELF AND OTHER LENDERS AS DEFINED IN THE LOAN AGREEMENT OF EVEN DATE WITH THE DEED OF TRUST ("LENDERS"), UNDER THAT CERTAIN CONSTRUCTION DEED OF TRUST AND FUTURE FILING (WITH ASSIGNMENT OF LEASES AND RENTS AND SECURITY AGREEMENT) RECORDED ON NOVEMBER 10, 2022, AT DOCUMENT NO. 20220831563 0 THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, OF ARIZONA ("DEED OF TRUST") AS A FIRST LIEN ON THE PROPERTY DESCRIBED IN THE DEED OF TRUST ("LENDERS' LIEN"), FOR AND BEHALF ON THE LENDERS AND THEIR SUCCESSORS AND ASSIGNS, HEREBY (A) CONSENTS TO THE RECORDED OF THIS FINAL PLAT ("FINAL PLAT"), AND EACH AND EVERY DEDICATION, EASEMENT, RIGHT-OF-WAY, COVENANT, CONDITION AND RESTRICTION MORE SPECIFICALLY SET FORTH IN THIS FINAL PLAT; (B) AGREES THAT, UPON THE RECORDED OF THIS FINAL PLAT, THE LENDERS LIEN WITH RESPECT TO THE PROPERTY DESCRIBED IN THIS FINAL PLAT IS HEREBY DEEMED SUBJECT AND SUBORDINATE TO THIS FINAL PLAT; WITH LENDERS' LIEN CONTINUING IN EFFECT AGAINST SUCH PROPERTY AS SUCH LEGAL DESCRIPTION HAS BEEN MODIFIED BY RECORDED OF THIS FINAL PLAT; AND (S) AGREES THAT UPON THE RECORDED OF THIS FINAL PLAT ALL PROPERTY DEDICATED TO THE CITY OF SURPRISE HEREUNDER IS RELEASED FROM THE LENDERS' LIEN.

DATED: \_\_\_\_\_, 20\_\_.

ZIONS BANCORPORATION, N.A. DBA CALIFORNIA BANK AND TRUST

BY: \_\_\_\_\_

NAME: \_\_\_\_\_

ITS: \_\_\_\_\_

#### ACKNOWLEDGMENT FOR LENDERS' CONSENT

A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY, OR VALIDITY OF THAT DOCUMENT.

STATE OF CALIFORNIA

COUNTY OF \_\_\_\_\_

ON \_\_\_\_\_ BEFORE ME, \_\_\_\_\_ PERSONALLY APPEARED

\_\_\_\_\_, WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE OF THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE/THEY EXECUTED EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES), AND THAT BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT. WITNESS MY HAND AND OFFICIAL SEAL.

SIGNATURE \_\_\_\_\_

#### ASANTE COMMUNITY ASSOCIATION RATIFICATION

BY THIS RATIFICATION, \_\_\_\_\_, AS THE DULY ELECTED PRESIDENT OF THE ASANTE PHASE 2 COMMUNITY ASSOCIATION, AN ARIZONA NONPROFIT CORPORATION ACKNOWLEDGES THE RESPONSIBILITIES OF SAID ASSOCIATION AS SET FORTH HEREIN.

BY: \_\_\_\_\_ ITS \_\_\_\_\_

#### NOTARY ACKNOWLEDGEMENT

STATE OF ARIZONA: )  
COUNTY OF MARICOPA: ) SS

ON THIS \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_ PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, WHO ACKNOWLEDGED HIMSELF/HERSELF TO BE THE \_\_\_\_\_ OF THE ASANTE PHASE 2 COMMUNITY ASSOCIATION, AND THAT HE/SHE, AS \_\_\_\_\_, EXECUTED THIS INSTRUMENT FOR THE PURPOSES HEREIN CONTAINED.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND OFFICIAL SEAL.

BY: \_\_\_\_\_ MY COMMISSION EXPIRES \_\_\_\_\_ DATE \_\_\_\_\_  
NOTARY PUBLIC

#### APPROVALS

##### CITY OF SURPRISE ENGINEER APPROVAL

DATA ON THIS PLAT REVIEWED AND APPROVED THIS \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_, BY THE CITY ENGINEER OF SURPRISE, ARIZONA.

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
CITY ENGINEER

##### CITY OF SURPRISE COUNCIL APPROVAL

APPROVED BY THE CITY COUNCIL OF THE CITY OF SURPRISE, ARIZONA.  
THIS \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_.

ATTEST: \_\_\_\_\_ DATE \_\_\_\_\_  
MAYOR

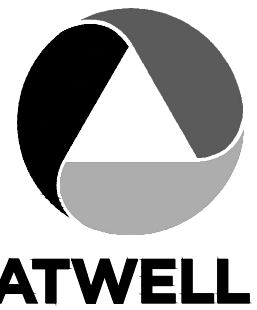
\_\_\_\_\_  
CITY CLERK DATE \_\_\_\_\_

#### AREA CALCULATIONS

TRACTS	SQ.FT.	AC
LOTS = 300	1,023,035	23.49
RIGHT OF WAY	311,720	7.15
PRIVATE ALLEYS	58,913	1.35
TOTAL	1,956,791	44.92

#### SHEET INDEX

DESCRIPTION	SHEET NO
COVER SHEET	1
KEY MAP, LEGAL DESCRIPTION	2
PLAT SHEETS	3-12





**LEGAL DESCRIPTION**

LOCATED WITHIN A PORTION OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A FOUND MONUMENT CAP FLUSH STAMPED CITY OF SURPRISE, ACCEPTED AS THE EAST QUARTER CORNER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, FROM WHICH A FOUND MONUMENT CAP FLUSH STAMPED CITY OF SURPRISE, ACCEPTED AS THE SOUTHEAST CORNER OF SECTION 12, TOWNSHIP 4 NORTH, RANGE 2 WEST, THEREOF BEARS S00°45'20"W A DISTANCE OF 2634.06 FEET;

THENCE, ALONG THE EAST LINE OF SAID SECTION 12, N00°44'56"E A DISTANCE OF 2444.11 FEET;

THENCE, LEAVING THE EAST LINE OF SAID SECTION 12, N89°20'59"W A DISTANCE OF 467.50 FEET TO THE POINT OF BEGINNING;

THENCE, S00°44'56"W A DISTANCE OF 1181.54 FEET;

THENCE, N89°45'19"W A DISTANCE OF 381.08 FEET;

THENCE, N85°30'56"W A DISTANCE OF 338.15 FEET;

THENCE, N89°45'19"W A DISTANCE OF 1030.89 FEET;

THENCE, N86°42'42"W A DISTANCE OF 5.00 FEET;

THENCE, N03°17'18"E A DISTANCE OF 282.59 FEET;

THENCE, S86°42'42"E A DISTANCE OF 7.00 FEET;

THENCE, N03°17'18"E A DISTANCE OF 181.17 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE RIGHT;

THENCE, NORTHERLY ALONG SAID CURVE AN ARC LENGTH OF 41.44 FEET, WITH A RADIUS OF 758.00 FEET AND A CENTRAL ANGLE OF 03°07'57";

THENCE, N53°52'41"E A DISTANCE OF 27.43 FEET;

THENCE, N04°51'45"E A DISTANCE OF 70.35 FEET;

THENCE, N32°44'07"W A DISTANCE OF 27.44 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE RIGHT;

THENCE, NORTHEASTERLY ALONG SAID CURVE AN ARC LENGTH OF 314.34 FEET, WITH A RADIUS OF 765.00 FEET AND THE RADIAL BEARING OF S75°18'02"E AND A CENTRAL ANGLE OF 23°32'34";

THENCE, N38°14'05"E A DISTANCE OF 134.68 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE LEFT;

THENCE, NORTHEASTERLY ALONG SAID CURVE AN ARC LENGTH OF 231.13 FEET, WITH A RADIUS OF 1035.00 FEET AND A CENTRAL ANGLE OF 12°47'42";

THENCE, N25°26'23"E A DISTANCE OF 78.80 FEET;

THENCE, N69°33'13"E A DISTANCE OF 28.72 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE LEFT;

THENCE, EASTERLY ALONG SAID CURVE AN ARC LENGTH OF 267.74 FEET, WITH A RADIUS OF 1455.00 FEET AND THE RADIAL BEARING OF N23°16'26"E AND A CENTRAL ANGLE OF 10°32'35";

THENCE, S12°43'51"W A DISTANCE OF 5.00 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE LEFT;

THENCE, EASTERLY ALONG SAID CURVE AN ARC LENGTH OF 205.17 FEET, WITH A RADIUS OF 1460.00 FEET AND THE RADIAL BEARING OF N12°43'51"E AND A CENTRAL ANGLE OF 08°03'06";

THENCE, S41°36'07"E A DISTANCE OF 28.73 FEET;

THENCE, N88°25'44"E A DISTANCE OF 70.18 FEET;

THENCE, N46°40'28"E A DISTANCE OF 28.71 FEET;

THENCE, S89°20'59"E A DISTANCE OF 315.99 FEET;

THENCE, S00°39'01"W A DISTANCE OF 5.00 FEET;

THENCE, S89°20'59"E A DISTANCE OF 210.00 FEET;

THENCE, S44°20'59"E A DISTANCE OF 28.28 FEET;

THENCE, N85°53'12"E A DISTANCE OF 60.21 FEET;

THENCE, N45°39'01"E A DISTANCE OF 28.28 FEET;

THENCE, S89°20'59"E A DISTANCE OF 122.36 FEET TO THE POINT OF BEGINNING.

OPEN SPACE TABLE		
TYPE	ACREAGE	PERCENTAGE OF TOTAL OPEN SPACE
ACTIVE	3.65	28.23%
PASSIVE	9.28	71.77%
TOTAL	12.93	100.00%
% OF TOTAL OPEN SPACE IN PLAT 28.78%		

LINE TABLE			LINE TABLE			LINE TABLE		
LINE #	DIRECTION	LENGTH	LINE #	DIRECTION	LENGTH	LINE #	DIRECTION	LENGTH
L1	N86°42'42"W	5.00'	L8	N25°26'23"E	78.80'	L15	S89°20'59"E	210.00'
L2	S86°42'42"E	7.00'	L9	N69°33'13"E	28.72'	L16	S44°20'59"E	28.28'
L3	N03°17'18"E	181.17'	L10	S12°43'51"W	5.00'	L17	N85°53'12"E	60.21'
L4	N53°52'41"E	27.43'	L11	S41°36'07"E	28.73'	L18	N45°39'01"E	28.28'
L5	N04°51'45"E	70.35'	L12	N88°25'44"E	70.18'	L19	S89°20'59"E	122.36'
L6	N32°44'07"W	27.44'	L13	N46°40'28"E	28.71'			
L7	N38°14'05"E	134.68'	L14	S00°39'01"W	5.00'			

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C1	41.44'	758.00'	003°07'57"
C2	314.34'	765.00'	023°32'34"
C3	231.13'	1035.00'	012°47'42"
C4	267.74'	1455.00'	010°32'35"
C5	205.17'	1460.00'	008°03'06"

**SITE DATA**

GROSS SITE AREA	44.92 ACRES
RIGHT OF WAY	7.15 ACRES
NET SITE AREA	37.77 ACRES
NUMBER OF LOTS	300 LOTS
NET DENSITY	6.67 DU/AC
ARTERIAL RIGHT OF WAY	0.00 ACRES
ZONING	LOTS 1-300 PAD



PRIVATE DRIVE-ALLEY TABLE			
TRACT	AREA SQ FT	AREA ACRES	USAGE
PRIVATE TRACT ALLEY 1	13,631	0.31	ALLEY STREET, UTILITIES & PUE
PRIVATE TRACT ALLEY 2	7,800	0.18	ALLEY STREET, UTILITIES & PUE
PRIVATE TRACT ALLEY 3	11,050	0.25	ALLEY STREET, UTILITIES & PUE
PRIVATE TRACT ALLEY 4	11,050	0.25	ALLEY STREET, UTILITIES & PUE
PRIVATE TRACT ALLEY 5	15,382	0.35	ALLEY STREET, UTILITIES & PUE
TOTAL	58,913	1.35	

TRACT TABLE							
TRACT	AREA SQ FT	AREA ACRES	USAGES	TRACT	AREA SQ FT	AREA ACRES	USAGES
TRACT A	27,991	0.64	DRAINAGE, PUE & FUTURE ROADWAY	TRACT K	940	0.02	DRAINAGE & PUE
TRACT B	68,267	1.57	DRAINAGE & PUE	TRACT L	850	0.02	DRAINAGE & PUE
TRACT C	900	0.02	DRAINAGE & PUE	TRACT M	59,950	1.38	DRAINAGE & PUE
TRACT D	900	0.02	DRAINAGE & PUE	TRACT N	77,225	1.77	DRAINAGE & PUE
TRACT E	55,846	1.28	DRAINAGE & PUE	TRACT O	850	0.02	DRAINAGE & PUE
TRACT F	73,088	1.68	DRAINAGE & PUE	TRACT P	850	0.02	DRAINAGE & PUE
TRACT G	940	0.02	DRAINAGE & PUE	TRACT Q	190,175	4.37	DRAINAGE & PUE
TRACT H	850	0.02	DRAINAGE & PUE	TRACT R	854	0.02	DRAINAGE & PUE
TRACT I	850	0.02	DRAINAGE & PUE	TRACT S	947	0.02	DRAINAGE & PUE
TRACT J	850	0.02	DRAINAGE & PUE	TOTAL	563,123	12.93	

LEGEND			
	SUBDIVISION BOUNDARY	*26'	26' TRACT-PRIVATE ALLEY
	PROPOSED RIGHT OF WAY LINE	VNAE	VEHICULAR NON-ACCESS EASEMENT
	EXISTING RIGHT OF WAY LINE	PUE	PUBLIC UTILITY EASEMENT
	CENTERLINE	MCR	MARICOPA COUNTY RECORDER
	PROPOSED EASEMENT LINE	R/W	RIGHT-OF-WAY
	SECTION LINE	D	DELTA
	20' PRIVATE DRIVE INGRESS-EGRESS, DRAINAGE ESMT, AND WATER-SEWER ESMT	C1	CURVE TABLE NUMBER
	PHASE LINE 4.4-4.7	L1	LINE TABLE NUMBER
	SUBDIVISION CORNER TO BE SET	UBE	USE AND BENEFIT EASEMENT
	FOUND MONUMENT AS NOTED		
	CENTERLINE MONUMENT (TO BE SET BY CITY OF SURPRISE STANDARDS)		
	20'x20' SIGHT VISIBILITY EASEMENT		
	30'x30' SIGHT VISIBILITY EASEMENT		
	5' UBE DEDICATED HEREON		

NE COR SEC 12, T.4N., R.2W  
MONUMENT DESTROYED,  
NOTHING SET, CALCULATED POSITION

CITY OF SURPRISE  
APN 503-74-975

S00°44'56"W 1181.54'

ASANTE DEVELOPMENT  
PARTNERS LLC  
APN 503-74-978

E 1/4 COR SEC 12, T.4N., R.2W  
FND MONUMENT FLUSH  
STAMPED CITY OF SURPRISE  
"POINT OF COMMENCEMENT"

SE COR SEC 12, T.4N., R.2W  
FND MONUMENT FLUSH  
STAMPED CITY OF SURPRISE



CASE NO. FS23-0831

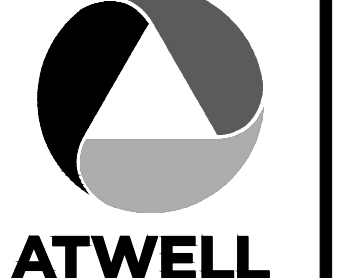


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

FINAL PLAT  
ASANTE UNITS 4.4-4.7  
CITY OF SURPRISE, ARIZONA

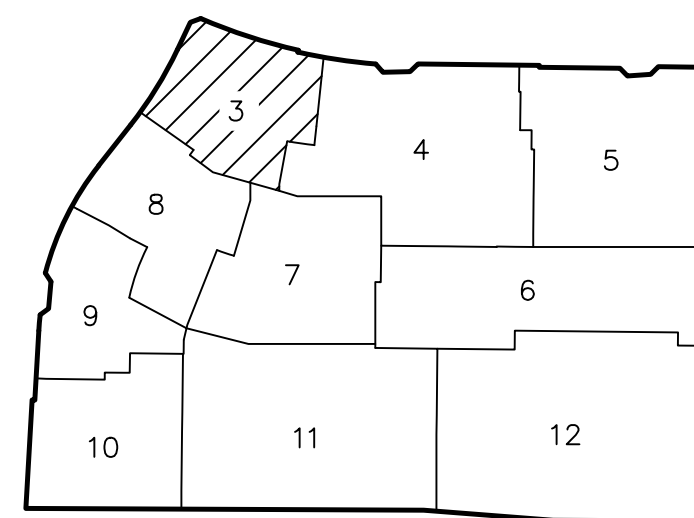
DECEMBER 2023

REVISIONS:

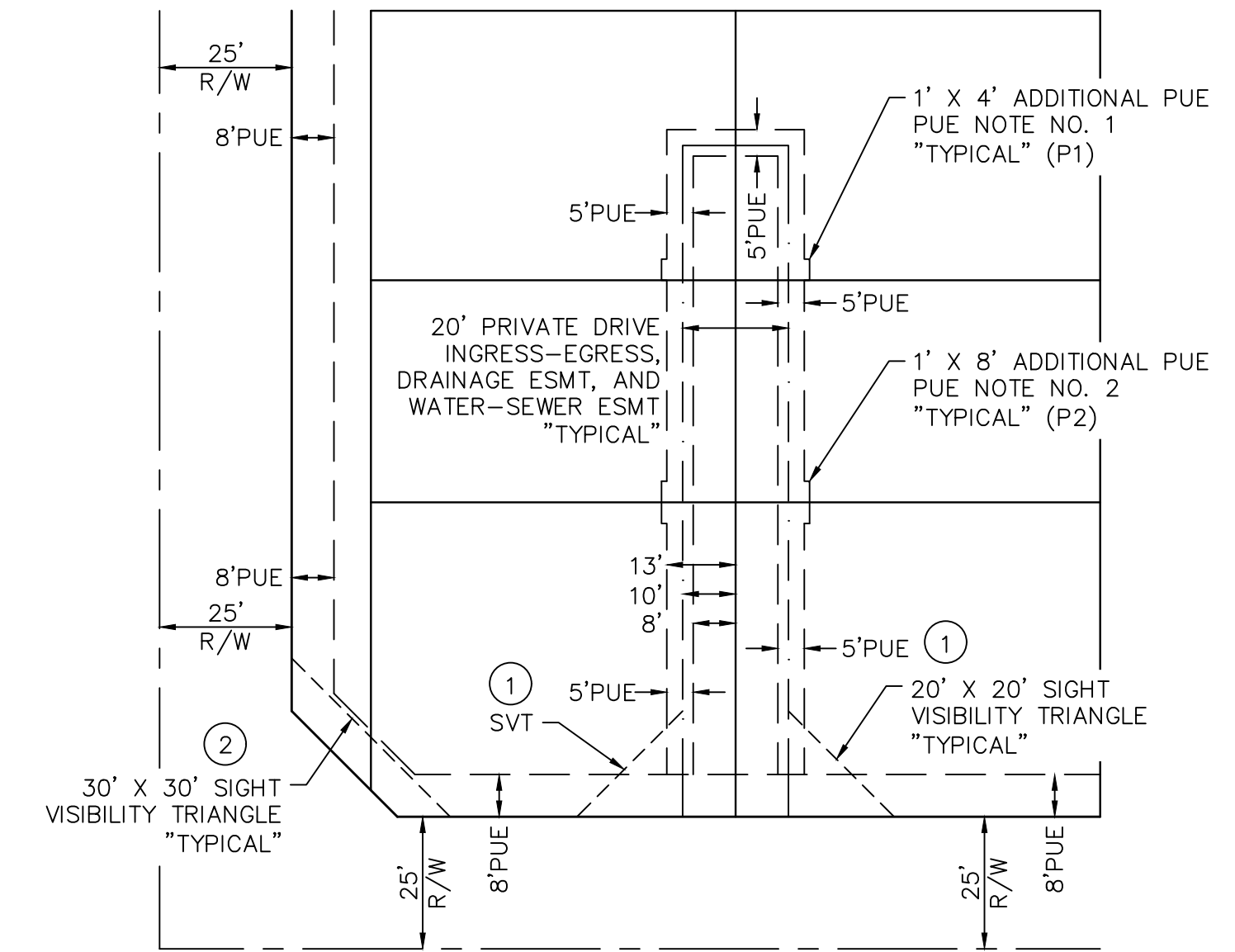


PM. J. SPRING  
DR. R. GILES  
JOB NO.  
22003507  
SCALE 0 15 30  
1" = 30 FEET  
22003507 ASANTE 4.4-4.7 FP.DWG  
SHEET NO.  
2 OF 12

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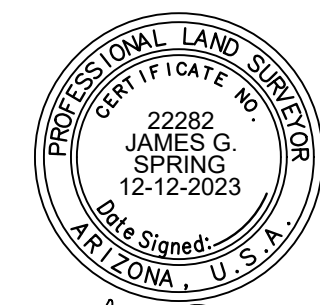
SITE KEY MAP



LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
1	2898	0.067	16	4210	0.097
2	3519	0.081	17	2898	0.067
3	3864	0.089	18	3519	0.081
4	3243	0.074	19	3588	0.082
5	4465	0.103	20	3058	0.070
6	4223	0.097	21	4622	0.106
7	2898	0.067	40	4084	0.094
8	3519	0.081	41	3519	0.081
9	3631	0.083	42	3804	0.087
10	3158	0.072	43	4291	0.099
11	4841	0.111			

LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	N69°33'13"E	28.72'
L2	S12°43'51"W	5.00'
L3	N67°49'35"E	32.27'
L4	N75°56'54"W	72.08'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C1	205.17'	1460.00'	008°03'06"
C2	135.31'	1255.00'	006°10'38"
C3	145.02'	1230.00'	006°45'20"
C4	145.59'	1205.00'	006°55'21"
C5	69.82'	55.00'	072°44'22"
C6	44.33'	35.00'	072°34'21"
C7	228.05'	975.00'	013°24'05"
C8	233.90'	1000.00'	013°24'05"
C9	239.74'	1025.00'	013°24'05"



*James G. Spring*

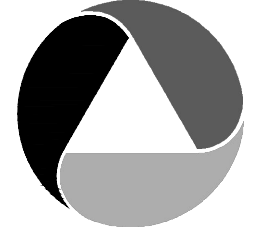


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANIE UNITS 4.4-4.7**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



PM. J. SPRING  
DR. R. GILES  
JOB NO. 22003507

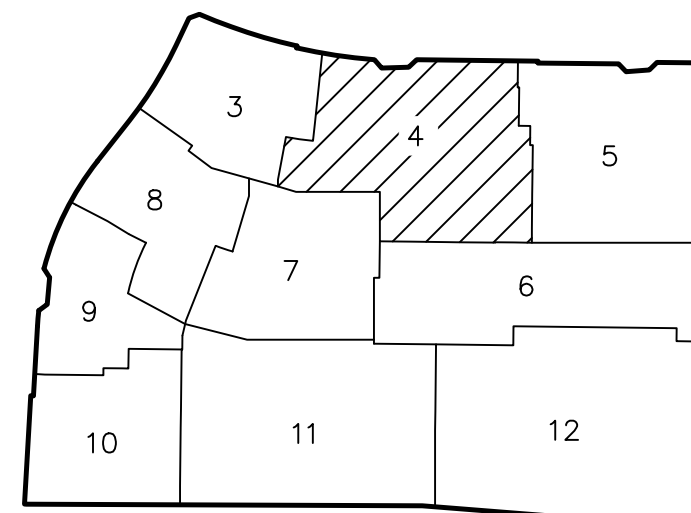
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22003507 ASANIE 4.4-4.7 FP.DWG

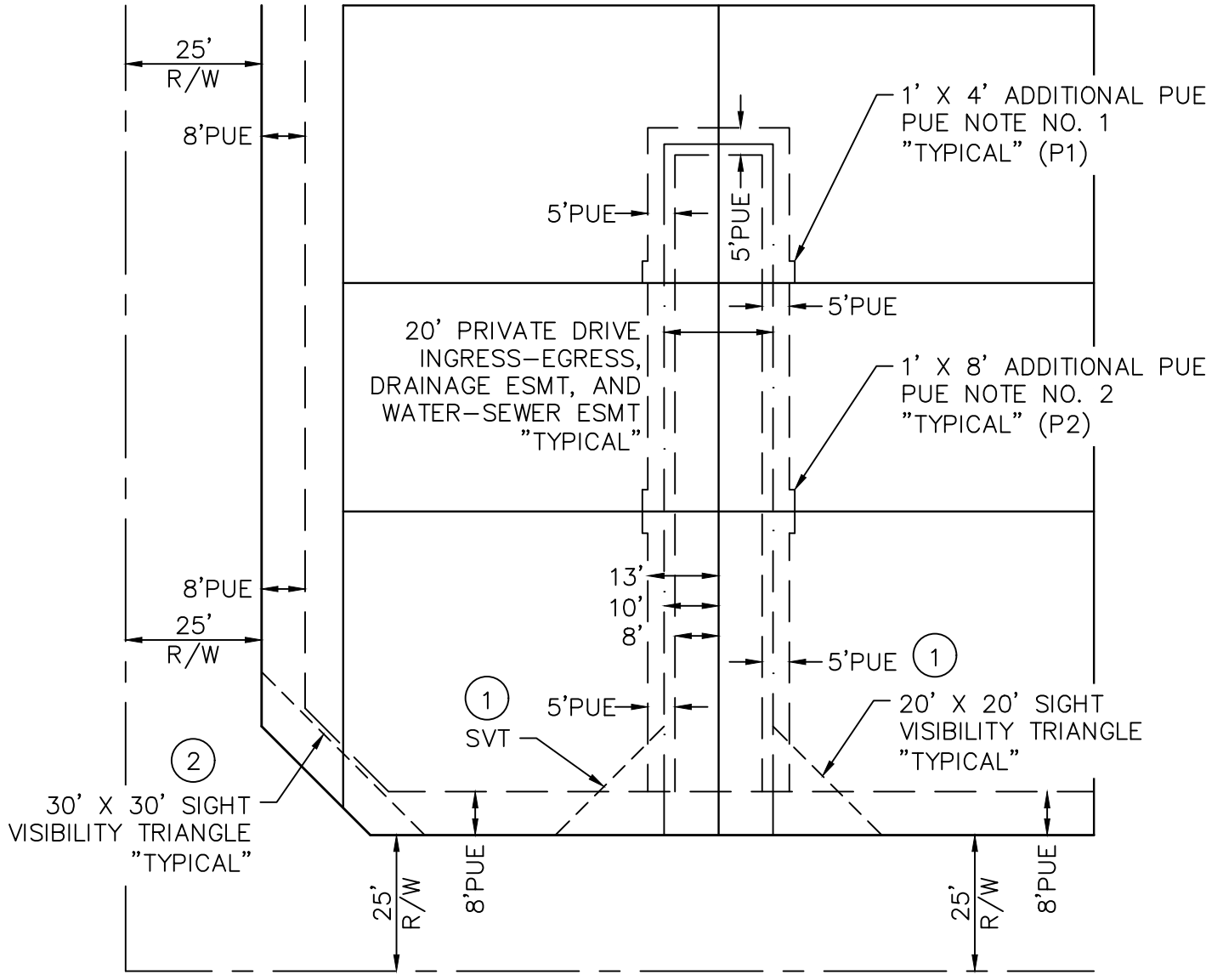
SHEET NO. **3 OF 12**

CASE NO. FS23-0831





SITE KEY MAP



LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
12	4799	0.110	203	2820	0.065
13	3731	0.086	204	2820	0.065
14	3519	0.081	205	2820	0.065
15	4198	0.096	206	2820	0.065
44	4422	0.102	207	2820	0.065
45	3956	0.091	208	2820	0.065
46	3519	0.081	209	2820	0.065
47	4156	0.095	211	3203	0.074
186	3306	0.076	212	3000	0.069
187	2924	0.067	213	3000	0.069
188	2910	0.067	214	3247	0.075
189	3395	0.078	215	3000	0.069
190	3487	0.080	216	3000	0.069
191	3000	0.069	217	3000	0.069
192	3000	0.069	218	3000	0.069
193	3000	0.069	220	3450	0.079
202	3290	0.076	233	3290	0.076

LINE TABLE		LINE TABLE			
LINE #	DIRECTION	LENGTH	LINE #	DIRECTION	LENGTH
L5	S41°36'07"E	28.73'	L13	N89°20'59"W	94.00'
L6	N46°40'28"E	28.71'	L14	N89°20'59"W	90.00'
L7	N44°21'34"W	28.29'	L15	N44°20'59"W	28.28'
L8	N00°39'01"E	35.84'	L16	N45°39'01"E	28.28'
L9	N45°38'27"E	28.28'	L17	N00°39'01"E	90.00'
L10	N24°01'38"W	9.12'	L18	N89°20'59"W	475.00'
L11	N45°39'01"E	21.21'	L19	N00°39'01"E	94.00'
L12	N00°39'01"E	95.00'	L20	N89°20'59"W	405.00'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C10	73.57'	2535.00'	001°39'46"
C11	81.59'	2500.00'	001°52'11"
C12	71.28'	2465.00'	001°39'25"
C13	228.05'	975.00'	013°24'05"
C14	233.90'	1000.00'	013°24'05"
C15	239.74'	1025.00'	013°24'05"
C16	77.69'	41.00'	108°34'26"
C17	17.83'	55.00'	018°34'26"

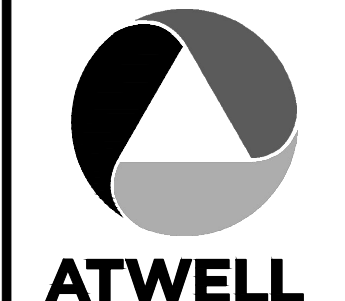


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNITS 4.4-4.7**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



PM. J. SPRING  
DR. R. GILES  
JOB NO. 22003507

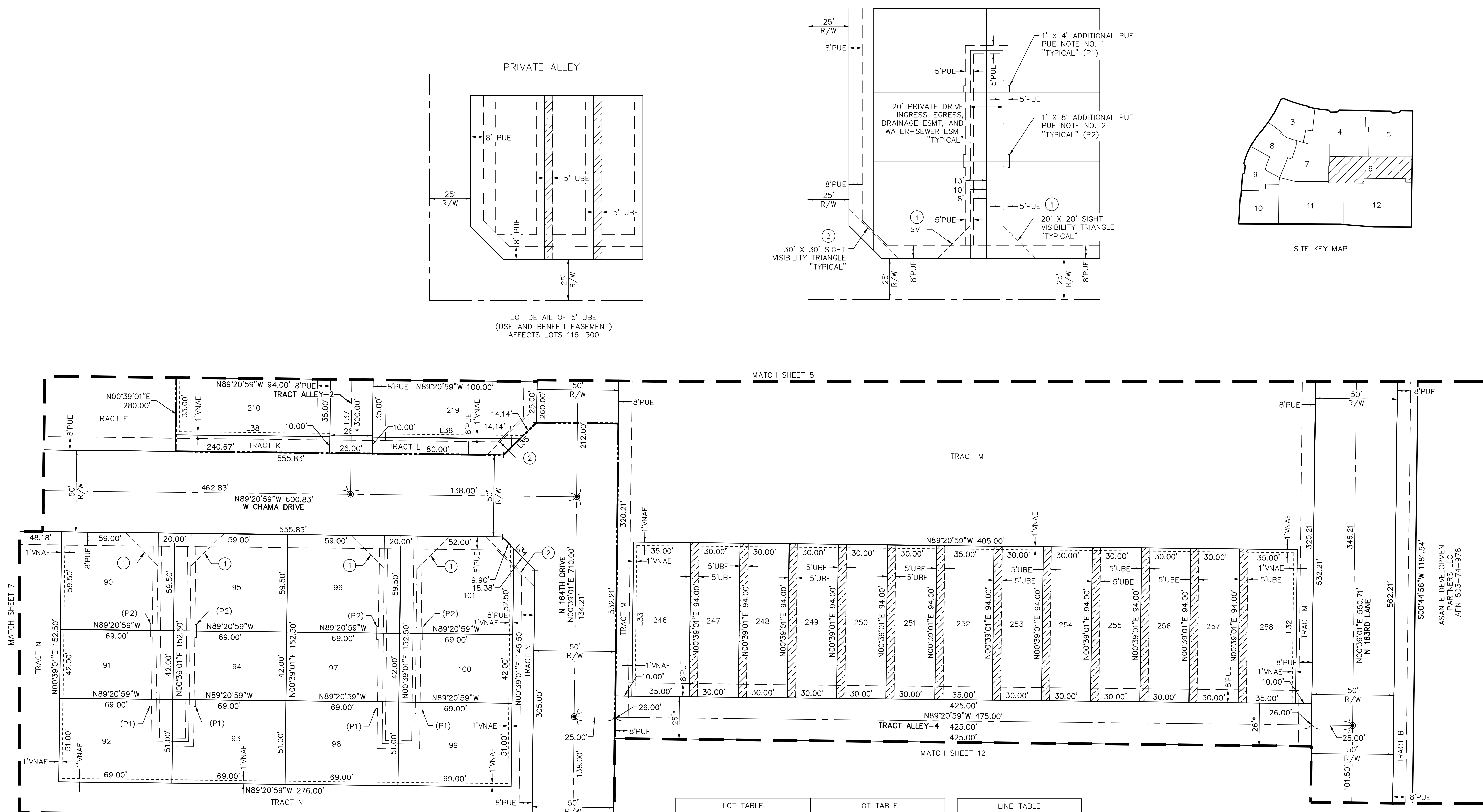
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22003507 ASANTE 4.4-4.7.FP.DWG

SHEET NO. 4 OF 12

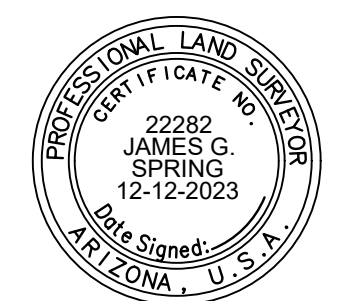
CASE NO. FS23-0831





LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
90	4105	0.094	246	3290	0.076
91	2898	0.067	247	2820	0.065
92	3519	0.081	248	2820	0.065
93	3519	0.081	249	2820	0.065
94	2898	0.067	250	2820	0.065
95	4105	0.094	251	2820	0.065
96	4105	0.094	252	3290	0.076
97	2898	0.067	253	2820	0.065
98	3519	0.081	254	2820	0.065
99	3519	0.081	255	2820	0.065
100	2898	0.067	256	2820	0.065
101	4081	0.094	257	2820	0.065
210	3290	0.076	258	3290	0.076
219	3450	0.079			

LINE TABLE		
LINE #	DIRECTION	LENGTH
L32	N00°39'01"E	94.00'
L33	N00°39'01"E	94.00'
L34	N44°20'59"W	28.28'
L35	N45°39'01"E	28.28'
L36	N89°20'59"W	90.00'
L37	N00°39'01"E	350.00'
L38	N89°20'59"W	94.00'



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 866.850.4200 www.atwell-group.com  
 4700 E. SOUTHERN AVENUE  
 MESA, AZ 85206  
 480.218.8651

COUNTY: MARICOPA  
 SECTION: 12  
 TOWNSHIP: 4 NORTH  
 RANGE: 2 WEST

**FINAL PLAT**  
**ASANITE UNITS 4.4-4.7**  
 CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:

**ATWELL**

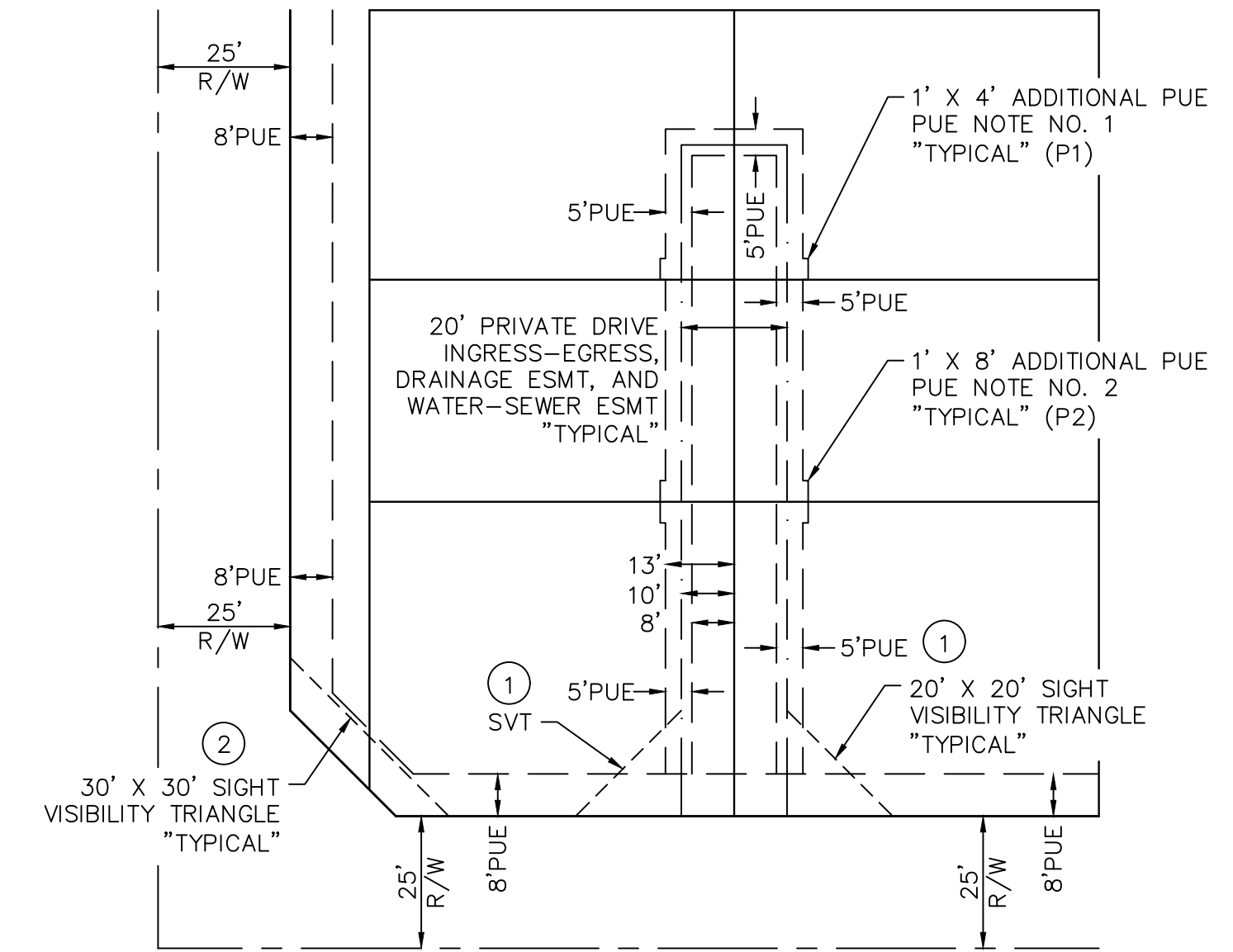
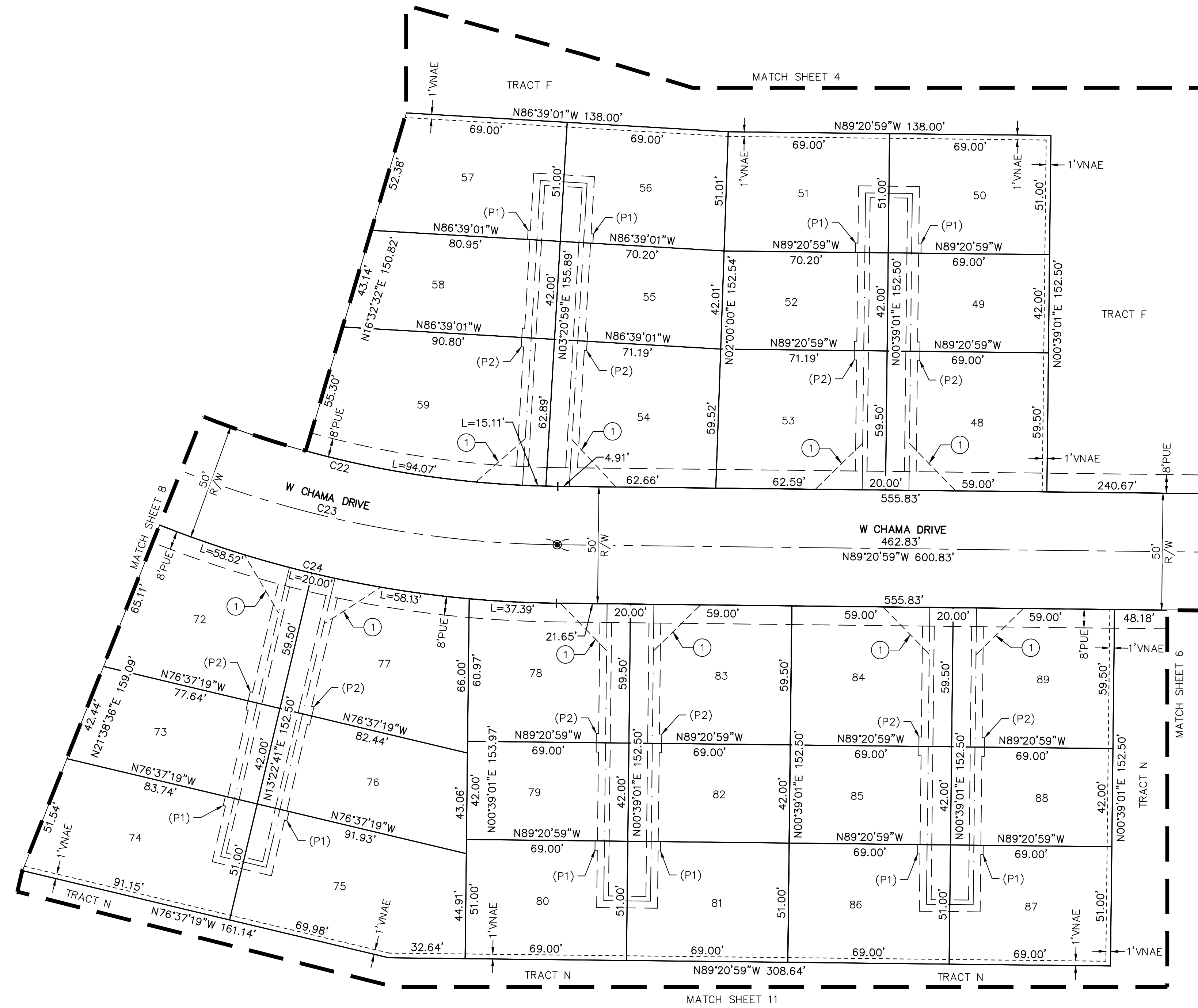
PM. J. SPRING  
 DR. R. GILES

JOB NO.  
 22003507

SCALE 0 15 30  
 1" = 30 FEET

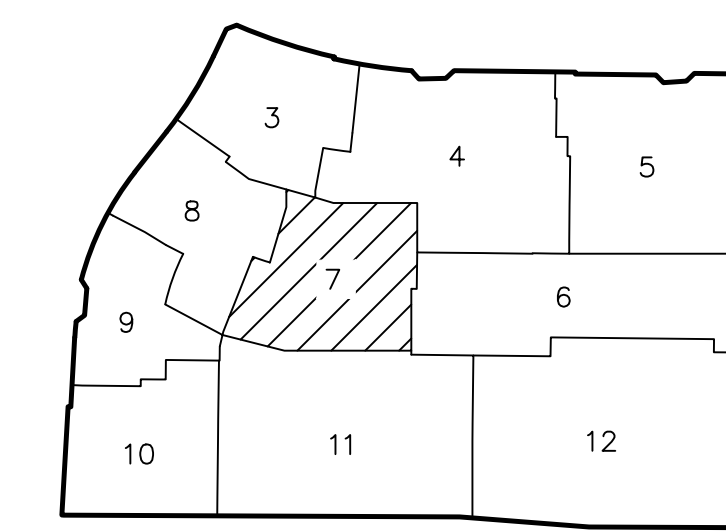
22003507 ASANITE 4.4-4.7 FP.DWG  
 SHEET NO.  
**6 OF 12**



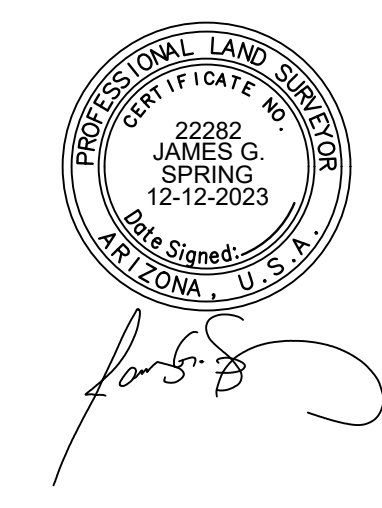


LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
48	4105	0.094	75	4862	0.112
49	2898	0.067	76	3662	0.084
50	3519	0.081	77	4618	0.106
51	3550	0.081	78	4124	0.095
52	2969	0.068	79	2898	0.067
53	4278	0.098	80	3519	0.081
54	4402	0.101	81	3519	0.081
55	2969	0.068	82	2898	0.067
56	3550	0.081	83	4105	0.094
57	3824	0.088	84	4106	0.094
58	3607	0.083	85	2898	0.067
59	5917	0.136	86	3519	0.081
72	4476	0.103	87	3519	0.081
73	3389	0.078	88	2898	0.067
74	4460	0.102	89	4105	0.094

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C22	240.24'	425.00'	032°23'14"
C23	254.37'	450.00'	032°23'14"
C24	268.50'	475.00'	032°23'15"



SITE KEY MAP



CASE NO. FS23-0831

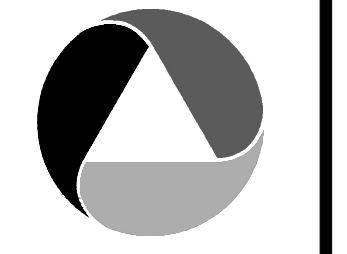


COUNTY: MARICOPA  
 SECTION: 12  
 TOWNSHIP: 4 NORTH  
 RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNITS 4.4-4.7**  
 CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



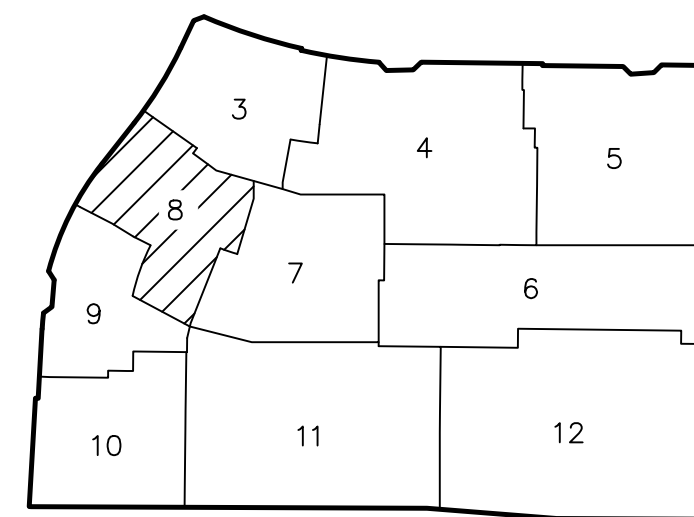
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 JOB NO.  
 22003507

SCALE 0 15 30  
 1" = 30 FEET

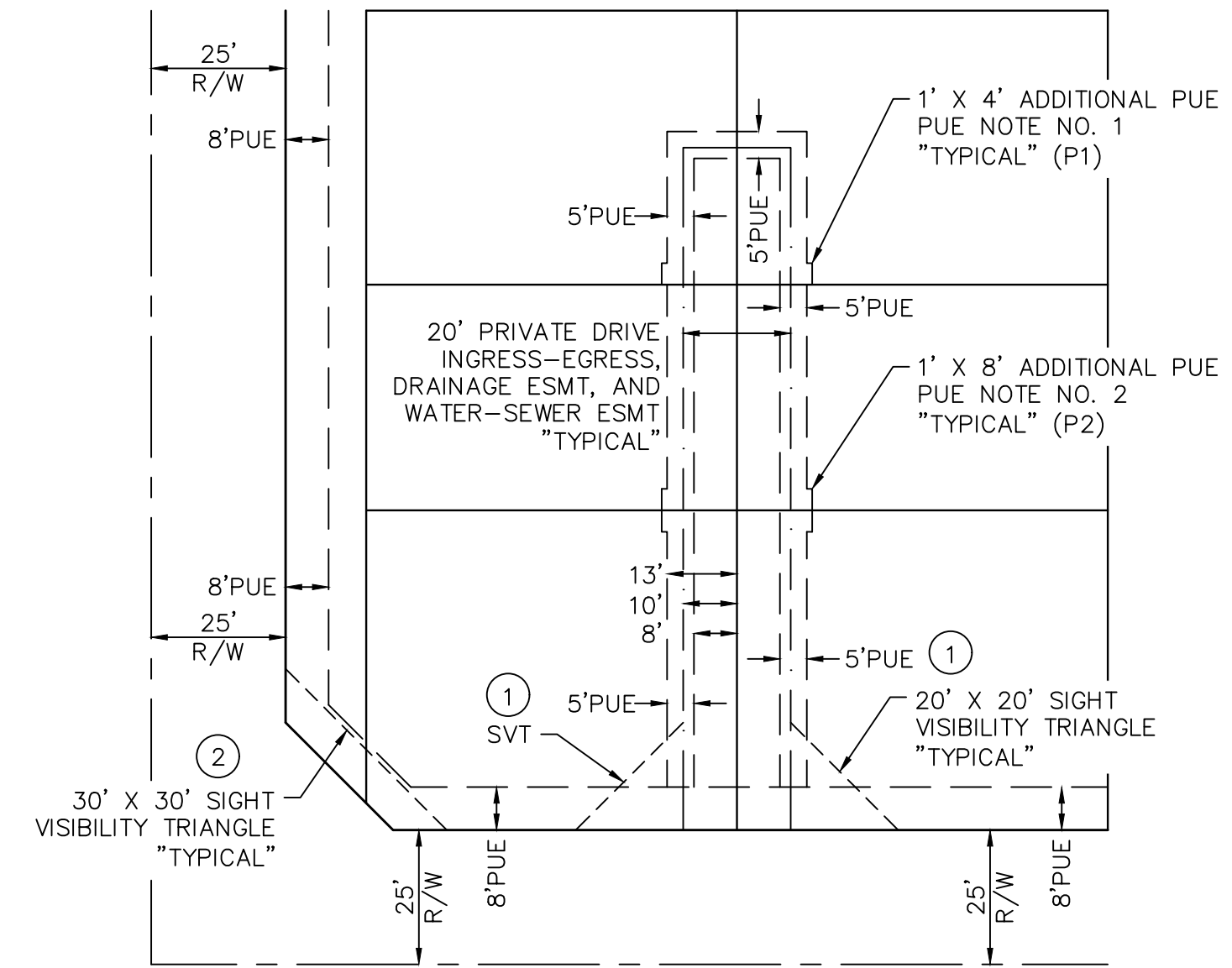
22003507 ASANTE 4.4-4.7 FP.DWG

SHEET NO.  
**7 OF 12**





SITE KEY MAP



LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
22	4558	0.105	60	6147	0.141
23	3058	0.070	61	3612	0.083
24	3636	0.083	62	3831	0.088
25	3980	0.091	63	3519	0.081
26	3138	0.072	64	2898	0.067
27	4402	0.101	65	4543	0.104
28	4162	0.096	66	4193	0.096
29	2901	0.067	67	2898	0.067
30	3523	0.081	68	3519	0.081
31	4079	0.094	69	4460	0.102
32	3125	0.072	70	3389	0.078
33	4325	0.099	71	4476	0.103

LINE TABLE		
LINE #	DIRECTION	LENGTH
L39	N10°08'19"W	27.37'
L40	N76°12'51"E	27.37'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C25	223.31'	1000.00'	012°47'42"
C26	231.13'	1035.00'	012°47'42"
C27	487.94'	800.00'	034°56'47"
C28	314.34'	765.00'	023°32'34"
C29	145.59'	1205.00'	006°55'21"
C30	145.02'	1230.00'	006°45'20"
C31	135.31'	1255.00'	006°10'38"
C32	252.03'	600.00'	024°04'01"
C33	377.18'	575.00'	037°35'04"
C34	265.89'	550.00'	027°41'55"
C35	4.88'	550.00'	000°30'29"
C36	240.24'	425.00'	032°23'14"
C37	254.37'	450.00'	032°23'14"
C38	268.50'	475.00'	032°23'15"



*James G. Spring*

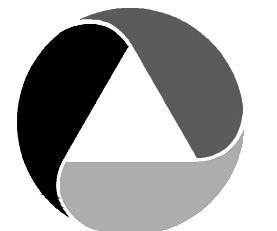


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNITS 4.4-4.7**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



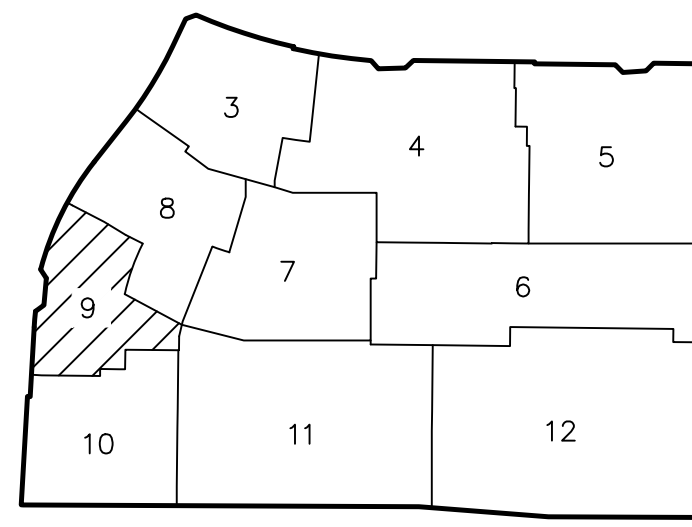
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DR. R. GILES  
JOB NO. 22003507

SCALE 0 15 30  
1" = 30 FEET

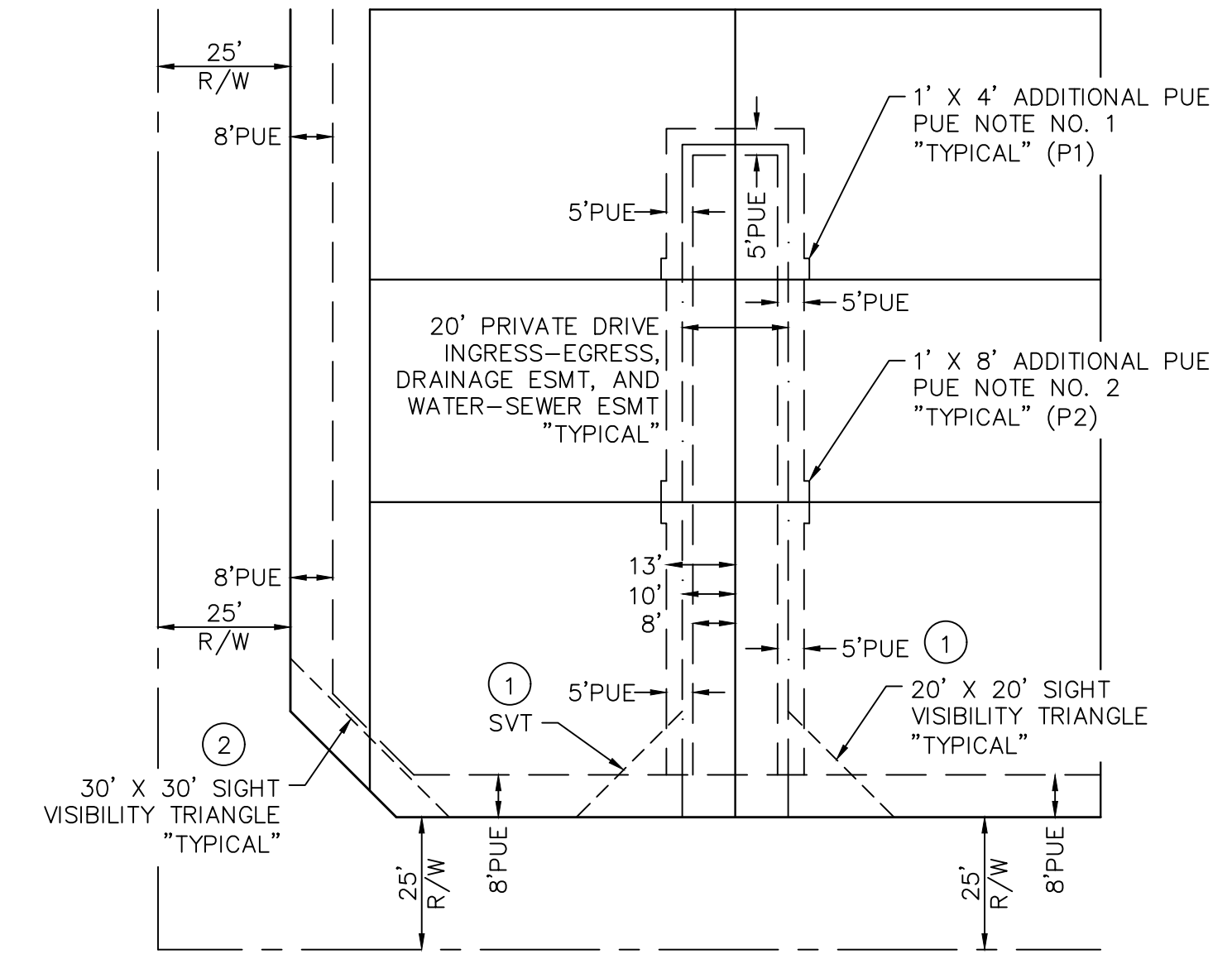
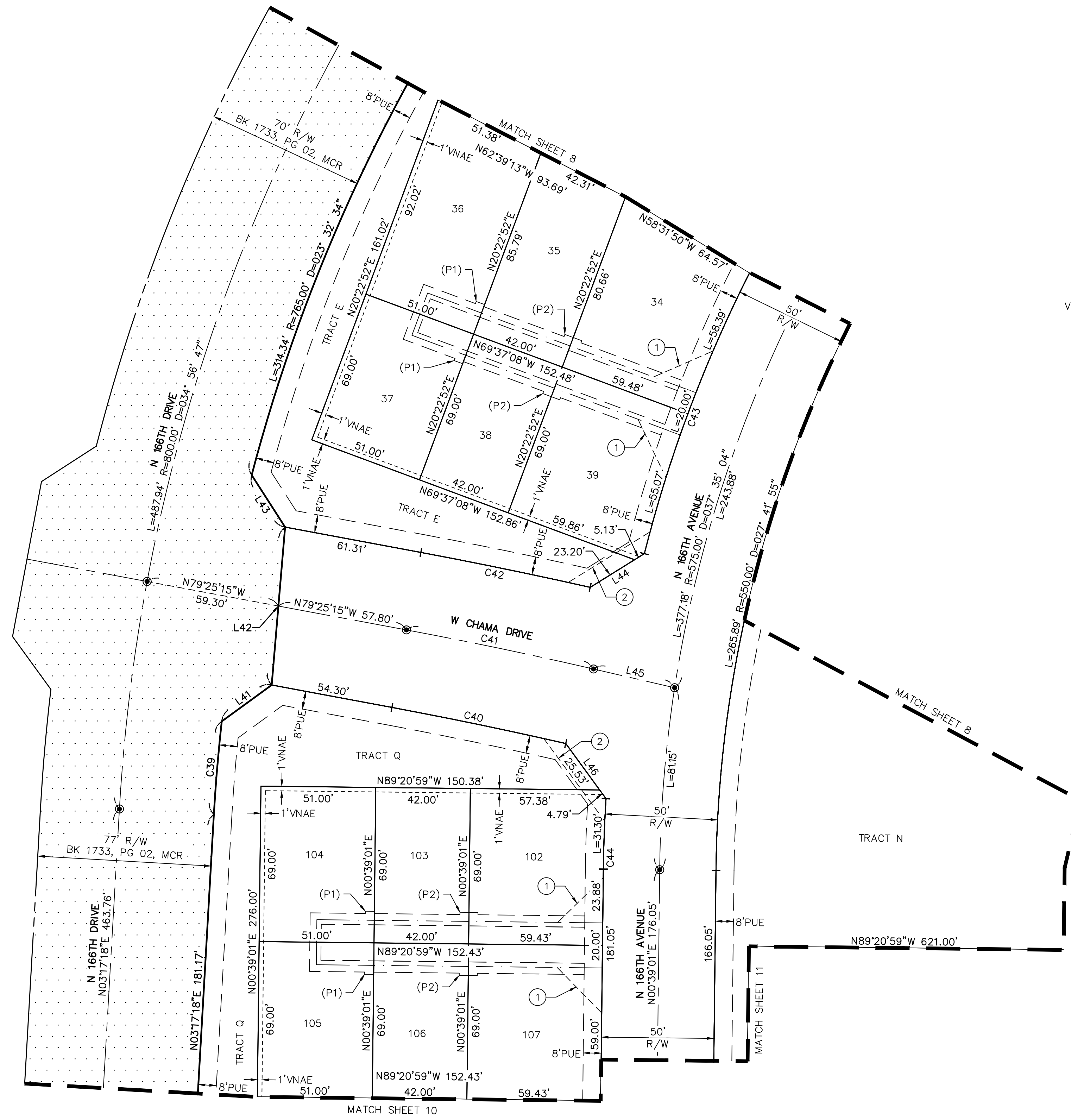
22003507 ASANTE 4.4-4.7 FP.DWG

SHEET NO. 8 OF 12

CASE NO. FS23-0831



SITE KEY MAP



LOT TABLE		
LOT	AREA SQ FT	AREA ACRES
34	4541	0.104
35	3496	0.080
36	4534	0.104
37	3519	0.081
38	2898	0.067
39	4188	0.096
102	4107	0.094
103	2898	0.067
104	3519	0.081
105	3519	0.081
106	2898	0.067
107	4101	0.094

LINE TABLE		
LINE #	DIRECTION	LENGTH
L41	N53°52'41"E	27.43'
L42	N04°51'45"E	70.35'
L43	N32°44'07"W	27.44'
L44	N58°07'02"E	28.33'
L45	N76°59'25"W	36.97'
L46	N36°07'07"W	30.32'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C39	41.44'	758.00'	003°07'57"
C40	78.82'	1965.00'	002°17'53"
C41	84.84'	2000.00'	002°25'50"
C42	76.76'	2035.00'	002°09'40"
C43	252.03'	600.00'	024°04'01"
C44	31.30'	600.00'	002°59'19"



COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

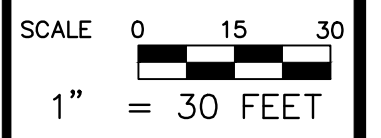
**FINAL PLAT**  
**ASANTE UNITS 4.4-4.7**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:

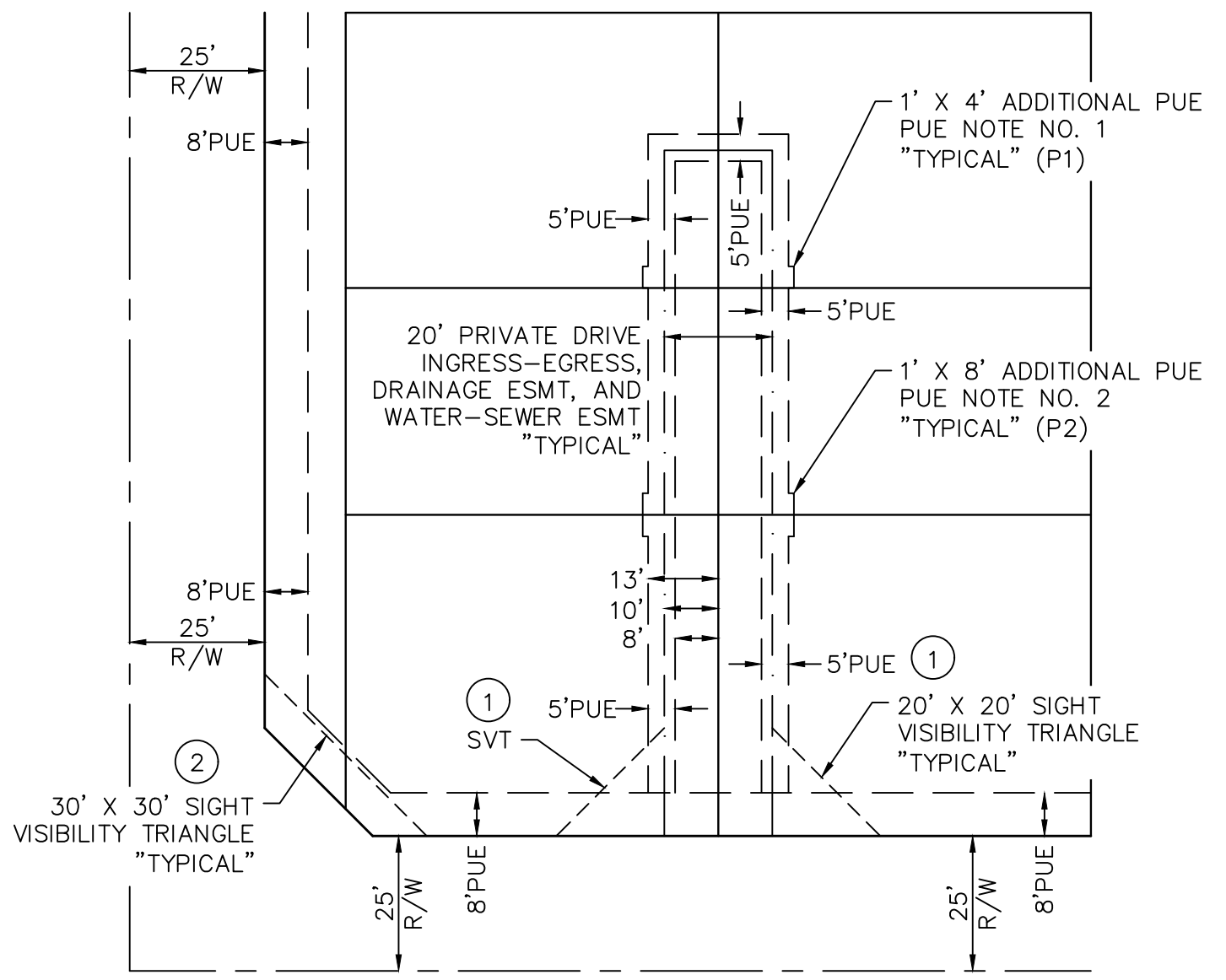
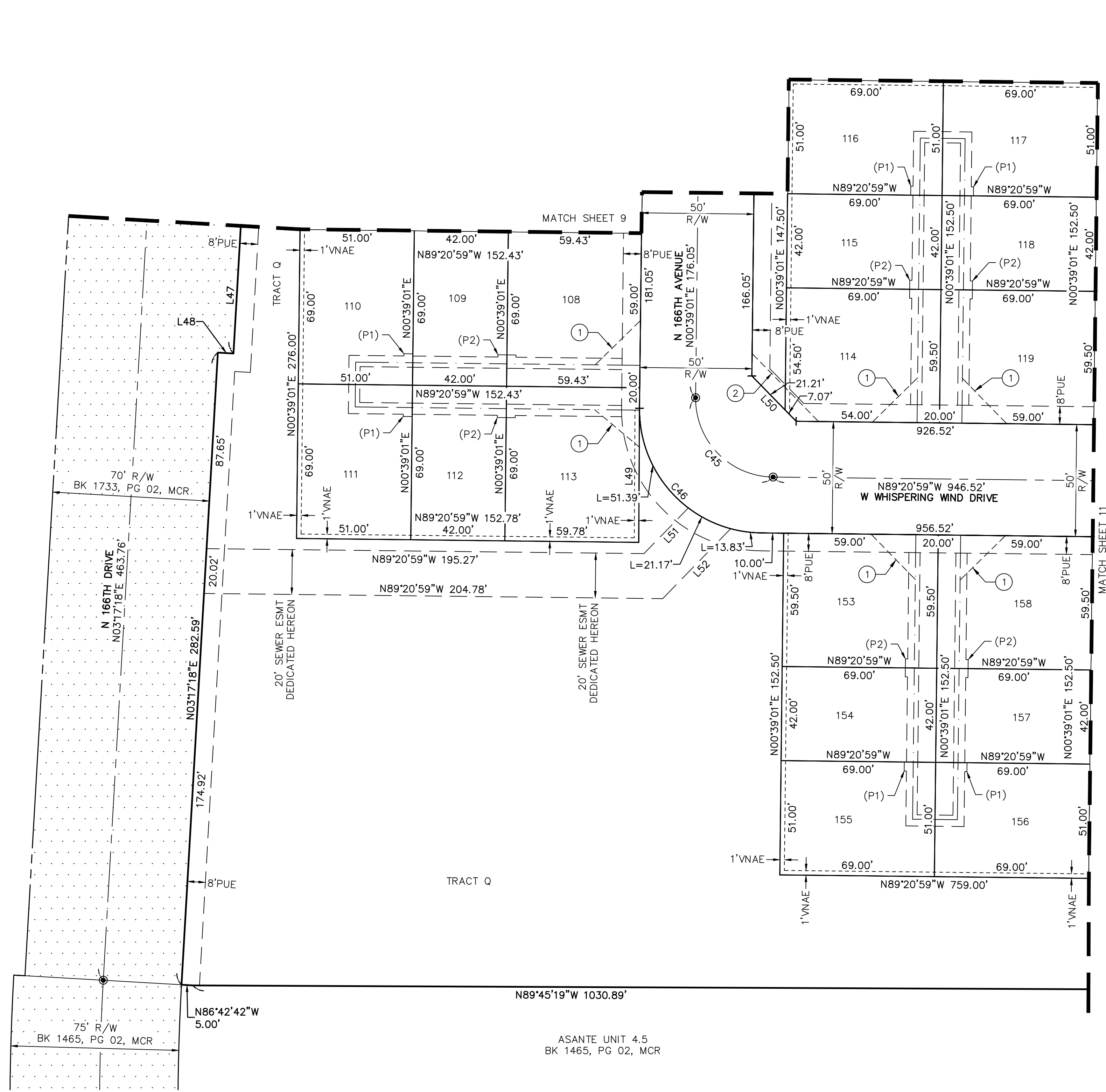


PM. J. SPRING  
DR. R. GILES  
JOB NO. 22003507



22003507 ASANTE 4.4-4.7 FP.DWG

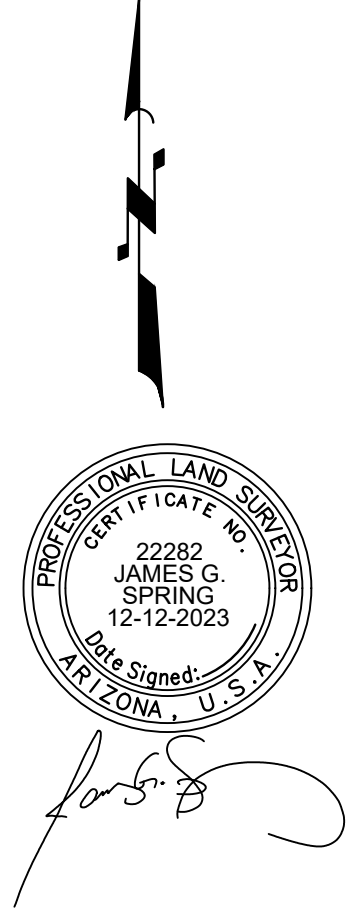
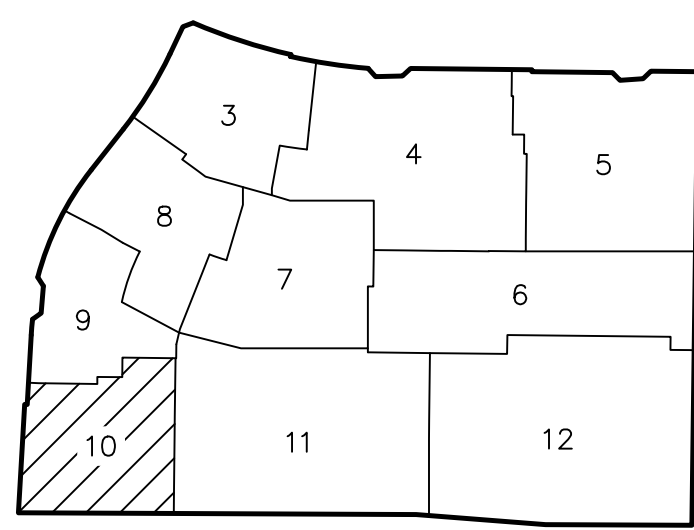
SHEET NO. **9 OF 12**



LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
108	4101	0.094	117	3519	0.081
109	2898	0.067	118	2898	0.067
110	3519	0.081	119	4105	0.094
111	3519	0.081	153	4105	0.094
112	2898	0.067	154	2898	0.067
113	4111	0.094	155	3519	0.081
114	4093	0.094	156	3519	0.081
115	2898	0.067	157	2898	0.067
116	3519	0.081	158	4105	0.094

LINE TABLE		
LINE #	DIRECTION	LENGTH
L47	N03°17'18"E	181.17'
L48	S86°42'42"E	7.00'
L49	N00°19'20"E	59.00'
L50	N44°20'59"W	28.28'
L51	S44°11'48"W	28.41'
L52	S44°11'48"W	43.54'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C45	54.98'	35.00'	090°00'00"
C46	86.39'	55.00'	090°00'00"

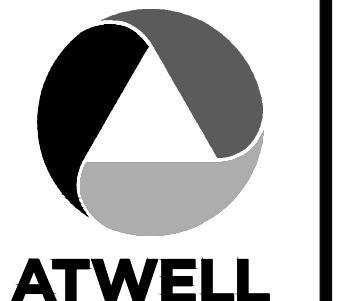


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNITS 4.4-4.7**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



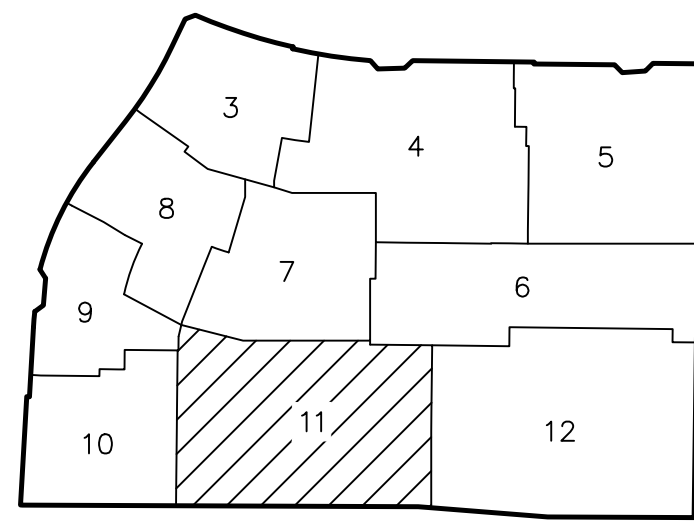
PM. J. SPRING  
DR. R. GILES  
JOB NO.  
22003507

SCALE 0 15 30  
1" = 30 FEET

22003507 ASANTE 4.4-4.7 FP.DWG

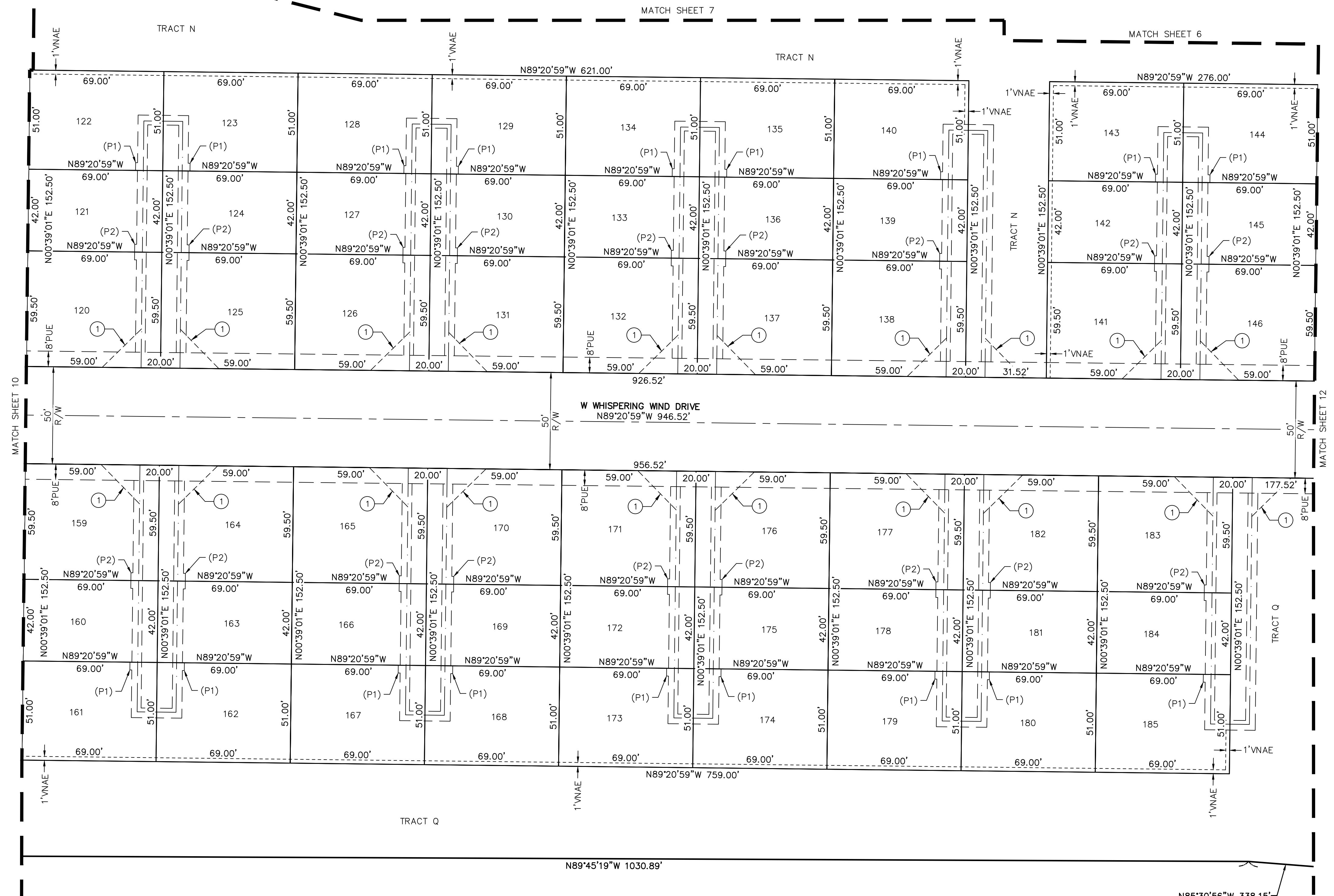
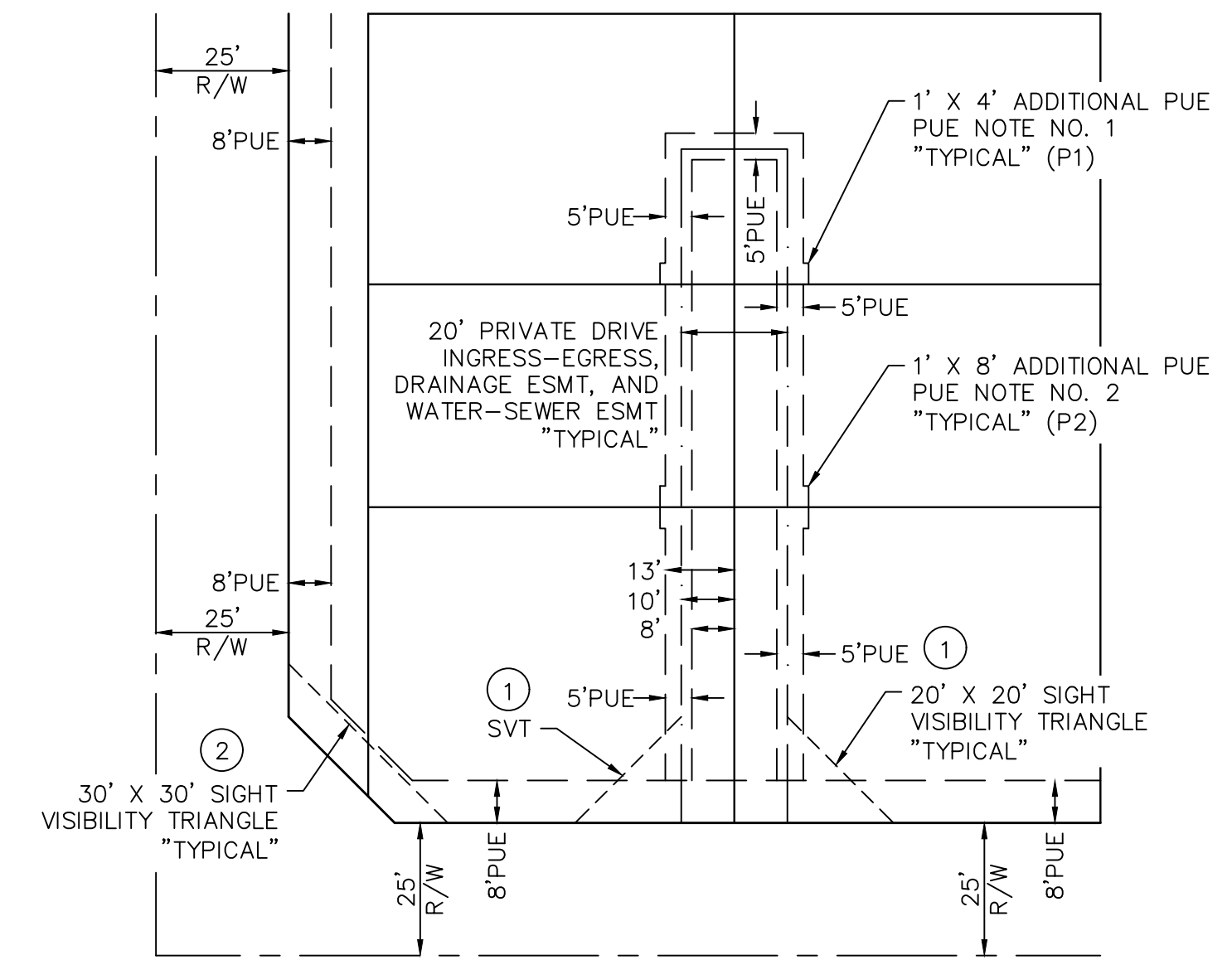
SHEET NO.  
**10 OF 12**

CASE NO. FS23-0831



SITE KEY MAP

LOT TABLE			LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
120	4106	0.094	138	4105	0.094	168	3519	0.081
121	2898	0.067	139	2898	0.067	169	2898	0.067
122	3519	0.081	140	3519	0.081	170	4105	0.094
123	3519	0.081	141	4105	0.094	171	4106	0.094
124	2898	0.067	142	2898	0.067	172	2898	0.067
125	4105	0.094	143	3519	0.081	173	3519	0.081
126	4105	0.094	144	3519	0.081	174	3519	0.081
127	2898	0.067	145	2898	0.067	175	2898	0.067
128	3519	0.081	146	4105	0.094	176	4106	0.094
129	3519	0.081	147	4105	0.094	177	4106	0.094
130	2898	0.067	148	2898	0.067	178	2898	0.067
131	4105	0.094	149	3519	0.081	179	3519	0.081
132	4105	0.094	150	3519	0.081	180	3519	0.081
133	2898	0.067	151	2898	0.067	181	2898	0.067
134	3519	0.081	152	4105	0.094	182	4106	0.094
135	3519	0.081	153	4105	0.094	183	4106	0.094
136	2898	0.067	154	2898	0.067	184	2898	0.067
137	4105	0.094	155	3519	0.081	185	3519	0.081



ASANTE UNIT 4.5  
BK 1465, PG 02, MCR

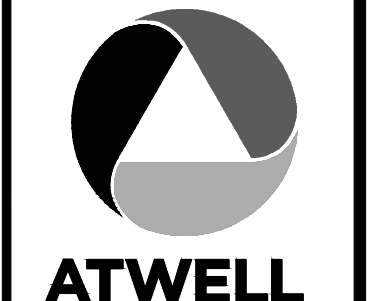


COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

FINAL PLAT  
ASANTE UNITS 4.4-4.7  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:



PM. J. SPRING  
DR. R. GILES  
JOB NO.  
22003507

SCALE 0 15 30  
1" = 30 FEET

22003507 ASANTE 4.4-4.7.FP.DWG

SHEET NO.  
11 OF 12

CASE NO. FS23-0831



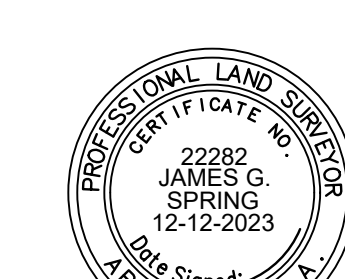
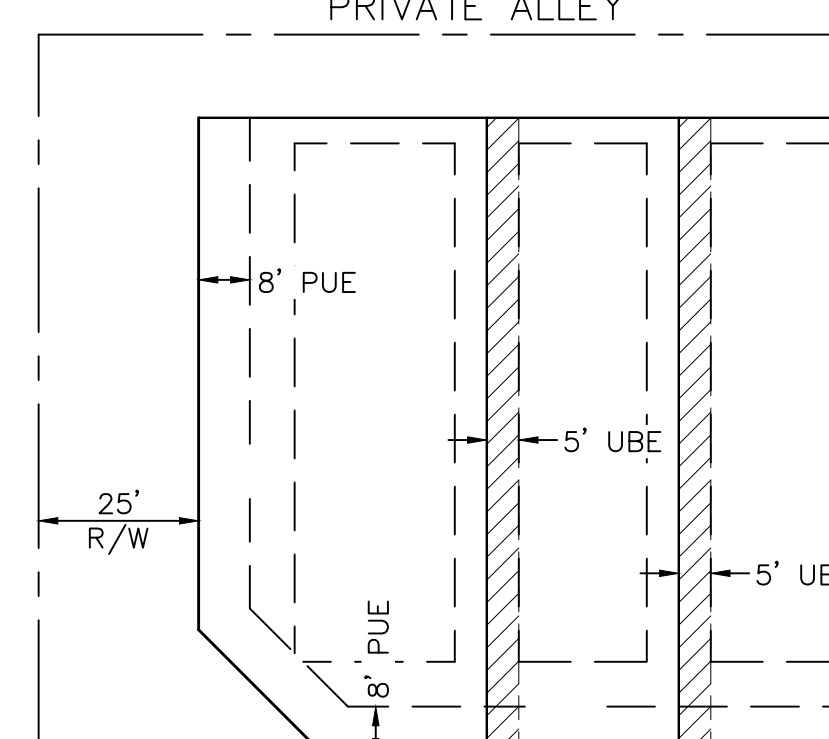
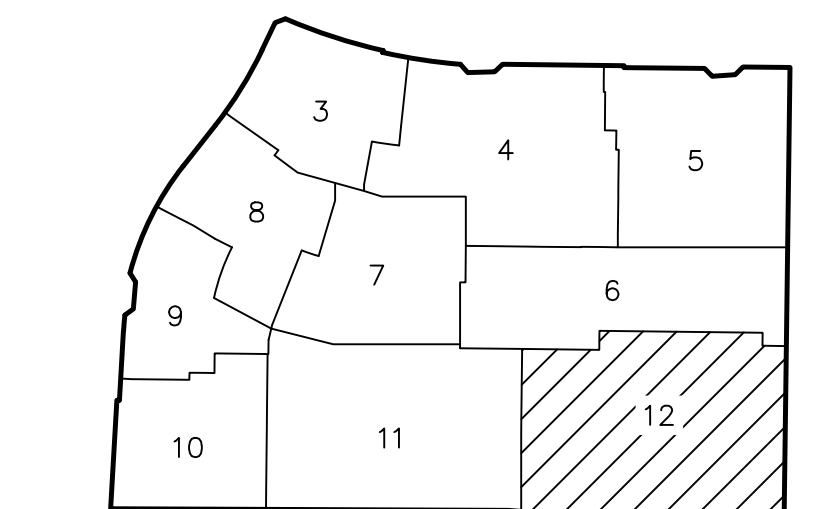
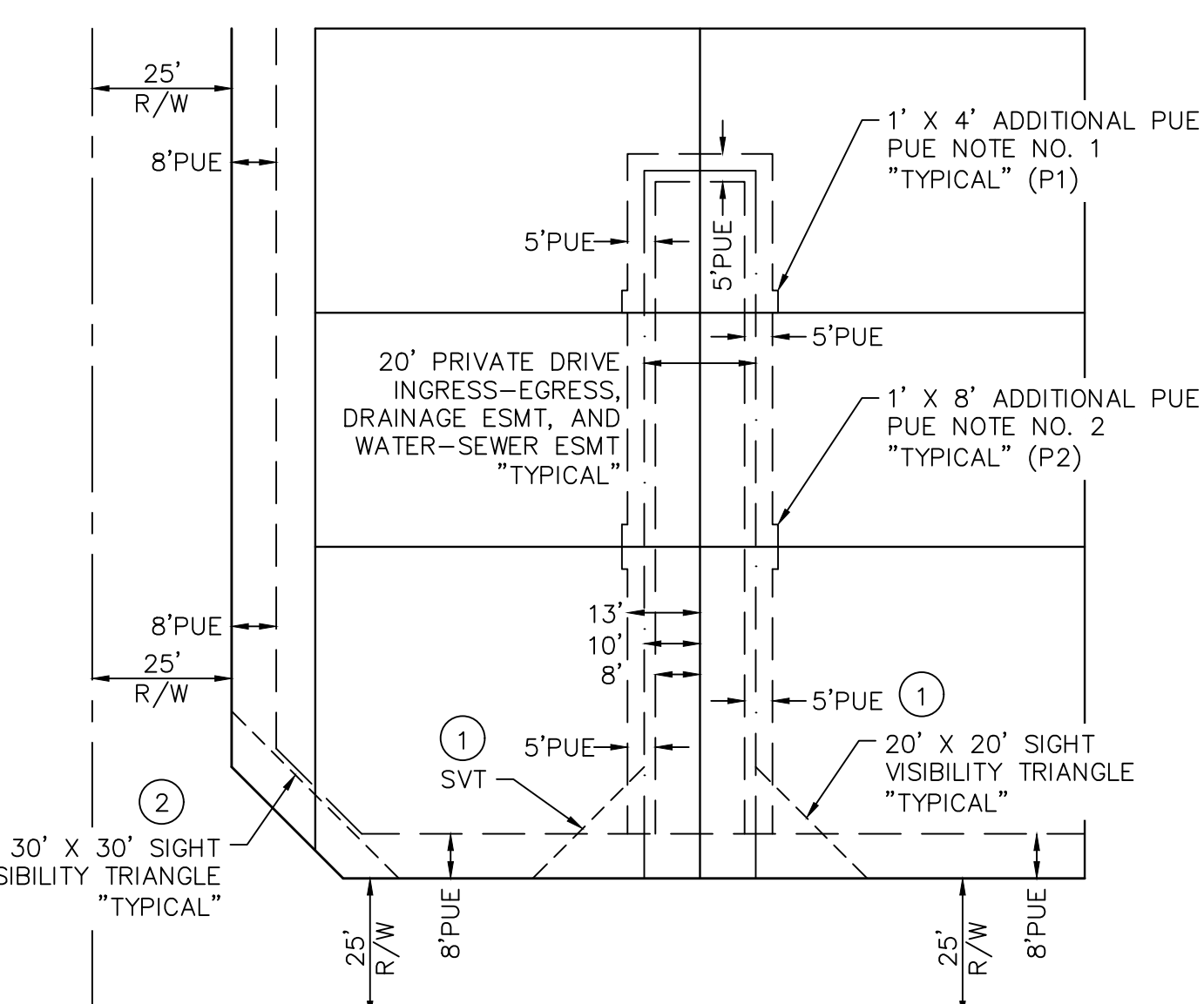
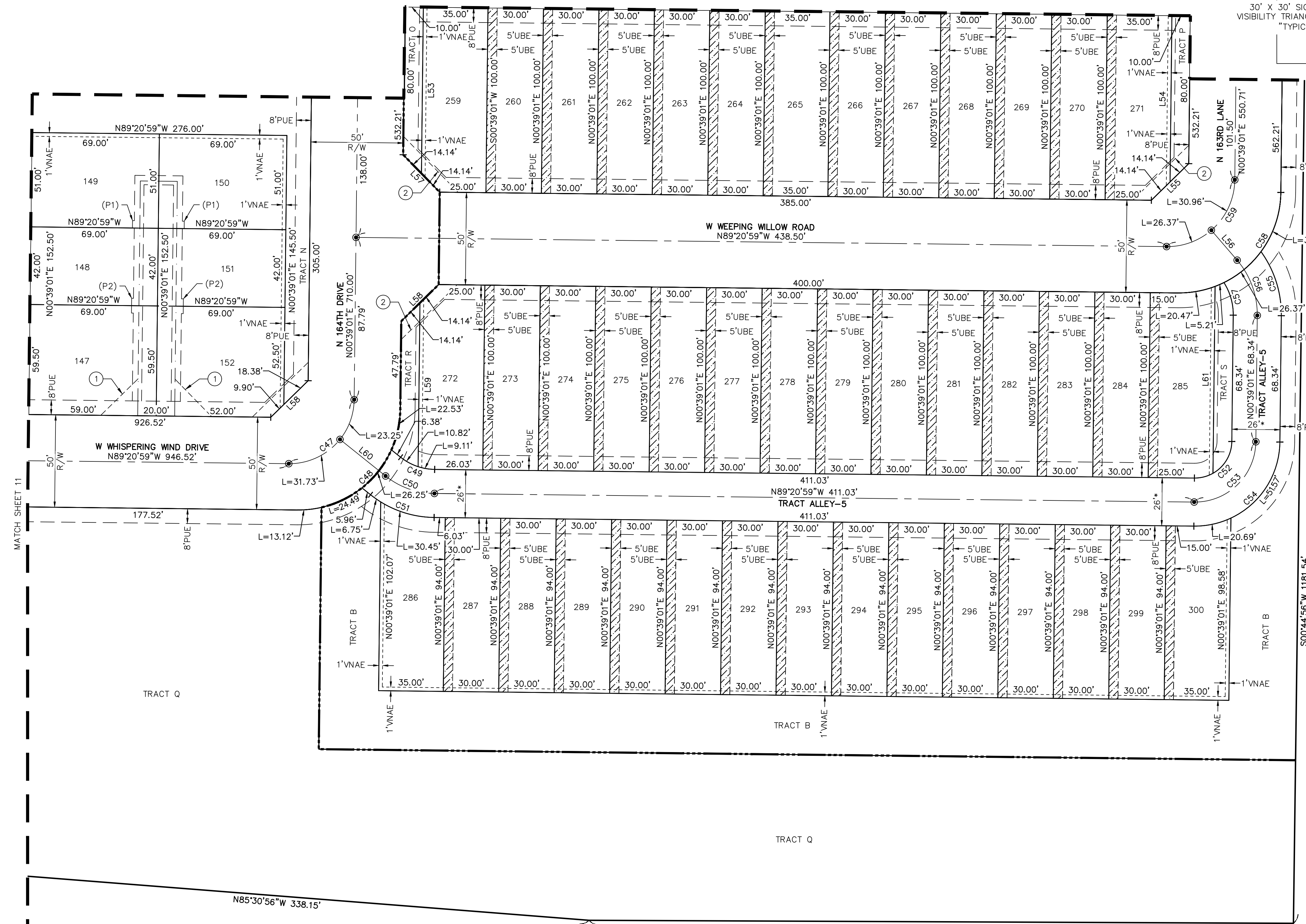
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K:\22003507\DWG\SURVEY\FINAL PLAT\4.7.22003507 ASANTE 4.4-4.7 FP.DWG. SAVE DATE: 12/8/2023 10:24 AM. PLOTTED DATE: 12/12/2023 1:50 PM

LOT TABLE			LOT TABLE			LOT TABLE			LOT TABLE		
LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES	LOT	AREA SQ FT	AREA ACRES
147	4105	0.094	265	3500	0.080	277	3000	0.069	289	2820	0.065
148	2898	0.067	266	3000	0.069	278	3000	0.069	290	2820	0.065
149	3519	0.081	267	3000	0.069	279	3000	0.069	291	2820	0.065
150	3519	0.081	268	3000	0.069	280	3000	0.069	292	2820	0.065
151	2898	0.067	269	3000	0.069	281	3000	0.069	293	2820	0.065
152	4081	0.094	270	3000	0.069	282	3000	0.069	294	2820	0.065
259	3450	0.079	271	3450	0.079	283	3000	0.069	295	2820	0.065
260	3000	0.069	272	3446	0.079	284	3000	0.069	296	2820	0.065
261	3000	0.069	273	3000	0.069	285	3516	0.081	297	2820	0.065
262	3000	0.069	274	3000	0.069	286	3366	0.077	298	2820	0.065
263	3000	0.069	275	3000	0.069	287	2820	0.065	299	2820	0.065
264	3000	0.069	276	3000	0.069	288	2820	0.065	300	3320	0.076

LINE TABLE		
LINE #	DIRECTION	LENGTH
L53	S00°39'01"W	90.00'
L54	N00°39'01"E	90.00'
L55	N45°39'01"E	28.28'
L56	S40°44'34"E	21.36'
L57	N44°20'59"W	28.28'
L58	N45°39'01"E	28.28'
L59	N00°39'01"E	88.63'
L60	N51°17'31"W	31.62'
L61	N00°39'01"E	101.09'

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C47	54.98'	35.00'	090°00'00"
C48	86.39'	55.00'	090°00'00"
C49	19.93'	30.00'	038°03'28"
C50	28.56'	43.00'	038°03'28"
C51	37.20'	56.00'	038°03'28"
C52	31.42'	20.00'	090°00'00"
C53	51.84'	33.00'	090°00'00"
C54	72.26'	46.00'	090°00'00"
C55	36.96'	58.00'	036°30'23"
C56	32.51'	45.00'	041°23'36"
C57	18.58'	32.00'	033°15'30"
C58	86.39'	55.00'	090°00'00"
C59	57.33'	36.50'	090°00'00"



COUNTY: MARICOPA  
SECTION: 12  
TOWNSHIP: 4 NORTH  
RANGE: 2 WEST

**FINAL PLAT**  
**ASANTE UNITS 4.4-4.7**  
CITY OF SURPRISE, ARIZONA

DECEMBER 2023

REVISIONS:

PM. J. SPRING  
DR. R. GILES  
JOB NO. 22003507  
SCALE 0 15 30  
1" = 30 FEET  
22003507 ASANTE 4.4-4.7 FP.DWG  
SHEET NO. 12 OF 12

CASE NO. FS23-0831

## Leslie Carnie

---

**From:** RAHN, JENNIFER L CIV USAF AETC 56 FW/CVE <jennifer.rahm@us.af.mil>  
**Sent:** Monday, September 18, 2023 3:13 PM  
**To:** Nichole Flores  
**Cc:** 56 FW/CIT Community Initiative  
**Subject:** RE: FS23-0831 Asante JV Unit 4.4 & 4.7 Final Plat - New Digital Submittal 09.12.23

**\*\*\*The e-mail below is from an external source. Please do not open attachments or click links from an unknown or suspicious origin.\*\*\***

Good afternoon Ms. Flores,

Thank you for the opportunity to provide comments on the final site application for the Asante JV Unit 4.4 & 4.7 Final Plat. A concept review for this parcel was not previously received. Per the site plan provided, the proposed development is located on approximately 44.92 acres and is generally located west of 163<sup>rd</sup> Avenue and south of Happy Valley Road in Surprise, AZ. The application requests 300 residential single-family lots. The site is 3.38 miles outside the Luke AFB Aux-1 2004 65 Ldn, "high noise or accident potential zone" as identified by A.R.S. § 28-8461 and is within the "territory in the vicinity of a military airport" also defined by A.R.S. § 28-8461.

In an effort to promote a more compatible co-existence, Luke AFB follows the guidelines in the Graduated Density Concept (GDC). The GDC proposes, in the absence of a more restrictive state, county or municipal general or comprehensive plan, graduating densities away from the 65 Ldn as follows: a maximum of 2 du/ac from the 65 Ldn to 1/2 mile, a maximum of 4 du/ac from 1/2 to 1 mile, and a maximum of 6 du/ac from 1 to 3 miles. The proposal for the property as stated in the narrative, consisting of 6.68 du/ac on the property meets the GDC due to being outside of the 3-mile boundary.

As described in the application, this project will not negatively impact the flying operations at Luke AFB. Since the site will be located within the "territory in the vicinity of a military airport," it will be subjected to approximately 170 over flights per day. We also recommend a strong notification program on the part of the applicant to inform any potential occupant(s) about Luke AFB operations.

Respectfully,

*Jenn Rahn*

Senior Planner, Community Initiatives Team  
56th Fighter Wing  
Luke AFB AZ 85309  
Office: 623-856-9981  
DSN: 896-9981

---

**From:** Nichole Flores <Nichole.Flores@surpriseaz.gov>  
**Sent:** Tuesday, September 12, 2023 10:44 AM  
**To:** 56 FW/CIT Community Initiative <56FW.CIT.CommunityInitiative@us.af.mil>; Afshin Ahouraiyan (Flood Control District of Maricopa County) <Afshin.Ahouraiyan@Maricopa.Gov>; Alex Garza (Maricopa Assoc of Governments) <AGarza@azmag.gov>; Aspasia Angelou (Nadaburg School District) <aangelou@nadaburgsd.org>; Barbara J Remondini, Ph.D. (Wickenburg School District) <bremondini@wusd9.org>; Bryce Christo (bchristo@cityofelmirage.org) <bchristo@cityofelmirage.org>; Chris Cain (Maricopa Water District) <chrisc@mwdaz.com>; Darren V Gerard (Maricopa



County Planning) <Darren.Gerard@maricopa.gov>; Debbie Trasancos (Maricopa Water District) <debbiet@mwdaz.com>; Douglas Kirkland (Epcor) <dkirkland@epcor.com>; Ernest (USPS) <Ernest.L.James@usps.gov>; Eva Pierce <eva.pierce@dysart.org>; Gregory McDowell (MCDOT) <Gregory.McDowell@maricopa.gov>; Ibeth - USPS <lbeth.L.Roman@usps.gov>; RAHN, JENNIFER L CIV USAF AETC 56 FW/CVE <jennifer.rahn@us.af.mil>; Jerome Choy (ADOT) <jchoy@azdot.gov>; John Willett (City of Buckeye) <jwillett@buckeyeaz.gov>; Jorge Gastelum (City of El Mirage) <jgastelum@cityofelmirage.org>; Judy Lopez - Beardsley Water Company <managefnm365@aol.com>; Kevin Shipman <kevin.shipman@dysart.org>; Leslie - MWD <lesliej@mwdaz.com>; Mark Frago <fragom@mail.maricopa.gov>; Mary Orta - Surprise Chamber <mary.orta@surpriseregionalchamber.com>; MCDOT (MCDOTPlanning@maricopa.gov) <MCDOTPlanning@maricopa.gov>; Raoul Sada - Surprise Chamber <raoul@surpriseregionalchamber.com>; Rovell Foggy (Liberty Utilities) <Rovell.Foggy@libertyutilities.com>; Shelby Rios (MWD) <shelbyr@mwdaz.com>; Victor.Schaum <Victor.Schaum@cox.com>; Yvonne Aguirre <yvonne.aguirre@swgas.com>

**Cc:** Tierney Farago <Tierney.Farago@surpriseaz.gov>

**Subject:** [Non-DoD Source] FS23-0831 Asante JV Unit 4.4 & 4.7 Final Plat - New Digital Submittal 09.12.23

Good morning,

Attached please find the **application**, **narrative**, and **final plat** for the above referenced project.

Please feel free to contact us with any questions.

Best regards,

*Nichole Flores*

Planning Project Coordinator  
City of Surprise | Community Development  
16000 N Civic Center Plz | Surprise AZ 85374  
(623) 222-3244 Direct

***\*Effective 6/26/23, we are now using Camino (<https://app.oncamino.com/surprise-az/login>) for ALL submittals.***

***\*Please note effective August 3, 2022, we will be adding a 2-business day out-processing for ALL notices***

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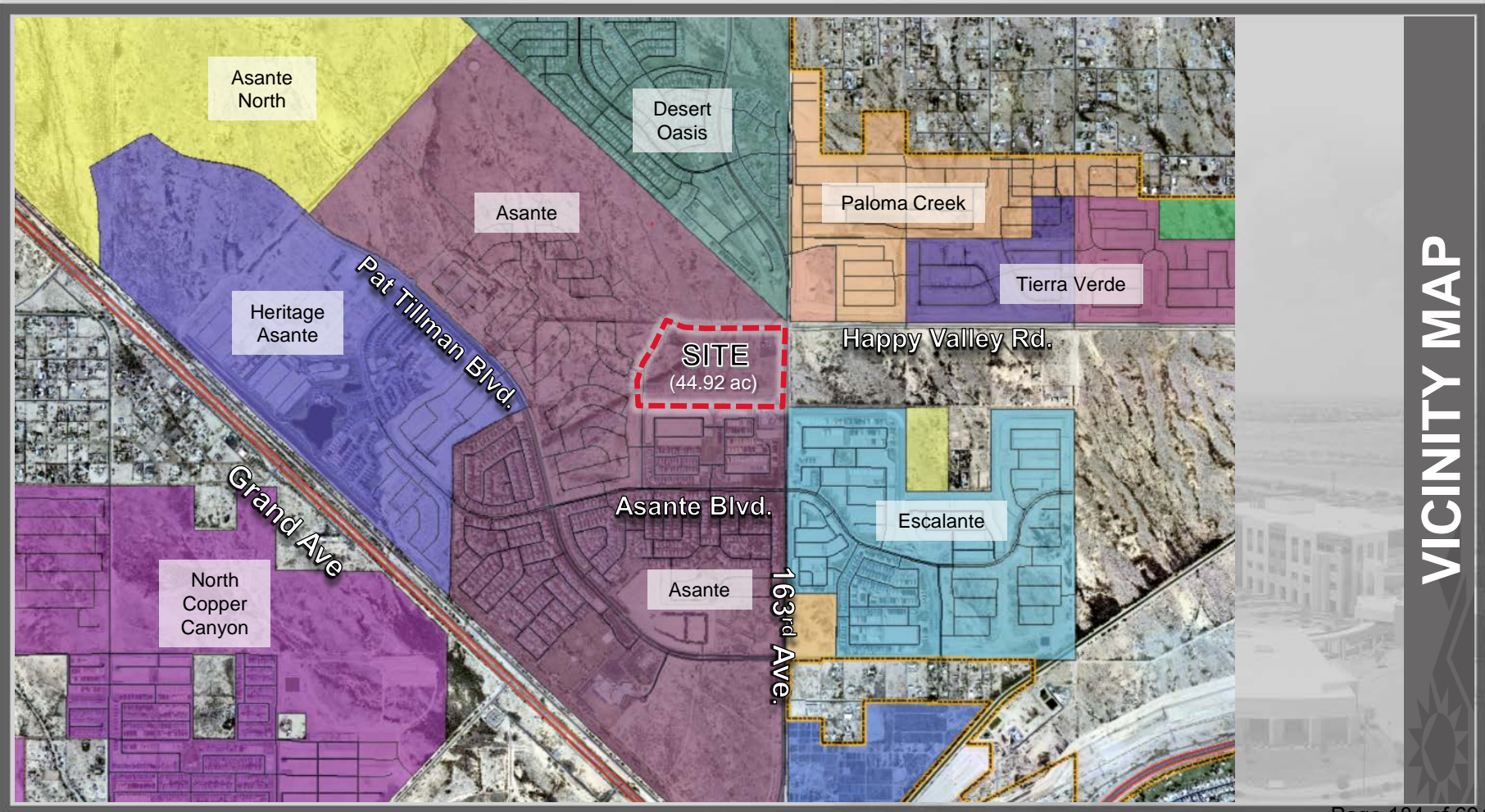
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**SURPRISE**  
ARIZONA

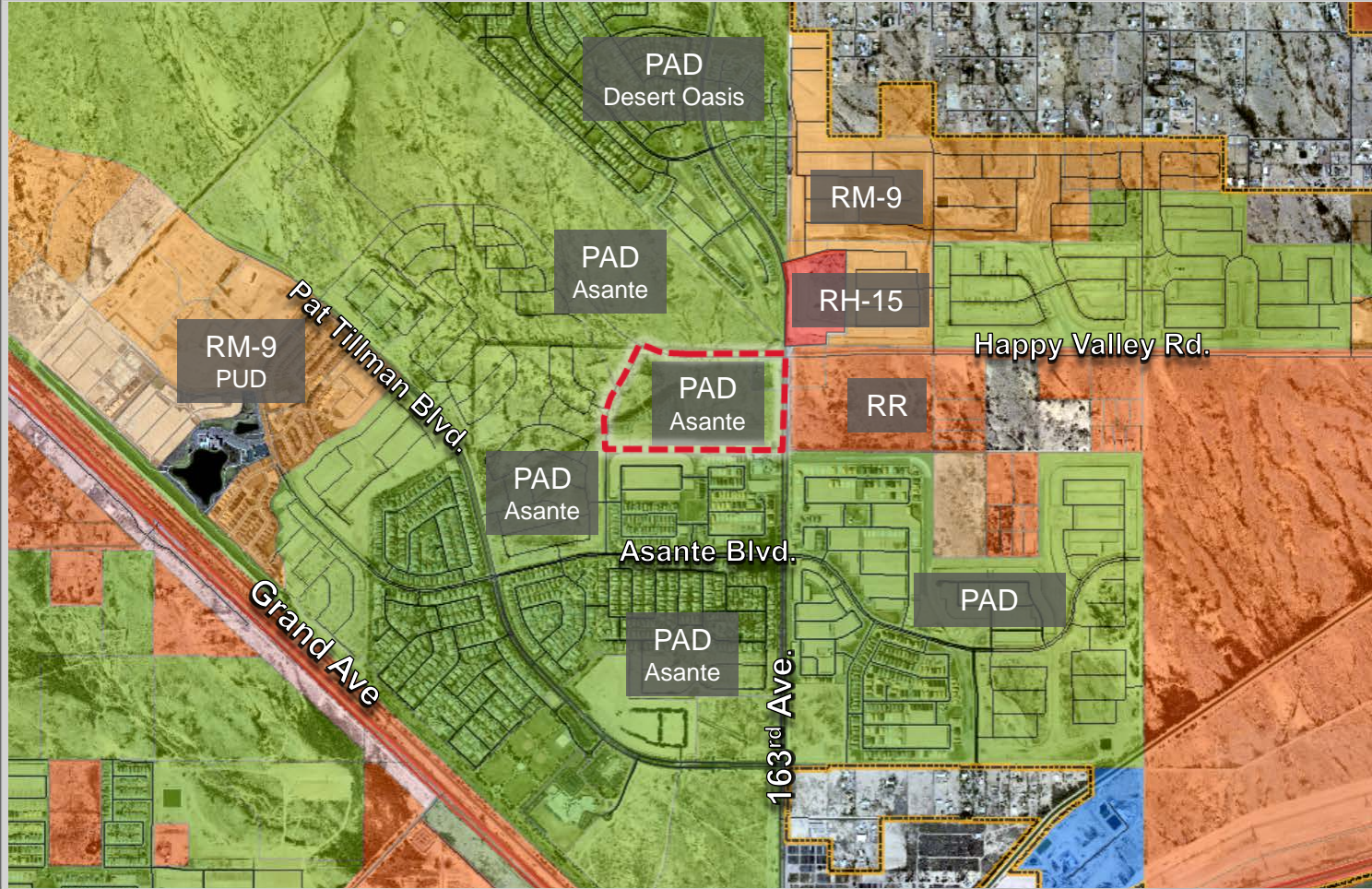
**FS23-0831**  
**Asante Units 4.4 & 4.7**  
**Final Plat**

City Council  
February 20, 2024



# VICINITY MAP





# ZONING MAP

























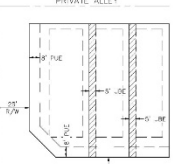
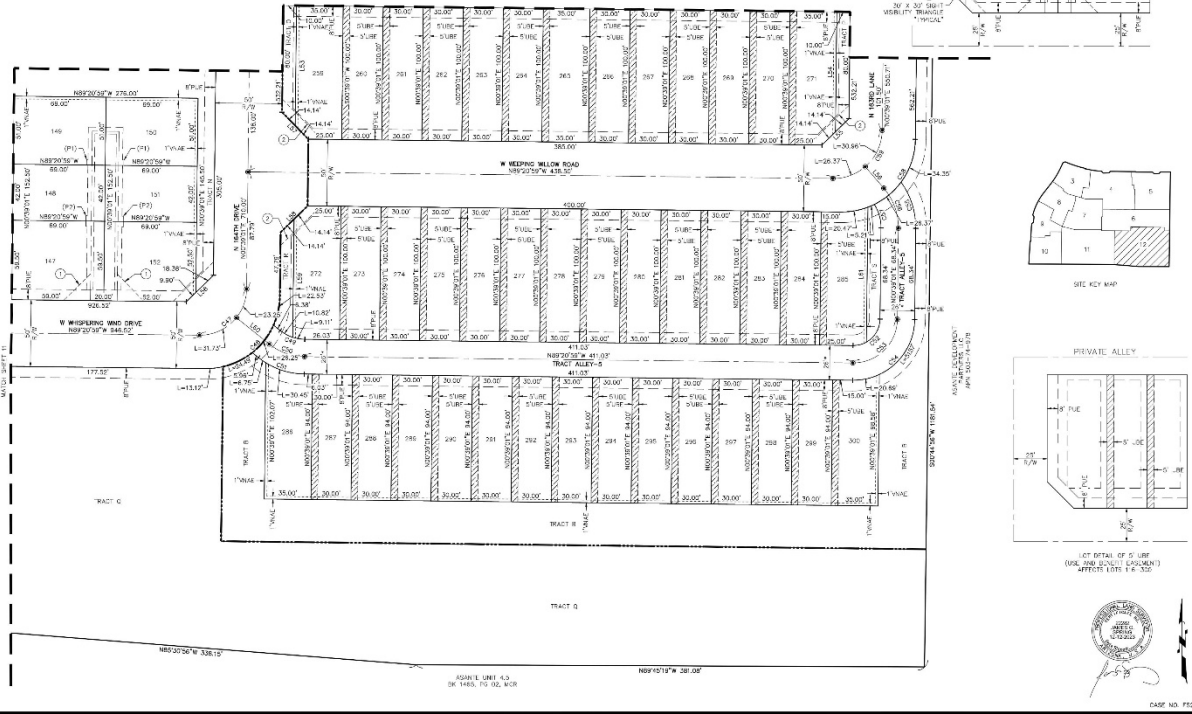
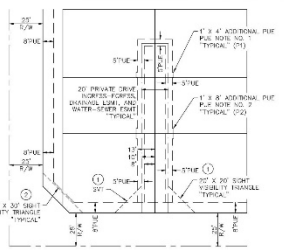




LOT TABLE				LOT TABLE				LOT TABLE				LOT TABLE			
LOT	AREA SQ FT	AREA ACRES	LOT AREA ACRES	LOT	AREA SQ FT	AREA ACRES	LOT AREA ACRES	LOT	AREA SQ FT	AREA ACRES	LOT AREA ACRES	LOT	AREA SQ FT	AREA ACRES	LOT AREA ACRES
142	1120	0.026	0.026	150	1000	0.023	0.023	158	2800	0.065	0.065	166	1120	0.026	0.026
143	2849	0.067	0.067	151	1000	0.023	0.023	159	2800	0.065	0.065	167	1120	0.026	0.026
144	3510	0.081	0.081	152	1000	0.023	0.023	160	2800	0.065	0.065	168	1120	0.026	0.026
145	3510	0.081	0.081	153	1000	0.023	0.023	161	2800	0.065	0.065	169	1120	0.026	0.026
146	3510	0.081	0.081	154	1000	0.023	0.023	162	2800	0.065	0.065	170	1120	0.026	0.026
147	3510	0.081	0.081	155	1000	0.023	0.023	163	2800	0.065	0.065	171	1120	0.026	0.026
148	3510	0.081	0.081	156	1000	0.023	0.023	164	2800	0.065	0.065	172	1120	0.026	0.026
149	3510	0.081	0.081	157	1000	0.023	0.023	165	2800	0.065	0.065	173	1120	0.026	0.026
150	3510	0.081	0.081	158	1000	0.023	0.023	166	2800	0.065	0.065	174	1120	0.026	0.026
151	3510	0.081	0.081	159	1000	0.023	0.023	167	2800	0.065	0.065	175	1120	0.026	0.026
152	3510	0.081	0.081	160	1000	0.023	0.023	168	2800	0.065	0.065	176	1120	0.026	0.026
153	3510	0.081	0.081	161	1000	0.023	0.023	169	2800	0.065	0.065	177	1120	0.026	0.026
154	3510	0.081	0.081	162	1000	0.023	0.023	170	2800	0.065	0.065	178	1120	0.026	0.026
155	3510	0.081	0.081	163	1000	0.023	0.023	171	2800	0.065	0.065	179	1120	0.026	0.026
156	3510	0.081	0.081	164	1000	0.023	0.023	172	2800	0.065	0.065	180	1120	0.026	0.026
157	3510	0.081	0.081	165	1000	0.023	0.023	173	2800	0.065	0.065	181	1120	0.026	0.026
158	3510	0.081	0.081	166	1000	0.023	0.023	174	2800	0.065	0.065	182	1120	0.026	0.026
159	3510	0.081	0.081	167	1000	0.023	0.023	175	2800	0.065	0.065	183	1120	0.026	0.026
160	3510	0.081	0.081	168	1000	0.023	0.023	176	2800	0.065	0.065	184	1120	0.026	0.026
161	3510	0.081	0.081	169	1000	0.023	0.023	177	2800	0.065	0.065	185	1120	0.026	0.026
162	3510	0.081	0.081	170	1000	0.023	0.023	178	2800	0.065	0.065	186	1120	0.026	0.026
163	3510	0.081	0.081	171	1000	0.023	0.023	179	2800	0.065	0.065	187	1120	0.026	0.026
164	3510	0.081	0.081	172	1000	0.023	0.023	180	2800	0.065	0.065	188	1120	0.026	0.026

LINE TABLE	
LINE #	LENGTH (FEET)
L101	1000.00
L102	1000.00
L103	1000.00
L104	1000.00
L105	1000.00
L106	1000.00
L107	1000.00
L108	1000.00
L109	1000.00
L110	1000.00
L111	1000.00

CURVE TABLE			
CURVE #	LENGTH (FEET)	BECA	DETA
C01	50.00	30.00	0.00000000
C02	60.00	30.00	0.00000000
C03	70.00	30.00	0.00000000
C04	80.00	30.00	0.00000000
C05	90.00	30.00	0.00000000
C06	100.00	30.00	0.00000000
C07	110.00	30.00	0.00000000
C08	120.00	30.00	0.00000000
C09	130.00	30.00	0.00000000
C10	140.00	30.00	0.00000000
C11	150.00	30.00	0.00000000
C12	160.00	30.00	0.00000000
C13	170.00	30.00	0.00000000
C14	180.00	30.00	0.00000000
C15	190.00	30.00	0.00000000
C16	200.00	30.00	0.00000000
C17	210.00	30.00	0.00000000
C18	220.00	30.00	0.00000000
C19	230.00	30.00	0.00000000
C20	240.00	30.00	0.00000000
C21	250.00	30.00	0.00000000
C22	260.00	30.00	0.00000000
C23	270.00	30.00	0.00000000
C24	280.00	30.00	0.00000000
C25	290.00	30.00	0.00000000
C26	300.00	30.00	0.00000000
C27	310.00	30.00	0.00000000
C28	320.00	30.00	0.00000000
C29	330.00	30.00	0.00000000
C30	340.00	30.00	0.00000000
C31	350.00	30.00	0.00000000
C32	360.00	30.00	0.00000000
C33	370.00	30.00	0.00000000
C34	380.00	30.00	0.00000000
C35	390.00	30.00	0.00000000
C36	400.00	30.00	0.00000000
C37	410.00	30.00	0.00000000
C38	420.00	30.00	0.00000000
C39	430.00	30.00	0.00000000
C40	440.00	30.00	0.00000000
C41	450.00	30.00	0.00000000
C42	460.00	30.00	0.00000000
C43	470.00	30.00	0.00000000
C44	480.00	30.00	0.00000000
C45	490.00	30.00	0.00000000
C46	500.00	30.00	0.00000000
C47	510.00	30.00	0.00000000
C48	520.00	30.00	0.00000000
C49	530.00	30.00	0.00000000
C50	540.00	30.00	0.00000000
C51	550.00	30.00	0.00000000
C52	560.00	30.00	0.00000000
C53	570.00	30.00	0.00000000
C54	580.00	30.00	0.00000000
C55	590.00	30.00	0.00000000
C56	600.00	30.00	0.00000000
C57	610.00	30.00	0.00000000
C58	620.00	30.00	0.00000000
C59	630.00	30.00	0.00000000
C60	640.00	30.00	0.00000000
C61	650.00	30.00	0.00000000
C62	660.00	30.00	0.00000000
C63	670.00	30.00	0.00000000
C64	680.00	30.00	0.00000000
C65	690.00	30.00	0.00000000
C66	700.00	30.00	0.00000000
C67	710.00	30.00	0.00000000
C68	720.00	30.00	0.00000000
C69	730.00	30.00	0.00000000
C70	740.00	30.00	0.00000000
C71	750.00	30.00	0.00000000
C72	760.00	30.00	0.00000000
C73	770.00	30.00	0.00000000
C74	780.00	30.00	0.00000000
C75	790.00	30.00	0.00000000
C76	800.00	30.00	0.00000000
C77	810.00	30.00	0.00000000
C78	820.00	30.00	0.00000000
C79	830.00	30.00	0.00000000
C80	840.00	30.00	0.00000000
C81	850.00	30.00	0.00000000
C82	860.00	30.00	0.00000000
C83	870.00	30.00	0.00000000
C84	880.00	30.00	0.00000000
C85	890.00	30.00	0.00000000
C86	900.00	30.00	0.00000000
C87	910.00	30.00	0.00000000
C88	920.00	30.00	0.00000000
C89	930.00	30.00	0.00000000
C90	940.00	30.00	0.00000000
C91	950.00	30.00	0.00000000
C92	960.00	30.00	0.00000000
C93	970.00	30.00	0.00000000
C94	980.00	30.00	0.00000000
C95	990.00	30.00	0.00000000
C96	1000.00	30.00	0.00000000



COUNTY/MARICOPA  
SECTION 12  
TOWNSHIP 4 NORTH  
RANGE 1 WEST

FINAL PLAT  
ASANTE UNITS 4.4-4.7  
CITY OF PHOENIX, ARIZONA

DATE: 2003

REVISION



BY: J. SPRING  
OR: R. GILES

DATE: 20030607

SCALE: 1" = 30' FEET

SHEET NO. 12 OF 12

# FINAL PLAT







**SURPRISE**

ARIZONA

**QUESTIONS OR  
COMMENTS?**

**Thank You**



**CITY OF SURPRISE**  
**Regular City Council Meeting**

---

Council Meeting Date: February 20, 2024      Contact Person: Leslie Carnie  
Submitting Department: Community Development      District: District 1  
Staff Recommendations:

---

Consent: Yes      Regular: No      Public Hearing: No      Report/Discussion: No

---

**Agenda Wording:**

Consideration and action pertaining to approval of the Final Plat entitled, “Enclave 4 at Paloma Creek”, a site generally located on the north of Happy Valley Rd. and east of 163<sup>rd</sup> Ave; Case FS22-1632.

---

**Motion:**

I move to approve the Final Plat entitled, “Enclave 4 at Paloma Creek”.

---

**Background:**

Chandra McCarty, with EPS Group Inc, seeks approval of Enclave 4 of Paloma Creek. The proposed Final Plat includes the subdivision of 9.96 gross acres into 30 single-family lots and 2.37 acres of ROW for a net density of 4.0 DU/Ac.

---

**Objective Analysis:**

The subject Final Plat meets the requirements of the RM-9 PUD zoning, in addition to other requirements as set forth in the Municipal Code. All city reviewing departments have reviewed the request and expressed no concerns.

---

**Policy Compliant:**

This proposed Final Plat is consistent with the Surprise General Plan 2035, RM-9 PUD (Enclave IV) zoning district and the Land Development Ordinance.

---

**Financial Impact:**

While this item does not have an immediate or direct financial impact, ongoing development activity in the City will inevitably have a future financial impact as additional resources are needed to provide city services.

---

**Budget Impact:**

There is no anticipated budget impact related to this item.

**FTE Impact:**

This item does not have an impact on current staffing levels.

---



**ATTACHMENTS:**

1. 00 - FS22-1632 Enclave 4 Final Plat - Staff Report 02.20.24 CC
  2. 01 - FS22-1632 Enclave 4 Final Plat -Vicinity Map
  3. 02 - FS22-1632 Enclave 4 Final Plat -Zoning Map
  4. 03 - FS22-1632 Enclave 4 Final Plat -Final Plat
  5. 04 - FS22-1632 Enclave 4 Final Plat -Landscape Plan
  6. 05 - FS22-1632 Enclave 4 Final Plat -Luke AFB Comments
  7. FS22-1632 Enclave 4 Final Plat - PowerPoint
-

1 **Case: FS22-1632**  
2  
3 **Project Name:** Enclave 4 – Final Plat  
4  
5 **Council District:** 1 - Acacia  
6  
7 **Meeting Date:** **February 20, 2024**  
8  
9 **Planner:** Leslie Carnie, Planner II

---

10  
11 **Owner:** Meritage Homes of Arizona, Inc.  
12  
13 **Applicant:** EPS Group  
14  
15 **Request:** Final Plat for a 30-lot single-family residential subdivision in the  
16 RM-9 PUD (Enclave IV) zoning district  
17  
18 **Site Location:** Generally located north of Happy Valley Road and east of 163<sup>rd</sup>  
19 Avenue  
20  
21 **Site Size:** 9.96 gross acres (approx.)  
22  
23 **Net Density:** 4.0 DU/Ac.  
24  
25 **General Plan**  
26 **Conformance:** The proposed Final Plat is consistent with the Surprise  
27 General Plan 2035.  
28  
29 **Findings:**  
30  
31 

- The proposed Final Plat is consistent with RM-9 PUD (Enclave IV) zoning district.
- The proposed Final Plat is consistent with the Preliminary Plat, case FS22-0667.
- The proposed Final Plat is consistent with the applicable City of Surprise regulations.
- The reviewing agencies have indicated no objections to the request.

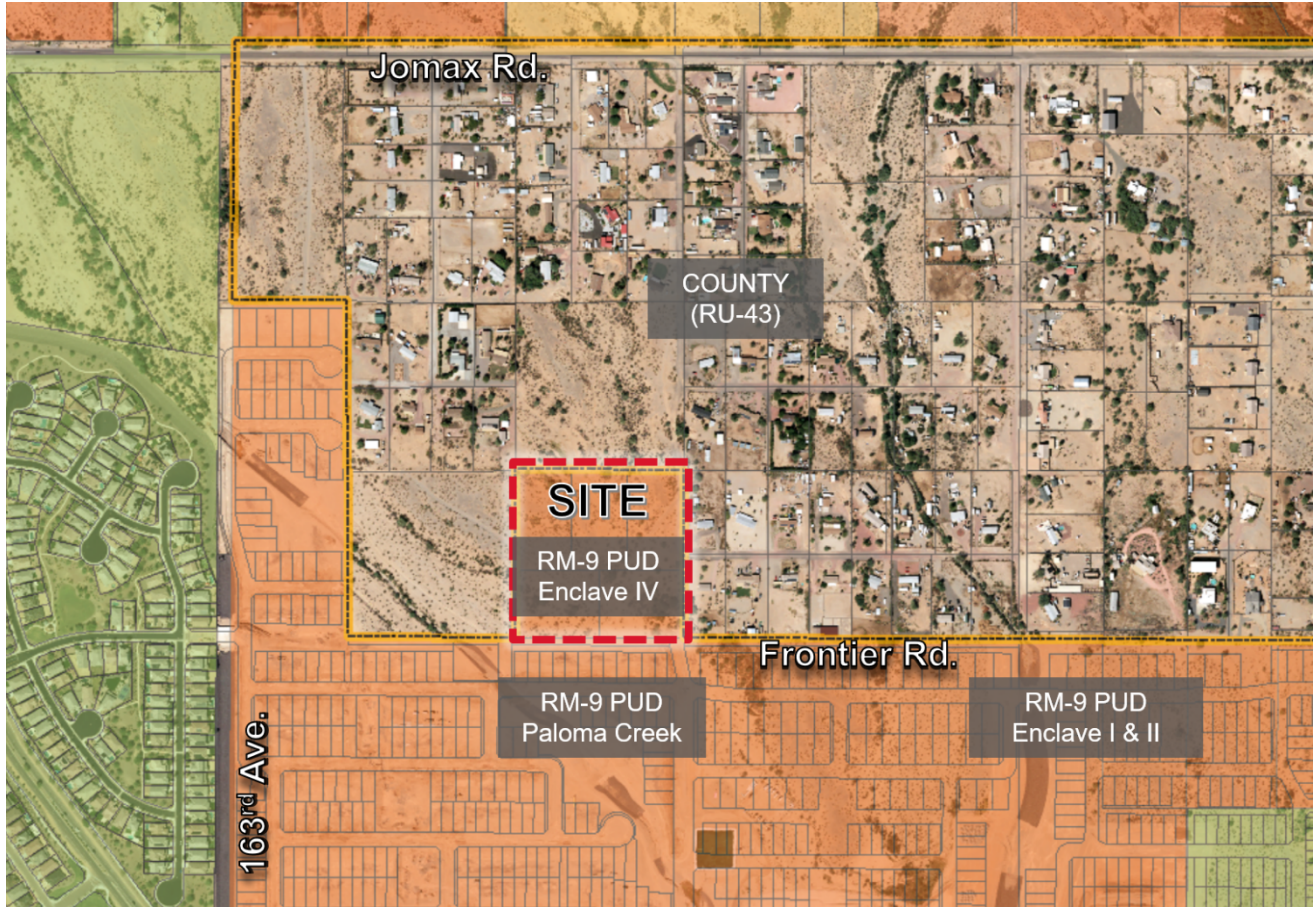
  
35  
36 **Alternative Actions:** **Approve** – Approval of the proposed Final Plat will allow the  
37 applicant the ability to subdivide the property as proposed.  
38  
39 **Deny** – Denial of the requested Final Plat will prevent the  
40 applicant from subdividing the property as proposed.  
41  
42  
43

44 **PROJECT DESCRIPTION:**

45  
 46 Chandra McCarty, with EPS Group Inc., seeks approval of Enclave 4 of Paloma Creek. The  
 47 proposed Final Plat includes the subdivision of 9.96 gross acres into 30 single-family lots and  
 48 2.37 acres of ROW for a net density of 4.0 DU/Ac.  
 49

50 **SURROUNDING LAND ZONING:**

51  
 52 The following map depicts the existing zoning of the subject site and its surrounds:  
 53



54  
 55  
 56

COUNTY (RU-43)	COUNTY (RU-43)	COUNTY (RU-43)
COUNTY (RU-43)	<b>RM-9 PUD</b>	COUNTY (RU-43)
RM-9 PUD	RM-9 PUD	RM-9 PUD

57  
 58  
 59  
 60  
 61  
 62

63 **BACKGROUND:**

64  
65 **September 5, 2019:** The City Council approved the annexation of the subject property under  
66 case FS18-149, Ordinance # 2019-07.

67  
68 **September 5, 2019:** The City Council approved the rezoning of the Paloma Creek property  
69 under case FS18-150, Ordinance # 2019-22. Said rezoning was adjacent to but did not  
70 include the subject property.

71  
72 **September 5, 2019:** The City Council approved the original Preliminary Plat for the Paloma  
73 Creek property under case FS18-150. Said Preliminary Plat was adjacent to but did not  
74 include the subject property.

75  
76 **November 17, 2020:** The City Council approved the rezoning of Enclave I under case FS20-  
77 421, Ordinance # 2020-36.

78  
79 **May 18, 2021:** The City Council approved the rezoning of Enclave II under case FS20-718,  
80 Ordinance # 2021-04.

81  
82 **September 15, 2022:** Planning and Zoning Commission approved the Preliminary Plat for  
83 Enclave 4 under case FS22-0667.

84  
85 **December 21, 2022:** The applicant filed a Final Plat for Enclave 4, the subject case, under  
86 case FS22-1632.

87  
88 **ANALYSIS AND DISCUSSION:**

89  
90 The subject plat will create 30 single-family residential lots within 9.96 gross acres. The lots  
91 are consistent with the approved zoning for Enclave IV, as well as the approved Preliminary  
92 Plat. Four tracts are included in the subject Final Plat, encompassing approximately 2.27  
93 acres for landscaping, open space, and future ROW for 159<sup>th</sup> Ave. There is also 2.37 acres  
94 of right-of-way proposed within the subject plat.

95  
96 Primary access to the subject site will be via 159th Avenue on the east side of the subject  
97 site. A secondary emergency access easement is provided on the west side to Paloma Creek  
98 Phase 2B.

99  
100 **Utility and Services Table:**

101

Water:	City of Surprise.
Wastewater:	City of Surprise
School District:	Dysart Unified

102  
103  
104  
105

106 **Conformance with Adopted Plans:**

107

108 The Surprise General Plan shows the subject property as lying within the Neighborhood  
109 Character Area, which supports residential development of up to 8 DU/Ac or more. At a  
110 net density of 4.0 DU/Ac, this development is consistent with the General Plan in this  
111 regard.

112

113 **Reviewing Agencies:**

114

115 In addition to the standard city reviewing agencies, who indicate no objections to the  
116 request, Luke Air Force Base and the Maricopa Water District were included in the routing  
117 of the case and indicate no objections.

118

119 **Summary:**

120

121 The subject Final Plat meets the requirements of the RM-9 PUD (Enclave IV) zoning district,  
122 in addition to other applicable requirements as set forth in the Surprise Municipal Code. All  
123 city reviewing departments have reviewed the request and expressed no concerns.

124

125 **Findings:**

126

- 127 • The proposed Final Plat is consistent with the RM-9 PUD (Enclave IV) zoning  
128 district.
- 129 • The proposed Final Plat is consistent with applicable City of Surprise regulations.
- 130 • The proposed Final Plat is in substantial conformance with the Preliminary Plat  
131 approved under case FS22-0667.
- 132 • The reviewing agencies have indicated no objections to the request.

133

134 **Attachments:**

135

136 01 Vicinity Map

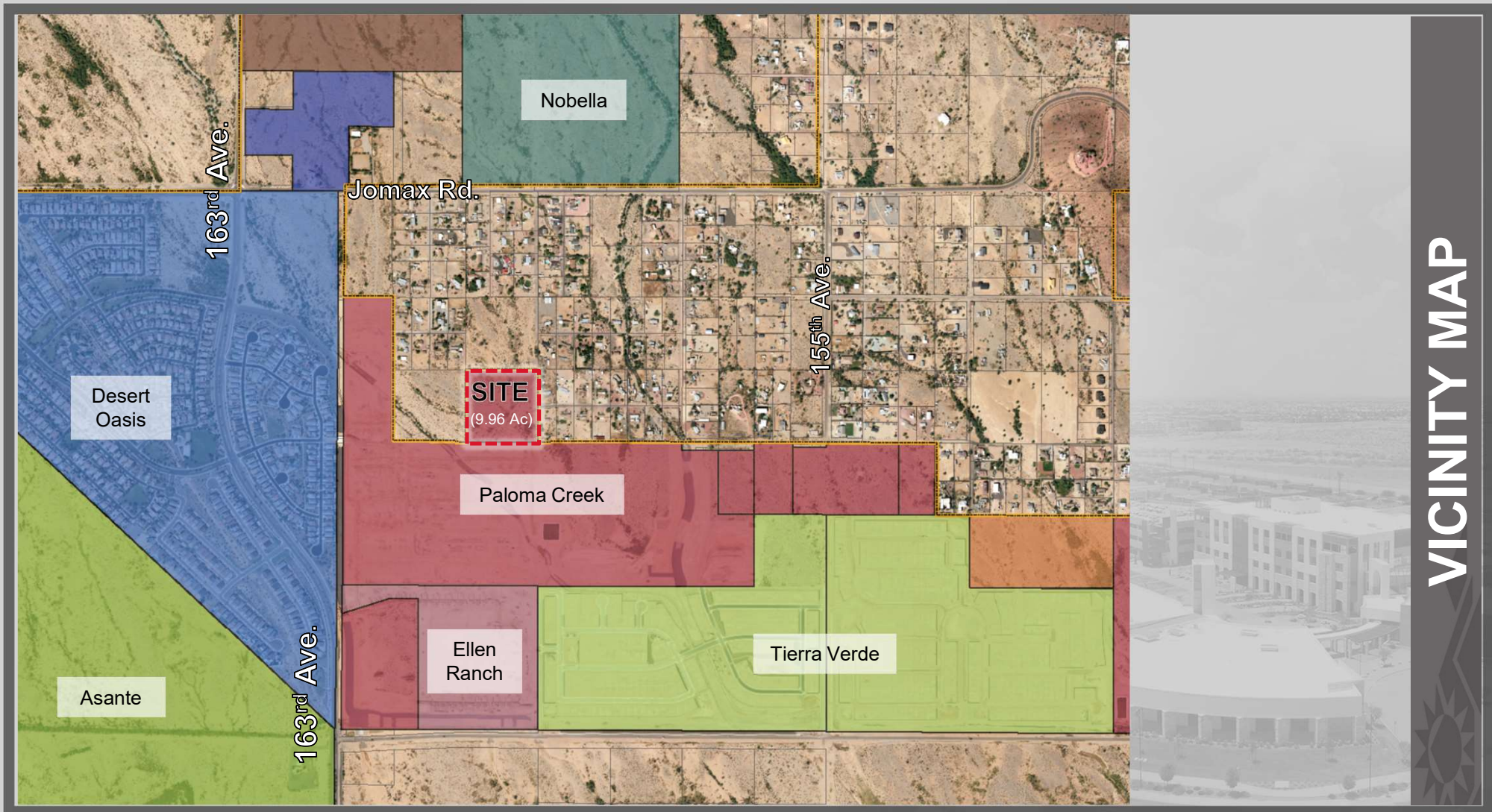
137 02 Zoning Map

138 03 Final Plat

139 04 Landscape Plans

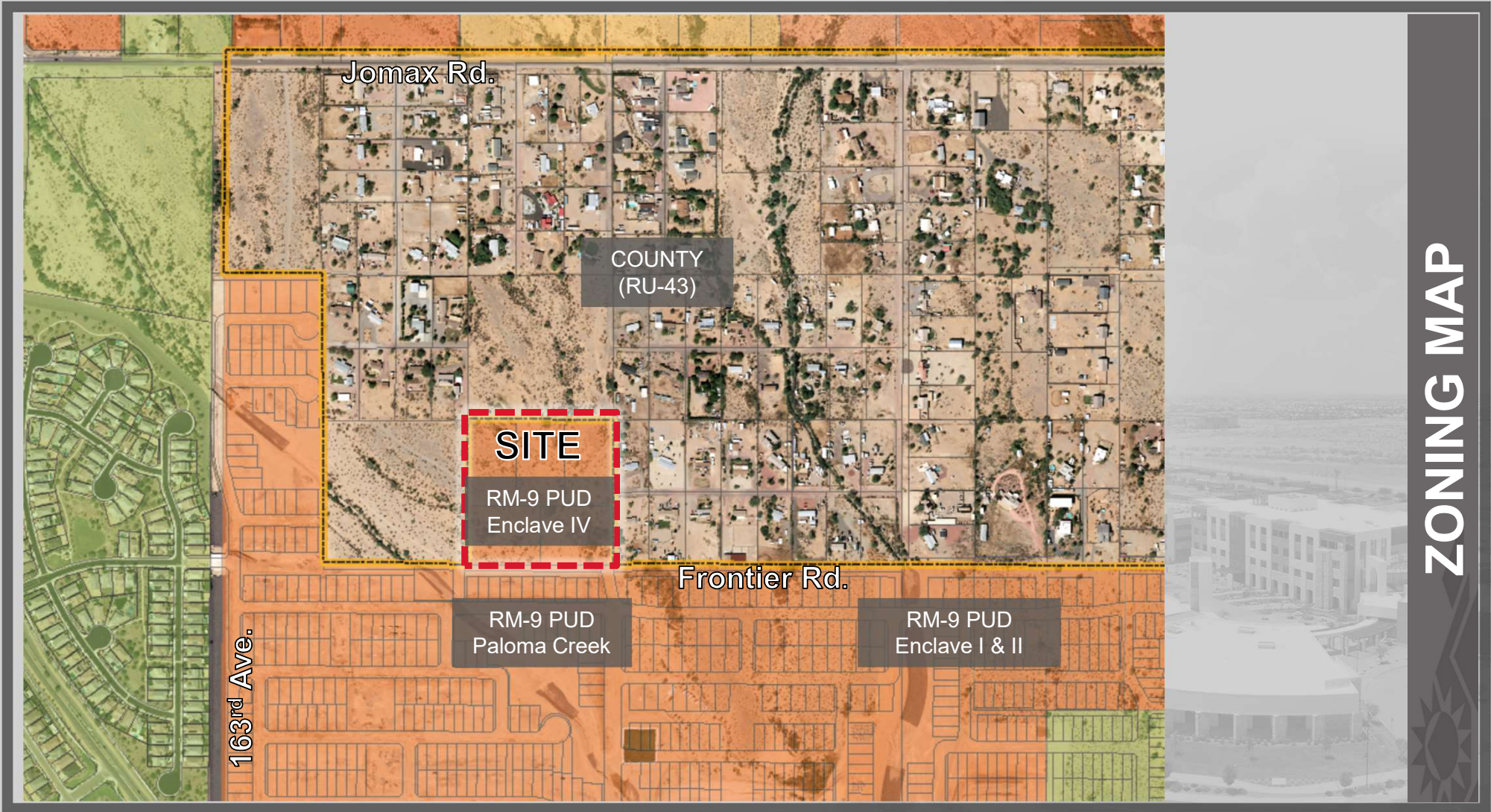
140 05 Luke AFB Comments





# VICINITY MAP





ZONING MAP









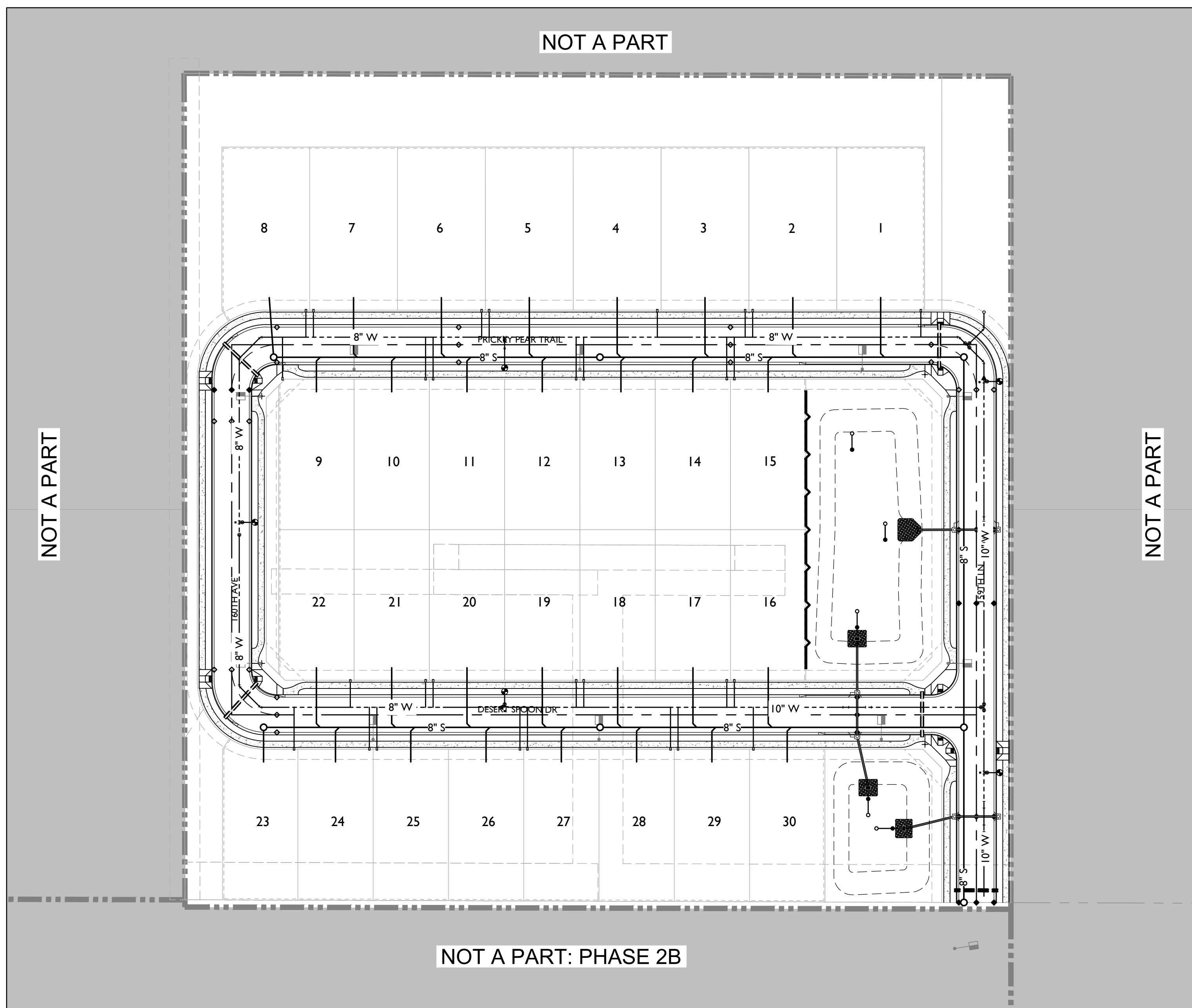
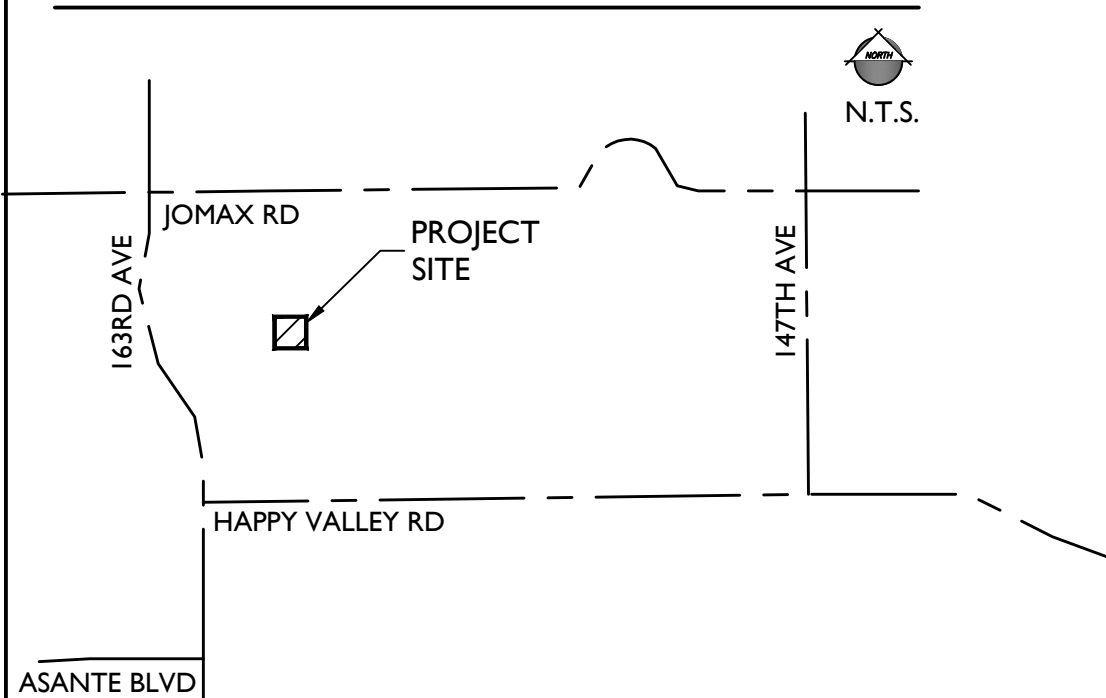
# PALOMA CREEK - ENCLAVE 4

A PORTION OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 6, TOWNSHIP 4 NORTH, RANGE 1 WEST OF THE GILA AND SALT RIVER MERIDIAN MARICOPA COUNTY, ARIZONA

## LANDSCAPE CONSTRUCTION DOCUMENTS

SUBMITTED: November 28, 2022  
RESUBMITTED: March 23, 2023  
RESUBMITTED: May 3, 2023

### VICINITY MAP



### SHEET INDEX

SHEET	SHEET TITLE	SHEET NO.
L-CS	Cover Sheet	1
L-0.01 - L-0.02	General Notes & Legends	2
L-0.03	Landscape Specifications	3
L-1.01	Sheet Layout Key	4
L-2.01	Material & Wall Plan	5
L-3.01	Material Details	6
L-4.01 - L-4.03	Planting Plans	7 - 9
L-5.01	Landscape Details	10
L-6.01	Irrigation Masterplan	11
L-7.01 - L-7.03	Irrigation Plan	12 - 14
L-8.01 - L-8.02	Irrigation Details	15 - 16
L-9.01	Irrigation Specifications	17

### WATER RESOURCE MANAGEMENT IRRIGATION WATER DEMAND CALCULATIONS

**TURF**  
PEAK SEASON DEMAND:  
IRRIGATED ACRES X 4000 GPD/ACRE = TOTAL TURF IRRIGATION GPD  
0 ACRES X 4000 GPD/ACRE = 0 GPD (GALLONS PER DAY)

**(XERISCAPE) DECOMPOSED GRANITE AREAS (TREES & SHRUBS)**  
PEAK SEASON DEMAND:  
DRIP IRRIGATION ACRES X 1,300 GPD/ACRE = TOTAL XERISCAPE IRRIGATION GPD  
2.506 ACRES X 1,300 GPD/ACRE = 3,257.8 GPD (GALLONS PER DAY)

3,257.8 GPD (GALLONS PER DAY)

### TOTAL IRRIGATION WATER DEMAND (TURF, TREES, SHRUBS)

PEAK SEASON DEMAND:  
3,257.8 GPD (GALLONS PER DAY)

ANNUAL TOTAL DEMAND:  
656,306.8 GALLONS

THIS PLAN SHEET DOES NOT HAVE ANY LANDSCAPE AREAS THAT WILL BE MAINTAINED BY THE CITY

### PROJECT TEAM

**DEVELOPER:**  
**MERITAGE HOMES**  
8880 E. Raintree Dr, Suite 300  
Scottsdale, AZ 85260  
(480) 515-8100  
Contact: Troy Hill  
Troy.Hill@meritagehomes.com

**LANDSCAPE ARCHITECT:**  
**EPS GROUP, INC.**  
1130 N. Alma School Rd, Suite 120  
Mesa, AZ 85201  
(480) 503-2250  
Contact: Aliza Sabin, RLA, LEED AP  
Aliza.Sabin@epsgruoinc.com

**PLANNER:**  
**EPS GROUP, INC.**  
1130 N. Alma School Rd, Suite 120  
Mesa, AZ 85201  
(480) 503-2250  
Contact: Josh Hannon,  
Josh.Hannon@epsgruoinc.com

**CIVIL ENGINEER:**  
**EPS GROUP, INC.**  
1130 N. Alma School Rd, Suite 120  
Mesa, AZ 85201  
(480) 503-2250  
Contact: Chandra McCarty, PE  
Chandra.McCarty@epsgruoinc.com

**IRRIGATION DESIGN:**  
**COATES IRRIGATION CONSULTANTS, INC.**  
1420 S Greenfield Rd #103  
Gilbert, Arizona 85234  
(480) 481-0682  
Contact: Gaylon Coates  
gaylon@coatesirrigation.com

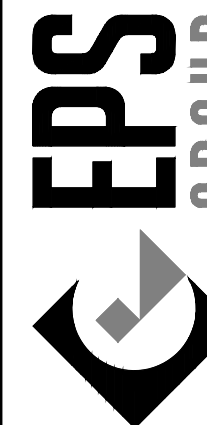
**ELECTRICAL ENGINEER:**  
**WRIHT ENGINEERING CORP.**  
165 E. Chilton Drive  
Chandler, AZ 85225  
(480)-503-2250  
Contact: Adam Bowers, PE  
abowers@wrightengineering.us

**STRUCTURAL ENGINEER:**  
**WRIGHT ENGINEERS**  
1759 E Queen Creek Rd, Suite 1  
Chandler, AZ 85286  
(480)-483-6111  
Contact: Blake Scoresby, PE  
bscoresby@wrightengineers.com

16-400

Jul 14, 2023 4:04pm G:\Projects\2016\16-400\Drawings\Construction Documents\Enclave 4\16-400 - Enclave 4 - L-CS-Cover Sheet.dwg

1130 N. Alma School Road, Suite 120  
Mesa, AZ 85201  
T:480.503.2250 | F:480.503.2258  
www.epsgruoinc.com



Paloma Creek  
Enclave 4  
City of Surprise, Arizona

Cover Sheet

Project:

Revisions:
1ST SUBMITTAL: 11/28/2022
2ND SUBMITTAL: 03/23/2023
3RD SUBMITTAL: 05/03/2023



Designer: AS  
Drawn by: JA



Job No.  
**16-400**

CONSTRUCTION DOCUMENTATION

Sheet No.  
**L-CS**

1 of 17

Case #FS22-1632



**SITWORK GENERAL NOTES:  
LAYOUT AND GRADING**

- The Contractor shall be responsible for coordinating all concurrent work by other trades. Sleeves have been provided at key locations under roadway and drive aprons from previous work. Most sleeves can be found by locating rebar or an "S" stamped into concrete curb at each location. See Irrigation Plans for more information.
- Verify all conditions at job site and notify Landscape Architect of dimensional errors, omissions or discrepancies before beginning any work. Verify existing elevations.
- Contractor to obtain necessary permits prior to construction.
- All work shall conform to the appropriate agencies. Contractor shall verify location of all existing underground utilities, lines and structures prior to excavation or trenching. Damage shall be repaired by the Contractor at no cost to the Owner. The Landscape Architect does not assume any responsibility for the utilities or structures not shown on the drawings. Contractor to verify the exact location of utilities prior to construction (Call Before You Dig 602-263-1100). Contractor shall use extreme caution when working over or near the existing gas main, water lines and electrical lines.
- All layout dimensions are from plan view calculations. Actual field dimensions may vary from plan due to actual lengths along a sloped surface. Horizontal layout and dimensioning are from face of building unless otherwise noted.
- If there is a conflict with layout in the field, notify Landscape Architect prior to installation.
- Drawing symbols: A system of diagrammatic symbols and notations are used in these drawings. Review notations carefully, notify Landscape Architect and request clarification on any unclear notation or discrepancy prior to commencing work.
- Existing and proposed grades are based on field observations. Verify all grade elevations in field prior to construction.
- All finished grades are to meet and blend smoothly with existing grades at the project limit.
- Work performed without Landscape Architect's approval and/or in compliance with construction documents is subject to removal at Contractor's expense.
- The Landscape Architect is not responsible for the construction means, methods, techniques, sequences or for safety precautions or problems utilized in connection with the work, and will not be responsible for the Contractor's failure to carry out the work in accordance with the Contract Documents.
- Contractor to verify all quantities. In case of any discrepancies, graphically shown material quantities shall take precedence.
- Conditions beyond the property line and contract limits are shown for reference only and are not part of this Landscape Construction Documentation set.
- The Contractor shall take all precautionary measures necessary to protect existing improvements from damage and all such improvements and structures damaged by the Contractor's operations shall be repaired or reconstructed satisfactory to the Landscape Architect at the Contractor's expense.
- Special consideration has been given to the design and intended relationship between building, sitework, and circulation systems.
- The Contractor shall provide positive drainage flow away from all buildings toward drain inlets, retention basins, planting/lawn areas or the street.
- The drawings represent the finished work. All bracing, temporary supports, shoring, etc. is the sole responsibility of the Contractor. Observation visits to the job site by the Landscape Architect do not include inspection of construction methods and safety conditions at the job site. These visits shall not be construed as continuous and detailed inspections.
- Dimensions marked 'verify' are to be field measured. Any discrepancy from the noted dimension is to be brought to the attention of the Landscape Architect prior to further work.

**MAINTENANCE NOTE:**

- All landscape areas and materials shall be maintained in a healthy, neat, clean, and weed-free condition. This shall be the responsibility of the Homeowners Association.

**SITE ABBREVIATIONS:**

ARCH ARCHITECT	NTS NOT TO SCALE
BC BOTTOM OF CURB	OAE OR APPROVED EQUAL
BWV BOTTOM OF WALL	OC ON CENTER
CL CENTER LINE	OS OFF-SITE
CIP CAST IN PLACE	PL PROPERTY LINE
CONC CONCRETE	QTY QUANTITY
DIA DIAMETER	R RADIUS
DWG DRAWING	R/W RIGHT OF WAY
EA EACH	PUE PUBLIC UTILITY EASEMENT
ESP ESPALIER	SDL SIGHT DISTANCE LINE
FFE FINISH FLOOR ELEVATION	SF SQUARE FEET
FG FINISH GRADE	SPE SIDEWALK AND
GAL GALLON	STD STANDARD
HC HANDICAP	SVT SIGHT VISIBILITY TRIANGLE
HP HIGH POINT	TC TOP OF CURB
IRRIG IRRIGATION	TWV TOP OF WALL
LF LINEAR FOOT	TYP TYPICAL
LP LOW POINT	W/ WITH
MAX MAXIMUM	W/O WITHOUT
MIN MINIMUM	' FOOT (FEET)
NIC NOT IN CONTRACT	" INCH (INCHES)

**LANDSCAPE PLANTING NOTES:**

- Verify all conditions at the job site and notify the Landscape Architect immediately of any dimensional errors, omissions or discrepancies prior to any construction taking place.
- Provide matching sizes and forms for each tree to be installed.
- Plant material to be healthy specimens, free from disease or damage.
- Contractor to verify all quantities. In case of any discrepancies, graphically shown plant and irrigation quantities shall take precedence.
- Stake all tree locations based upon these plans. Obtain Landscape Architect's approval of staked locations prior to planting.
- All materials shall conform to the guidelines established by the current American Standards for Nursery Stock, published by the American Association of Nurserymen.
- All plants shall be boxed, balled and wrapped or container grown. All root wrapping material made of synthetics or plastics shall be entirely removed at time of planting.
- All plant material shall be selected at nurseries that carry specified plants. There shall not be any substitutions of plant material from other non specified plants or nurseries. Plant material is subject to review and approval by Landscape Architect before installation.
- Notify Landscape Architect 48 hours prior to delivery of plant material to coordinate acceptance and approval.
- All plants shall be set plumb unless otherwise noted.
- All plant species shall conform to the Landscape Construction Documents. There will be no plant substitutions, type, or quantity deviations from the approved landscape plans without prior approval from the Landscape Architect & City of Surprise. All rip-rap installed in drainage areas to be installed in such a manner that eliminates the possibility of voids that allow wasps to build nests.
- Walls information in this landscape plan programs wall layout and aesthetic details that include (but are not limited to) material, color, texture, and heights. These landscape plans act as part of the wall permitting submittal which must also include structural plans, details, diagrams and calculations prepared and sealed by a registered structural engineer licensed in the State of Arizona
- Sight distance easements shall be kept clear of landscaping or other visibility obstructions with a height greater than 2' - 6". Trees within these easements shall have a canopy trimmed and maintained to a height of 7' - 0" upon installation.
- Submit as-built irrigation drawings to owner's representative to reflect changes from original drawings and specifications.
- Submit an operation & maintenance manual to the owner's representative at project completion to include: catalog & parts sheets on all material & equipment installed, installation instructions, suppliers names and contact information complete operating maintenance on all major equipment.
- Maintain a minimum of 5'-0" clearance around fire hydrants.
- All trees, shrubs and cactus having significant spines or thorns shall be placed at least ten feet from all public sidewalks, private pathways and gathering spaces as to not harm pedestrians.
- Any rip-rap installed in drainage areas to be installed in such a manner that eliminates the possibility of voids that allow wasps to build nests.
- All irrigation pipe shall be purple.

**CITY OF SURPRISE NOTES:**

- All construction must conform to Maricopa Association of Government (MAG) specification and details and latest revisions unless otherwise stated on plans.
- The engineer will not be responsible for construction means, methods, techniques, sequences, or procedures or for safety precautions or programs utilized in connection with the work, and they will not be responsible for the contractor's failure to carry out the work in accordance with the contract documents.
- The contractor shall be responsible for identifying all overhead and underground utility locations where construction occurs. Special care shall be taken to ensure that all utilities avoided. Utility locations shown on the plans are approximate and not for construction purposes. Any damage to existing utilities shall be repaired and or replaced at the contractor's expense. The contractor shall comply with all current Arizona underground facilities laws (Arizona Revised Statutes Title 40, Chapter 2, Article 6.3, Section 40-360.21-32) Call Arizona 811 for field location by dialing 811.
- The City of Surprise engineering services of Public Works shall be notified forty-eight (48) hours prior to commencement of any construction work at (623)-222-6150.
- The engineer and applicable agency must approve, prior to construction, any alteration or variance from these plans. Any variation from these plans shall be proposed and resubmitted for review and approval.
- The contractor shall protect and maintain all existing utilities on the site, any damage to existing utilities, whether shown or not on the drawing, shall be repaired/replaced at the contractor's expense. Existing surface features and fencing shall be replaced in kind.
- Any inspection by the city, county, or the engineer, shall not in any way relieve the contractor from any obligation to perform the work in strict compliance with the applicable codes and agency requirements.
- The contractor is to locate all existing landscaping, landscaping irrigation lines, property monuments, fencing or surface features prior to construction. Anything disturbed during construction shall be replaced in kind at the contractor's expense.
- Nothing contained in the contract documents shall create, nor shall be construed to create, any contractual relationship between the engineer and the contractor or any subcontractor.
- All construction water used within the City of Surprise Water Service Area requires approval by the City of Surprise Public Works Department and may be subject to volume and time restrictions. Please see the City of Surprise Construction Water Guidelines for additional information. The guidelines can be obtained from the Public Works Department at (623)-222-6000.
- Traffic control shall be maintained in accordance with MAG specification 401. The manual on uniform traffic control devices, and the "temporary work zone traffic management policy" (latest edition).
- Prior to final approval and acceptance of the work, the developer/contractor will be required to clean and repair adjacent (off-project) roadways used or damaged during the course of construction.
- Emergency vehicle access (E.V.A.) must be provided by the developer/contractor at all times. Signage shall be posted at the point of entry to the site and at all locations where a change in direction occurs.
- The plans shall comply with the Americans with Disabilities Act's Accessibility Guidelines, as published in the federal register on September 15, 2010.
- Root barrier per City of Surprise EDS 8-14 is required for any tree located within three (3) feet of any sidewalk, curb, pavement or wall.
- Fire access vertical clearance of 15 feet from finished grade to the lowest point of the tree canopy shall be maintained from curb to curb.
- Sight distance requirements on Arterials and Collectors will adhere to Surprise Details 4-01. Sight visibility within the unobstructed view easement area and in front of stop signs must meet or exceed requirements in Surprise Details 4-01 and 4-02. Trees, shrubs, and other landscaping are permitted within the sight visibility triangle provided limbs, leaves, needles or other foliage are kept below 30 inches or above 84 inches, per Surprise EDS Detail 4-01.
- The Landscape and Irrigation design will comply with City of Surprise EDS per Chapter 8.

**SITE DETAIL KEYNOTES**

PAGE #/DETAIL #

KEYNOTE	ITEMS	PAGE #/DETAIL #
1.0	PAVEMENTS	
1.1	DECOMPOSED GRANITE	L-3.01/1
2.0	WALLS / EMBANKMENTS	
2.1	PRIMARY THEME WALL	L-3.01/3
2.2	PARTIAL VIEW FENCE	L-3.01/6
2.3	PRIMARY THEME COLUMN	L-3.01/4
3.0	MISCELLANEOUS	
3.1	MAILBOX	L-3.01/7

**PLANT LEGEND**

SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	QTY
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TREES	SCIENTIFIC NAME	COMMON NAME	SIZE	QTY
	Acacia aneura	Mulga	24" Box	17
	Acacia salicina	Willow acacia	24" Box	6
	Chilopsis linearis	Desert Willow	24" Box	19
	Parkinsonia x 'Desert Museum'	Desert Museum Palo Verde	36" Box	12
	Prosopis hybrid 'Phoenix'	Thornless Mesquite	24" Box	10

SHRUBS/ACCENTS	COMMON NAME	SIZE	QTY
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	Bougainvillea 'La Jolla'	'La Jolla' Bougainvillea	5 Gal 14
	Calliandra eriophylla	Pink Fairy Duster	5 Gal 70
	Dasylirion wheeleri	Desert Spoon	5 Gal 18
	Dodonea viscosa	Hop Bush	5 Gal 44
	Encelia farinosa	Brittlebush	5 Gal 10
	Eremophila hygrophana 'Blue Bells'	Blue Bells	5 Gal 55
	Eremophila maculata 'Valentine'	Valentine Bush	5 Gal 62
	Hesperaloe parviflora 'Brakelights'	Brakelights Red Yucca	5 Gal 86
	Leucophyllum laevigatum	Chihuahuan Sage	5 Gal 88
	Muhlenbergia capillaris 'Regal Mist'	Regal Mist Muhly	5 Gal 68

GROUNDCOVERS	COMMON NAME	SIZE	QTY
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	Acacia redolens Desert Carpet	Prostrate Acacia	1 Gal 38
	Lantana montevidensis	Trailing Purple Lantana	1 Gal 73
	Lantana x 'New Gold'	New Gold Lantana	1 Gal 90
	Rosmarinus officinalis 'Huntington Carpet'	Trailing Rosemary	1 Gal 35

**WALLS LEGEND**

SYMBOL	ITEM	QTY
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	DECORATIVE COLUMN 'TYPE A'	12 EA
	PRIMARY THEME WALL	438 LF
	PARTIAL VIEW FENCE	1,486 LF

**COLOR & MATERIALS SCHEDULE**

ITEM	COLOR & MANUFACTURER
COLOR A (CMU)	SW9547 'VESSEL' BY SHERWIN WILLIAMS, OAE
COLOR B (CMU)	SW7026 'GRIFFIN' BY SHERWIN WILLIAMS, OAE
COLOR C (STEEL)	POWDER COATED TO MATCH COLOR: RAL 7043 TRAFFIC GREY B, OAE
COLOR D (CONCRETE CAP)	PRECAST CONCRETE CAP; COLOR #18 WHITE, BY MESA PRECAST

- GENERAL NOTES:  
1. SUBMIT SAMPLES TO LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE FOR APPROVAL.

**MATERIALS LEGEND**

SYMBOL	ITEM	SIZE	QTY
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	Apache Brown Decomposed Granite (OAE)	3/4" Screened 2" Depth, Min.	109,149 SF
	Standard concrete paving		683 SF

1130 N. Alma School Road, Suite 20  
Mesa, AZ 85201  
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**EPS GROUP**

Paloma Creek  
Enclave 4  
City of Surprise, Arizona

General Notes & Legends

Project: Paloma Creek Enclave 4 City of Surprise, Arizona

Revisions:

1ST SUBMITTAL: 11/28/2022  
2ND SUBMITTAL: 03/23/2023  
3RD SUBMITTAL: 05/03/2023

Call at least two full working days before you begin excavation.

ARIZONA 611  
Dig a hole or trench in the ground in Maricopa County: 800-283-1100

Designer: JA  
Drawn by: AS

REGISTERED LANDSCAPE ARCHITECT  
45568  
ALIZA E. SABIN  
Arizona, D. S. 223

Job No.  
**16-400**

CONSTRUCTION DOCUMENTATION

Sheet No.  
**L-0.01**

2 of 17

Case #FS22-1632



## SECTION 32 93 00 - LANDSCAPE

### PART 1 - GENERAL

#### 1.01 Work Included

- Landscape Fine Grading
- Soil Preparation
- Tree Supports and Headers
- Planting
- Watering
- Maintenance

#### 1.02 Definitions

Plants - all shrubs and cacti other than trees, and turf.  
Plant material - all trees, shrubs, succulents, cacti, ground cover, and other plants.

#### 1.03 Related Work

Contractor: minimum 5 years experience in supply and installation of landscape materials.

#### 1.04 Source Quality Control

Provide certificates of inspection for all materials as required by this specification and/or prevailing law or regulation.

Developer's Representative shall review plant material prior to planting. Any material deemed unacceptable shall be removed from the site and not planted.

Provide trees and shrubs grown in a recognized nursery in accordance with good horticultural practice. Provide healthy, undamaged, vigorous stock grown under climactic conditions similar to conditions at project site and free of disease, insects, eggs, larvae and defects such as sun-scaid, knots, injuries, abrasions or disfigurements. Provide trees and shrubs of the sizes indicated. Trees and shrubs of sizes larger than those indicated may be used provided roots, root ball, staking and planting pits are increased proportionately.

#### 1.05 Reference Standards

- Arizona Nursery Association plant standards for nursery stock
- ANSI 60.1 - American Standards for Nursery Stock, International Society of Arboriculture
- American Joint Committee on Horticultural Nomenclature

#### 1.06 Samples

Submit samples to developer's representative a minimum of 2 weeks prior to start of work for the following material:

- Topsoil for backfill mix
- Mulches
- Tree supports
- Inert Groundcovers (1 gallon)
- Boulders
- Steel Edging - 6" sample length

The Developer's Representative reserves the right to take and analyze samples of materials for conformity to specification at any time. Furnish samples upon request by Developer's Representative.

#### 1.07 Products

Submit to Developer's Representative a minimum of 2 weeks prior to start of work manufacturer's comprehensive product description, including specifications and installation instructions.

#### 1.08 Certificates and Test Reports

Provide and pay for all materials testing. Testing agency shall be acceptable to the Developer's Representative.

Submit to Developer's Representative a minimum of 2 weeks prior to start of work 2 copies of certificates of inspection as required by these specifications, jurisdictional authorities, and vendor's certified analysis for soil amendments, fertilizer materials, and chemicals. Submit other data substantiation that materials comply with specified requirements. Certificates are required to determine the quality and quantity of all specified soil amendments.

Materials certification to be submitted include, but are not limited to:

- Topsoil source and nutrient analysis
- Mulch
- Fertilizers/soil amendments/chemicals

Test representative material samples proposed for use. Provide the following data:

- Topsoil and planting backfill
- Soil PH
- Particle size, percentage soil texture
- Percentage organic material
- Nutrient level analysis
- All macro, secondary and micronutrients
- Salinity
- Percolation rate

Recommendations on type and quantity of amendments required to bring levels into acceptable ranges as detailed in part 2 - products of materials of these specifications.

Separate recommendations to be submitted for each crop. Crop to be identified as:

- Irrigated trees, shrubs, and groundcovers
- Turf or lawn

#### 1.09 Maintenance Data

Submit to Developer's Representative 2 copies of written instructions, prior to expiration of the initial maintenance period, recommending procedures to be followed by the developer for the maintenance of landscape work for one full year.

#### 1.10 Product Delivery, Storage and Handling

Deliver packaged materials in containers showing weight, analysis and identification of manufacturer. Protect materials from environmental conditions and deterioration at all times.

Provide protective covers to plant life and trees during delivery. Do not prune trees prior to delivery. Do not bend trees or shrubs in such a manner as to cause damage or destroy shape.

Deliver materials after preparations for planting have been completed. If planting is delayed for more than 8 hours after delivery, set plant material in shade, protect from weather and mechanical damage and keep roots moist.

Do not remove container grown stock from containers until planting time.

#### 1.11 Site Conditions

Determine location of underground utilities. Use professional services to determine locations. Execute work as required to prevent damage.

Maintain grade stakes set by others until directed otherwise.

Protect of all existing plants to remain:

- Do not store materials or equipment, permitted burning, or operate or park equipment under the branch of any existing plant or plant material to remain except as actually required for construction in those areas
- Provide barricades, fences or other barriers as necessary at the drip line to protect existing plants to remain from damage during construction
- Notify Developer's Representative in any case where contractor feels grading or other construction called for by contract documents may damage existing plants to remain
- If existing plants to remain are damaged during construction, contractor shall replace such plants of the same species and size as those damaged at no cost to Developer. Determination of extent of damage and value of damaged plant shall rest solely with

Developer's Representative

#### 1.12 Warranty

Submit warranty to Developer's Representative.

Trees, Saguaros, Yuccas, and Ocotillos  
Warrant that trees, saguaros, yuccas and ocotillos will be alive and in good health for a period of one (1) year after acceptance except for defects resulting from neglect by developer or abuse by others.

Developer must follow contractor's maintenance schedule and provide current maintenance log to Developer's Representative.

Remove and replace dead, unhealthy or girdled trees, yuccas and ocotillos that lose original form and size during warranty period with material equal to that specified. Replace any material which does not meet requirements within thirty days of notification. All replacement material shall be subject to an additional one year maintenance period.

#### Shrubs and Other Plantings

Guarantee all other planting will be alive and in satisfactory condition for a period of 90 days from date of acceptance or will be replaced at no additional cost to the Developer.

All plant material shall be maintained in a healthy, sturdy condition during the warranty period by the contractor. Turf shall be mowed and trimmed weekly after root establishment.

All replacement plants, including shrubs, cacti, groundcovers, vines and perennials shall be subject to an additional 90 day maintenance period.

### PART 2 - PRODUCTS

#### 2.01 Fill Materials

Provide dry, loose material for fill, backfill, planting backfill and topsoil for planter beds. Frozen or muddy soils are not acceptable. Salts are not to exceed 1500 ppm, and soils shall be free of debris, noxious weeds, ingredients or objects detrimental to healthy plant growth.

Topsoil - screened, fertile, friable, from well drained arable land, free of noxious weeds, refuse, roots, heavy clay or any material toxic to plant growth; contents shall be as follows:

- Silt: 20-45%
- Clay: 15-20%
- Sand: 30-60%
- Ph: 7.0-8.3
- Soluble Salts: 1,500 ppm
- Organic material (natural or otherwise): 2% minimum
- Nutrients: enough to bring levels of acceptable plant growth.

Percolation rate shall be between 3 to 4 inches per hour. Existing topsoil may be used provided it meets these requirements. Imported topsoil must be proven to meet these requirements.

#### 2.02 Commercial Grade Fertilizers

Agri-Sul dispersal - use only for sulfur agriculture grade gypsum, osmacote, 'sierra-blend', apply at mfg. recommended rate for each planting type.

#### 2.03 Soil Amendments

Wood shavings: nitrogen stabilized fir or pine shavings containing 0.75% total nitrogen and 0.1 to 0.15% total iron, and under 60 ppm total manganese; composted, leached and aged for a minimum of 10 to 12 months; ph factor, 4.0 to 4.5. No soil amendments are required for salvaged plant material and cacti unless otherwise specified.

#### 2.04 Tree Supports

Tree stakes: copper naphthenate impregnated lodge pole 12 feet in length for trees 15 gallon to 36" box, 2 lodge poles per tree, 3 poles for multi-trunk trees. Tree stakes are not required for salvaged plant material or 48" box trees or larger, unless determined otherwise by Landscape Architect due to high wind conditions. Tree ties: provide a minimum of two per tree, 18" tree strap by star nursery (www.star-nursery.com) or approved equal, beige, with grommets. No. 10 gauge pliable zinc coated iron wire to be threaded through grommets and connected to tree stakes. Wire will not make contact with tree.

#### 2.05 Pesticides and Herbicides

Pre-emergent herbicide shall be Surflan as manufactured by Dow/Elanco chemical company or equal.

Pesticides shall be ortho "Lindane Borer and Leaf Miner Spray" by Ortho, Consumer Products Division, Chevron Chemical Company, San Francisco, CA 94119, or "Borer Killer", by Greenlight Company, San Antonio, TX 78217. Contact herbicide shall be submitted by contractor to Developer's Representative.

Types of herbicides to be used and the methods of application will conform to Environmental Protection Agency, state and location requirements and labeling instructions.

#### 2.06 Plant Material

Plant material shall be healthy, shapely and well-rooted. Roots shall show no evidence of having been restricted or deformed at any time. All plants shall have normally developed branching. Plants shall be free from disfiguring knots, sun scald injuries and abrasions of bark. Plants not meeting these requirements shall be considered defective and shall be replaced immediately. All plants shall be true to name and shall be tagged, one of each variety. All plant material shall be grown in nurseries inspected by the State Department of Agriculture.

Specimen plant material shall be selected and tagged at the growers nursery prior to shipment.

Plants shall be measured when branches are in their normal position. Height and spread dimensions specified refer to main body of plant and not branch tip to tip. Caliper measurement shall be taken at a point on the trunk 6" above natural ground line for trees up to 4" in caliper and at a point 12" above the natural ground line for trees over 4" in caliper. If a range of size is given, no plant shall be less than the minimum size and not less than 40% of the plants shall be large as the maximum size specified. The measurements specified are the minimum size acceptable and are the measurements after pruning, where pruning is required. Plants that meet the measurements specified, but do not possess a normal balance between height and spread shall be rejected.

Container stock, when specified, shall have grown in the containers in which delivered for at least 6 months, but not over 2 years. Samples must prove no rootbound conditions exist. No container plants that have cracked or broken balls of earth when taken from container shall be planted except upon special approval by Developer's Representative.

Container stock shall not be pruned before delivery. Field grown plants recently transplanted into containers will not be accepted.

Sod shall be dense with the grass having been mowed at a height of 1" prior to removal from field. All grass shall be grown on fumigated fields. Sod shall not be stacked for more than 234 hours between time of cutting and time of delivery.

#### 2.07 Inert Groundcover

Inert groundcovers, including but not limited to, decomposed granite (DG), crushed rock, and river rock shall have a minimum 2" coverage depth, unless noted otherwise on plans. Insets shall be the size and color as per plan, and shall be taken from a single quarry. DG shall be from a single source approved by the Developer's Representative. Screened DG shall be uniform, free of clay lumps, calcareous coatings, caliche, organic matter or deleterious substances.

Boulders will be from a single source approved by the Developer's Representative. Surface Select Boulders to be free of broken areas, scars and scrapes. Boulders for seating shall have a flattened top.

#### 2.08 Edging

Edging, including but not limited to, poly or steel product, shall be of the size (gauge and depth) specified on plans and drawings. Samples shall be submitted by contractor for approval.

### PART 3 - EXECUTION

#### 3.01 General

Install all material in accordance with the methods, techniques and specifications of each manufacturer and these specifications.

Do not begin planting until completion of the site grading and installation of a fully functional underground irrigation system is in place.

The Contractor will, prior to the start of construction activities on the site, define the limit boundaries of all areas designated as off-limits to the Contractor. Provide protective fencing for existing landscaped plants from construction activities as noted per drawings.

#### 3.02 Backfill, Imported Fill or Artificial Soil and Gravel

Inspect the integrity of all damp-proofing and water proofing membranes which occur over, on or against any construction to be fully or partially concealed by earthwork prior to the placement of any imported soil, backfill, gravel fill or sub-base.

#### 3.03 Topsoil

Import additional topsoil only as required to bring planting areas up to finish grade or per turf or planting bed requirements. Spread and cultivate soil so that no settling takes place at any time.

#### 3.04 Landscape Fine Grading

Allow for the addition of soil amendments, conditioners and any specified top dressing when determining and executing finish grade.

Set finish grade 2-1/2 inches below adjacent paving, curb and headers to allow for decomposed granite, groundcover mulch or turf sod.

Complete all finish grading prior to commencing landscape operations. Surface drainage will be away from the building foundation and walls, and will ensure proper drainage of the site as indicated on the drawings. Grade all planting areas to a smooth, even and uniform plane with no abrupt changes to surface, and the area drains as designed. Grade and maintain all flow lines, designated or not, to allow free flow of surface water. Cultivate entire area to a depth of 6 inches minimum and remove all rock in excess of 1-1/2 inches, all building rubble, building construction material, waste and any other material that may impair satisfactory growth.

Dispose of any unacceptable or excess soil or other materials at a local offsite disposal area and pay all dumping fees and charges.

#### 3.05 Inert Groundcovers

Apply inert groundcovers to a 2 inch minimum depth within 1/2 inch of the top of adjacent curb or sidewalk.

Exercise care when placing inert groundcover around plant materials so as not to choke, cover or damage plant. Inert groundcover will be kept out of the crowns of the plants.

Areas of installation will be completely weed-free before the placement of inert groundcover. Apply pre-emergent according to manufacturer's recommendations before and after groundcover installation. Feather granite to provide a smooth transition to areas not receiving DG. After placing and grading DG, the Contractor will lightly water the granite to remove fine material from the surface.

#### 3.06 Herbicide Application

All areas shall be maintained weed-free at all times during construction. Do not apply pre-emergent herbicides at locations of revegetation seeding. The contractor shall manually remove invasive weeds within these areas.

#### 3.07 Tree Support

Only stake trees which are delivered with nursery stakes. Remove nursery stakes and install lodgepole per specifications. Install tree supports as shown on the drawings within 48 hours of planting. Bracing stakes will be driven vertically into firm ground and outside the rootball. Tree supports shall be installed to prevent rubbing and girdling, yet allow for trunk movement. Tree ties that encircle trunks shall be large enough to allow for normal growth of the trunk during the first year without girdling.

#### 3.08 Plant Placement

Layout plant locations with stakes or flags prior to planting. Coordinate with developer's representative to assure appropriate location.

Place shrubs no closer than 20 inches from foundations, fences, walls and walks or as far as character of growth demands, whichever is greater, unless directed otherwise by the Developer's Representative.

Place trees no closer than 6 feet to foundations, fences, walls and walks unless directed otherwise by the Developer's Representative.

All plants which settle deeper than the surrounding grade will be rejected and must be raised to correct level.

Where rock, underground construction or other detrimental conditions are encountered at plant pits, Developer's Representative may selective alternate location.

#### 3.09 Container Stock

Test drainage of plant beds and pits by filling with water. Notify developer's representative of areas where water is retained more than 24 hours and request a hardpan planting detail. Any drainage problem must be rectified prior to planting.

Do not expose roots to air except during transplanting.

Dig pits with perpendicular sides to a minimum of 2 to 3 times the width (see details) of the root ball for containerized trees and shrubs. Dig pits only as deep as the root ball to prevent settling of the tree or shrub.

Unless otherwise specified, place all plants in the center of planting pits, plant upright and face to give the best appearance and relationship to the adjacent plants for structures.

Plants will be set in relation to surrounding grade so they are even with depth at which they were grown in nursery or container.

After removing plant from container, scarify sides of rootball to eliminate root bound condition. Do not plant stock if rootball is cracked or broken.

#### 3.10 Boxed Trees

Branches and rootballs must not be damaged.

Top of rootball will be one inch (1") above adjacent finished grade.

Add soil backfill under the tree if needed to bring rootball to proper height.

Planting pit will be backfilled with clean topsoil as box sides are progressively removed to minimize damage to the rootball and to prevent it from collapsing.

Backfill in bottom of planting pit will be to prevent undue settling.

Water the trees at planting as needed until the permanent automatic irrigation system is installed and operating.

#### 3.11 Backfilling

Backfill plant pits and form a temporary shallow basin around the plant to hold enough water to saturate the root ball and backfill. Water plants immediately after planting and allow backfill to settle in plant pit. Do not water ocotillos after planting. Remove basin prior to installation of inert groundcovers or turf.

Treat all planting areas with a pre-emergent, with the exception of the revegetated seed areas.

#### 3.12 Annuals

At time of transplanting, soil in flats shall be sufficiently moist so as not to fall apart when lifting plants. Plant each plant with its proportionate amount of the flat soil in a manner that will ensure a minimum disturbance to the root structure.

Plant flat material sufficiently deep to cover all roots. Firmly tamp the earth around each plant to force out large air pockets.

#### 3.13 Sod

##### Soil Preparation

Provide soil with an organic matter content of 25 percent to 30 percent. Incorporate into soil by tilling the soil to a depth of 6 inches thoroughly remove debris, weeds and rocks from soil.

##### Soil Amendments

Prior to tilling, apply gypsum at a rate of 100 pounds per 1,000 square feet, phosphate at a rate of two pounds per 1,000 square feet and soil sulfur at five pounds per 1,000 square feet.

##### Sod Installation

Install sod along the straightest edge of turf area. Stagger joints in a brick-like pattern. Avoid gaps and overlapping. Place sod diagonally across slopes, so it cannot slide, and so that it provides complete cover with no brown sections or cracks showing. Water sod at least every thirty minutes. After installation, water lightly and roll in two directions with a sod roller.

#### 3.14 Watering

Water all plants immediately after planting to avoid drying out, to the full depth, saturating the root ball of each plant hole repeat watering as often as necessary to keep the ground moist but not soaked, well below the root system of the plants.

#### 3.15 Clean Up

Keep all areas clean and orderly during and after execution of work.

#### 3.16 Pruning

Prune shrubs and trees upon completion of the work, according to standard horticultural practices to preserve the natural character of the species and to repair or replace injured plants as directed. Limit pruning only to remove dead or injured twigs and branches and to compensate for loss of roots as a result of planting operations.

#### 3.17 Maintenance Period

Upon substantial completion, as determined by the Developer's Representative, in accordance with the conditions of the contract, the contractor shall be notified in writing that the maintenance period is to begin.

Landscape contractor shall be responsible for maintenance of landscaped areas for a period of 90 days. Maintenance includes watering trees and grasses, monitoring and adjusting the irrigation system as necessary, mowing and trimming lawn areas, pruning and trimming plant material, weed removal, and cultivating plant beds.

Landscape contractor shall be responsible for maintenance of the sprinkler irrigation system, including monitoring and adjusting the duration and frequency of the watering schedule, adjustment of heads for coverage and elevation, repair of leaks in both main and lateral lines, and all other work required to establish a complete working sprinkler irrigation system.

Landscape contractor shall be responsible for maintenance of new planting, including watering, cultivating, weeding, mulching, re-staking, tightening and repairing guys, resetting plants to proper grades and position, maintenance of temporary tree wells, and furnishing and supplying all fertilizers, herbicides, and pesticides to maintain a thriving landscape.

Landscape contractor, in order to protect his guarantee, shall give typewritten to developer, a complete maintenance manual in the care, maintenance and fertilization of the landscape. Maintenance manual may include, but is not limited to the following: irrigation, fertilization, weeding, pesticide and herbicide application, pruning, resetting unstable plants, mowing, repairing, adjusting or replacing stake and guying, repair damage caused by weather, wildlife and vandalism or other hazards, perform maintenance operations necessary to assure healthy plant growth.

Landscape contractor shall request, in writing, a final inspection at the completion of the maintenance period. If the developer's representative determines the work is satisfactory, the maintenance period will end on the date of the final inspection. If the maintenance is unsatisfactory, the maintenance period will be extended, at the contractor's expense, until such time as all corrections are made and the work is inspected and approved by the developer's representative. Retention will not be released until final inspection is made and approval issued by the developer's representative.

#### 3.18 Field Quality Control

Notify Developer's Representative of the requirement for inspections at least 48 hours in advance. Inspections are required, but not limited to, the following:

- Inspection and acceptance of plant material prior to shipping.
- At completion of rough grade prior to boulder placement.
- At completion of landscape finish grading and soil preparation, prior to planting.
- At layout of irrigation system, prior to installation of irrigation system.
- A installation of irrigation system, prior to backfilling trenches and planting
- During installation of specimen tree, palm or other specimen plant material.
- After staking locations for plant holes, but prior to planting.
- During the planting process.
- During the placement and aiming of all light fixtures
- At substantial completion of the work.
- During warranty period to observe maintenance procedures.
- At final completion of the work.

16-400

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Paloma Creek  
Enclave 4  
City of Surprise, Arizona

Landscape Specifications

Project:

Revisions:

1ST SUBMITTAL: 11/28/2022  
2ND SUBMITTAL: 03/23/2023  
3RD SUBMITTAL: 05/03/2023

Call at least two full working days before you begin excavation.  
ARIZONA  
SEAL

Designer: AS  
Drawn by: JA



Job No.

16-400

CONSTRUCTION DOCUMENTATION

Sheet No.

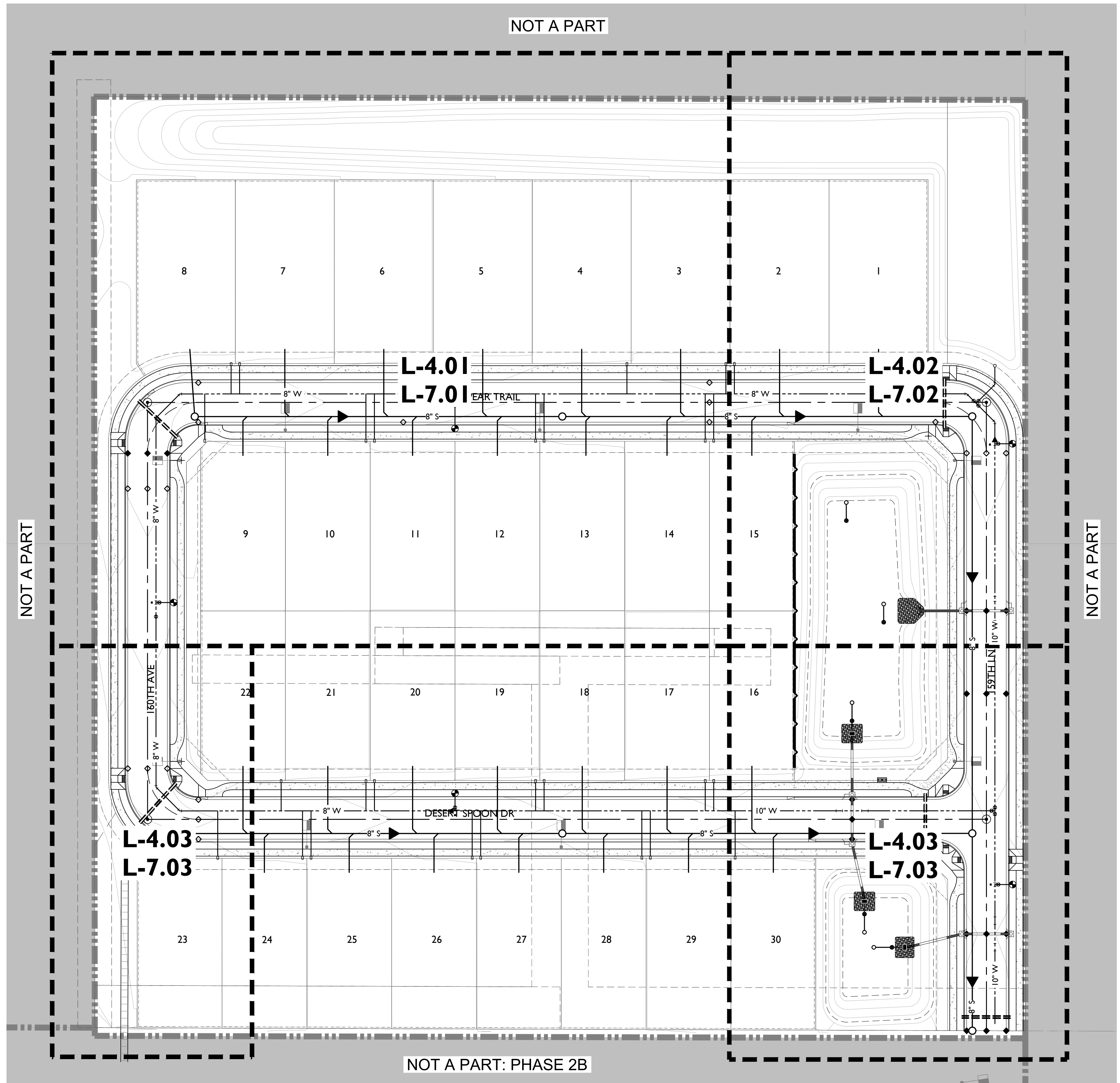
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Case #FS22-1632



# PLANTING AND IRRIGATION PLANS



## SHEET LAYOUT KEY LEGEND

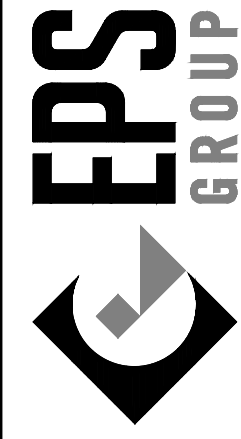
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PLANTING PLANS	L-4.01 - L-4.03
IRRIGATION PLANS	L-7.01 - L-7.03

16-400

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jdiaz

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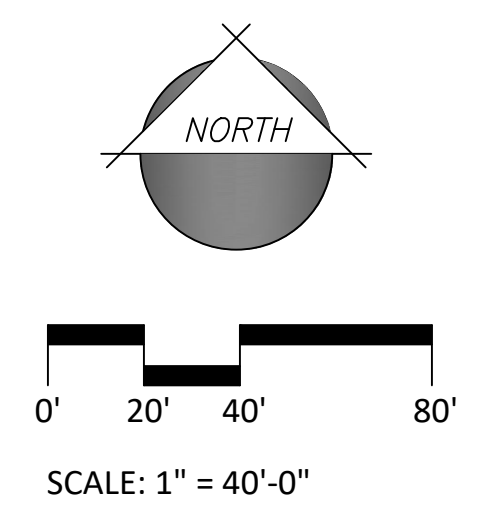
Project: Paloma Creek  
Enclave 4  
City of Surprise, Arizona  
Sheet Layout Key

Revisions:

NO.	DATE	DESCRIPTION
1ST SUBMITTAL	1/17/2023	
2ND SUBMITTAL	03/23/2023	
3RD SUBMITTAL	05/03/2023	



Designer: AS  
Drawn by: JA



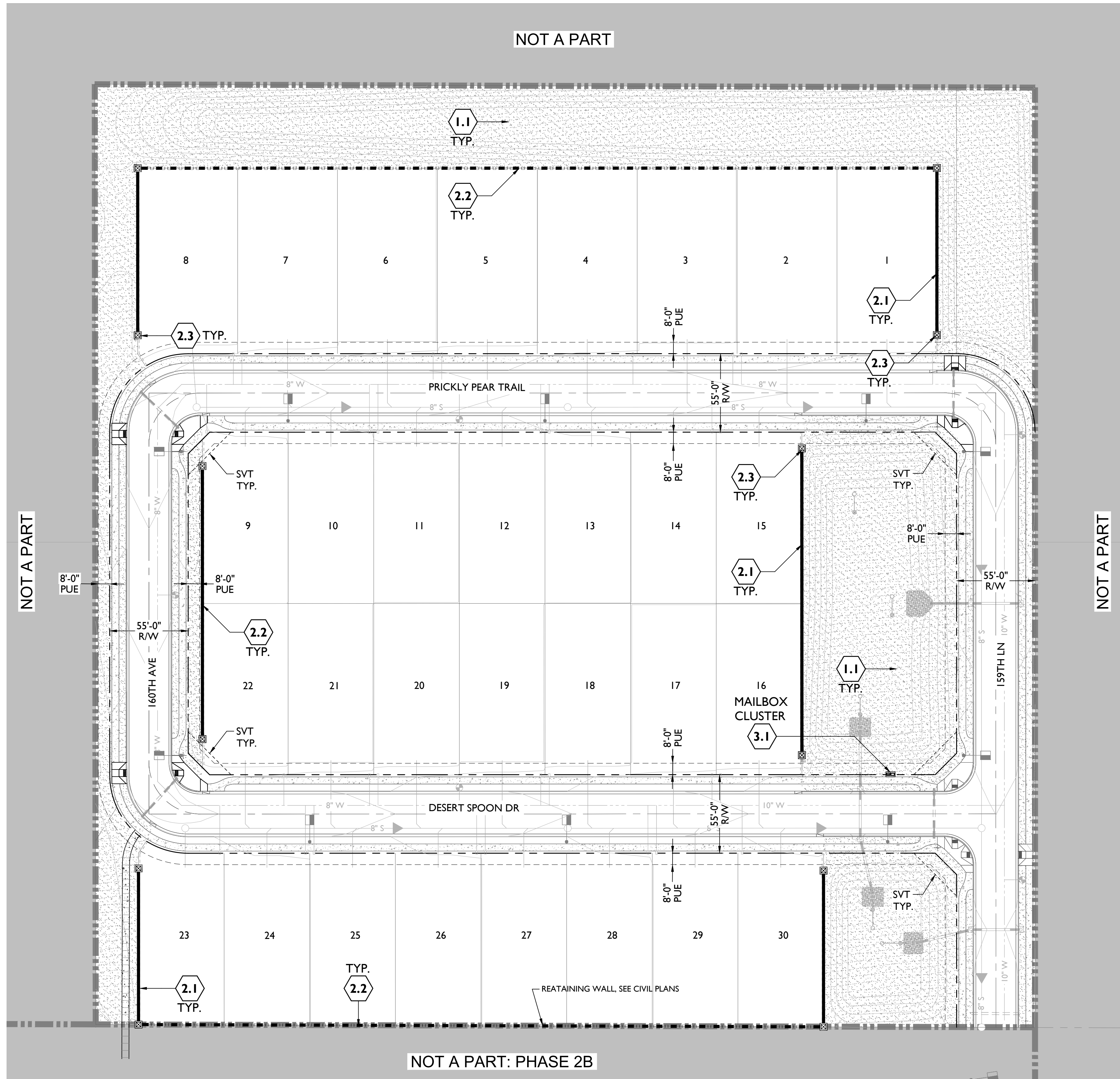
Job No.  
**16-400**

CONSTRUCTION DOCUMENTATION

Sheet No.  
**L-1.01**

4 of 17





**SITE DETAIL KEYNOTES**

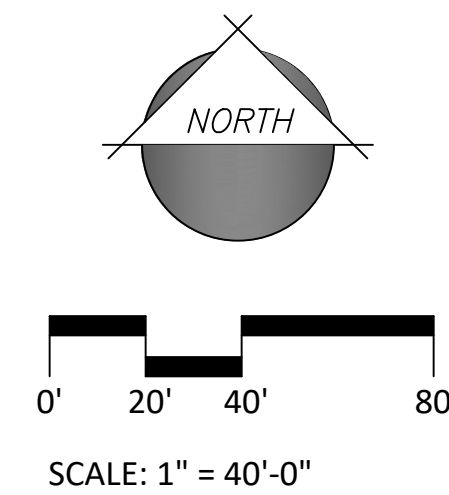
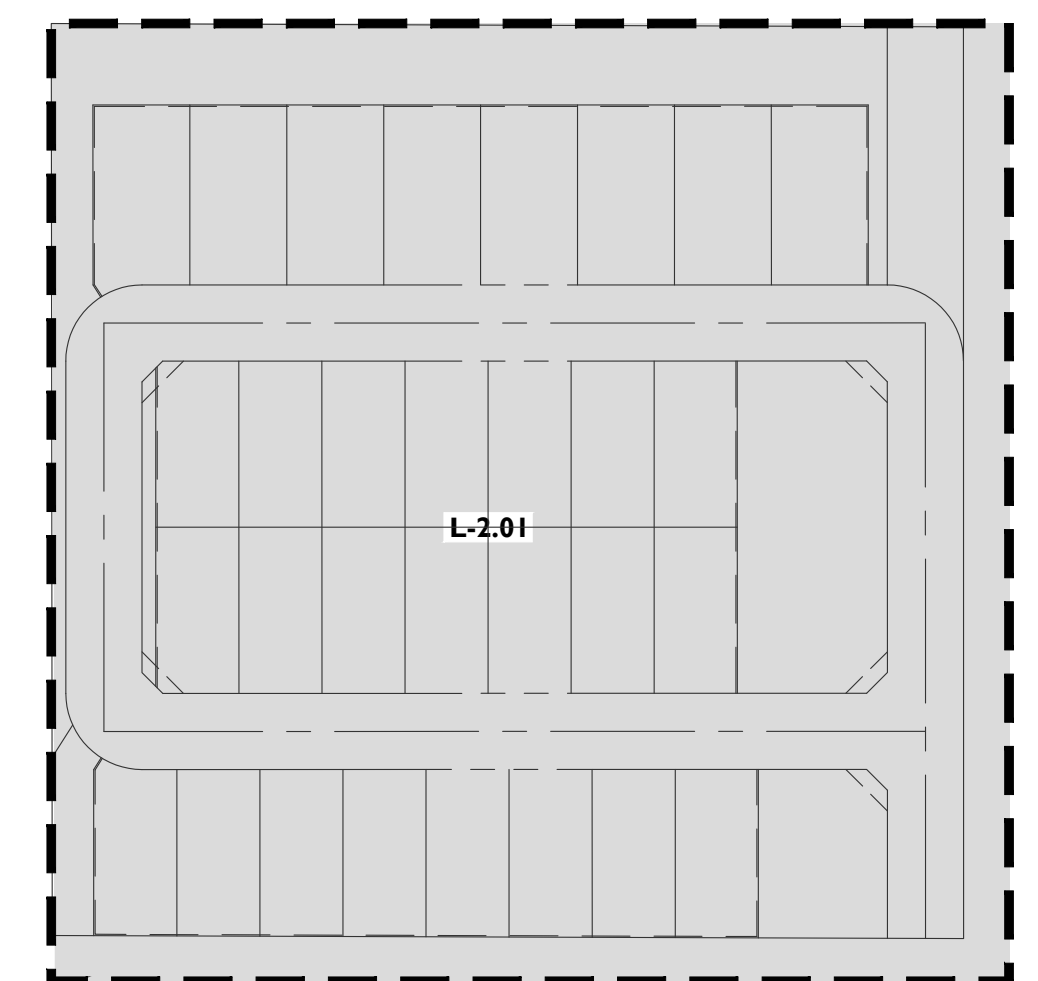
PAGE #/DETAIL #

KEYNOTE	DESCRIPTION	PAGE #/DETAIL #
1.0	PAVEMENTS	
1.1	DECOMPOSED GRANITE	L-3.01/1
2.0	WALLS / EMBANKMENTS	
2.1	PRIMARY THEME WALL	L-3.01/3
2.2	PARTIAL VIEW FENCE	L-3.01/6
2.3	PRIMARY THEME COLUMN	L-3.01/4
3.0	MISCELLANEOUS	
3.1	MAILBOX	L-3.01/7

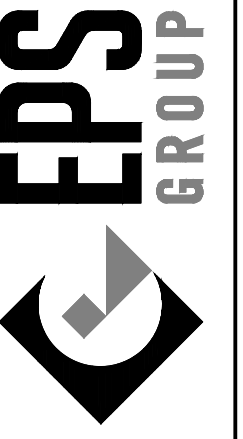
**WALLS LEGEND**

SYMBOL	ITEM
	DECORATIVE COLUMN 'TYPE A'
	PRIMARY THEME WALL
	PARTIAL VIEW FENCE

**KEY MAP**



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Paloma Creek  
Enclave 4  
City of Surprise, Arizona  
**Material & Wall Plan**

Project: Paloma Creek Enclave 4

Revisions:

1ST SUBMITTAL: 1/28/2023	AS
2ND SUBMITTAL: 03/23/2023	JA
3RD SUBMITTAL: 05/03/2023	JA

Call or text at least two full working days before you begin construction.

DESIGNER: AS  
DRAWN BY: JA

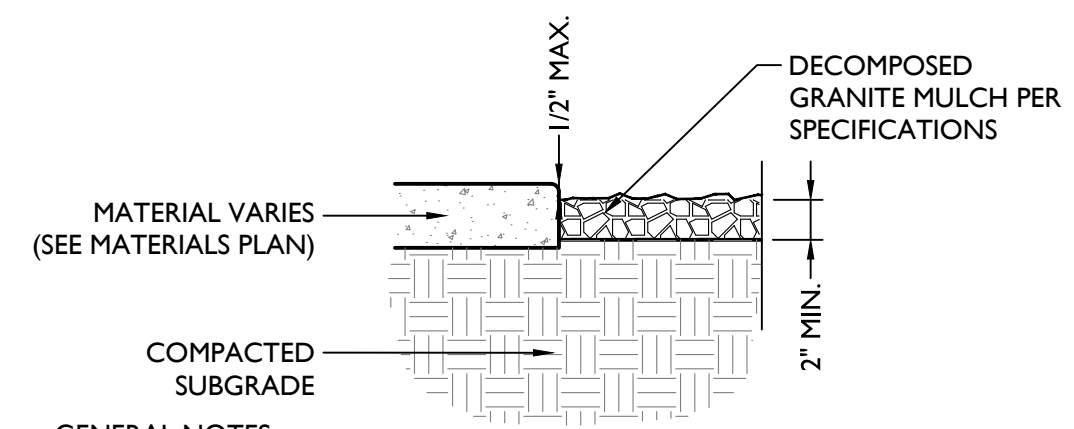


Job No.  
**16-400**

CONSTRUCTION DOCUMENTATION

Sheet No.  
**L-2.01**





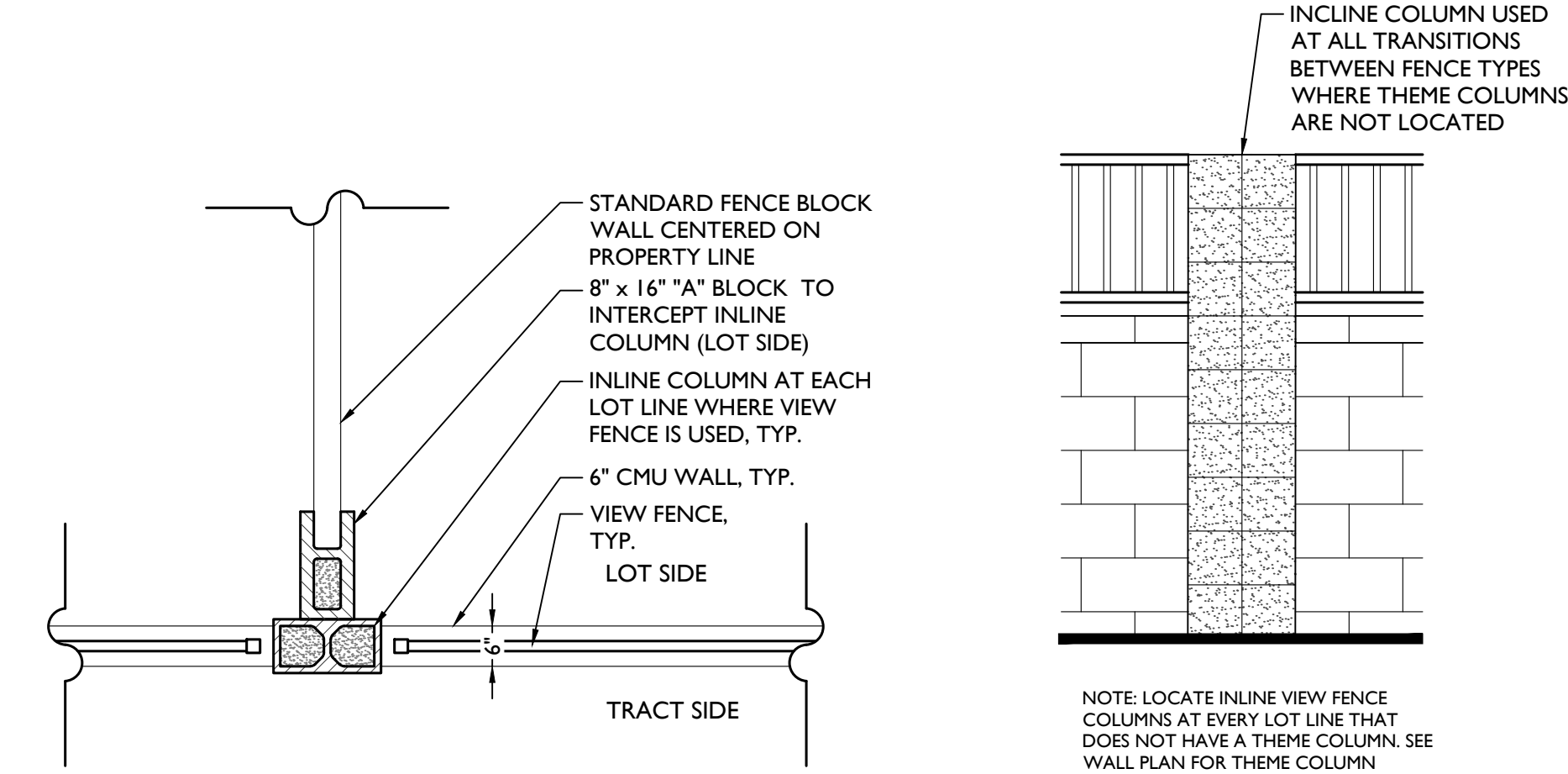
GENERAL NOTES:

1. APPLY PRE-EMERGENT HERBICIDE AT SUBGRADE AFTER FINAL GRADE HAS BEEN ESTABLISHED AND PRIOR TO SPREADING DECOMPOSED GRANITE.
2. EVENLY SPREAD 2" MIN. OF GRANITE ON COMPACTED FINISHED GRADE.
3. GRANITE TO BE SPRAYED WITH WATER TO CLEAN SMALLER DEPOSITS AND GRANITE DUST AND ALSO TO SETTLE GRANITE EVENLY.

### 1 DECOMPOSED GRANITE MULCH

Scale: 1"=1'-0"

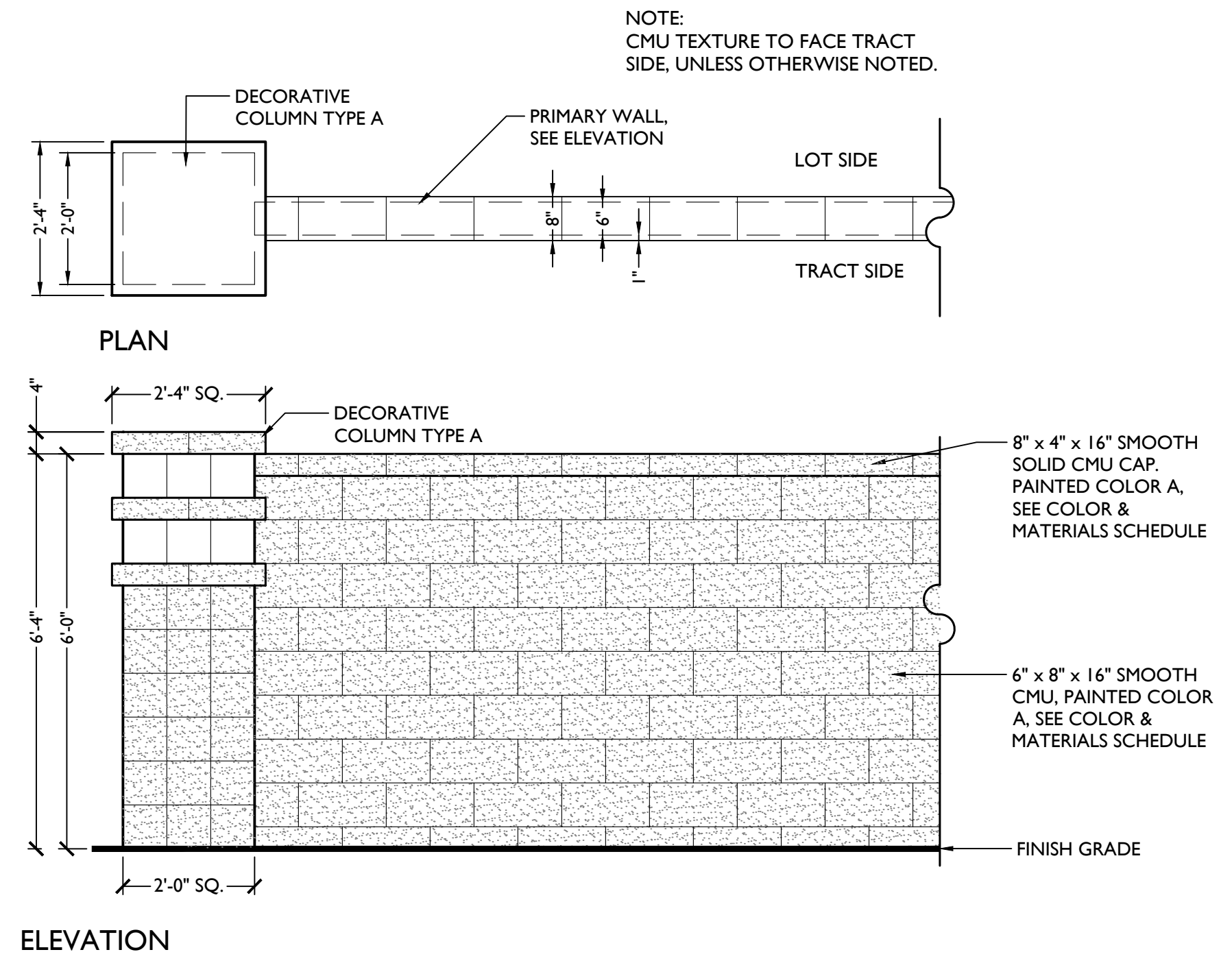
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### 2 COLUMN LAYOUT

Scale: 1"=1'-0"

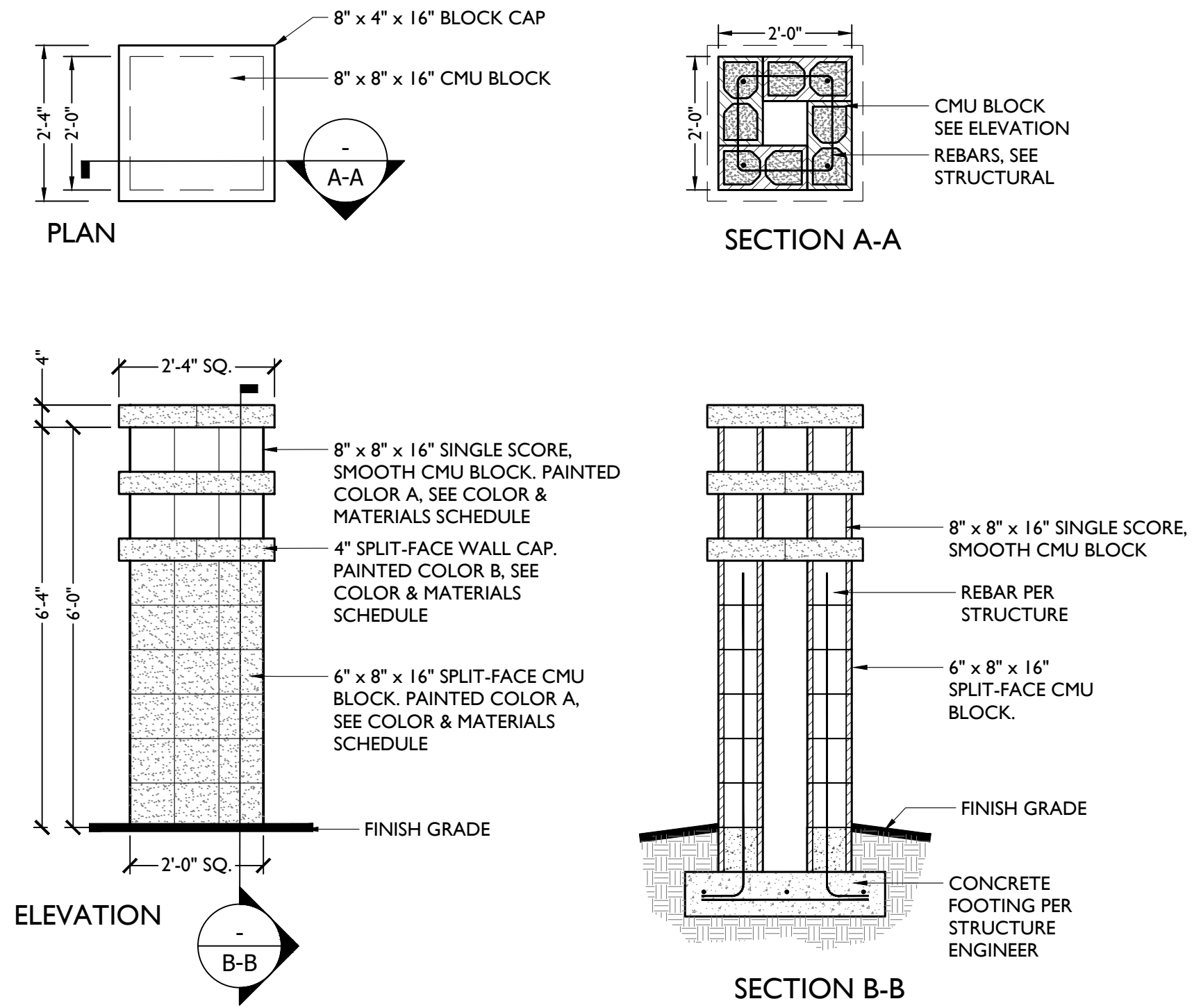
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### 3 PRIMARY THEME WALL

Scale: 1/2"=1'-0"

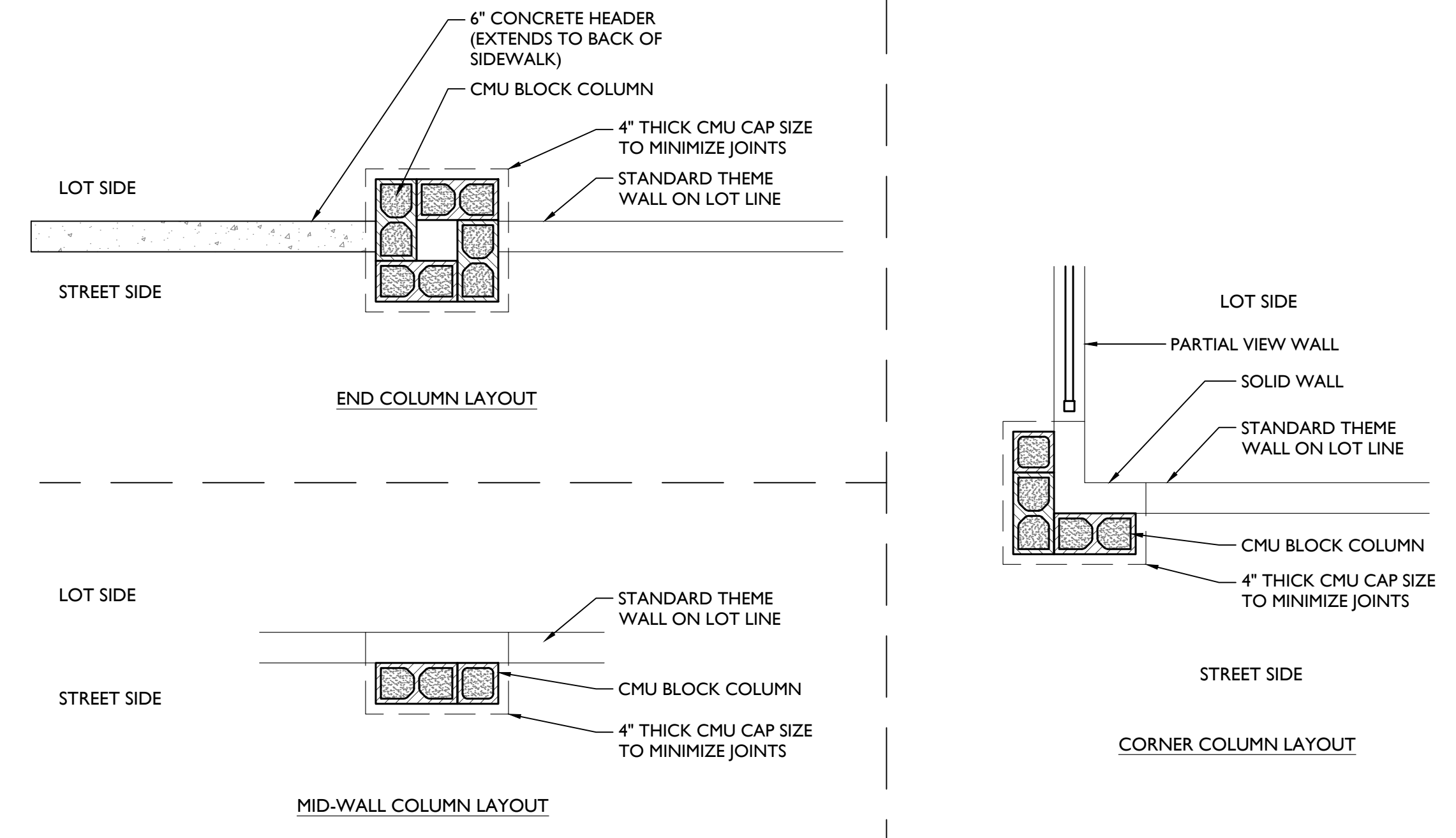
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### 4 PRIMARY THEME COLUMN

Scale: 1/2"=1'-0"

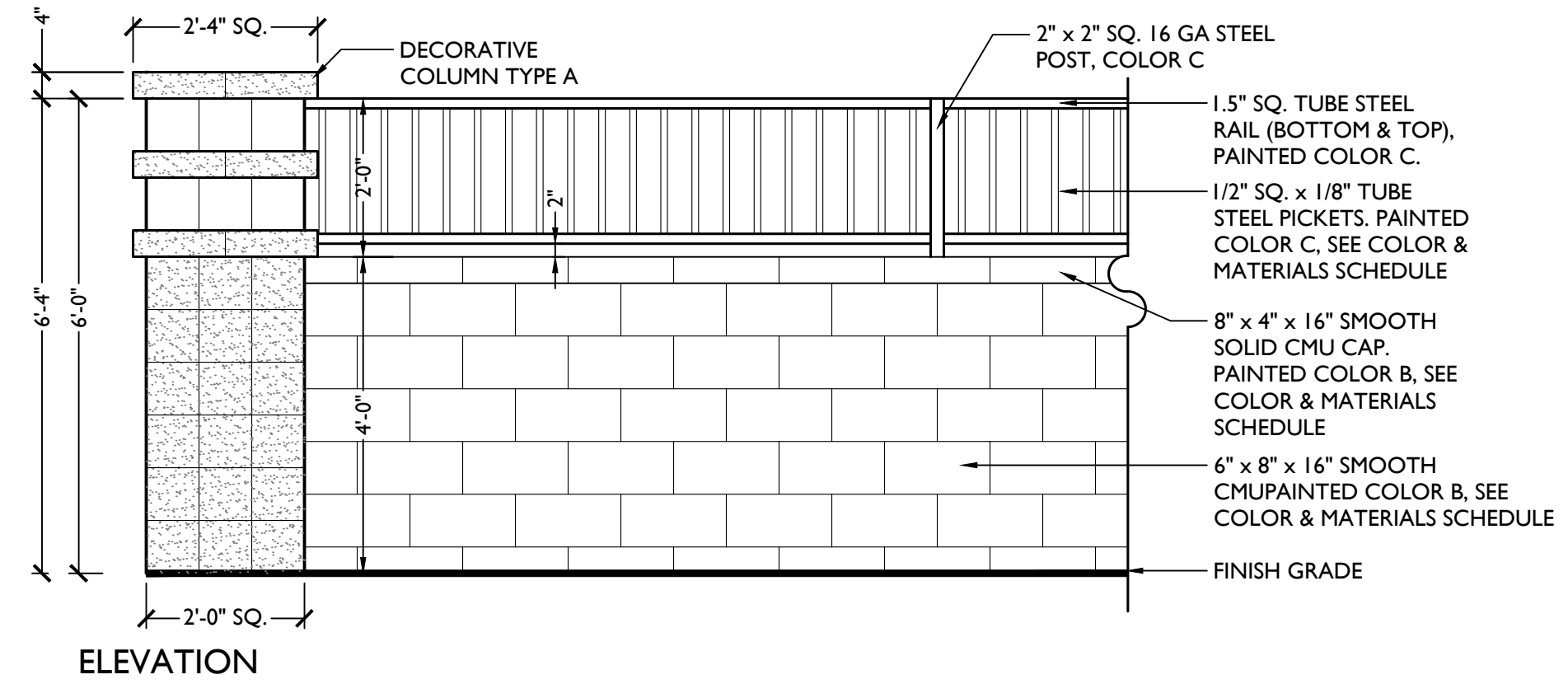
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### 5 COLUMN LAYOUT

Scale: 1/2"=1'-0"

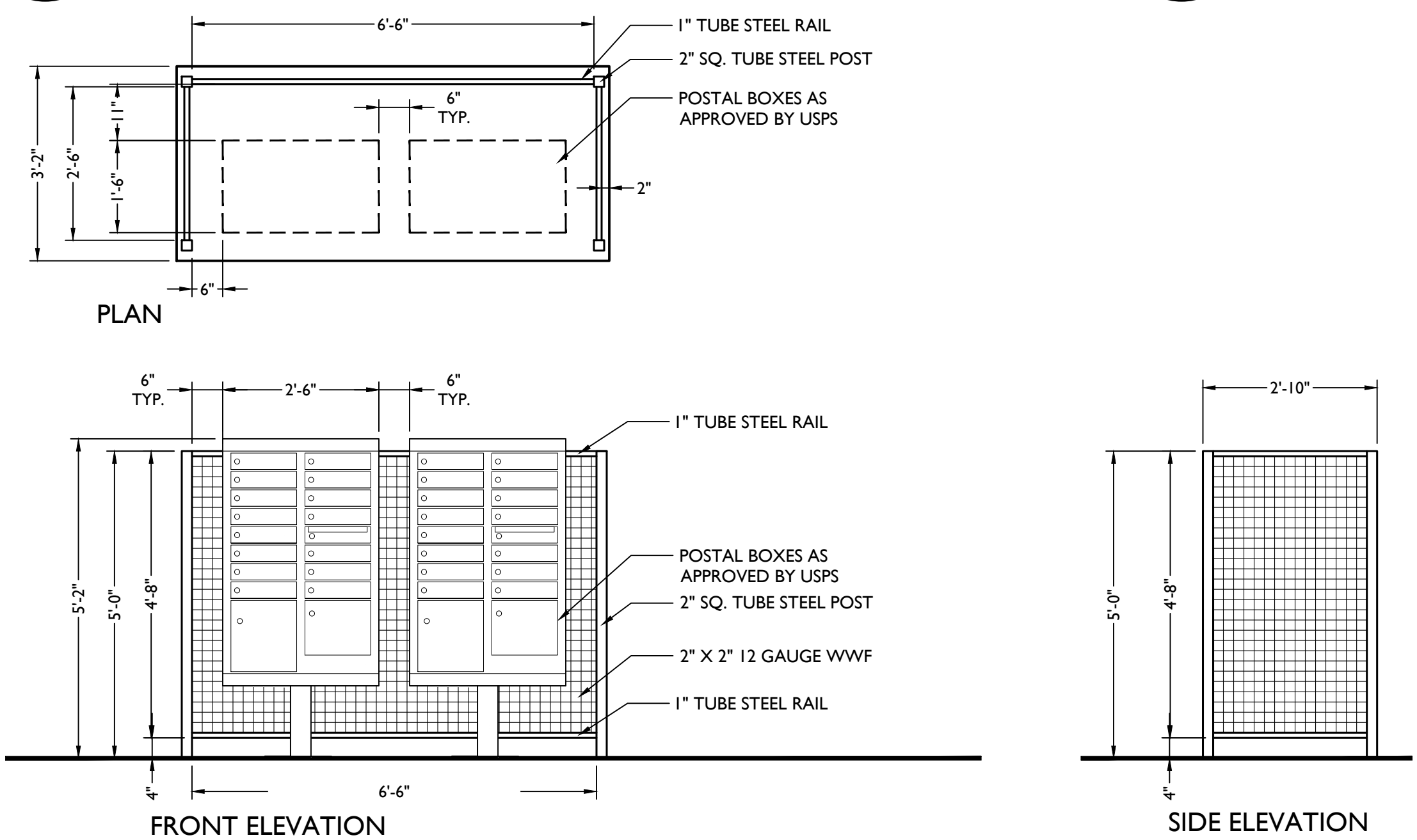
2.3



### 6 PARTIAL VIEW FENCE

Scale: 1/2"=1'-0"

2.2



### 7 MAILBOX CLUSTER DETAIL

Scale: 1/2"=1'-0"

3.1

## SITE DETAIL KEYNOTES

PAGE #/DETAIL #

1.0	PAVEMENTS	
1.1	DECOMPOSED GRANITE	L-3.01/1
2.0	WALLS / EMBANKMENTS	
2.1	PRIMARY THEME WALL	L-3.01/3
2.2	PARTIAL VIEW FENCE	L-3.01/6
2.3	PRIMARY THEME COLUMN	L-3.01/4
3.0	MISCELLANEOUS	
3.1	MAILBOX	L-3.01/7

## COLOR & MATERIALS SCHEDULE

ITEM	COLOR & MANUFACTURER
COLOR A (CMU)	SW9547 'VESSEL' BY SHERWIN WILLIAMS, OAE
COLOR B (CMU)	SW7026 'GRIFFIN' BY SHERWIN WILLIAMS, OAE
COLOR C (STEEL)	POWDER COATED TO MATCH COLOR: RAL 7043 TRAFFIC GREY B, OAE
COLOR D (CONCRETE CAP)	PRECAST CONCRETE CAP; COLOR #18 WHITE, BY MESA PRECAST

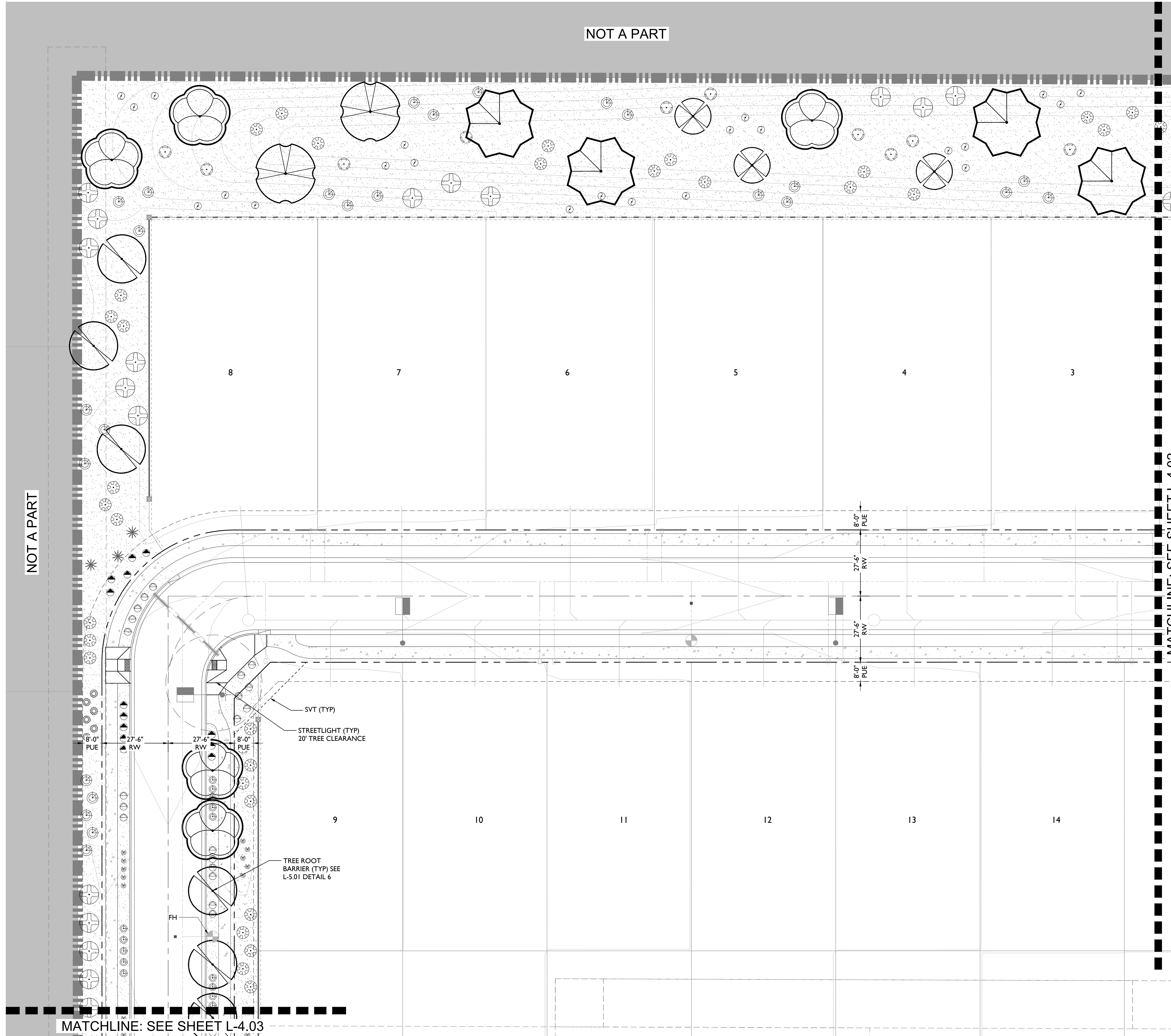
GENERAL NOTES:

1. SUBMIT SAMPLES TO LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE FOR APPROVAL.

Revisions:

1ST SUBMITTAL: 11/28/2022
2ND SUBMITTAL: 03/23/2023
3RD SUBMITTAL: 05/03/2023





NOT A PART

NOT A PART

MATCHLINE: SEE SHEET L-4.02

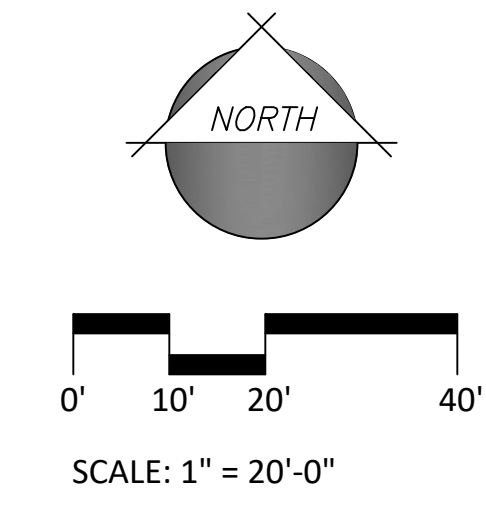
MATCHLINE: SEE SHEET L-4.03

### PLANT LEGEND

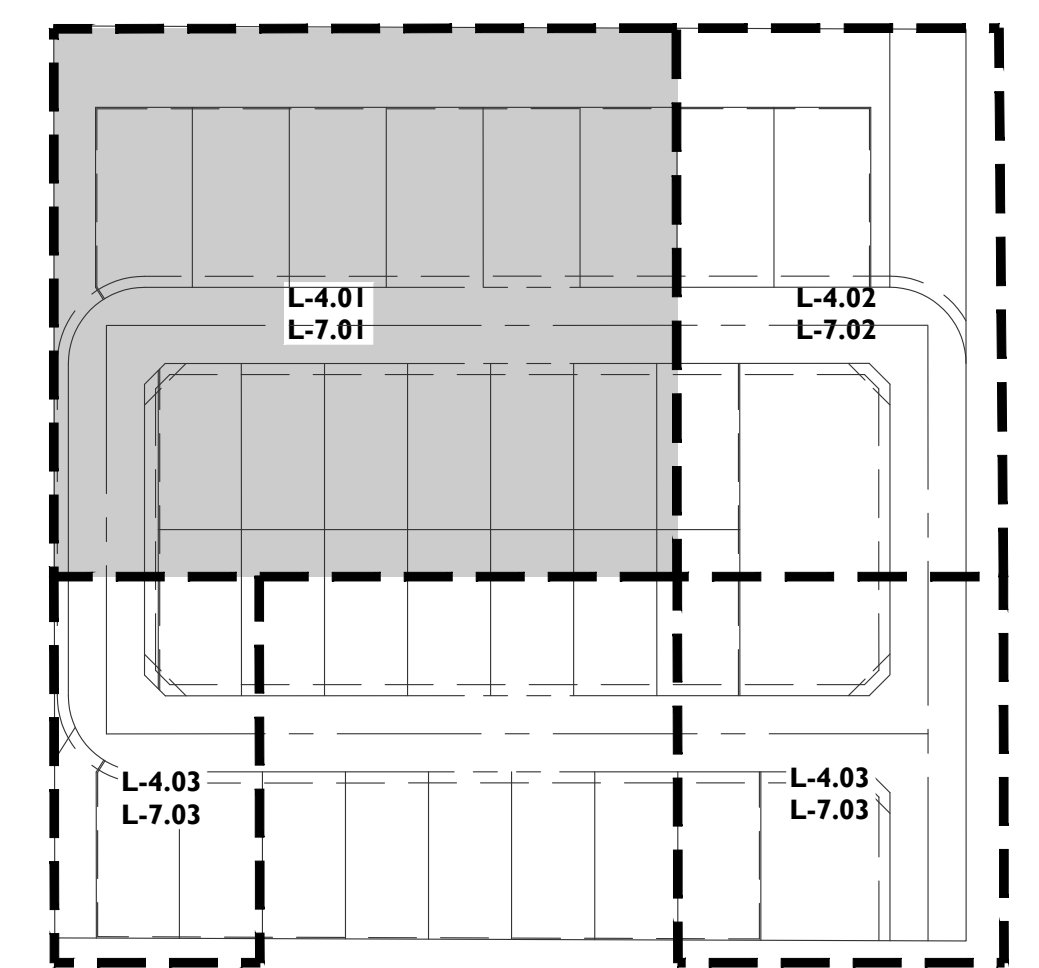
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE
<b>TREES</b>			
	Acacia aneura	Mulga	24" Box
	Acacia salicina	Willow acacia	24" Box
	Chilopsis linearis	Desert Willow	24" Box
	Parkinsonia x 'Desert Muesum'	Desert Museum Palo Verde	36" Box
	Prosopis hybrid 'Phoenix'	Thornless Mesquite	24" Box
<b>SHRUBS/ACCENTS</b>			
	Bougainvillea 'La Jolla'	'La Jolla' Bougainvillea	5 Gal
	Calliandra eriophylla	Pink Fairy Duster	5 Gal
	Dasyliiron wheeleri	Desert Spoon	5 Gal
	Dodonea viscosa	Hop Bush	5 Gal
	Encelia farinosa	Brittlebush	5 Gal
	Eremophila hygrophana 'Blue Bells'	Blue Bells	5 Gal
	Eremophila maculata 'Valentine'	Valentine Bush	5 Gal
	Hesperaloe parviflora 'Brakelights'	Brakelights Red Yucca	5 Gal
	Leucophyllum laevigatum	Chihuahuan Sage	5 Gal
	Muhlenbergia capillaris 'Regal Mist'	Regal Mist Muhly	5 Gal
<b>GROUNDCOVERS</b>			
	Acacia redolens Desert Carpet	Prostrate Acacia	1 Gal
	Lantana montevidensis	Trailing Purple Lantana	1 Gal
	Lantana x 'New Gold'	New Gold Lantana	1 Gal
	Rosmarinus officianlis 'Huntington Carpet'	Trailing Rosemary	1 Gal

### MATERIALS LEGEND

SYMBOL	ITEM	SIZE
	Apache Brown Decomposed Granite (OAE)	3/4" Screened 2" Depth, Min.
	Standard concrete paving	



### KEY MAP



1130 N. Alma School Road, Suite 120  
Mesa, AZ 85201  
T: 480.503.2250 | F: 480.503.2258  
www.epsgrupp.com

Project:

**Paloma Creek  
Enclave 4**  
City of Surprise, Arizona

Revisions:

No.	Description	By	Date

1ST SUBMITTAL: 1/12/2023

2ND SUBMITTAL: 03/23/2023

3RD SUBMITTAL: 05/03/2023

Call or text 811 or 1-800-4-A-ARIZONA (477-6246) in Maricopa County, 602-263-1100

Designer:

AS

Drawn by:

JA

Job No.  
**16-400**

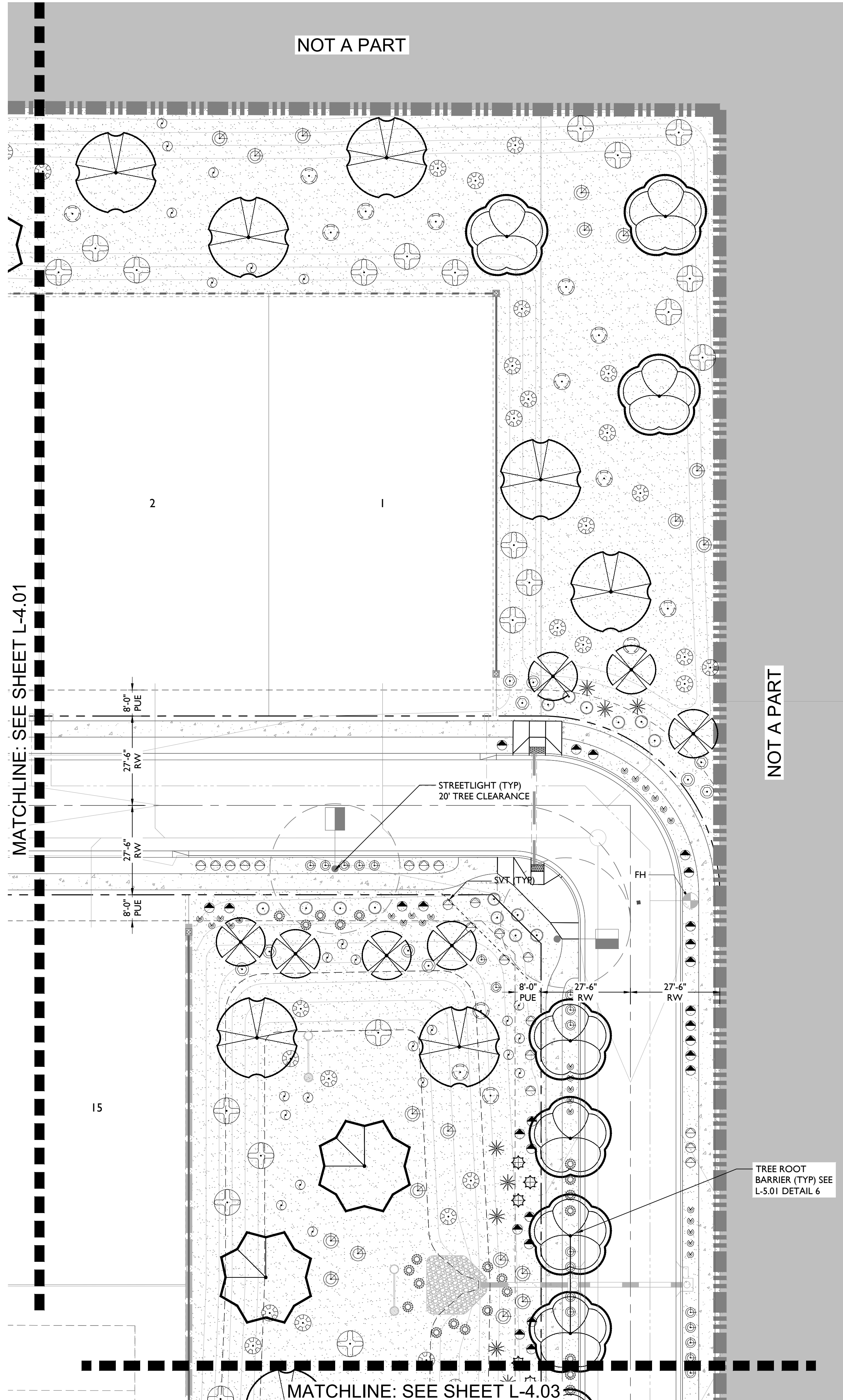
CONSTRUCTION DOCUMENTATION

Sheet No.

L-4.01

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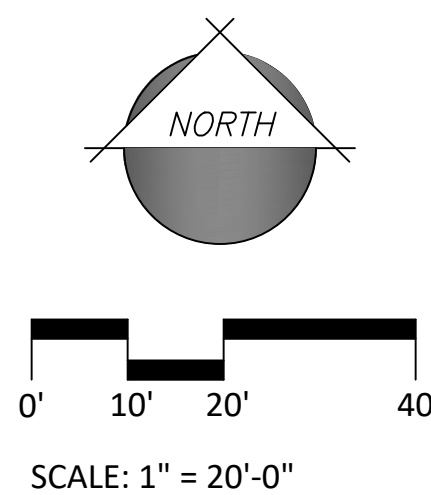
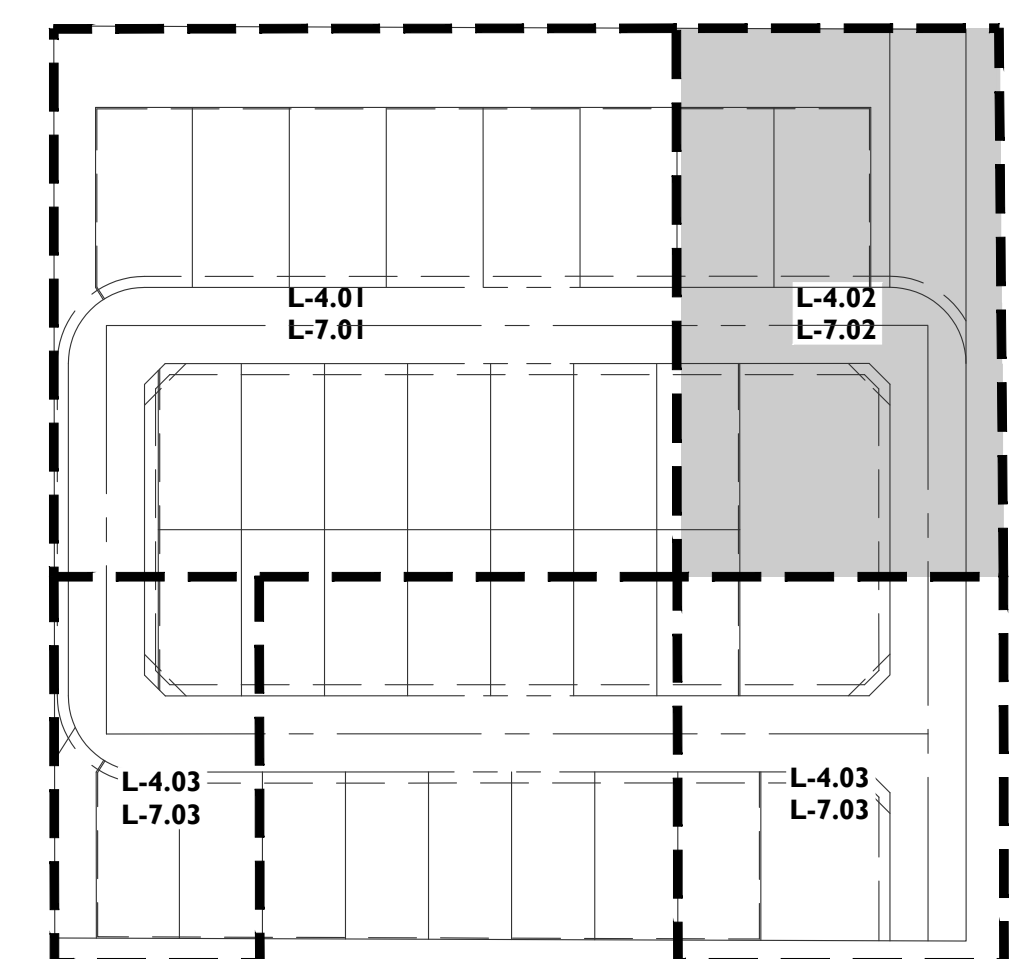
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	Encelia farinosa	Brittlebush	5 Gal
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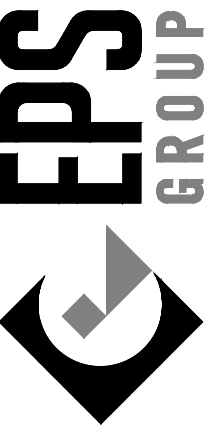
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SYMBOL	ITEM	SIZE
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**KEY MAP**



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Paloma Creek  
Enclave 4  
City of Surprise, Arizona

**Planting Plan**

Project:

Revisions:

1ST SUBMITTAL: 1/12/2023	
2ND SUBMITTAL: 03/23/2023	
3RD SUBMITTAL: 05/03/2023	



Designer: AS  
Drawn by: JA



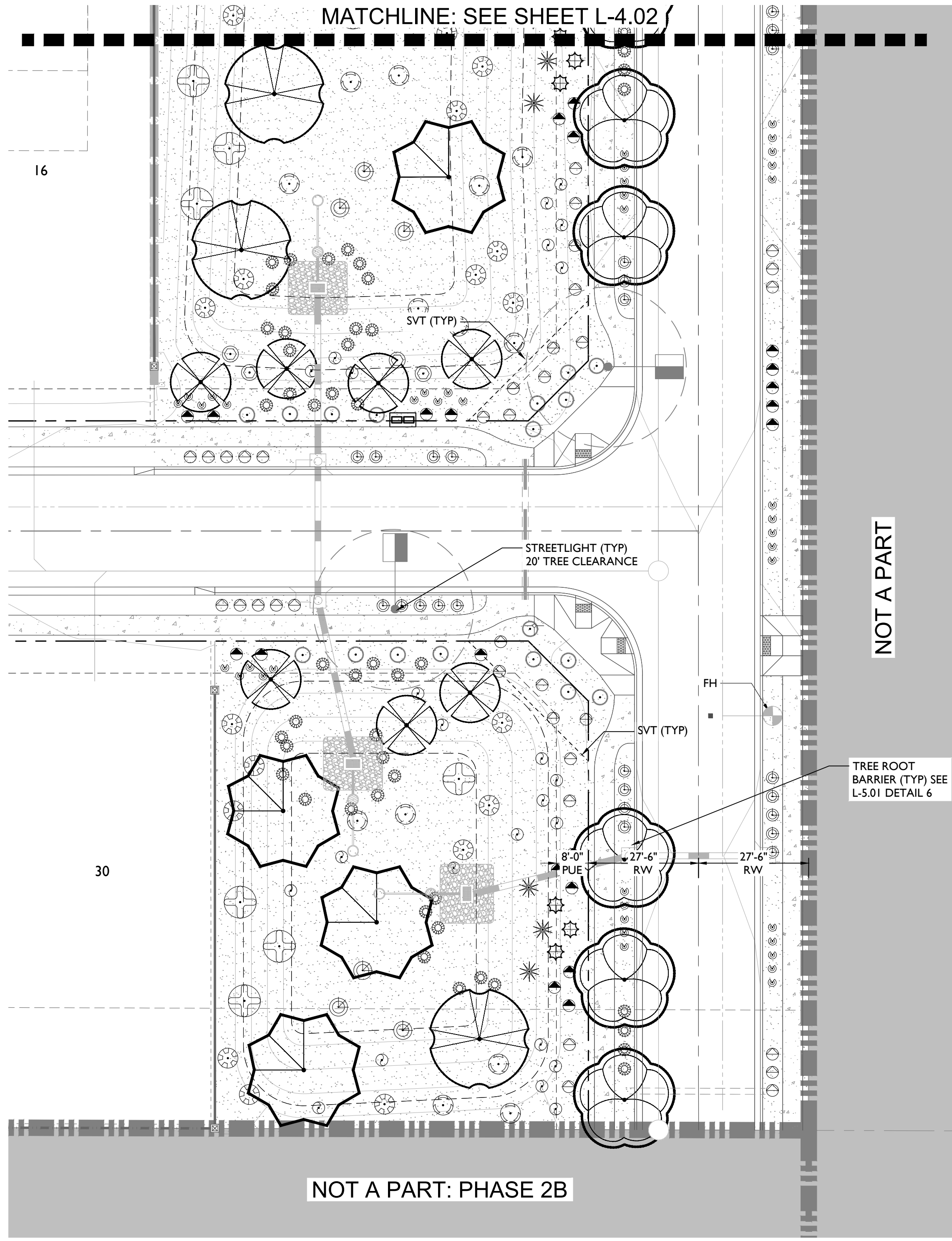
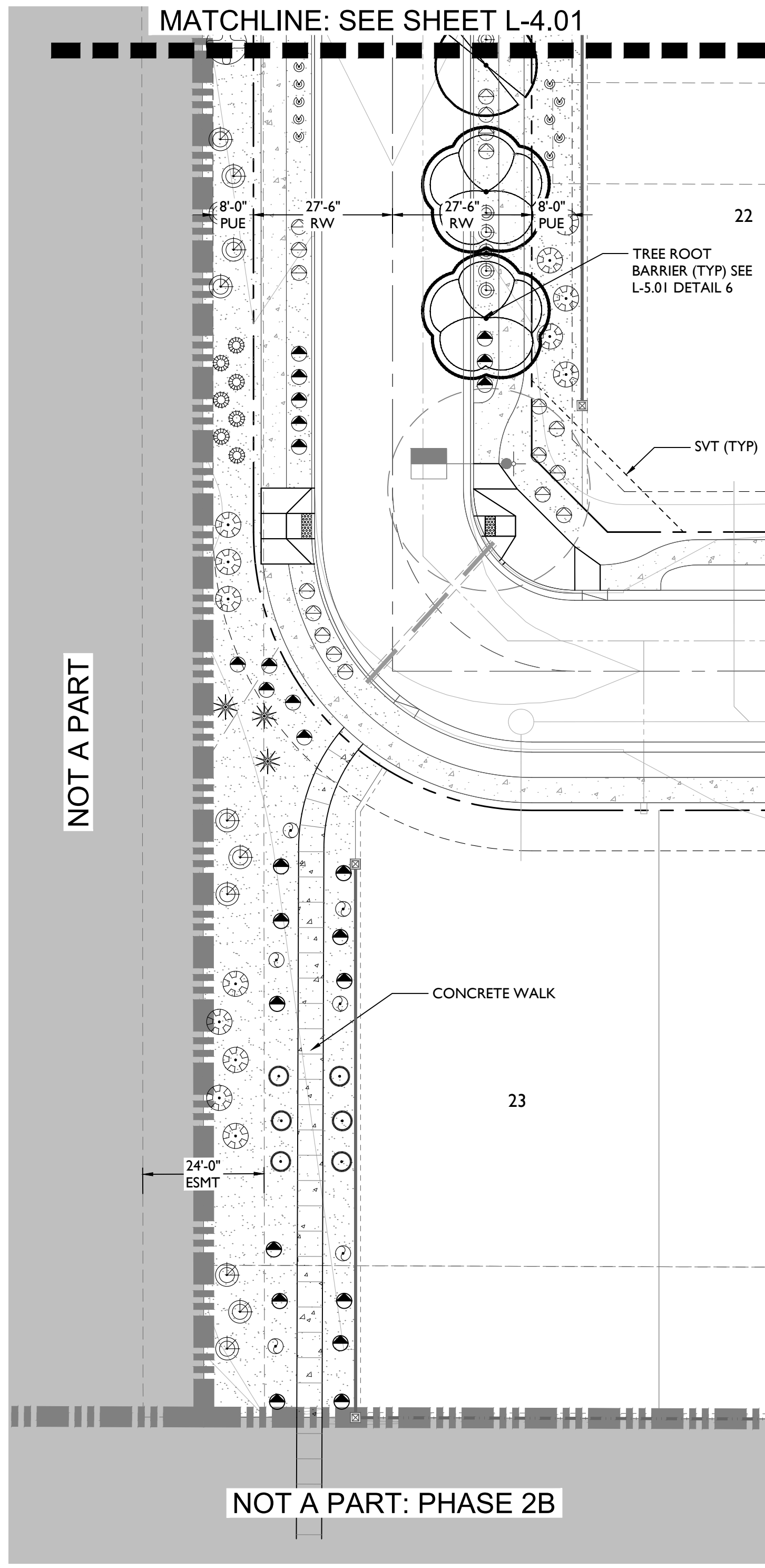
Job No.  
**16-400**

CONSTRUCTION DOCUMENTATION

Sheet No.  
**L-4.02**

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**PLANT LEGEND**

SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE
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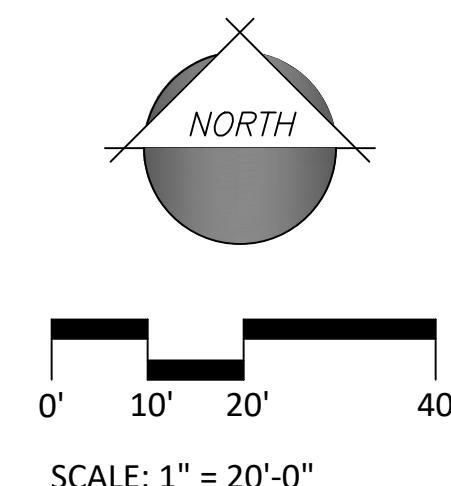
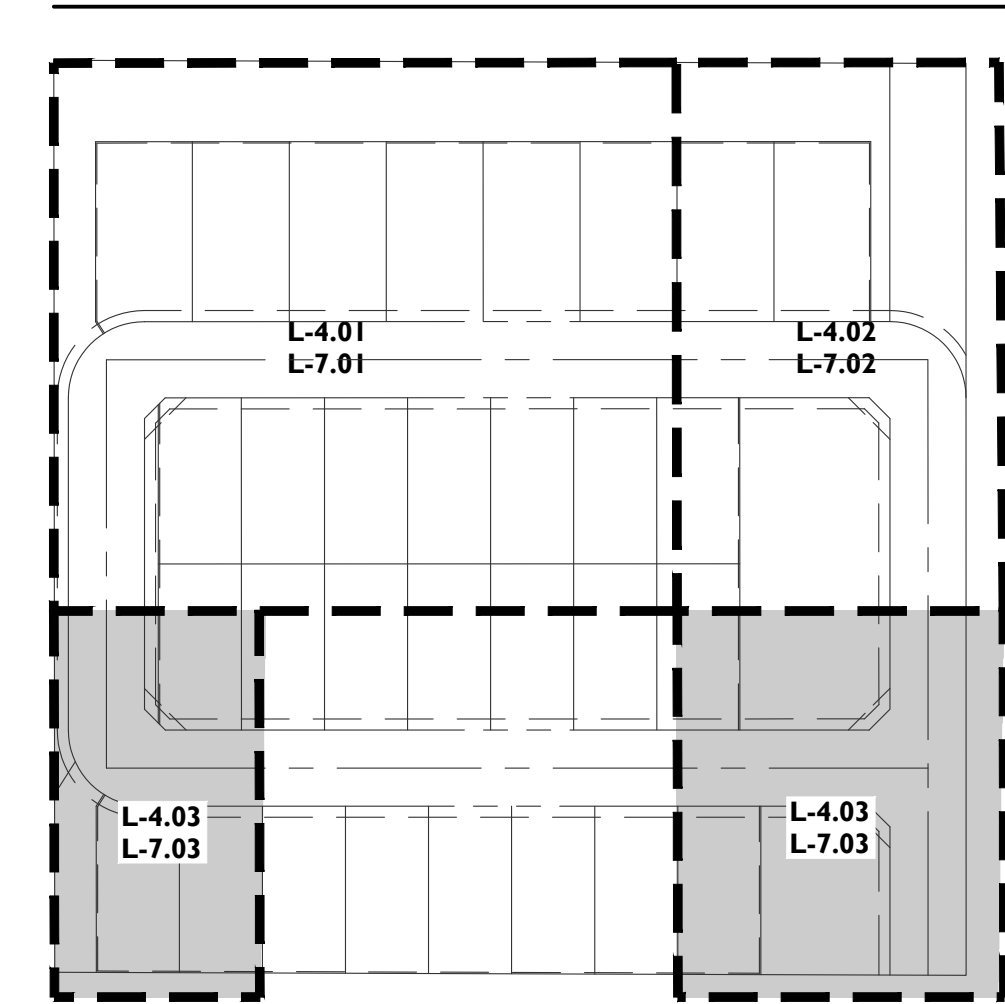
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	Leucophyllum laevigatum	Chihuahuan Sage 5 Gal
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SYMBOL	COMMON NAME	SIZE
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**KEY MAP**



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**EPS GROUP**

Paloma Creek  
Enclave 4  
City of Surprise, Arizona

**Planting Plan**

Project:

Revisions:

1ST SUBMITTAL: 1/12/2023  
2ND SUBMITTAL: 03/23/2023  
3RD SUBMITTAL: 05/03/2023

Call or text at least two full working days before you begin construction.

**ARIZONA**  
Professional Seal  
DESIGNER: AS  
DRAWN BY: JA

REGISTERED LANDSCAPE ARCHITECT  
45568  
ALIZA E. SABIN  
Expires 5-31-23  
ARIZONA, U.S.A.

Job No.  
**16-400**

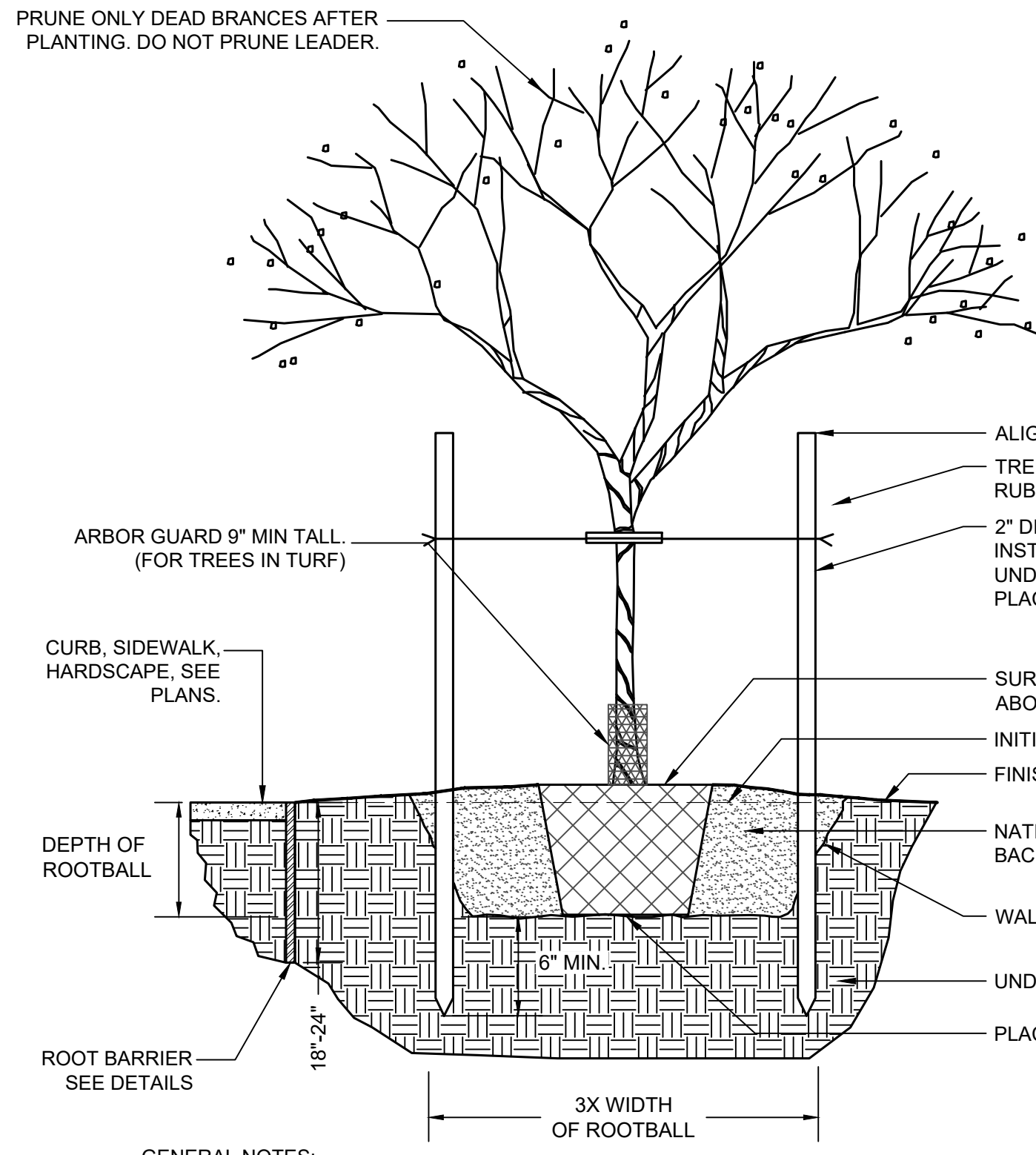
CONSTRUCTION DOCUMENTATION

Sheet No.  
**L-4.03**

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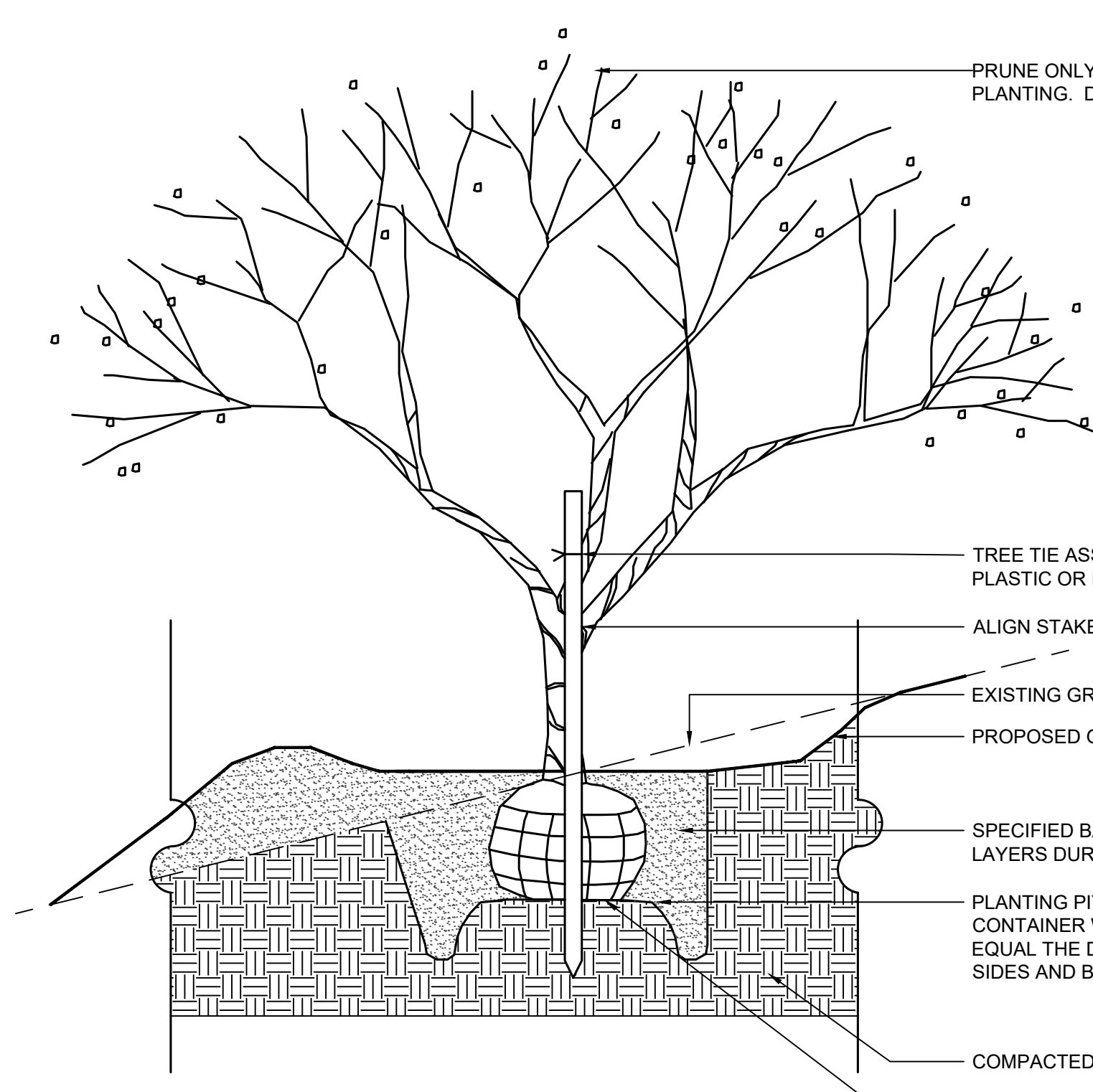
Case #FS22-1632



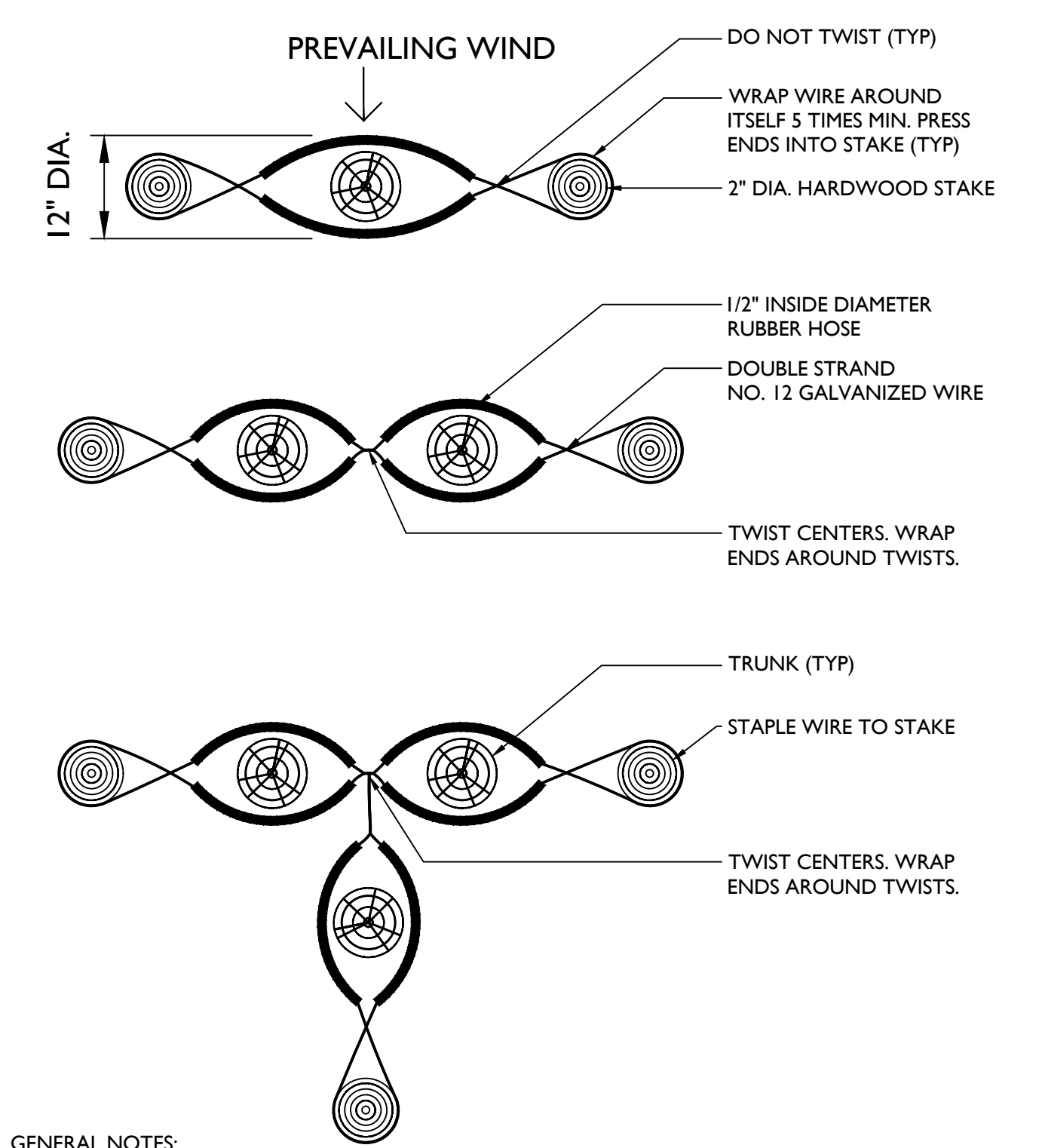


- ROOT BARRIER NOTES:**
1. TOP OF ROOT CONTROL BARRIER MUST BE AT GRADE.
  2. PROVIDE A MIN. OF 12 FEET OF ROOT BARRIER PER TREE.
  3. ROOT BARRIER SHALL BE A MIN. OF 18" BELOW GRADE ON WALKS & A MIN. OF 24" BELOW GRADE ON CURB SIDE.
  4. CONTRACTOR SHALL SUBMIT CUT SHEETS OF ROOT BARRIER FOR OWNER AND L.A. APPROVAL.

- GENERAL NOTES:**
1. SET CROWN OF ROOTBALL 2" ABOVE FINISH GRADE AFTER SETTLEMENT. DO NOT COVER CROWN WITH SOIL.
  2. FOR TREES ADJACENT TO SIDEWALK, LOWER MOST BRANCH HEIGHT SHALL BE 7'-0" MIN FROM SIDEWALK GRADE.
  3. HANDLE BY ROOTBALL ONLY, DO NOT HANDLE TREE TOP.
  4. 1" MAX DEPTH OF DECOMPOSED GRANITE OVER PLANT ROOTBALL. PROTECT PLANT FROM DAMAGE DURING PLACEMENT OF GRANITE. DO NOT COVER OR CHOKE PLANT BASE.
  5. TREES THAT ARE LOCATED WITHIN VEHICULAR SIGHTLINE AREAS (SHOWN ON PLANS) SHALL HAVE AN INITIAL 7'-0" HEIGHT CLEARANCE MEASURED FROM THE TOP OF CURB AND SHALL BE PRUNED AS NECESSARY, UNDER THE DIRECTION OF THE CONTRACT ADMINISTRATOR, TO MAINTAIN THE 7'-0" HEIGHT. SMALLER STREETS TO BE PRUNED AS DIRECTED BY THE LANDSCAPE ARCHITECT AT INSTALLATION.

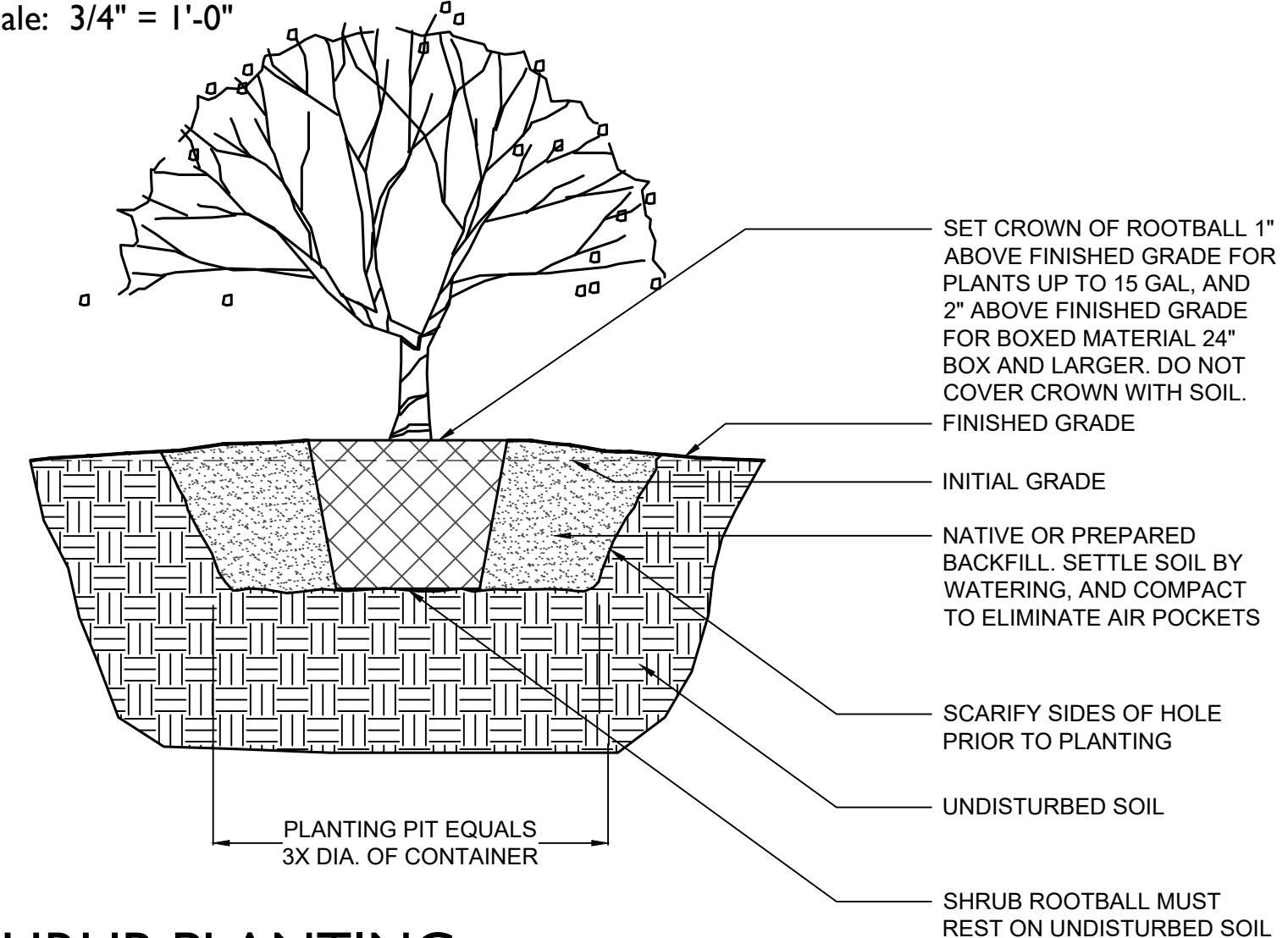


- GENERAL NOTES:**
1. SET CROWN OF ROOTBALL 2" ABOVE FINISH GRADE AFTER SETTLEMENT. DO NOT COVER CROWN WITH SOIL.
  2. HANDLE BY ROOTBALL ONLY, DO NOT HANDLE TREE TOP.
  3. REMOVE STAKING ASSEMBLY AND TREE STAKES AFTER FIRST FULL YEAR GROWING SEASON.



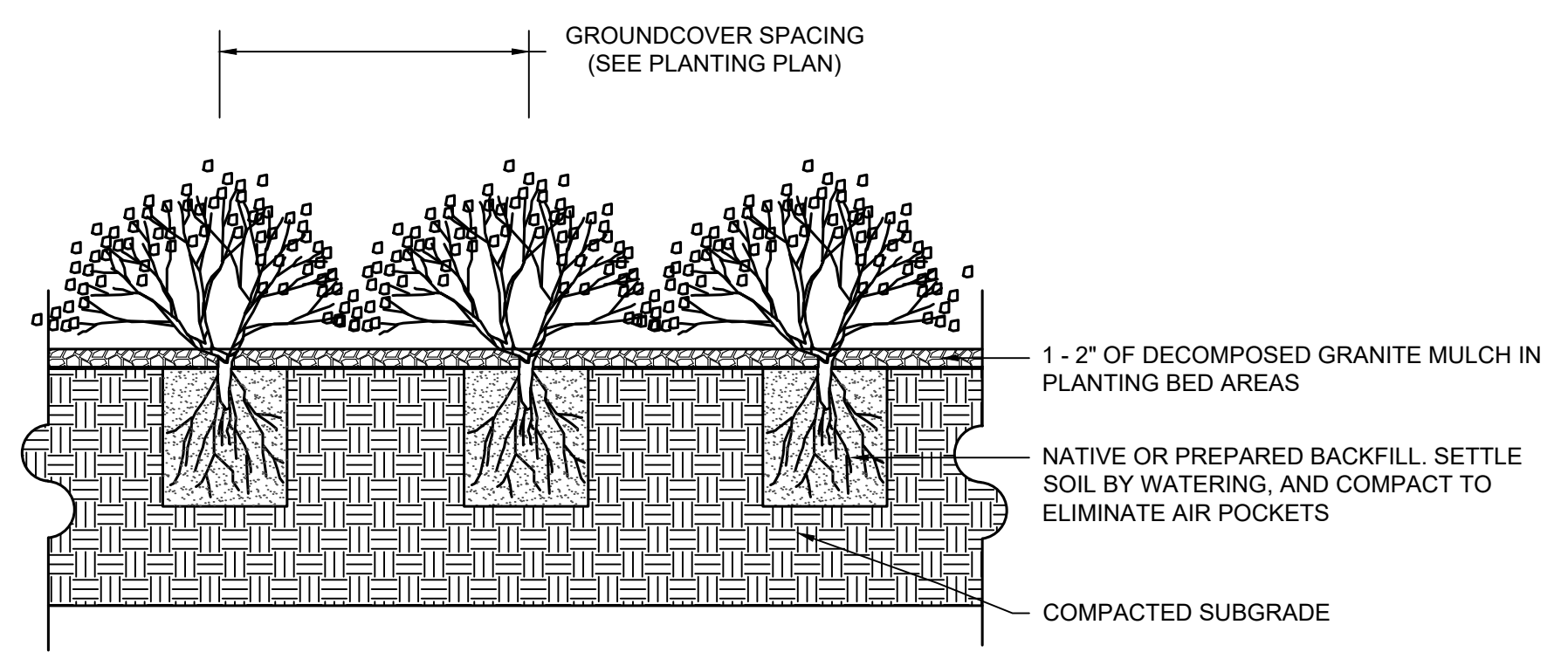
- GENERAL NOTES:**
1. MULTI-TRUNK TREES TO HAVE ALL MAJOR LEADERS STAKED OR SUPPORTED.
  2. ONLY STAKE TREES GROWN WITH NURSERY STAKES.
  3. ENDS OF WIRE AROUND STAKE TO BE PRESSED INTO STAKE.
  4. ENDS OF WIRE AT CENTER TWISTS TO BE FOLDED AROUND TWISTS.
  5. MAINTAIN ENOUGH SLACK AROUND TREE TRUNK TO ALLOW GENTLE MOVEMENT.

**1 TREE PLANTING & STAKING**  
Scale: 3/4" = 1'-0"



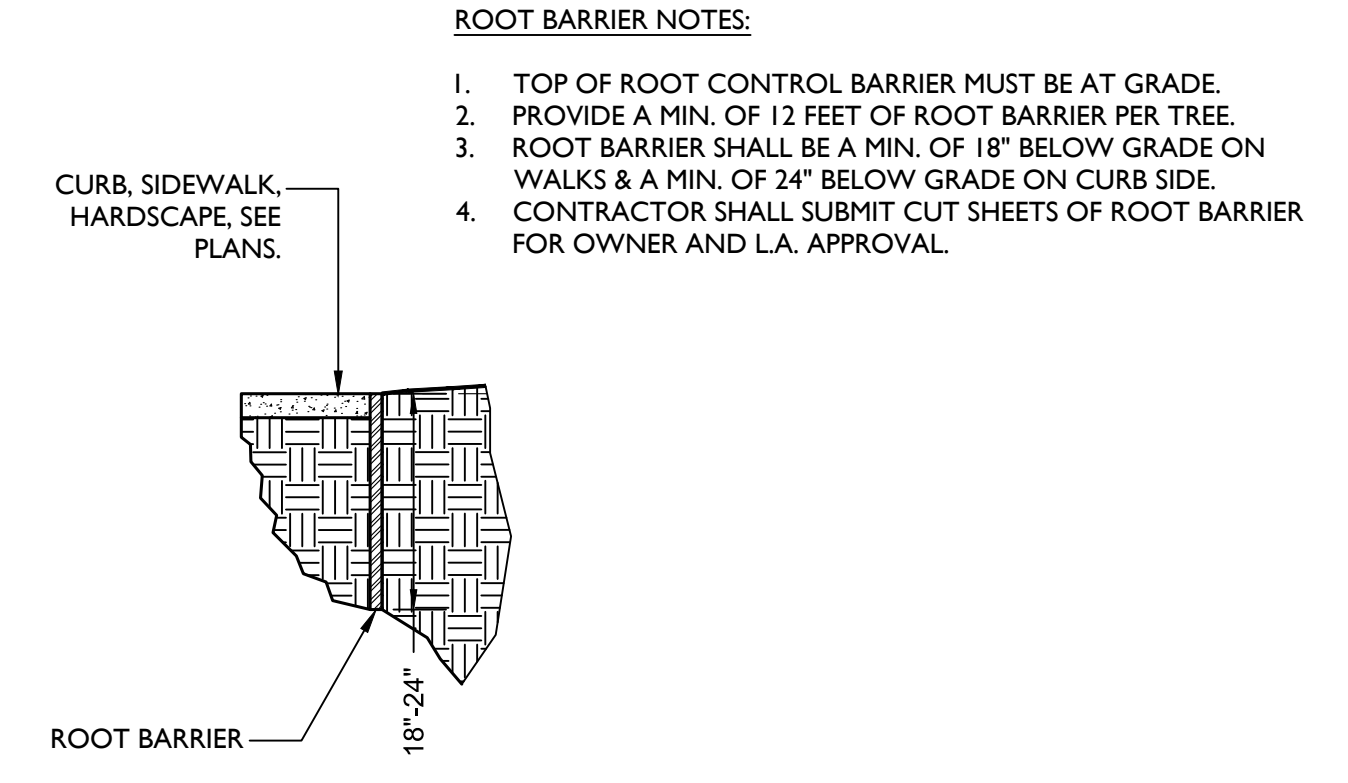
**4 SHRUB PLANTING**  
Scale: 3/4" = 1'-0"

**2 TREE ON SLOPE**  
Scale: 3/4" = 1'-0"



**5 GROUNDCOVER PLANTING**  
Scale: 3/4" = 1'-0"

**3 TREE STAKING**  
Scale: 3/4" = 1'-0"



**6 ROOT BARRIER**  
Scale: 3/4" = 1'-0"

- ROOT BARRIER NOTES:**
1. TOP OF ROOT CONTROL BARRIER MUST BE AT GRADE.
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  3. ROOT BARRIER SHALL BE A MIN. OF 18" BELOW GRADE ON WALKS & A MIN. OF 24" BELOW GRADE ON CURB SIDE.
  4. CONTRACTOR SHALL SUBMIT CUT SHEETS OF ROOT BARRIER FOR OWNER AND L.A. APPROVAL.

Revisions:

1ST SUBMITTAL: 11/28/2022
2ND SUBMITTAL: 03/23/2023
3RD SUBMITTAL: 05/03/2023

Call at least two full working days before you begin excavation.

Designer: JA  
Drawn by: JA

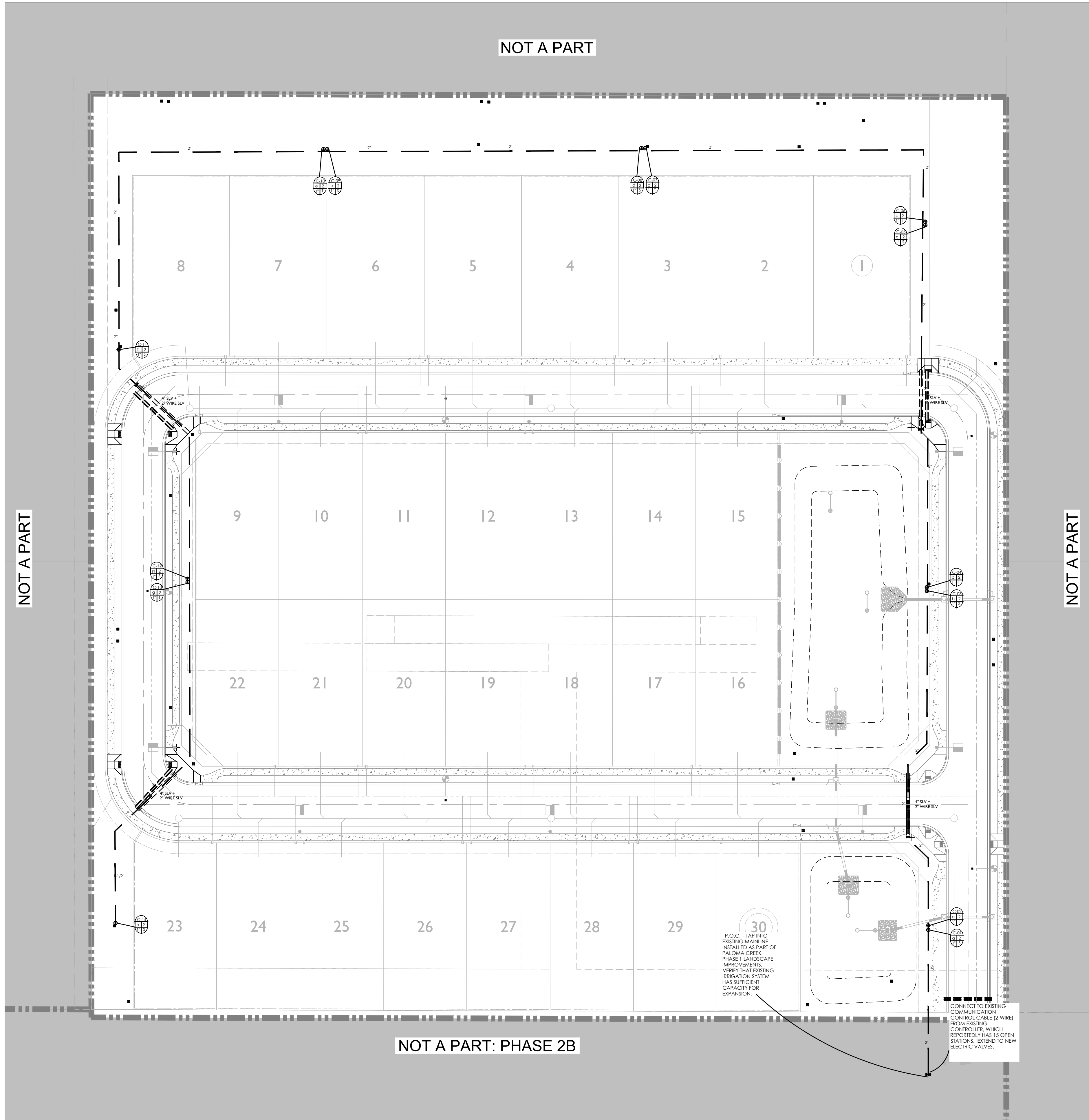
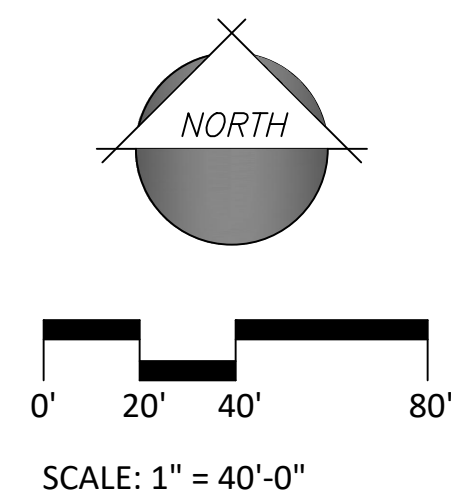


Job No.  
**16-400**

CONSTRUCTION DOCUMENTATION

Sheet No.  
**L-5.01**





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### IRRIGATION SCHEDULE

MPE-10 HUNTER MULTI-OUTLET EMITTER (ONE PER 6 SHRUBS--NOT SHOWN)  
(1.0 GPH @ 20 PSI PER PLANT)

MPE-10 HUNTER MULTI-OUTLET EMITTER (1 PER 15G/24" TREE--NOT SHOWN)  
(6.0 GPH @ 20 PSI PER TREE)

MPE-20 HUNTER MULTI-OUTLET EMITTER (1 PER 36" TREE--NOT SHOWN)  
(12.0 GPH @ 20 PSI PER TREE)

ICV-101G HUNTER ELECTRIC VALVE FOR EMITTER SYSTEM INCLUDES: HY-100 HUNTER WYE STRAINER (150 MESH); AND HUNTER 25-PSI PRESSURE REGULATOR. INSTALL HUNTER ICD-SERIES DECODERS AT ELECTRIC VALVES, AND ID1 TWO-WIRE COMMUNICATION CABLE FROM CONTROLLER TO VALVES.

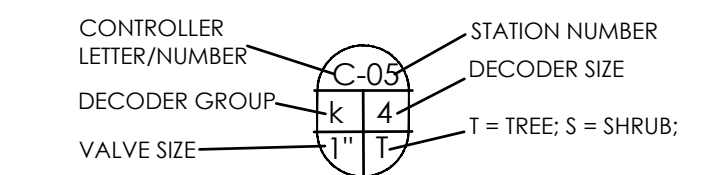
EXISTING CONTROLLER (NOT SHOWN). CONNECT TO EXISTING COMMUNICATION CABLE WIRE AND INSTALL HUNTER ICD-SERIES DECODERS AT ELECTRIC VALVES, AND ID1 TWO-WIRE COMMUNICATION CABLE FROM CONTROLLER TO VALVES.

BACKFLOW PREVENTER IS EXISTING AT PALOMA CREEK SYSTEM.

- HQ44-LRC HUNTER QUICK-COUPLER VALVE
- ✕ T-113K NIBCO MAIN LINE ISOLATION GATE VALVE
- MHT-3/4" --MANUAL DRIP FLUSH DEVICE
- SCHEDULE 40 PVC PIPE--MAINLINE. INSTALL DETECTABLE WARNING TAPE AND TRACER WIRE PER SPECIFICATIONS.
- 1/2" SCHEDULE 40 PVC PIPE-TO TREE EMITTERS. SOLVENT WELD.
- 1/2" SCHEDULE 40 PVC PIPE-TO SHRUB EMITTERS. SOLVENT WELD.
- SCHEDULE 40 PVC SLEEVING MATERIAL

NOTE:

- 1.) WATER SOURCE IS EXISTING AT PALOMA CREEK IRRIGATION SYSTEM. LOCATE AND CONNECT TO EXISTING MAIN AS NOTED.
- 2.) CONTROLLER IS EXISTING. CONNECT TO EXISTING COMMUNICATION CABLE WIRE AND EXTEND TO ALL ELECTRIC VALVES.
- 3.) ALL PIPE AND WIRING UNDER PAVED SURFACES SHALL BE IN SCHEDULE 40 PVC SLEEVES, WHETHER OR NOT SHOWN. INSTALL WIRE SLEEVE ADJACENT TO PIPE SLEEVE AT PAVED CROSSINGS.
- 4.) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL PER INDUSTRY STANDARDS AND CODES WHETHER OR NOT SHOWN.
- 5.) LOCATE TAN VALVE BOXES IN ACCESSIBLE PLANTER AREAS.
- 6.) CONTRACTOR SHALL PROVIDE TWO #HK44 HUNTER QUICK-COUPLER KEYS WITH H51 HOSE SWIVELS.
- 7.) CONTRACTOR SHALL COMPLETE THE FOLLOWING PRIOR TO FINAL WALK-THROUGH:
  - A. CONSTRUCTION RECORD (AS-BUILT) DRAWINGS.
  - B. CONTROLLER DATA SHEETS, INCLUDING IN DIGITAL FORMAT.
  - C. CONFIRMATION OF COMMUNICATION BETWEEN CONTROLLER & ELECTRIC VALVES.
- 8.) AN 18 GAGE, BLUE TRACER WIRE SHALL BE INSTALLED WITH 2 INCH AND LARGER MAIN LINES; 6 INCHES OF WHICH SHALL BE COILED INSIDE THE CONTROLLER.
- 9.) THESE IRRIGATION CONSTRUCTION DOCUMENTS, INCLUDING ALL PLANS, NOTES, DETAILS, AND SPECIFICATIONS ARE INTENDED TO FACILITATE THE INSTALLATION CONTRACTOR BY PROVIDING GENERAL GUIDELINES FOR DESIGN INTENT. THEREFORE, ALL IRRIGATION ELEMENTS GRAPHICALLY REPRESENTED IN THESE CONSTRUCTION DOCUMENTS ARE SCHEMATIC. FIELD MODIFICATIONS MAY OCCUR IN ORDER TO FULFILL THE DESIGN INTENT OF THE DRAWINGS. CONTRACTOR SHALL CONSULT WITH IRRIGATION DESIGNER AND PREPARE AS-BUILT PLANS SHOULD FIELD MODIFICATIONS BE NECESSARY.
- 10.) VALVE KEY:



### PIPE SIZING SCHEDULE:

CLASS 200 & SCHEDULE 40 PVC

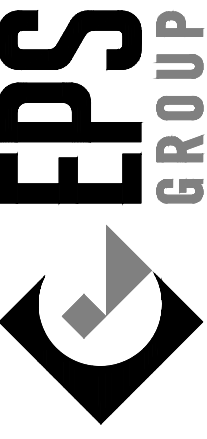
GPM	SIZE
0-4	1/2"
5-8	3/4"
9-13	1"
14-20	1-1/4"
21-30	1-1/2"
31-53	2"
54-75	2-1/2"
76-115	3"

NOTE: MINIMUM PIPE SIZE TO EACH SPRINKLER SHALL BE THE SIZE OF THE SPRINKLER HEAD INLET.



1420 N. GREENFIELD RD. #103 | GILBERT, AZ 85234 | P. 480-481-0682

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Mesa, AZ 85201  
T: 480.503.2250 | F: 480.503.2258  
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Paloma Creek  
Enclave 4  
City of Surprise, Arizona  
Irrigation Master Plan

Project:

Revisions:

1ST SUBMITTAL: 1/17/2023  
2ND SUBMITTAL: 03/23/2023  
3RD SUBMITTAL: 05/03/2023



Designer: AS  
Drawn by: JA



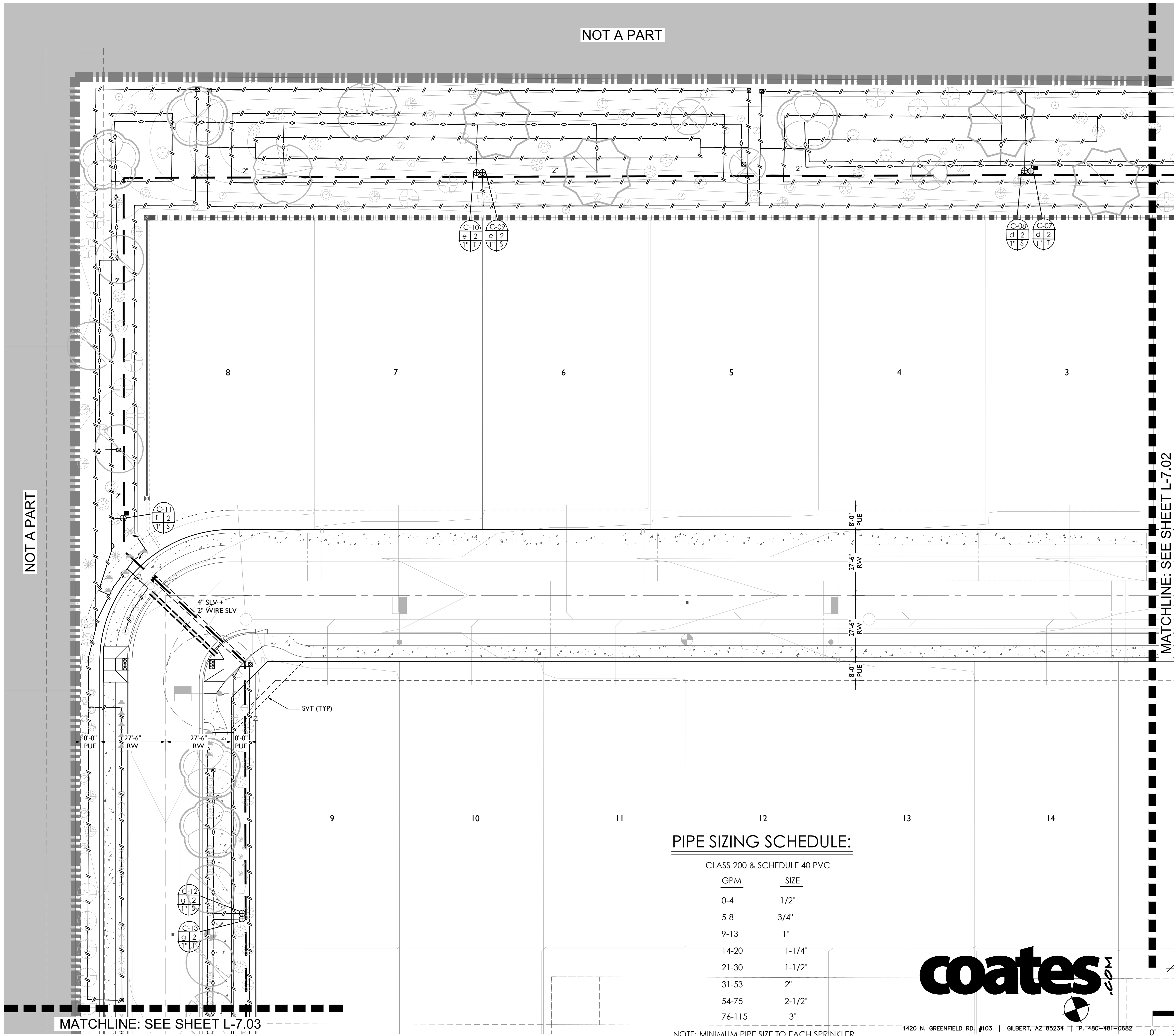
Job No.  
**16-400**

CONSTRUCTION DOCUMENTATION

Sheet No.  
**L-6.01**

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NOT A PART

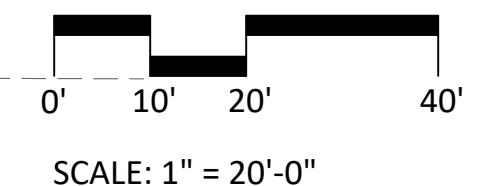
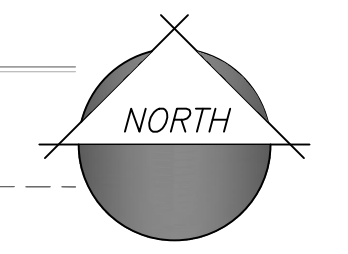
MATCHLINE: SEE SHEET L-7.02

MATCHLINE: SEE SHEET L-7.03

**PIPE SIZING SCHEDULE:**

CLASS 200 & SCHEDULE 40 PVC	
GPM	SIZE
0-4	1/2"
5-8	3/4"
9-13	1"
14-20	1-1/4"
21-30	1-1/2"
31-53	2"
54-75	2-1/2"
76-115	3"

NOTE: MINIMUM PIPE SIZE TO EACH SPRINKLER SHALL BE THE SIZE OF THE SPRINKLER HEAD INLET.

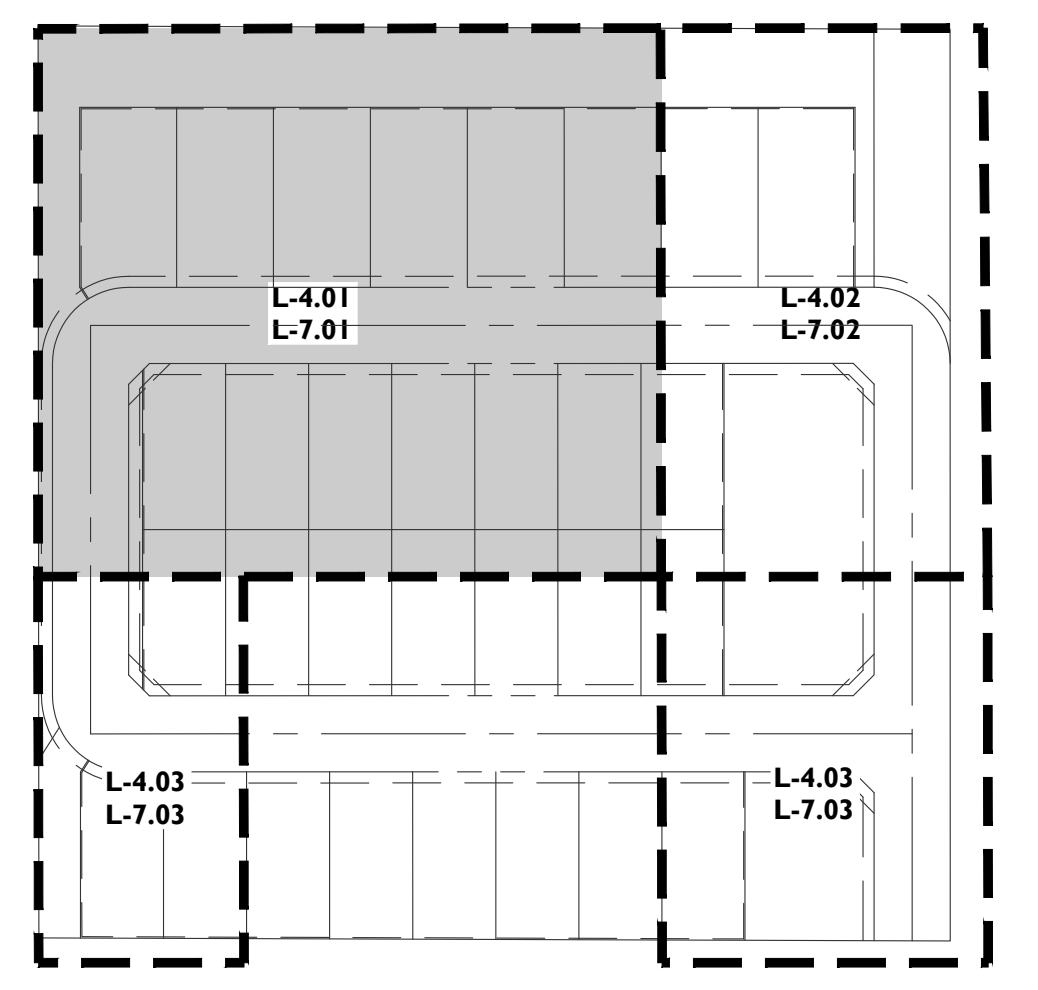


**IRRIGATION SCHEDULE**

- MPE-10 HUNTER MULTI-OUTLET EMITTER (ONE PER 6 SHRUBS--NOT SHOWN) (1.0 GPH @ 20 PSI PER PLANT)
  - MPE-10 HUNTER MULTI-OUTLET EMITTER (1 PER 15G/24" TREE--NOT SHOWN) (6.0 GPH @ 20 PSI PER TREE)
  - MPE-20 HUNTER MULTI-OUTLET EMITTER (1 PER 36" TREE--NOT SHOWN) (12.0 GPH @ 20 PSI PER TREE)
  - ICV-101 G HUNTER ELECTRIC VALVE FOR EMITTER SYSTEM INCLUDES: HY-100 HUNTER WYE STRAINER (150 MESH); AND HUNTER 25-PSI PRESSURE REGULATOR. INSTALL HUNTER ICD-SERIES DECODERS AT ELECTRIC VALVES, AND ID1 TWO-WIRE COMMUNICATION CABLE FROM CONTROLLER TO VALVES.
  - EXISTING CONTROLLER (NOT SHOWN). CONNECT TO EXISTING COMMUNICATION CABLE WIRE AND INSTALL HUNTER ICD-SERIES DECODERS AT ELECTRIC VALVES, AND ID1 TWO-WIRE COMMUNICATION CABLE FROM CONTROLLER TO VALVES.
  - BACKFLOW PREVENTER IS EXISTING AT PALOMA CREEK SYSTEM.
  - HQ44-LRC HUNTER QUICK-COUPLER VALVE
  - T-113K NIBCO MAIN LINE ISOLATION GATE VALVE
  - MHT-3/4" -MANUAL DRIP FLUSH DEVICE
  - SCHEDULE 40 PVC PIPE--MAINLINE. INSTALL DETECTABLE WARNING TAPE AND TRACER WIRE PER SPECIFICATIONS.
  - 1/2" SCHEDULE 40 PVC PIPE-TO TREE EMITTERS. SOLVENT WELD.
  - 1/2" SCHEDULE 40 PVC PIPE-TO SHRUB EMITTERS. SOLVENT WELD.
  - SCHEDULE 40 PVC SLEEVING MATERIAL
- NOTE:
- 1.) WATER SOURCE IS EXISTING AT PALOMA CREEK IRRIGATION SYSTEM. LOCATE AND CONNECT TO EXISTING MAIN AS NOTED.
  - 2.) CONTROLLER IS EXISTING. CONNECT TO EXISTING COMMUNICATION CABLE WIRE AND EXTEND TO ALL ELECTRIC VALVES.
  - 3.) ALL PIPE AND WIRING UNDER PAVED SURFACES SHALL BE IN SCHEDULE 40 PVC SLEEVES, WHETHER OR NOT SHOWN. INSTALL WIRE SLEEVE ADJACENT TO PIPE SLEEVE AT PAVED CROSSINGS.
  - 4.) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL PER INDUSTRY STANDARDS AND CODES WHETHER OR NOT SHOWN.
  - 5.) LOCATE TAN VALVE BOXES IN ACCESSIBLE PLANTER AREAS.
  - 6.) CONTRACTOR SHALL PROVIDE TWO #HK44 HUNTER QUICK-COUPLER KEYS WITH H51 HOSE SWIVELS.
  - 7.) CONTRACTOR SHALL COMPLETE THE FOLLOWING PRIOR TO FINAL WALK-THROUGH:
    - A. CONSTRUCTION RECORD (AS-BUILT) DRAWINGS.
    - B. CONTROLLER DATA SHEETS, INCLUDING IN DIGITAL FORMAT.
    - C. CONFIRMATION OF COMMUNICATION BETWEEN CONTROLLER & ELECTRIC VALVES.
  - 8.) AN 18 GAGE, BLUE TRACER WIRE SHALL BE INSTALLED WITH 2 INCH AND LARGER MAIN LINES; 6 INCHES OF WHICH SHALL BE COILED INSIDE THE CONTROLLER.
  - 9.) THESE IRRIGATION CONSTRUCTION DOCUMENTS, INCLUDING ALL PLANS, NOTES, DETAILS, AND SPECIFICATIONS ARE INTENDED TO FACILITATE THE INSTALLATION CONTRACTOR BY PROVIDING GENERAL GUIDELINES FOR DESIGN INTENT. THEREFORE, ALL IRRIGATION ELEMENTS GRAPHICALLY REPRESENTED IN THESE CONSTRUCTION DOCUMENTS ARE SCHEMATIC. FIELD MODIFICATIONS MAY OCCUR IN ORDER TO FULFILL THE DESIGN INTENT OF THE DRAWINGS. CONTRACTOR SHALL CONSULT WITH IRRIGATION DESIGNER AND PREPARE AS-BUILT PLANS SHOULD FIELD MODIFICATIONS BE NECESSARY.
  - 10.) VALVE KEY:
 

CONTROLLER LETTER/NUMBER	STATION NUMBER
DECODER GROUP	DECODER SIZE
VALVE SIZE	T = TREE; S = SHRUB:

**KEY MAP**



1130 N. Alma School Road, Suite 120  
Mesa, AZ 85201  
T: 480.503.2250 | F: 480.503.2258  
www.epsgrgroup.com

Project: Paloma Creek Enclave 4  
City of Surprise, Arizona

Revisions:

1ST SUBMITTAL: 1/17/2023  
2ND SUBMITTAL: 03/23/2023  
3RD SUBMITTAL: 05/03/2023

Call or text for full working drawings  
**ARIZONA**  
Professional Engineer  
No. 00101 or 1-800-878-2244  
in Maricopa County: 050203-1102

Designer: AS  
Drawn by: JA

REGISTERED LANDSCAPE ARCHITECT  
CERTIFICATE NO. 45568  
ALIZA E. SABIN  
Expires 5-31-23  
ARIZONA, U.S.A.

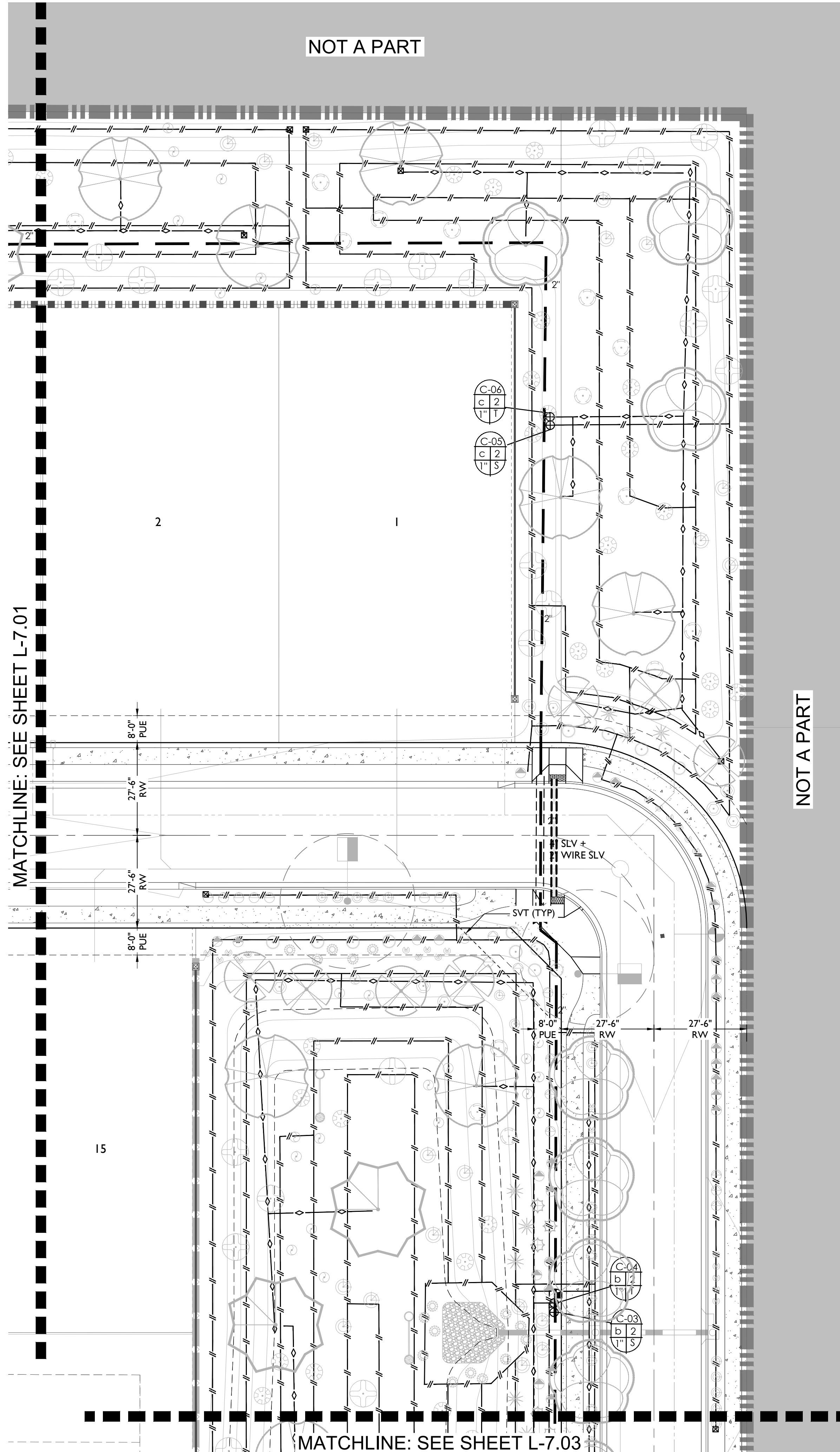
Job No. **16-400**

CONSTRUCTION DOCUMENTATION

Sheet No. **L-7.01**

12 of 17





**IRRIGATION SCHEDULE**

- MPE-10 HUNTER MULTI-OUTLET EMITTER (ONE PER 6 SHRUBS--NOT SHOWN)  
(1.0 GPH @ 20 PSI PER PLANT)
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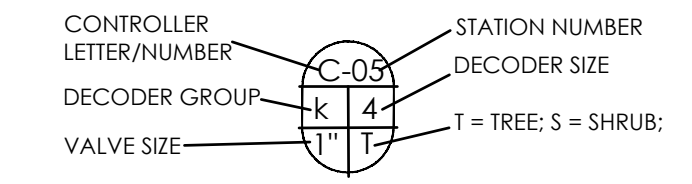
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  - 10.) VALVE KEY:



**PIPE SIZING SCHEDULE:**

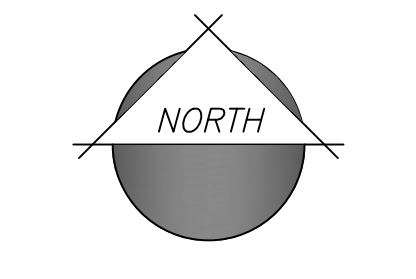
CLASS 200 & SCHEDULE 40 PVC

GPM	SIZE
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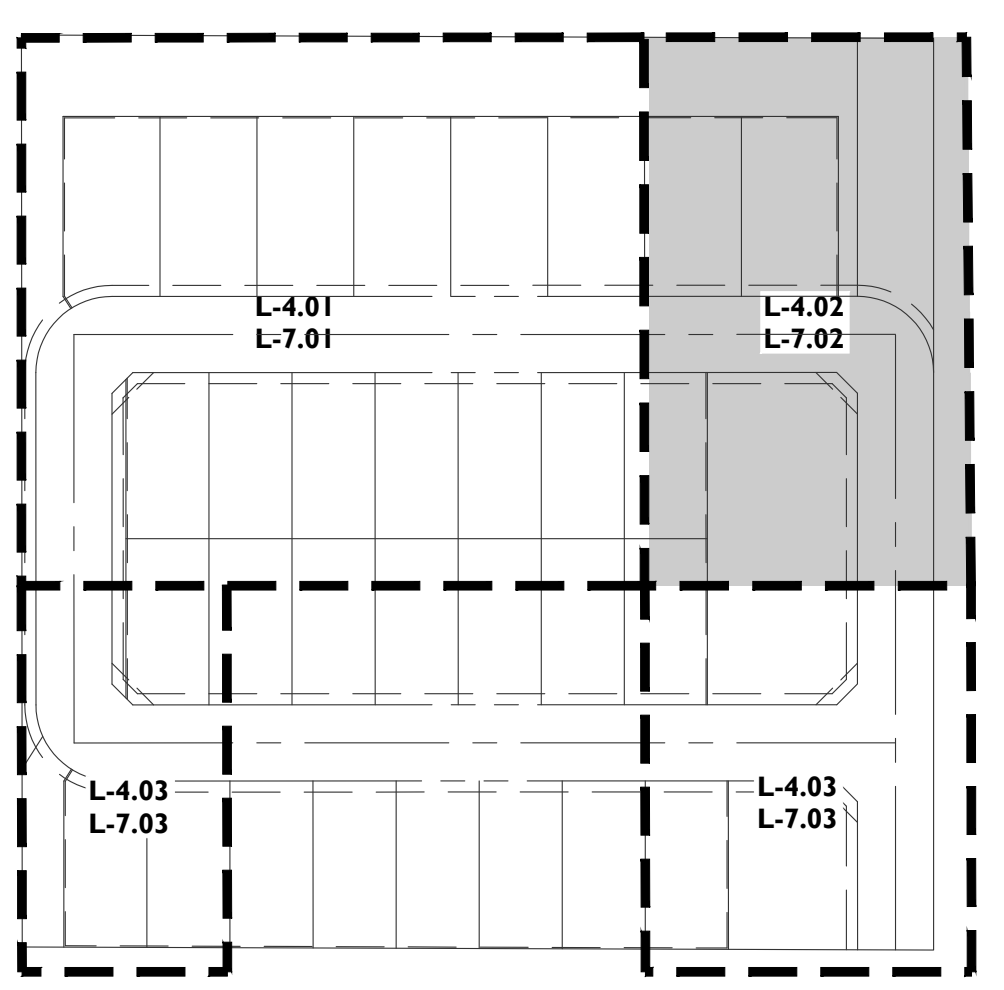


1420 N. GREENFIELD RD. #103 | GILBERT, AZ 85234 | P. 480-481-0682

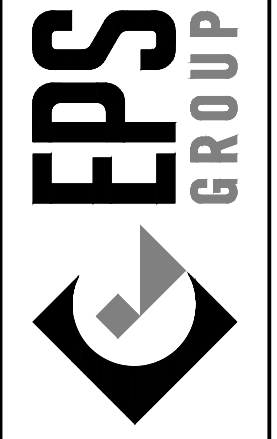


SCALE: 1" = 20'-0"

**KEY MAP**



1130 N. Alma School Road, Suite 120  
Mesa, AZ 85201  
T: 480.503.2250 | F: 480.503.2258  
www.epsgr.com



Paloma Creek  
Enclave 4  
City of Surprise, Arizona

Project: Paloma Creek Enclave 4 Irrigation Plan

Revisions:

NO.	DATE	DESCRIPTION	BY
1ST SUBMITTAL	1/17/2023		
2ND SUBMITTAL	03/23/2023		
3RD SUBMITTAL	05/03/2023		



Designer: AS  
Drawn by: JA

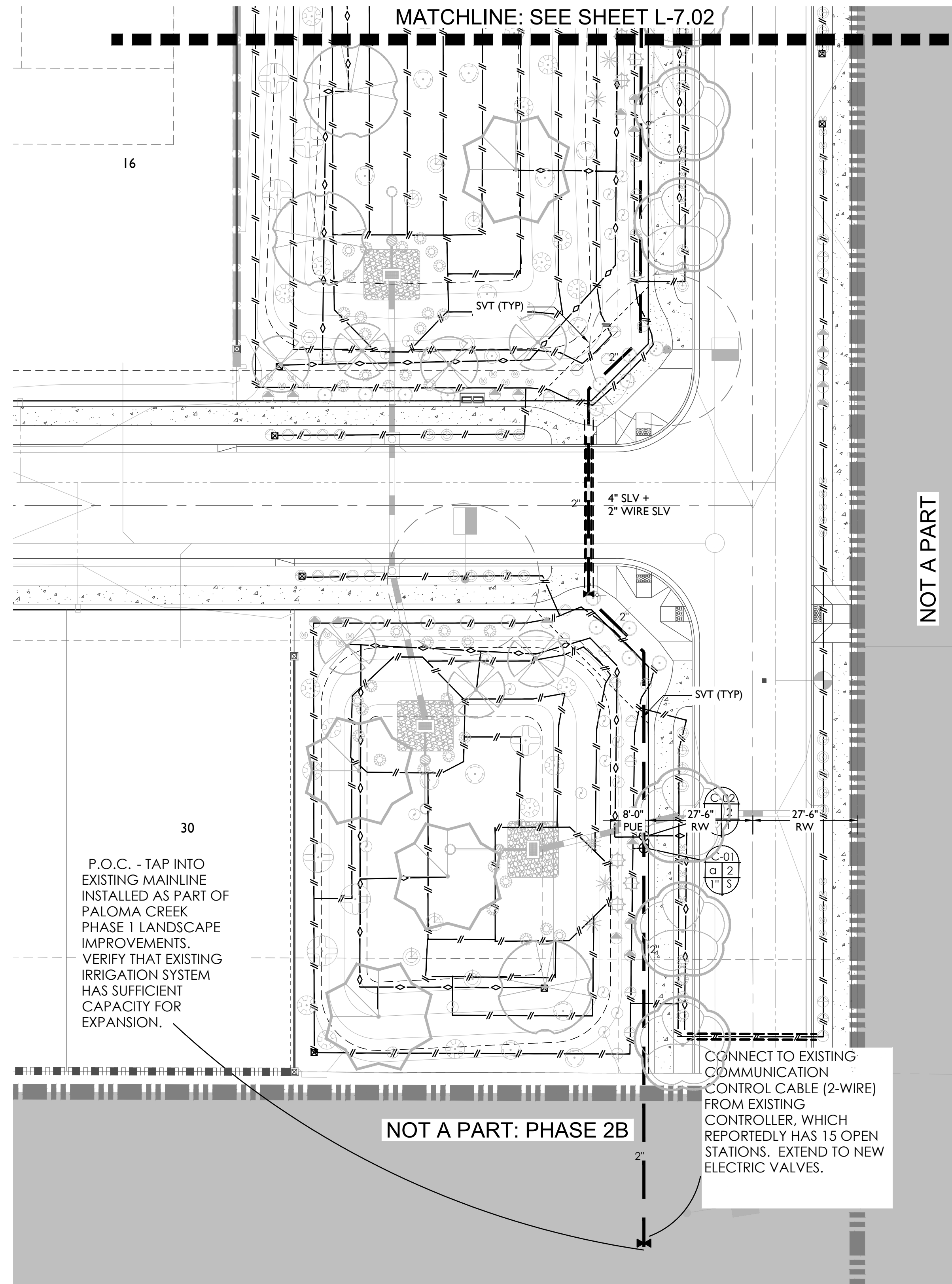
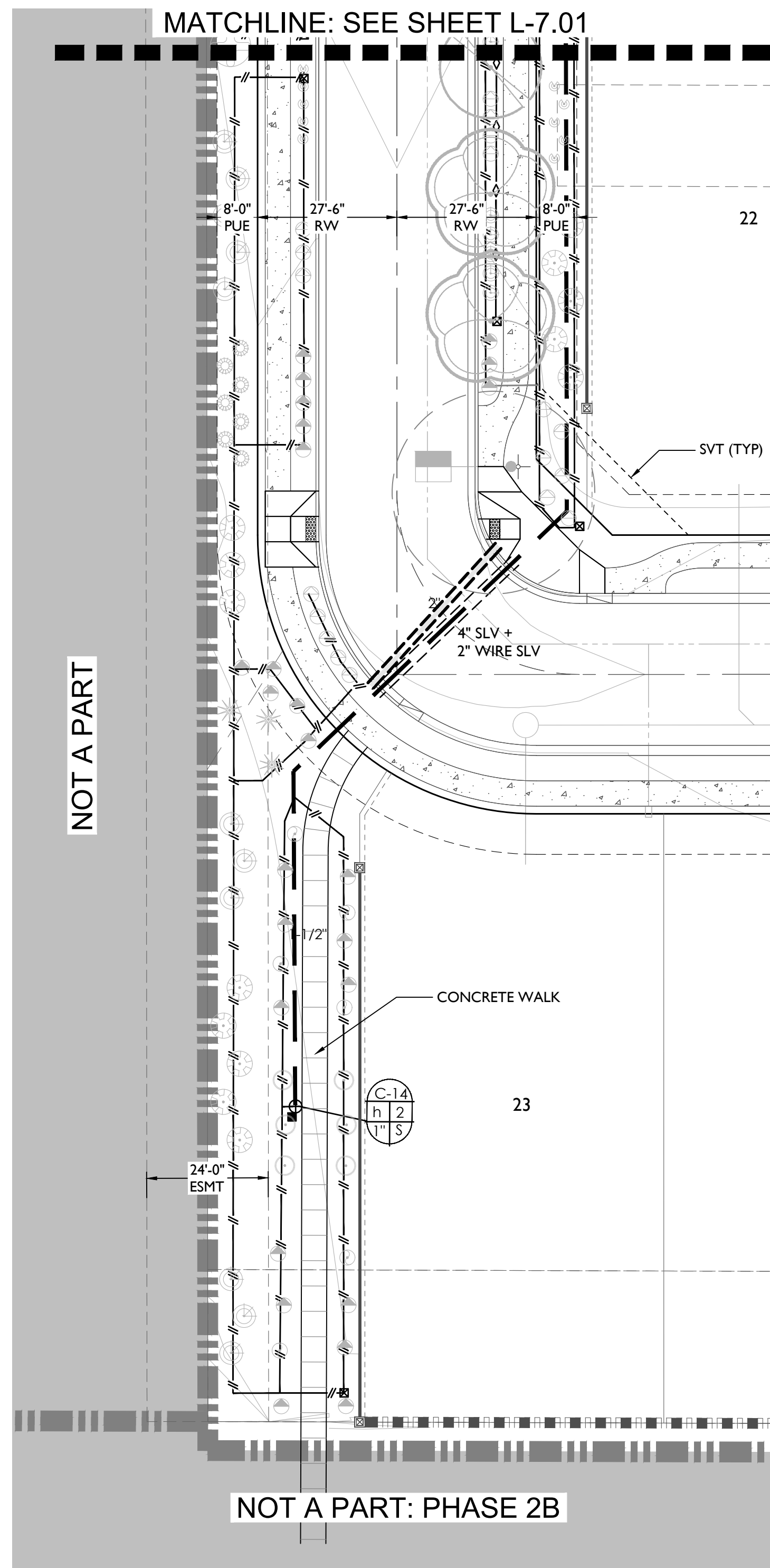


Job No. 16-400

CONSTRUCTION DOCUMENTATION

Sheet No. L-7.02

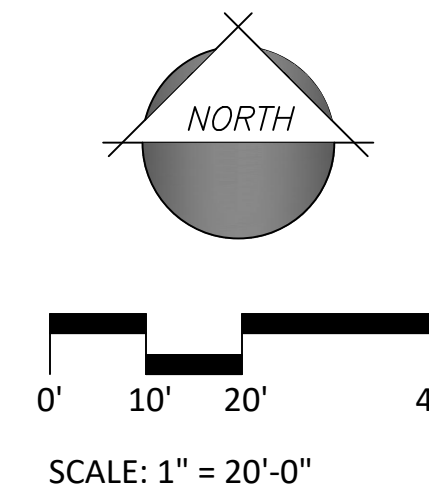




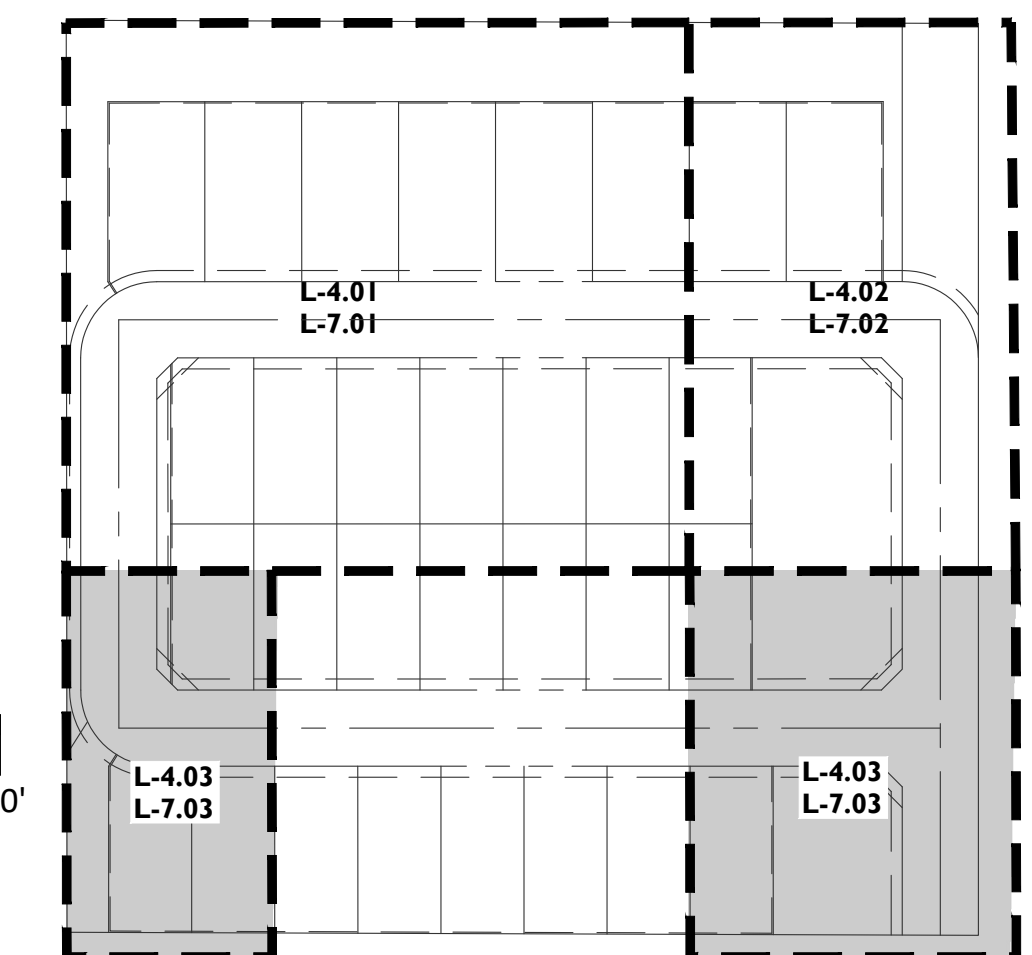
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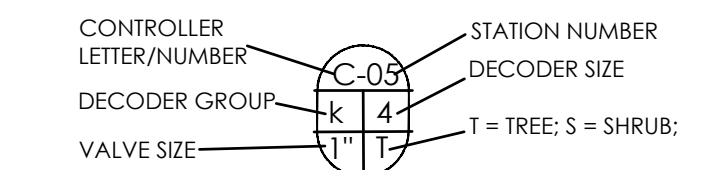


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Mesa, AZ 85201  
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www.epsgroupinc.com

Project:

**Paloma Creek  
Enclave 4**  
City of Surprise, Arizona

Revisions:

No.	Description	By	Date

1ST SUBMITTAL: 1/17/2023

2ND SUBMITTAL: 03/23/2023

3RD SUBMITTAL: 05/03/2023

Call out sheet two full working days before you begin installation

**ARIZONA**  
Professional Engineer  
No. 45568  
ALIZA E. SABIN  
Expires 5-31-23  
ARIZONA, U.S.A.

Designer:

AS

Drawn by:

JA

Job No.

**16-400**

CONSTRUCTION DOCUMENTATION

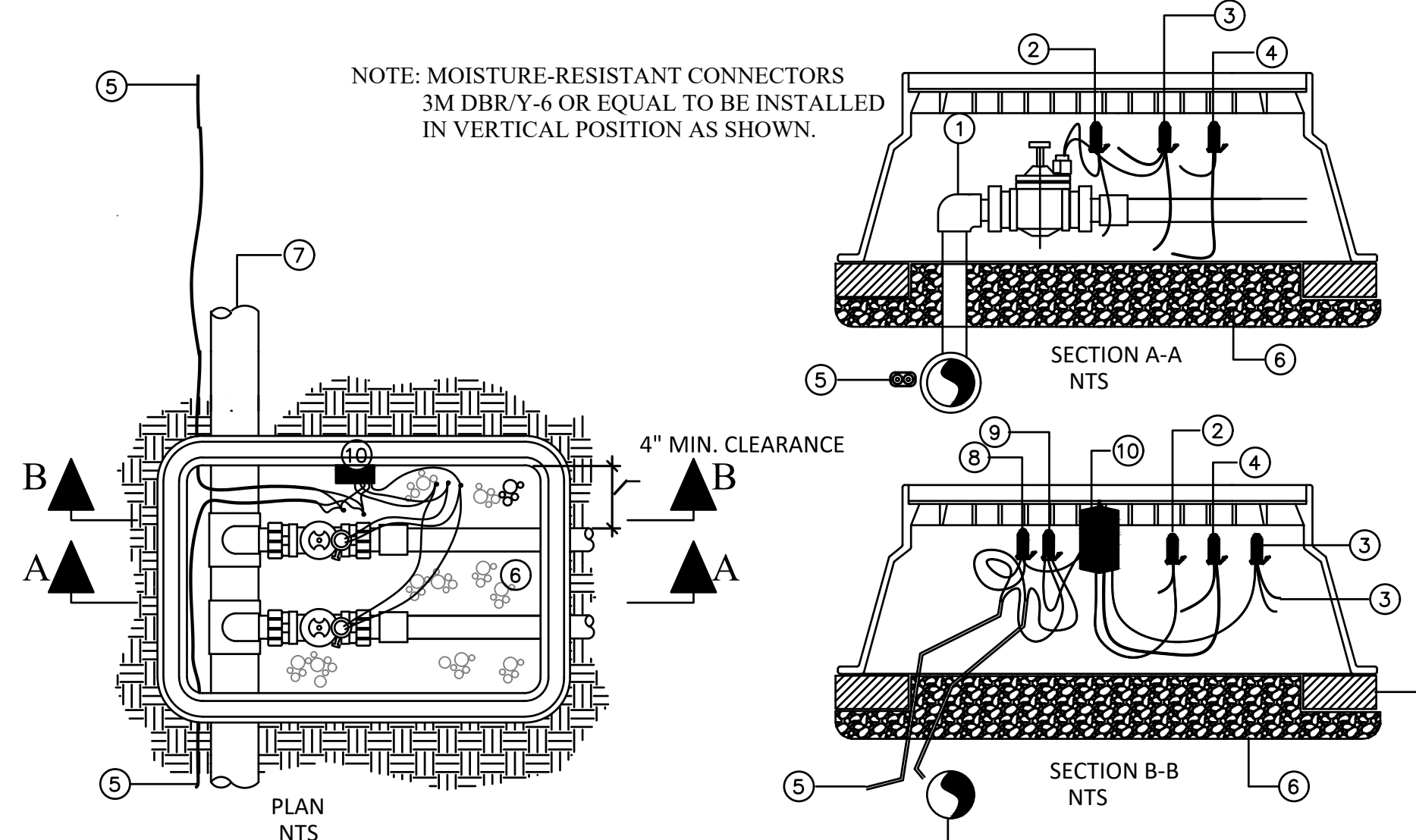
Sheet No.

**L-7.03**

14 of 17

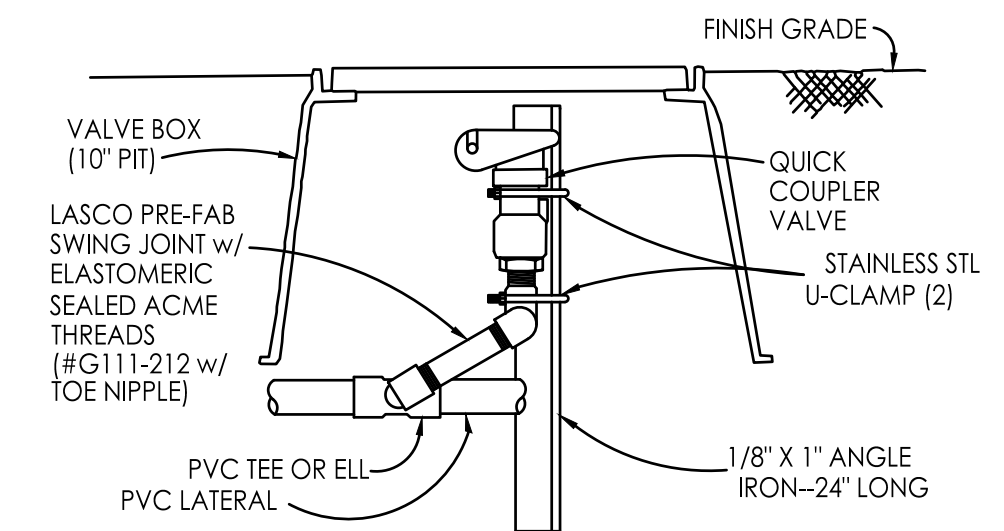
Case #FS22-1632





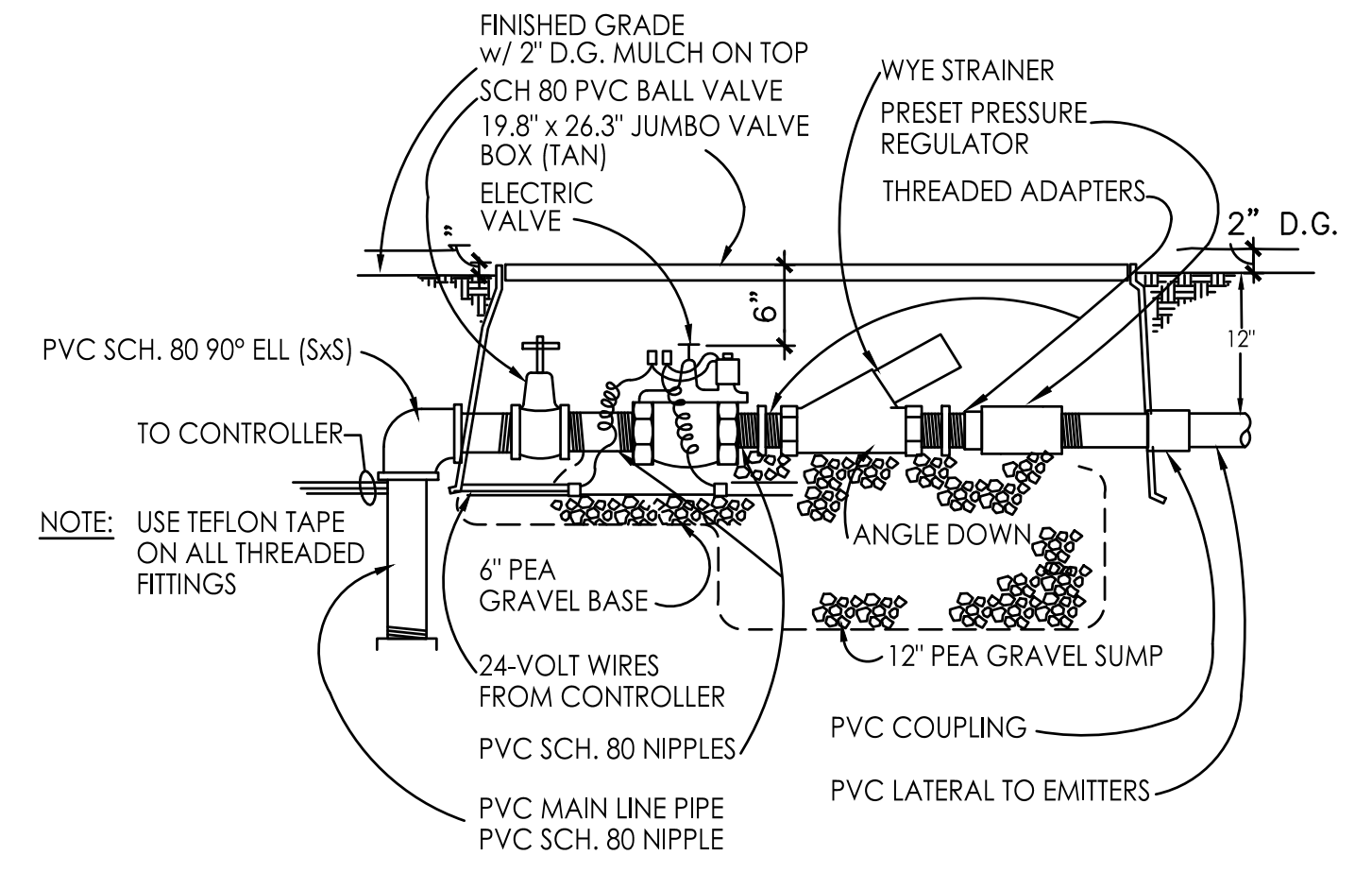
**1 VALVE BOX ASSEMBLY**  
Scale: 1-1/2" = 1'-0"

- 1 VALVE AND PIPING PER PLANS
- 2 MOISTURE-RESISTANT CONNECTION TO VALVE #2 (DBR/Y-6 OR EQ.)
- 3 MOISTURE-RESISTANT CONNECTION FOR COMMON WIRES FOR VALVES #1 & #2 (DBR/Y-6 OR EQ.)
- 4 MOISTURE-RESISTANT CONNECTION TO VALVE #1 (DBR/Y-6 OR EQ.)
- 5 TWO-WIRE - GAUGE PER PLANS
- 6 POROUS MATERIAL FOR DRAINAGE - 3" MINIMUM
- 7 MAINLINE AS PER PLANS
- 8 TWO-WIRE RED TO RED DECODER MOISTURE-RESISTANT CONNECTION (DBR/Y-6 OR EQ.)
- 9 TWO-WIRE BLACK TO DECODER BLACK MOISTURE-RESISTANT CONNECTION (DBR/Y-6 OR EQ.)
- 10 ELECTRIC VALVE DECODER - ATTACH TO VALVE BOX WITH TIE OR METAL SCREW
- 11 CORNER VALVE BOX SUPPORT (TYPICAL OF FOUR)

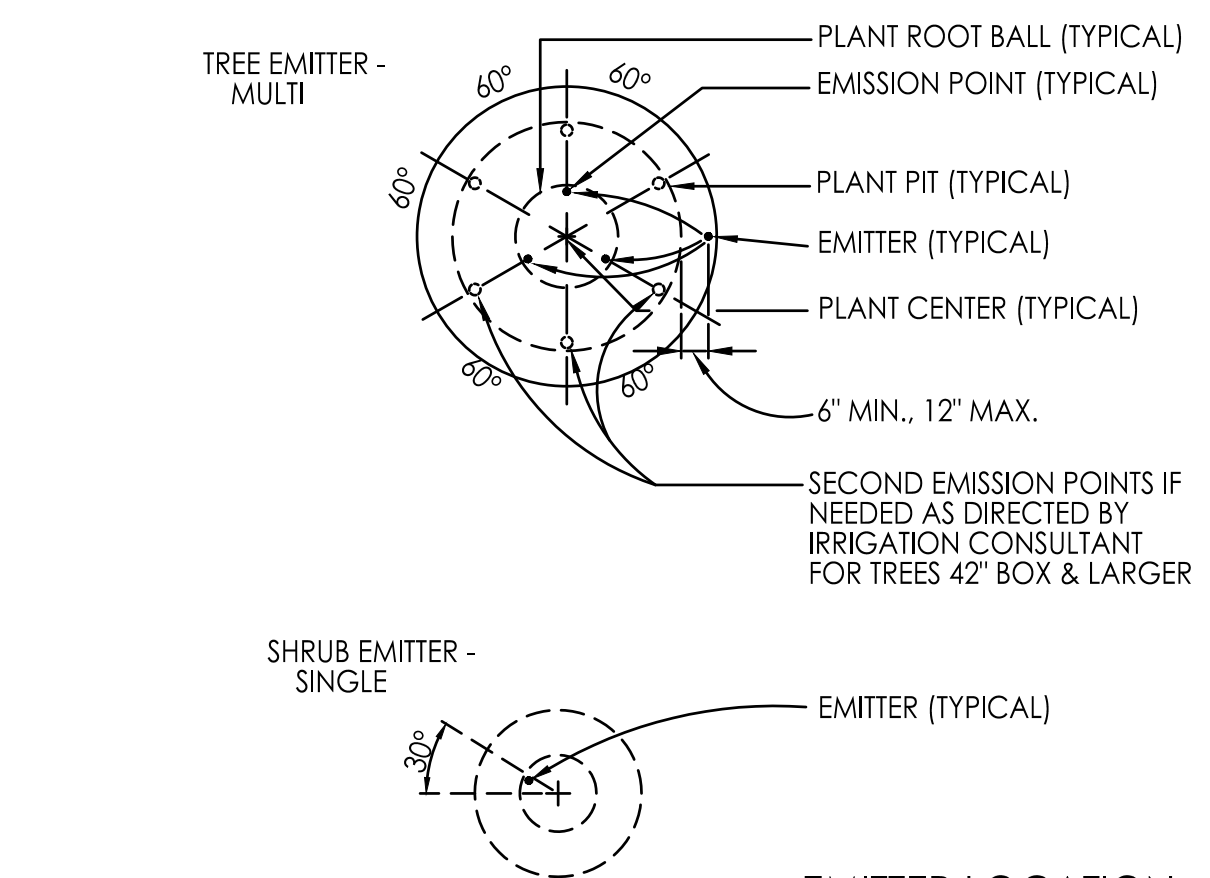


- NOTES**
1. EACH QUICK COUPLER SHALL BE IN A SEPARATE VALVE BOX
  2. PROVIDE (1) QUICK COUPLER KEY FOR EACH SIX QUICK COUPLER VALVES.
  3. PLACE 4"-6" DEPTH PEA GRAVEL UNDER VALVE BOX.
  4. QUICK COUPLER SHALL HAVE LOCKING RUBBER COVER

**2 QUICK COUPLER**  
Scale: 1-1/2" = 1'-0"



**3 EMITTER VALVE MANIFOLD**  
Scale: 3/4" = 1'-0"

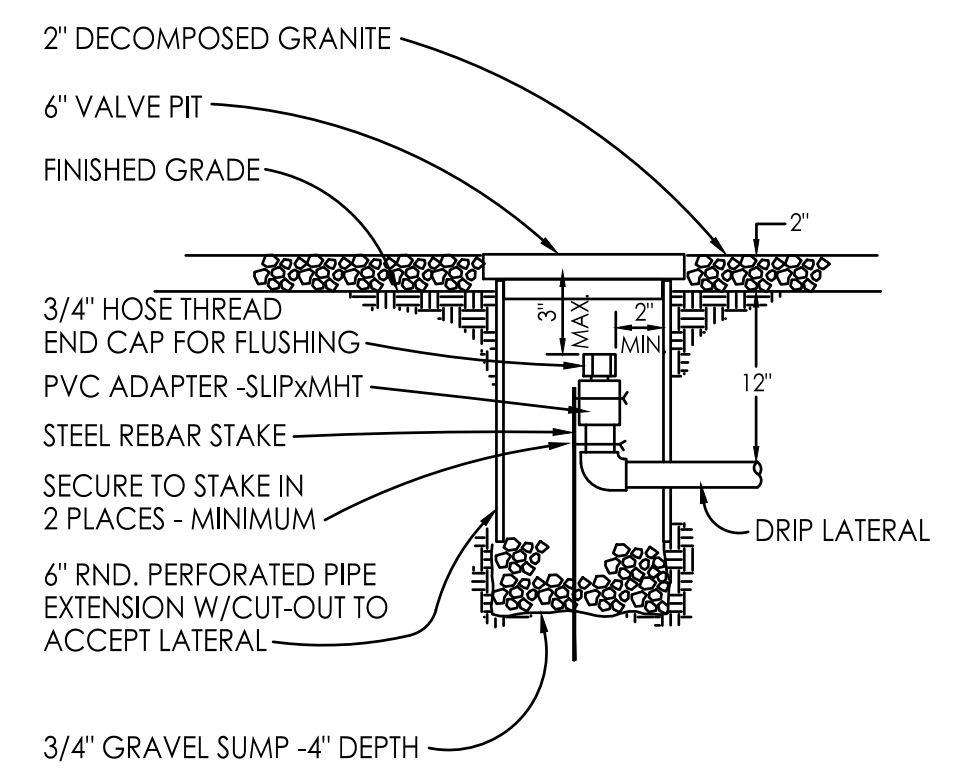


TREE SIZE	DISTANCE FROM TRUNK		EMITTER TYPE
	1st 6 TUBES	2nd 6 TUBES	
15 G	3-12"		1-1 GPH
24"	4-18"		1-1 GPH
30"	6-21"		1-1 GPH
36"	6-24"		1-2 GPH
42"	6-27"		1-2 GPH
48"	6-12"	4-30"	2-2 GPH
54"	6-15"	5-33"	2-2 GPH
60"	6-18"	6-36"	2-2 GPH
72"	6-20"	6-42"	3-2 GPH

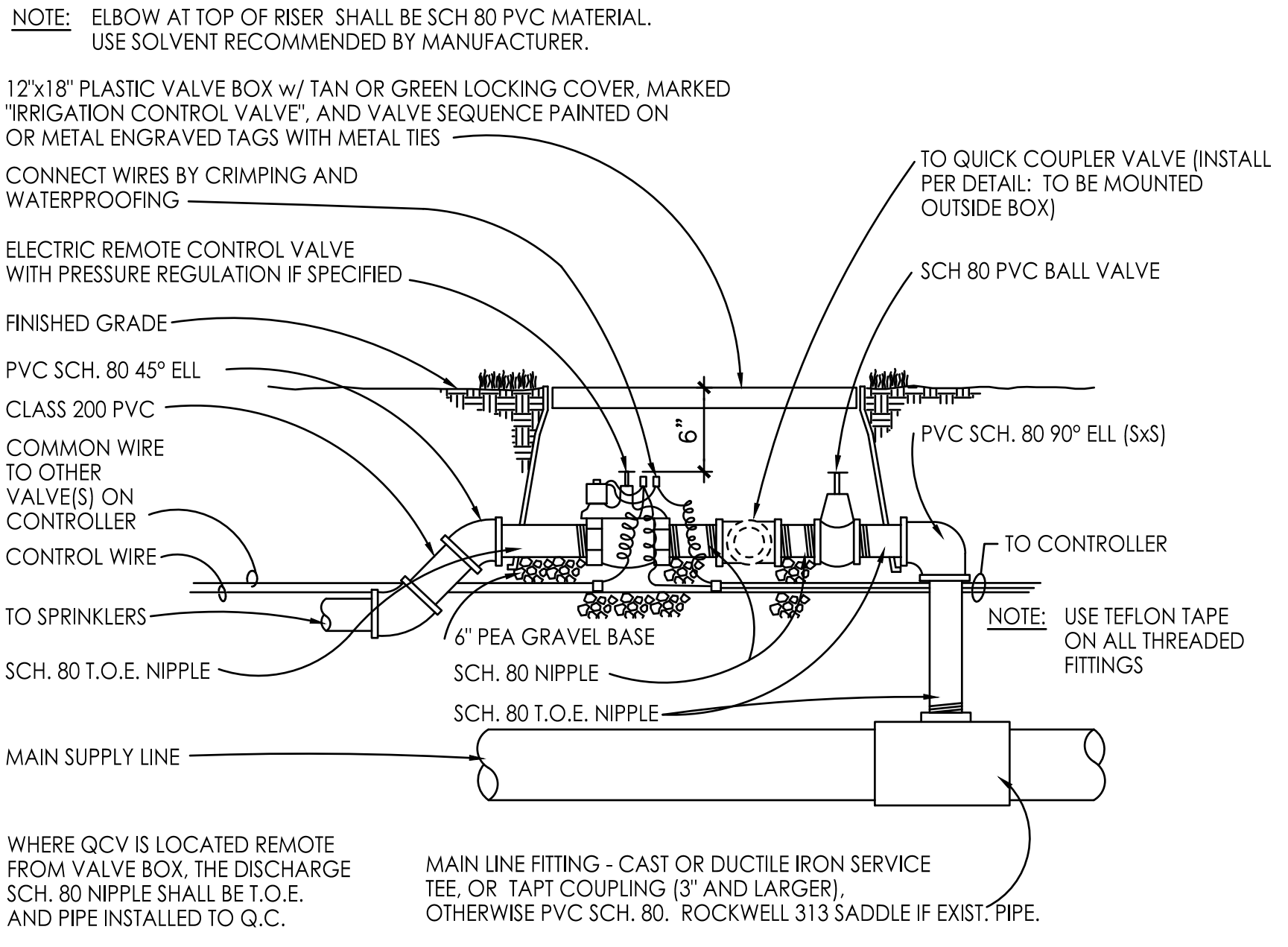
**NOTE:** ALL EMISSION POINTS SHALL BE LOCATED ON UPHILL SIDE OF PLANT MATERIAL. ONE EMISSION POINT SHALL BE DIRECTLY TO PLANT BALL AS INDICATED. ADDITIONAL EMISSION POINTS SHALL BE WITHIN PLANT PIT PERIMETER - 18" FROM TREE CENTER FOR TYP. 24" BOX TREE.

THIS IS A WATERING GUIDE ONLY. SITE, SOIL AND PLANT CONDITIONS VARY GREATLY. CONTRACTOR MUST OBSERVE THE PLANT MATERIAL AND MAKE ADJUSTMENTS AS NECESSARY FOR THE WELL-BEING OF THE PLANTS.

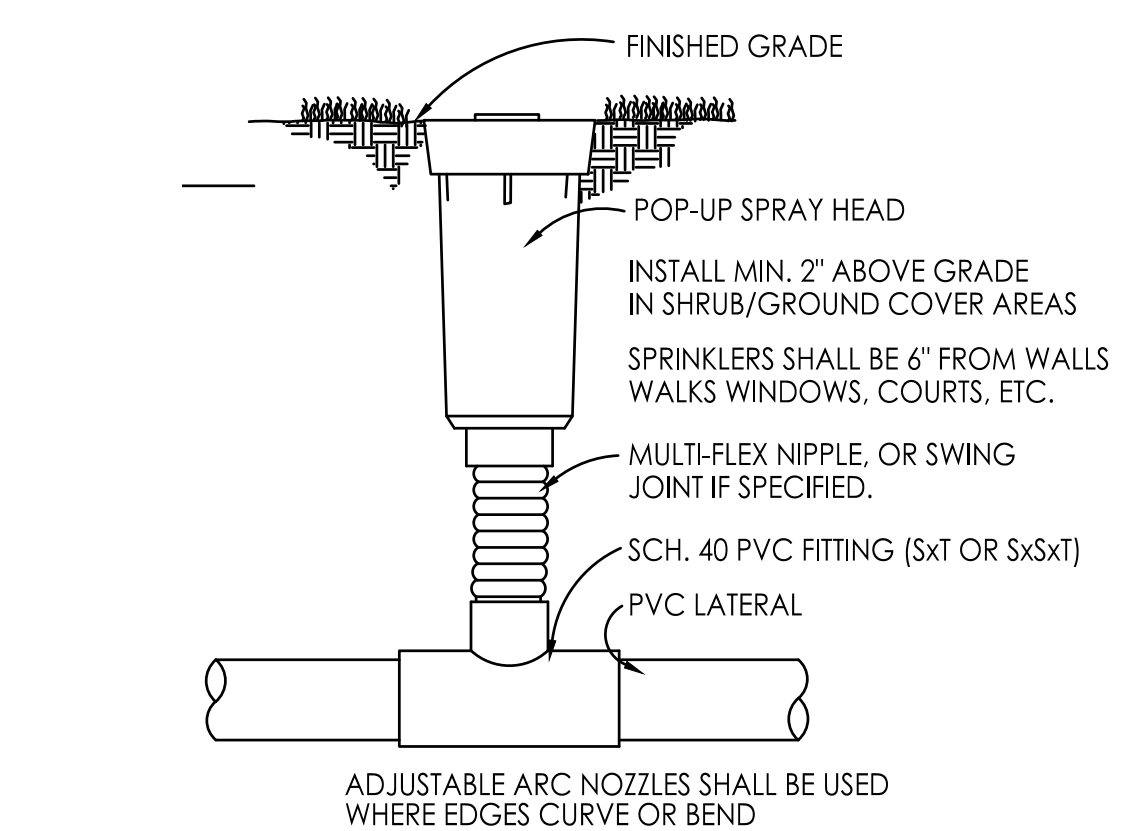
**4 EMITTER LOCATION**  
Scale: 3/4" = 1'-0"



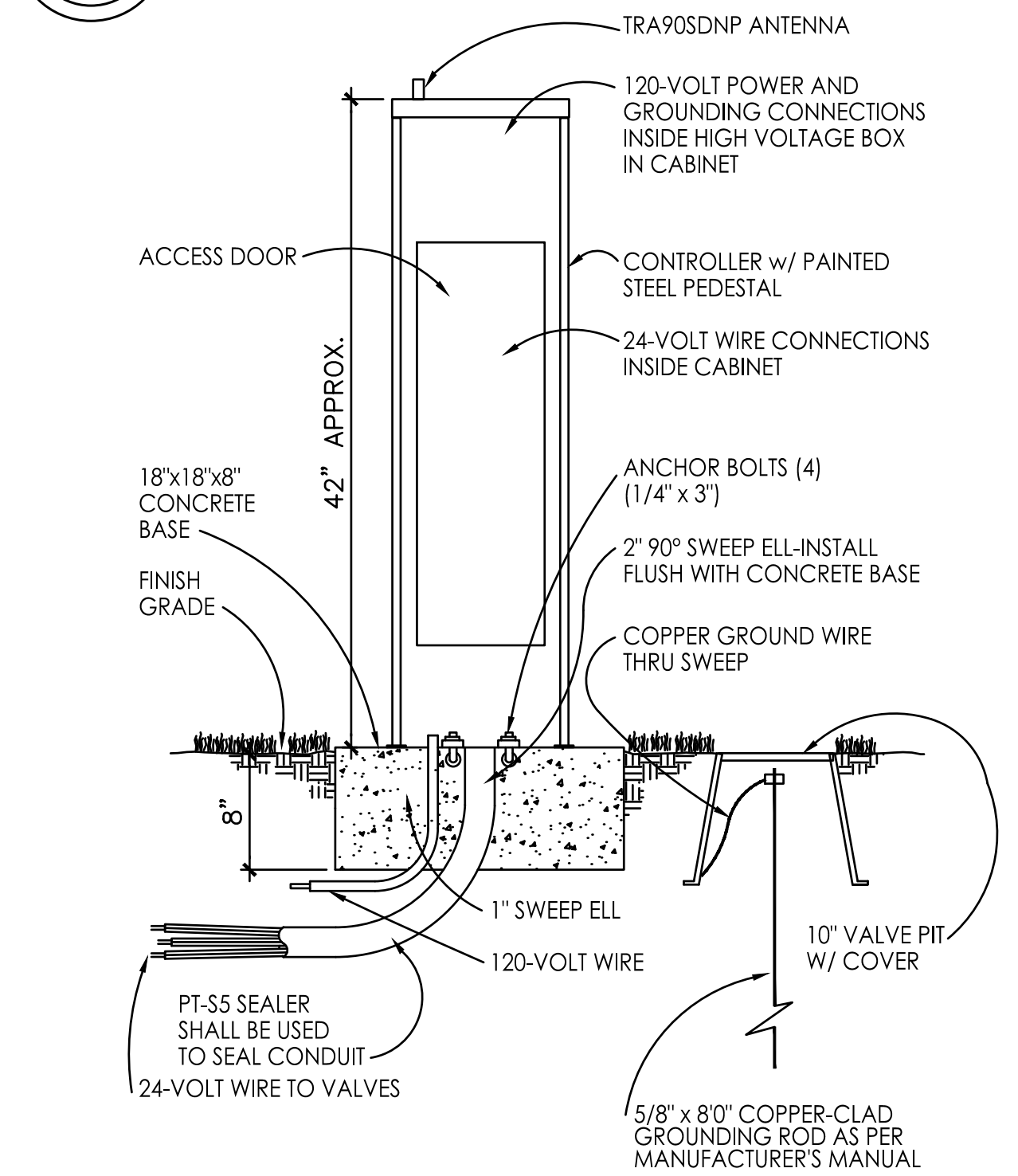
**5 DRIP SYSTEM PLUG**  
Scale: 3/4" = 1'-0"



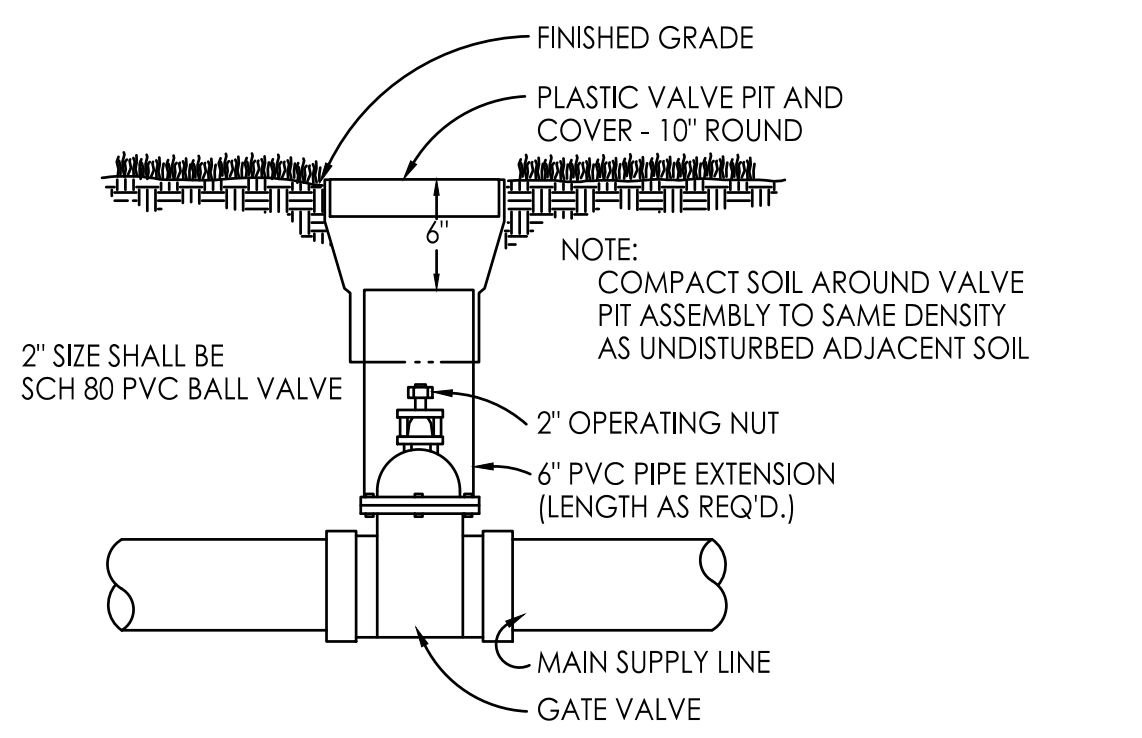
**8 REMOTE CONTROL VALVE ASSEMBLY**  
Scale: 3/4" = 1'-0"



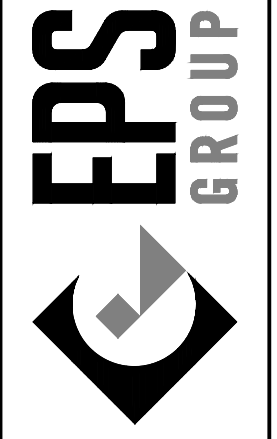
**6 POP-UP SPRAY HEAD**  
Scale: 3/4" = 1'-0"



**7 PEDAL-MOUNT CONTROLLER**  
Scale: 3/4" = 1'-0"



**9 GATE VALVE ASSEMBLY**  
Scale: 3/4" = 1'-0"



Project:

Revisions:	AS
1ST SUBMITTAL: 1/17/2023	
2ND SUBMITTAL: 03/23/2023	
3RD SUBMITTAL: 05/03/2023	



Designer: JA  
Drawn by: AS



Job No.  
**16-400**

CONSTRUCTION DOCUMENTATION

Sheet No.  
**L-8.01**



16-400 - Enclave 4 - L-9-01\_Irrigation\_Specifications.dwg  
May 09, 2023 11:35am Q:\Projects\2016-400 Landscape\Drawings\construction documents\enclave 4\16-400 - Enclave 4 - L-9-01\_Irrigation\_Specifications.dwg  
duarez

# IRRIGATION SPECIFICATIONS

## PART I - GENERAL

- 1.01 WORK INCLUDED
- Work of this Section generally includes a provision of an underground irrigation system including the following:
  - 1. Trenching, stockpiling excavation materials, and refilling trenches.
  - 2. Complete systems including but not limited to piping, pump station, assemblies, valves, fittings, heads, controller wiring, and final adjustments to ensure efficient coverage as determined by Architect.
  - 3. Water connections.
  - 4. Replacements of unsatisfactory materials.
  - 5. Clean-up, inspection, and approval.
  - 6. Tests.
- 1.02 REFERENCES
- Perform Work in accordance with requirement of Conditions of the Contract and Division 01 - General Requirements as well as provisions of all applicable laws, codes, ordinances, rules and regulations. Conform to requirements of reference information listed below, except where more stringent requirements are shown or specified in Contract Documents.
  - 1. American Society for Testing and Materials (ASTM) - Specifications and Test Methods specifically referenced in this section.
  - 2. Underwriters Laboratories (UL) - UL Wires and Cables.
- 1.03 QUALITY ASSURANCE
- Installer/Qualifications - Installer shall have had considerable experience and demonstrated ability in the installation of irrigation system(s) of specified type(s) in a neat, orderly, and responsible manner in accordance with recognized standards of workmanship. To demonstrate ability, experience, and financial stability necessary for this project, submit if requested by Consultant, prior to contract award the following:
  - 1. List of 3 projects completed in the last 2 years of similar complexity to this Project. Description of projects shall include:
    - a. Name of project.
    - b. Location.
    - c. Owner.
    - d. Brief description of work and project budget.
    - e. Current company financial statement.
- Special Requirements:
  - a. Tolerances - Specified depths of pressure supply lines and laterals and pitch of pipes are minimums. Settlement of trenches is cause for removal of finish grade treatment, refilling, recompaction, and repair of finished grade treatment.
  - b. Coordination with Other Contractors - Protect, maintain, and coordinate Work with Tasks under other sections.
  - c. Damage to Other Improvements - Contractor shall replace or repair damage to grading, soil preparation, seeding, sodding, or planting done under other Sections during work associated with installation of irrigation system at no additional cost to the Owner.
  - d. Work involving substantial plumbing for installation of backflow preventers, copper service, and related work shall be executed by licensed and bonded plumber(s), performed in accordance with all prevailing codes and regulations.
  - e. Work involving connection to, installation, or extension of 120 volt or greater electrical service shall be executed by a licensed and bonded electrician, performed in accordance with all prevailing codes and regulations.
- 1.04 SUBMITTALS
- Prepare and make submittals in accordance with conditions of the Contract prior to installation.

- STAKING, CONSTRUCTION RECORD DRAWINGS, AND PROGRAMMING:
  - 1. Coates Irrigation Consultants Inc. (CICI) shall stake the locations of all sprinklers 25-feet in radius or greater with the assistance of Contractor (refer to Section 3.02-1, and contact CICI prior to Bid for staking fees). CICI shall use the GPS collection method to record the rotary sprinklers, mainline routing, electric and gate valves, and controllers; and provide plan copy to Contractor. Contractor shall draw lateral piping, controller station numbers, and all other record information on the Field Record. At end of every day, revise Field Record for all work accomplished that day in RED ink. The Field Record Plan(s) shall be available at the Project Site for review. Upon completion of Project, Contractor shall submit Field Record Plan for review, prior to final acceptance.
    - Record plans shall be to same scale and in the same format as designed plans.
  - 2. Following approval of Field Record Plan by the Architect and Consultant, the Contractor shall submit the Field Record Plan with ALL changes, additions, and modifications performed during the project installation to Consultant. Consultant (CICI) shall create a digital Construction Record from the information provided by the Contractor. The digital Construction Record file shall be generated as follows:
    - a. PDF: Contractor shall contact with Coates Irrigation Consultants Inc. (CICI) to combine all Field Record information and GPS data for locations of water source(s), mainline routing, valves, controllers, and basic features to correspond with the site plan. This digital file shall be placed into sheet form as required, and Portable Document Format (PDF) files created as the Construction Record. Contractor shall contact CICI prior to Bid for fees for GPS data collection and creation of digital Construction Record.
  - 3. Consultant will not certify any pay request submitted by the Contractor if the Field Record drawings are not current, and processing of pay request will not occur until Field Records are updated.
  - 4. Consultant (CICI) shall collect the field controller data for programming purposes, if Contractor is unable to collect data or if the process delays project completion. Contractor shall contact CICI for fees for data collection.
  - 5. Prior to scheduling walk-through for substantial completion, Contractor is to submit all Field Record information to the Consultant for approval.
  - 6. Contractor shall also provide both a hard copy and Electronic Form version of the Controller Data Sheets to the Consultant. Hard copy and Electronic Forms shall be provided to the Contractor by Coates Irrigation Consultants Inc.

- CONTROLLER CHARTS - Do not prepare controller charts until Construction Record (as-built) drawings have been approved by the Consultant.
  - 1. Provide controller chart, automatic controller.
  - 2. Controller drawing may be same size reproduction of the record drawing, if scale permits fitting them into the controller door without folding drawing. If photo reduction prints are required, keep reproduction to maximum size possible to retain full legibility. Chart may also be Controller Data Sheet as for central-satellite systems, if approved by Consultant.
  - 3. Controller chart shall be bond print of actual as-built system, showing area covered by that controller; or Controller Data Sheet showing information on each station, and with complete description of each station's location.
  - 4. Identify area of coverage of each remote control valve, using a distinctly different pastel color for each zone. Highlight heads, lateral piping, and control valves.
  - 5. Following review of controller drawings by Consultant, hermetically seal each chart between two layers of 20 mm thick clear plastic.
  - 6. Controller chart shall be completed and approved by Consultant prior to final completion walk-through of irrigation system.
  - 7. Attach approved controller chart to inside of each controller door using self adhesive Velcro strips.

- CONTROL SYSTEM PROCEDURES:
  - 1. Contractor shall be responsible to provide and install all specified control equipment to result in a complete and working system, whether or not all appurtenances are shown on plans. System shall include controllers; all grounding and surge protection; and electrical control wiring.
    - 2. Following installation of each controller, contractor shall record all station data on a "Data Sheet" provided by the Consultant. This data shall include the type and quantity of irrigation devices on each station, nozzle type, arc, area of control (urf, trees, shrubs, etc.), valve size, gpm, location, etc. as shown on the Data Sheet.
    - 3. Prior to final walk-through for each area of the project, contractor shall confirm that the following has been accomplished:
      - a. Construction record drawings per 1.04.1.
      - b. Data Sheets for Controllers.
    - 4. Consultant (CICI) shall provide the following programming services: station data, hydraulic tree, and programs and schedules in the irrigation computer. CICI shall not provide a visual, interactive map. Contractor shall contact CICI for fees for programming services prior to bid.
  - 5. Product Warranty: Warranty includes the following:
    - a. Manufacturer's stated warranties shall apply on all products.
    - b. It shall insure that an authorized representative will be at the job site within 24 hours of notification of a product problem.
    - c. Warranty includes a one-year minimum product and labor warranty. If the product fails to meet project specifications, and the manufacturer's representative is unable to resolve the deficiency, the product will be replaced at no cost to the client with the product of their choice. This includes Contractor's labor for product replacement at their normal hourly rates.
    - d. In the event of a product problem, and the Consultant is required to spend additional time not covered by their contract as a result of this problem, then the manufacturer will reimburse the Consultant for time and materials at their normal hourly rates.
  - \*Project Qualifications:
    - a. The Consultant must be currently certified as an irrigation designer by the Irrigation Association, the American Society of Irrigation Consultants, or licensed in the project state to practice landscape architecture which includes irrigation design.
    - b. The project must consist entirely of one manufacturer's products where applicable (i.e.: excluding pipe, fittings, & wiring). If any composite products are INSTALLED on the project, the warranty will be the standard trade warranty as delineated in the manufacturer's product catalog.
    - c. The manufacturer's representative must be notified in the event of a product problem at least twenty-four (24) hours prior to an in-field meeting.
    - d. Installation must be certified by authorized representative in conformance to plans.

- Operation Manual:
  - Submit 3 sets of Operations Manual to Consultant for approval, prior to scheduling the final completion walk-through. Manual is to include the following in a 1 x 3 ring binder:
    - 1. Index sheet stating project name, and listing Contractor name, address, phone number, and contact person. Include same information for Primary Sub-Contractors.
    - 2. Manufacturer cut sheets for all material components of irrigation system. Highlight or circle specific models or items.

- 1.05 DELIVERY, STORAGE AND HANDLING
- Deliver, unload, store and handle materials, packaging, bundling, products, in dry conditions or a weatherproof manner, to prevent damage, breakage, deterioration, intrusion, ignition, and vandalism. Deliver in original unopened packaging containers prominently displaying manufacturer name, volume, quantity, contents, instructions, and conformance to local, state, and federal law. Remove and replace cracked, broken, or contaminated items or elements prematurely exposed to moisture, inclement weather, snow, ice, temperature extremes, fire, or job site damage.
- Handling of PVC Pipe - Exercise care in handling, loading and storing of PVC pipe. All PVC pipe shall be transported in a vehicle which allows the entire length of pipe to lie flat so as not to subject it to undue bending or concentrated external loads. All sections of pipe that have been dented or damaged shall be discarded, and if installed, shall be removed and replaced with new piping.
- 1.06 JOBSITE CONDITIONS
- Protection of Property:
  - 1. Preserve and protect all trees, plants, monuments, structures, and paved areas from damage due to Work in this Section. In the event damage does occur, all damage to inanimate items shall be completely repaired or replaced to the satisfaction of the Owner. All injuries to living plants shall be repaired by the Owner, and all costs of such repairs shall be charged to and paid by the Contractor.
  - 2. Protect buildings, walks, walls, and other property from damage. Flare and barricade open ditches. Damage caused to asphalt, concrete, or other building material surfaces shall be repaired or replaced at no cost to the Owner. Restore disturbed areas to original condition.
- Existing Trees:
  - 1. All trenching or other Work under limb spread of any and all evergreens or low branching deciduous material shall be done by hand or by other methods so as to prevent damage to limbs or branches.
  - 2. Where it is necessary to excavate adjacent to existing trees, use all possible care to avoid injury to trees, and tree roots. Excavation in areas where 2 inch and larger roots occur shall be done by hand. Roots 2 inches and larger in diameter, except directly in the path of pipe conduit, shall be tunneled under and shall be heavily wrapped with burlap to prevent scarring or excessive drying. Where a trenching machine is operated close to trees having roots smaller than 2 inches in diameter, the wall of the trench adjacent to the tree shall be hand trimmed, making clean cuts through roots. Roots 1 inch and larger in diameter shall be painted with two coats of "Tree Seal". Trenches adjacent to trees shall be closed within 24 hours, and when this is not possible, the side of the trench adjacent to the tree shall be kept shaded with moistened burlap or canvas.
- Protection and Repair of Underground Lines:
  - 1. Request proper utility company to stake exact location (including depth) of all underground utilities. Take whatever precautions necessary to protect these underground lines from damage. In the event damage does occur, all damages shall be repaired by Contractor unless other arrangements have been made.

- Replacement of Paving and Curbs - Where trenches and lines cross existing roadways, paths, curbing, etc., damage to these shall be kept to a minimum and shall be restored to original condition.
- 1.07 WARRANTY/GUARANTY
- Contractor shall warrant materials against defects for a period of one year from the date of Substantial Completion. Contractor shall guarantee workmanship for similar period. Contractor shall be responsible for coordinating material warranty items with the manufacturer/distributor.
  - Setting of backfilled trenches which may occur during warranty period shall be repaired by Contractor at no expense to the Owner, including complete restoration of damaged property.
  - Expenses due to vandalism before substantial completion shall be borne by Contractor.
- Owner or representative maintenance company will maintain turf and planting areas during warranty period, so as not to hamper proper operation of the irrigation system.
- 1.08 MAINTENANCE
- Furnish the following maintenance items to Owner prior to final Acceptance:
  - 1. 2 sets of special tools required for moving, disassembling, and adjusting each type of sprinkler head and valve supplied on this project.
  - 2. 2 keys of each automatic controller.
  - 3. 3 quick coupler keys and matching hose swivels.
- 1.09 EXTRA STOCK
- In addition to installed system furnish the following items to Owner:
  - 1. 4 per 100 installed drip emitters of each type used.
  - 2. 2 pop-up heads of each type used.

## PART II - PRODUCTS

- 2.01 MATERIALS
- General Piping:
  - Note: All piping for reclaimed water systems shall be purple colored, or wrapped with reclaimed "sock" or reclaimed marking tape, and main lines shall have detectable reclaimed marking tape in trench 12" above top of pipe.
  - 1. Pressure Supply Lines (downstream of Pump Station) - Class 200 PVC, Solvent Weld Belled End for 2-1/2" and smaller, and rubber-joint for 3" and larger with ductile iron fittings & taps with concrete thrust blocks.
  - 2. Non-pressure lines - Class 200 PVC, Solvent Weld Belled End.
  - 3. Drip Piping - 1/2" Class 315 PVC, Solvent Weld unless otherwise specified on plans.
  - 4. Emitter Tubing - by emitter manufacturer.
- Plastic Pipe and Fittings:
  - 1. Identification Markings:
    - a. All pipe to be identified with following indelible markings:
      - 1) Manufacturer's Name.
      - 2) Nominal pipe size.
      - 3) Schedule or class.
      - 4) Pressure Rating.
      - 5) NSF (National Sanitation Foundation) seal of approval.
      - 6) Date of extinction.
    - b. All fittings including valve taps for rubber-ring pipe shall be cast or ductile iron, rubber-ring joint for PVC. Ductile iron fittings shall have the following characteristics:
      - 1) All ductile iron fittings and joint restraints shall have a fusion bonded epoxy coating on interior and exterior of the product surface, average of 10-12 mm thickness. Epoxy coating shall conform to the requirements of CSA 2245.20-20 and NSF 61 for water services. Tar/bitumen coating will not be approved.
      - 2) All ductile iron pipe fittings, joint restraints, lateral isolation valves and mainline isolation gate valves shall be of the same manufacturer which offers a 10-year warranty on products and replacement labor costs. Prior to installation, manufacturer shall provide documentation stating the above warranty information.
  - 2. Solvent Weld Pipe - Manufactured from virgin polyvinyl chloride (PVC) compound in accordance with ASTM D2241 and ASTM D1784: cell classification 12245-B, Type 1, Grade 1.
    - a. Fittings - Standard weight, Schedule 40, injection molded PVC, complying with ASTM D1784 and D2466, cell classification 12454-B.
      - 1) Threads - Injection molded type (where required).
      - 2) Tees and elbs - Side gated.
    - b. Threaded Nipples - ASTM D2454, Schedule 80 with molded threads.
    - c. Joint Cement and Primer - Type as recommended by manufacturer of pipe and fittings.
- Low Pressure/Volume Systems:
  - 1. Emitters as indicated on drawings.
  - 2. Drip Piping - manufactured of polyvinyl chloride compound conforming to ASTM D2241 and ASTM D1784, Type 1, Grade 1.
  - 3. Fittings - Schedule 40 PVC, or as recommended by piping manufacturer.
  - 4. Drip Valve Assembly - Type and size shown on drawings.
    - a. Wye Strainer - Plastic/Fiberglass construction with 150 mesh nylon screen and blow out assembly.
    - b. Control Valve - 2-way, solenoid pilot operated type made of synthetic, non-corrosive material; diaphragm-activated and slow closing. Include freely pivoted seal seat; relieved (mounted) without attachment to diaphragm.
    - c. Pressure Regulator - Plastic/Fiberglass construction, preset type with pressure setting per drawings.

- Copper Pipe and Fittings:
  - 1. Copper Pipe - Type K hard tempered.
  - 2. Fittings - Wrought copper, solder joint silver.
  - 3. Joints - Soldered with solder, 45% silver, 15% copper, 16% zinc, and 24% cadmium and solids at 1125 F and liquids at 1145F.
- Brass Pipe and Fittings:
  - 1. Brass Pipe - 85% red brass, AMSI Schedule 40 screwed pipe.
  - 2. Fittings - Medium brass, screwed 125 pound class.
- Quick Coupling Valves - Brass two-piece body designed for working pressure of 150 psi, operable with quick coupler. Equip quick coupler with locking rubber cover (purple for reclaimed water if specified).
- Valve Boxes:
  - Note: All box covers for reclaimed water systems shall be purple colored, and marked for reclaimed. Otherwise, valve box cover to be selected based upon a review of the location and adjacent material by Owner and Landscape Architect prior to installation.

- Drip Line Blow-out Stubs, and Wire Stub Box - Carson #910-12.
- 1-inch through 2-inch Control Valves - Carson #1419-13B.
- Drip Valve Assemblies - Carson #1419-13B.
- Control Wiring Splices - Carson #910-12.
- Main Line Gate Valves - Carson #910-12.
- Air-Relief Valves - Carson #1419-13B.
- Manual Drain Valves - Carson #1419-13B.
- Pressure Reducing Valves - As shown on detail.

- Electrical Control Wiring:
  - 1. Low Voltage:
    - a. Electrical Control Wire - AWG UF UL approved No. 14 gauge direct-burial copper wire for 2-wire decoder-based system communication cable wiring with grounding every 1000', in 1" sch 40 PVG conduit with sealer at openings in valve boxes and controllers.
    - b. Wire Colors:
      - 1) Communication cable: Blue for first control leg on controller.
      - 2) Communication cable: Red for second control leg on controller. Other colors for more control legs.
      - 3) Future Wires - Same as control and common wire (labeled at terminations). Stub for future, at each extreme end.
    - c. If multiple controllers are utilized, and wire paths of different controllers cross each other, both common and control wires from each controller shall be different colors approved by Consultant.
    - d. Wire connections for all valve and solenoid locations shall be UL 486D approved direct-bury wire connectors for wet / damp locations, rated up to 600 volts, as manufactured by Rain Bird model DB Series Wire Connector, or approved similar dry splice method. Wire connectors shall provide strain relief and have the wire nut / spring integrated into the housing. All 24-volt wire splices shall conform to National Electric Code (NEC) standards and all state, local and federal codes.
  - 2. High Voltage - Type required by local codes and ordinances, of proper size to accommodate needs of equipment serviced.
- Sprinkler Heads - As shown on drawings. Purple caps or nozzles for Reclaimed Water use.
- Electric Control Valves - As noted on drawings. Purple handles for Reclaimed Water use. Install pressure regulating devices where specified on plans.
- Pipe bedding material - Construction grade sand approved by Consultant.
- Automatic Controller - As shown on drawings.
- Manual Drain Valve - As shown on drawings.
- Air-Relief Valve - As shown on drawings.
- Pressure Reducing Valve - As shown on drawings.
- Pump Station - As shown on drawings.

## PART III - EXECUTION

- 3.01 INSPECTION
- Examine areas and conditions under which Work of this Section is to be performed. Do not proceed with Work until unsatisfactory conditions have been corrected.
- Grading operations, with the exception of final grading, shall be completed and approved by Owner prior to staking or installation of any portion of irrigation system except sleeving.
- 3.02 PREPARATION
- Staking shall Occur as Follows:
  - 1. For all projects with rotary sprinklers spaced at twenty-five feet (25) or greater, Consultant (CICI) shall lay out the sprinklers using wire flags with assistance from Contractor. Contractor shall contact CICI prior to Bid for Consultant's staking fees. For all projects or area segments with smaller sprinklers, Contractor shall lay out sprinklers and contact Consultant for review.
  - 2. Mark with powdered line or marking paint routing of pressure supply lines, and flag heads and control valve locations for first series of zones as directed by Consultant. Contact Consultant a minimum of 48 hours in advance and request a review of staking. Consultant will review staking and direct changes if required. Staking review does not relieve installer from coverage problems due to improper placement of heads after staking.
- Install sleeving under all asphalt paving and concrete walks, prior to the installation of concrete or paving operations, to accommodate piping and wiring. Compact backfill around sleeves to 95% Standard Proctor Density within 2% of optimum moisture content in accordance with ASTM D1557.
- Trenching - Trench excavation shall follow, as much as possible, layout shown on Drawings. Dig trenches straight, and support the pipe continuously on the bottom of trench. Trench bottom shall be clean and smooth with all rock and organic debris removed. Pressure supply line trenches shall be over-excavated as required to allow for bedding material. Trench depth shall be uniform as required to meet minimum depth requirements for the type of piping being installed.
  - 1. Clearances:
    - a. Piping smaller than 3 inches - Trenches shall have a minimum width of 7 inches. 12 inches for 3" and larger pipe.
    - b. Line clearance - Provide not less than 6 inches of clearance between each line, and not less than 12 inches of clearance between lines of other trades.
    - c. For Reclaimed Water systems, 2-foot vertical (below) and 6-foot horizontal separations from potable lines are required per industry standards.
  - 2. Pipe and Wire Depth:
    - a. Pressure Supply Piping - 24 inches from top of pipe (30 inches where 6" and larger pipe is on project).
    - b. Non-pressure piping - 12 inches from top of pipe.
    - c. Control Wiring - Side and bottom of pressure supply line.
    - d. Drip piping - 12 inches from top of pipe.
    - e. Emitter tubing - 12 inches from top of pipe (non slope plantings). 4 inches from the top of pipe (slopes 2:1 or greater).
  - 3. Boring will be permitted only where pipe must pass under obstruction(s) which cannot be removed, and must be approved by Consultant if not specifically indicated on construction drawings. Final density of backfill shall match that of surrounding soil. Use of sleeves of suitable diameter is acceptable if installed first by jacking or boring, and pipe laid through sleeves. Observe same precautions as though pipe were installed in open trench.
- 3.03 INSTALLATION
- Locate other equipment as near as possible to location designated on construction drawings. Deviations shall be approved by Consultant prior to installation.
  - PVC Piping:
    - 1. Snake pipe in trench as much as possible to allow for expansion and contraction.
    - 2. When pipe laying is not in progress, or at end of each day, close pipe ends with tight plug or cap. (Perform work in accordance with good practices prevailing in piping trades).
    - 3. Coordinate pressure supply line installation with required bedding operations. Concrete thrust blocks or steel joint restraints shall be utilized for all rubber-joint joint fittings per industry standards. In sandy soil, mechanical joint fittings shall be used with thrust blocks.
    - 4. Stake all above-grade PVC piping per details.
    - 5. Use 45-degree elts when making perpendicular crossings of above-grade PVC piping, to depress bottom pipe.
    - 6. Lay pipe and make all plastic-to-plastic joints in accordance with manufacturer's recommendations.
  - Drip Piping:
    - 1. Install fitting connections per manufacturer's recommendations.
    - 2. Use threaded risers and Sch. 40 or Sch 80 fittings per details when making connections in drip piping for emitters and fittings.
    - 3. Install drip line blow-out stubs at all dead ends of drip piping.
    - 4. Any deviations from drip pipe routing shown on drawings must be approved by consultant prior to installation.
- Control Wiring
  - 1. Low Voltage Wiring:
    - a. Bury control wiring between controller and electric valves in pressure supply line trenches, with wires consistently located below and to one side of pipe, on top of initial pipe bedding, or in separate trenches.
    - b. Bundle all 24-volt wires at 10-foot intervals with electrical or duct tape.
    - c. Provide an expansion loop at pressure supply line angle fittings, every electric control valve location (in valve box), and at minimum 500 feet intervals. Form expansion loop by wrapping wire at least 8 times around a 1-inch pipe and withdrawing pipe.
    - d. Make splices and electric control valve connections using SureSplice SK 12-14 connectors or similar dry splice method.
    - e. Install control wire splices not occurring at control valve in a separate splice valve box.
    - f. Install one control wire for each control valve.
    - g. Run 2 spare communication cable wires from controller pedestal to last electric control valve operated by controller on each and every leg of pressure supply line. Label spare wires at controller and wire stub box. Loop a minimum of 24' from all spare wires inside every control valve box operated by controller.
    - h. Run all future control wires from controller pedestal to point indicated on drawings. Coil a minimum of ten (10) feet at termination and install in 10" round valve box. Label all wires at termination.
  - 2. High Voltage Wiring for Automatic Controller:
    - a. Provide 120-volt power connection to automatic controller.
- Automatic Controller:
  - 1. Install controller in accordance with manufacturer's instructions as detailed and where shown on Drawings.
  - 2. Connect remote control valves to controller in numerical sequence as shown on Drawings.
  - 3. Final location of controller shall be approved by Consultant prior to installation.
  - 4. Each controller shall have a dedicated separate ground wire and surge protection.
  - 5. Above-ground conduit shall be rigid galvanized with appropriate fittings. Below-ground conduit shall be Schedule 40 PVG.
- Quick Coupler Valves:
  - Install quick couplers on double swing-joint assemblies of Schedule 80 PVC piping, flush to grade. Angled nipple relative to pressure supply line shall be no more than 45 degrees and no less than 10 degrees. Install quick coupler as detailed.
- Drip Valve Assemblies - Install drip valve assembly as detailed.
- Drip Emitters - Install drip emitters as detailed.

- 3.04 ADJUSTING
- Upon substantial completion of installation, fine-tune entire system by regulating valves, adjusting spray patterns and break-up arms/screws, and setting pressure reducing valves or throttling electric valve flow control stems to proper pressure settings to provide optimum and efficient coverage. Flush and adjust all sprinkler heads for optimum performance and to prevent overspray onto walks, roadways, and buildings as much as possible. Heads of same type shall be operating at same pressure +/- 7%.
- If it is determined that irrigation adjustments will provide proper and more adequate coverage, make such adjustments prior to Final Acceptance, as directed, at no additional cost to Owner. Adjustments may also include changes in nozzle sizes, degrees of arc, and control valve throttling. All sprinkler heads shall be set perpendicular to finish grade unless otherwise designated.
- Areas which do not conform to designated operation requirements due to unauthorized changes or poor installation practices shall be immediately corrected at no additional cost to the Owner.
- 3.05 CLEANING
- Maintain continuous cleaning operation throughout duration of Work. All trash or debris generated by installation of irrigation system shall be properly disposed of by Contractor off-site.

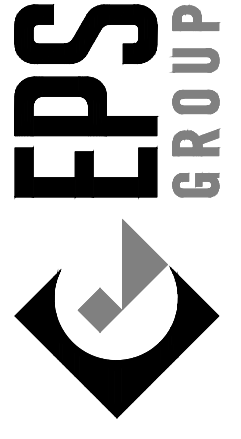
- Valve Boxes:
  - 1. Install one valve box for each type of valve installed as detailed flush with grade for all sodded areas, and above-grade for all seeded areas.
  - 2. Valve box extensions are not acceptable, except for master valve and flow sensor.
  - 3. Install gravel sump after compaction of all trenches. Valve box to rest on gravel sump. Place final portion of gravel inside valve box after valve box is backfilled and compacted.
  - 4. Install "Christy" stainless steel or 2.5" x 5" plastic valve label tags for each valve box (1-800-258-4583). Entire controller & station number shall be printed on each tag. Letter and number size shall be no smaller than 1/8 inch and no greater than 1/4 inches. Label each valve box as follows:
    - a. Control valves - Controller letter and station number. Burn "DEC" into box cover for all electric valves with Decoders.
    - b. Quick Coupler Valves - Label "QCV."
    - c. Wire Splices - Label wire splices with the letters "WS."
    - d. Drip Piping Blow-out Stubs - Controller letter and station number of each drip piping blow-out.
    - e. Gate Valves - Label with letters "GV" typical.
    - f. Air-Relief Valves - Label with letters "ARV" typical.
    - g. Manual Drain Valve - Label with letters "MDV."
    - h. Pressure Reducing Valves - Label with letters "PRV" typical.
    - i. Flow Sensors - Label with letters "FS" typical.
  - 5. Valve box color to be selected based upon a review of the location and adjacent material by Owner and Landscape Architect prior to installation. These guidelines are typical of all installations unless water source is effluent. In that case all valve boxes no matter the location are to be purple in color and meet all applicable codes and ordinances.
- Backflow Preventer - Install as detailed on Drawings if applicable.
- Pump Station - Install as detailed on Drawings.
- Electric Control Valves:
  - Install top of cross handle a maximum of 3 inches below finished grade where shown on Drawings and as detailed. When grouped together, allow a minimum of 12 inches between valve box sides. Space control valves accordingly. Install each remote control valve in a separate valve box. Install valve boxes flush with grade. When parallel to roadway, sidewalk or other permanent element or structure, control valve and box are to be installed perpendicular to element or structure, spaced equally. For athletic areas such as football fields where concrete curbs exists, place electric valves within one foot of curb.
- Main Line Gate Valves - Install as detailed on Drawings.
- Air-Relief Valves - Install as detailed on Drawings.
- Control Wiring:
  - 1. All control wiring to be laid to bottom and side of pressure supply line trench. Separate wire trenches will not be allowed unless approved by Consultant prior to installation.

- Backfilling - Do not begin backfilling operation until required system tests have been completed. Backfill shall not be done in freezing weather except with prior written approval by Consultant. Leave trenches slightly mounded to allow for settlement after backfilling is complete. Trenches shall be finished graded prior to walk-through of system by Consultant.
  - 1. All pressure supply lines shall be bedded with construction grade sand 4 inches below invert of pipe, to 6" above top of pipe and width of trench when site conditions are rocky or otherwise unfavorable.
  - 2. Materials - Excavated material is generally considered satisfactory for backfilling purposes after completing bedding requirements. Backfill material to be free of rubbish, vegetative matter, frozen materials, and stones larger than 2 inches in maximum dimension. Do not mix subsoil with topsoil. Material not suitable for backfill shall be hauled away. Contractor shall be responsible for providing suitable backfill if excavated material is unacceptable, or not sufficient to meet backfill, compaction, and final grade requirements.
  - 3. Do not leave trenches open for a period of more than 48 hours. Open excavations shall be protected in accordance with OSHA regulations.
  - 4. Compact backfill to 90% maximum density in 6" lifts, determined in accordance with ASTM D1557-7 utilizing the following methods:
    - a. Mechanical tamping.
    - b. Puddling or puddling. Puddling or puddling and/or jetting is prohibited within 10'-0" of building or foundation walls.
- Piping Under Paving:
  - 1. Provide for a minimum cover of 24 inches between the top of the pipe and the bottom of the aggregate base for all pressure and non-pressure piping installed under asphalt concrete or concrete paving. Provide sleeving as required by municipality, or as shown on plans.
  - 2. Piping shall be bedded with construction grade sand - 6 inches below pipe to 6 inches above pipe and the width of the trench.
  - 3. Compact backfill material in 6-inch lifts at 95% maximum density determined in accordance with ASTM D1557 using manual or mechanical tamping devices.
  - 4. Set in place, cap, and pressure test all piping under paving, in presence of Consultant or Owner prior to backfilling and paving operations.
  - 5. Piping under existing walk or concrete pavement shall be done by jacking, boring, or hydraulic driving, but where cutting or breaking of walks and/or concrete is necessary, it shall be done and replaced at no cost to the Owner. Obtain permission and prior approval from Owner to cut or break walks and / or concrete.
- 3.04 FIELD QUALITY CONTROL
- Flushing - After piping, risers, and valves are in place and connected, but prior to installation of emitter heads, quick coupler valves, and air relief valves, thoroughly flush piping system under full head of water pressure from dead end fittings. Maintain flushing for 5 minutes through furthestmost valves. Cap (iser after flushing).
  - Testing - Conduct tests in presence of Consultant. Arrange for presence of Consultant a minimum of 48 hours in advance of testing. Supply force pump and all other test equipment.

- 1. After backfilling, and installation of all control valves & quick coupler valves, fill pressure supply line with water, and pressurize to 40 PSI over the designated static pressure or 120 PSI, whichever is greater, for a period of 2 hours.
- 2. Leakage, Pressure Loss - Test is acceptable if no leakage or loss of pressure is evident during test period.
- 3. Leaks - Detect and repair leaks.
- 4. Retest system until pressure can be maintained for the duration of the test.
- 5. Before final acceptance, pressure supply line shall remain under pressure for a period of 48 hours.

- Walk-Through for Substantial Completion:
  - 1. Arrange for Consultant's presence a minimum of 48 hours in advance of walk-through.
  - 2. Entire System shall be completely installed and operational prior to scheduling of walk-through. All sodded areas are to be complete with head height and valve boxes adjusted accordingly.
  - 3. Operate each zone in its entirety for Consultant at time of walk-through, and open all valve boxes.
  - 4. Consultant shall generate a list of items to be corrected prior to Final Completion ("Punch List").
  - 5. Furnish all materials and perform all Work required to correct all inadequacies due to deviations from Contract Documents, and as directed by Consultant.
- During walk-through, expose all drip emitters and sprinklers under operations for observation by Consultant to demonstrate that they are performing and installed as designed; prior to placing of all mulch material. Schedule separate walk-through if necessary.


- Walk-Through for Final Completion:
  - 1. Arrange for Consultant's presence a minimum of 48 hours in advance of walk-through.
  - 2. Show evidence to Consultant that Owner has received all accessories, charts, record drawings, and equipment as required before Final Completion walk-through is scheduled.
  - 3. Operate each zone identified as deficient at substantial completion walk-through for Consultant to review at time of final completion walk-through to ensure correction of all incomplete items.
  - 4. Items deemed not acceptable by Consultant shall be reworked to the complete satisfaction of Consultant.
- If after request to Consultant for a walk-through for Final Completion of the irrigation system, Consultant finds items during walk-through to be deficient, Contractor shall be charged for all subsequent walk-throughs. Funds will be withheld from final payment and/or retainage to Contractor, in amount equal to additional time and expenses required by Consultant to conduct and document further walk-throughs as deemed necessary to ensure compliance with Contract Documents.
- 3.05 ADJUSTING
- Upon substantial completion of installation, fine-tune entire system by regulating valves, adjusting spray patterns and break-up arms/screws, and setting pressure reducing valves or throttling electric valve flow control stems to proper pressure settings to provide optimum and efficient coverage. Flush and adjust all sprinkler heads for optimum performance and to prevent overspray onto walks, roadways, and buildings as much as possible. Heads of same type shall be operating at same pressure +/- 7%.
- If it is determined that irrigation adjustments will provide proper and more adequate coverage, make such adjustments prior to Final Acceptance, as directed, at no additional cost to Owner. Adjustments may also include changes in nozzle sizes, degrees of arc, and control valve throttling. All sprinkler heads shall be set perpendicular to finish grade unless otherwise designated.
- Areas which do not conform to designated operation requirements due to unauthorized changes or poor installation practices shall be immediately corrected at no additional cost to the Owner.
- 3.06 CLEANING
- Maintain continuous cleaning operation throughout duration of Work. All trash or debris generated by installation of irrigation system shall be properly disposed of by Contractor off-site.

1130 N. Alma School Road, Suite 210  
Mesa, AZ 85201  
T:480.503.2258 | F:480.503.2258  
www.epsgroupinc.com

**Paloma Creek  
Enclave 4**  
City of Surprise, Arizona

**Irrigation Specifications**

Project:	Revisions:
EST SUBMITTAL: 11/28/2022	
2ND SUBMITTAL: 03/23/2023	
3RD SUBMITTAL: 05/03/2023	

Call at least two full working days before you begin excavation.

DESIGNED BY: ASDRAWN BY: JA

REGISTERED LANDSCAPE ARCHITECT  
AZ 45568  
ALIZA E. SABIN  
Lic. Exp. 5/31/2024Job No.

CONSTRUCTION DOCUMENT16-400

Sheet No.L-9.01

17 of 17

Case #F522-1632



## Leslie Carnie

---

**From:** JAMES, MARK C GS-13 USAF AETC 56 FW/CVE <mark.james.14@us.af.mil>  
**Sent:** Tuesday, January 10, 2023 9:32 AM  
**To:** Nichole Flores  
**Cc:** 56 FW/CIT Community Initiative  
**Subject:** RE: FS22-1632 Enclave 4 Final Plat - New Digital Submittal 12.21.22  
**Attachments:** smime.p7s; ATT00001.txt; ATT00002.htm

Thank you for allowing Luke AFB to make comments on the Enclave 4 Final Plat application.

As described in the application, this request will not have a negative impact on Luke AFB Flight Operations. Since the site will be located inside the “territory in the vicinity of a military airport,” it will be subjected to approximately 165 over flights per day. A strong notification program on the part of the applicant is essential to inform residents about Luke AFB operations.

Respectfully,

*Mark James*

Deputy Director, Community Initiatives Team  
56th Fighter Wing  
Luke AFB AZ 85309  
Office: 623-856-6175  
DSN: 896-6175

---

**From:** Nichole Flores <Nichole.Flores@surpriseaz.gov>  
**Sent:** Thursday, December 22, 2022 8:00 AM  
**To:** 56 FW/CIT Community Initiative <56FW.CIT.CommunityInitiative@us.af.mil>; Afshin Ahouraiyan (Flood Control District of Maricopa County) <Afshin.Ahouraiyan@Maricopa.Gov>; Alex Garza (Maricopa Assoc of Governments) <AGarza@azmag.gov>; Chris Cain (Maricopa Water District) <chrisc@mwdaz.com>; Debbie Trasancos (Maricopa Water District) <debbiet@mwdaz.com>; Ernest (USPS) <Ernest.L.James@usps.gov>; Eva Pierce <eva.pierce@dysart.org>; Ibeth - USPS <Ibeth.L.Roman@usps.gov>; Jerome Choy (ADOT) <jchoy@azdot.gov>; Judy Lopez - Beardsley Water Company <managefnm365@aol.com>; Kevin Shipman <kevin.shipman@dysart.org>; Leslie - MWD <lesliej@mwdaz.com>; Mark Frago <fragom@mail.maricopa.gov>; Mary Orta - Surprise Chamber <mary.orta@surpriseregionalchamber.com>; MCDOT (MCDOTPlanning@maricopa.gov) <MCDOTPlanning@maricopa.gov>; Raoul Sada - Surprise Chamber <raoul@surpriseregionalchamber.com>; Rovell Foggy (Liberty Utilities) <Rovell.Foggy@libertyutilities.com>; Shelby Rios (MWD) <shelbyr@mwdaz.com>; Victor.Schaum <Victor.Schaum@cox.com>; Yvonne Aguirre <yvonne.aguirre@swgas.com>  
**Subject:** [Non-DoD Source] FS22-1632 Enclave 4 Final Plat - New Digital Submittal 12.21.22

Good morning,

Attached please find the **application**, **narrative**, and **final plat** for the above referenced project.

Please feel free to contact us with any questions.

Best regards,

*Nichole Flores*

Planning Project Coordinator  
City of Surprise | Community Development  
16000 N Civic Center Plz | Surprise AZ 85374  
(623) 222-3244 Direct

**Please note effective August 3, 2022, we will be adding a 2-business day out-processing for ALL notices**

---

This e-mail and any accompanying files transmitted are intended solely for the use of the individual or entity to whom they are addressed; if you have received this e-mail in error please delete it and notify the sender. In addition, under Arizona law, e-mail communications and e-mail addresses may be public records.

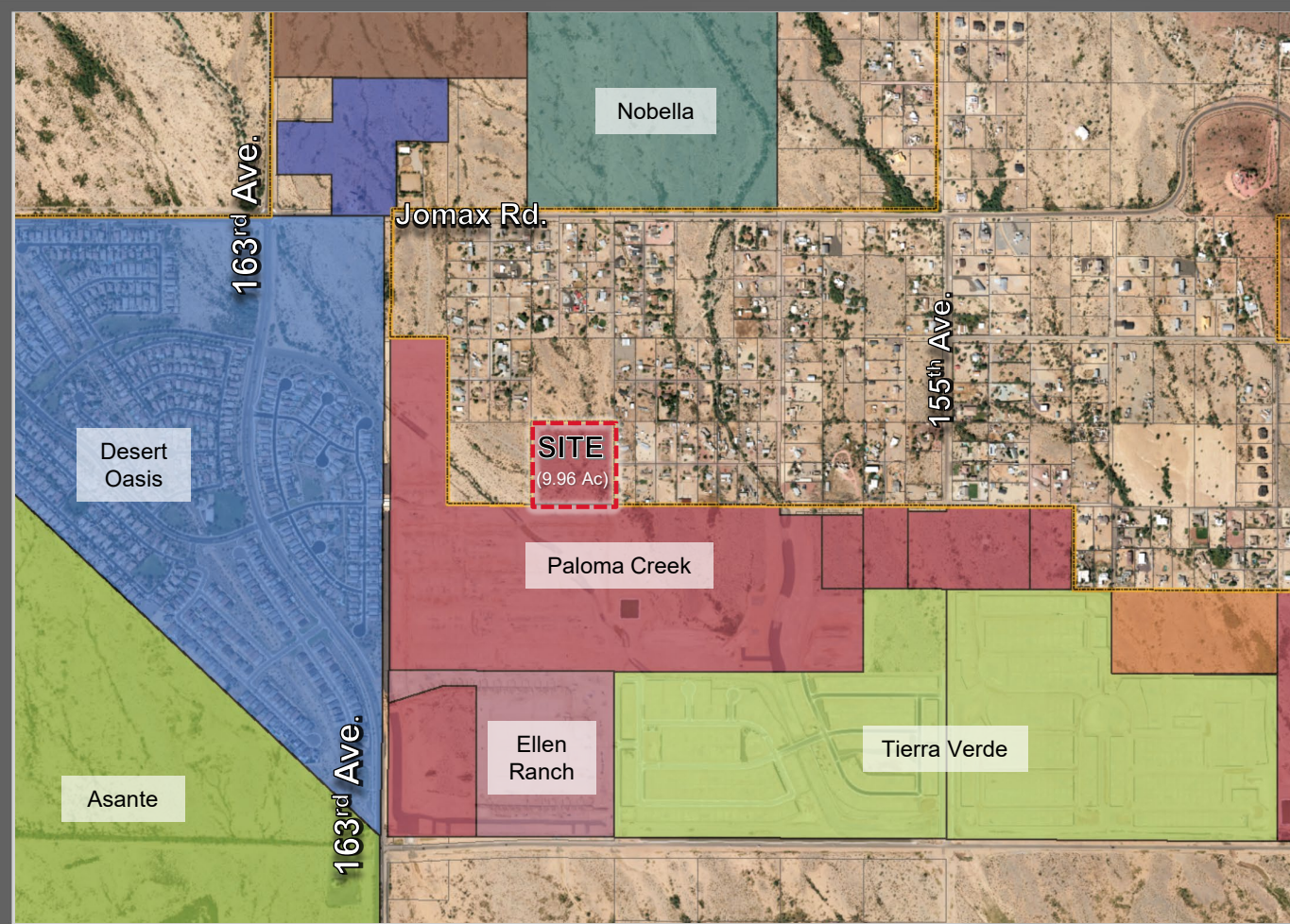
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**SURPRISE**  
ARIZONA

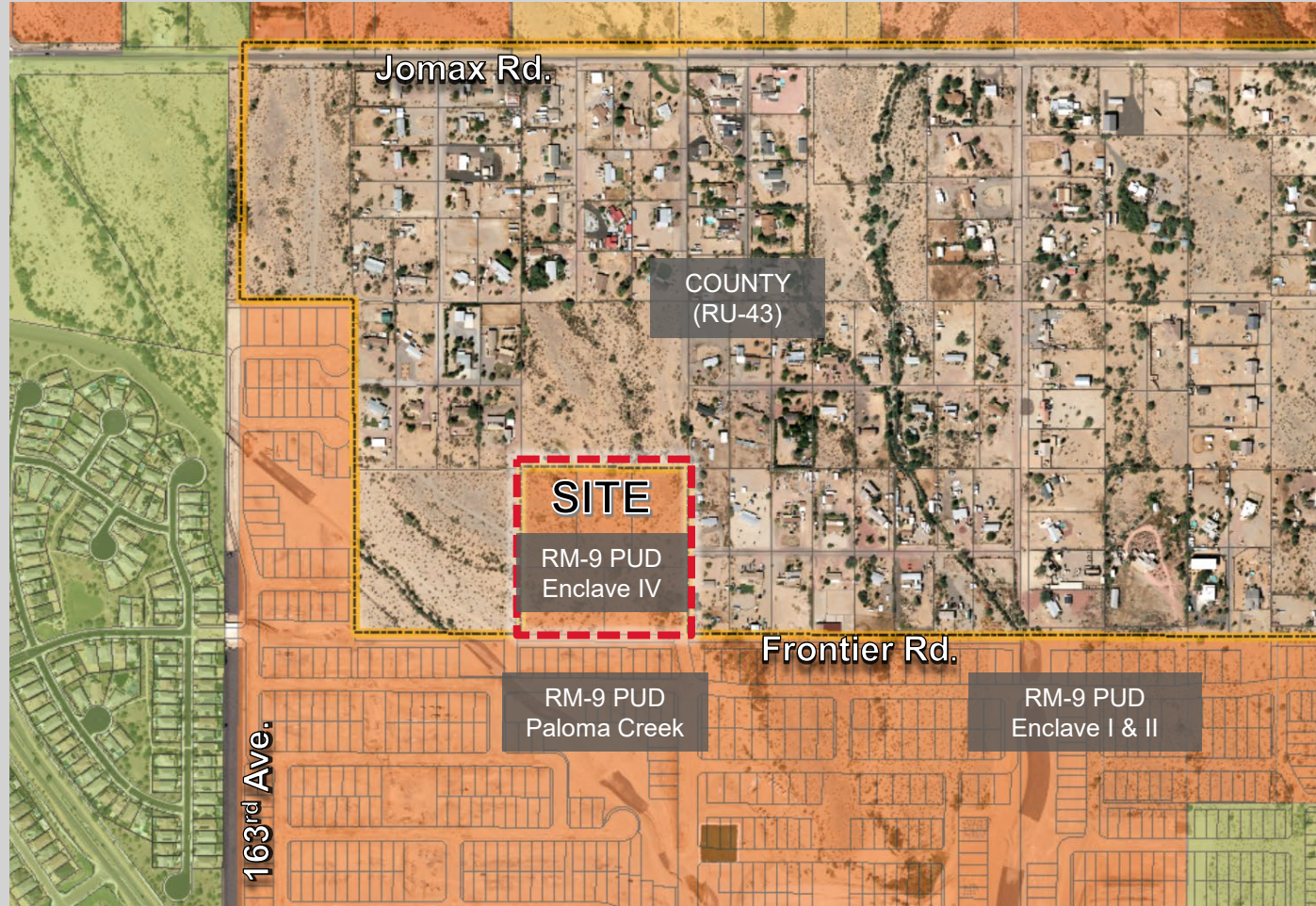
**FS22-1632**  
**Enclave 4**  
**Final Plat**

City Council  
February 20, 2024



# VICINITY MAP





Jomax Rd.

COUNTY  
(RU-43)

**SITE**

RM-9 PUD  
Enclave IV

Frontier Rd.

RM-9 PUD  
Paloma Creek

RM-9 PUD  
Enclave I & II

163rd Ave.

ZONING MAP







**SURPRISE**  
ARIZONA

**QUESTIONS OR  
COMMENTS?**

**Thank You**



**CITY OF SURPRISE**  
**Regular City Council Meeting**

---

Council Meeting Date: February 20, 2024

Contact Person: Holly Osborn, DIRECTOR-  
PARKS & REC

Submitting Department: Parks and Recreation

District: Citywide

Staff Recommendations: None

---

Consent: No

Regular: Yes

Public Hearing: No

Report/Discussion: No

---

**Agenda Wording:**

Consideration and action pertaining to amending the Fiscal Year 2024 budget by moving budget authority of \$218,300 within the General Fund from General Contingency to the Parks and Recreation Department and amending the full-time equivalent count; Resolution #2024-17.

---

**Motion:**

I move to approve Resolution #2024-17.

---

**Background:**

The Parks & Recreation Department has seen a significant increase in participation in recreation programs over the last year with many sports programs at capacity with wait lists. While revenue has increased due to the participation increase, the number of supplies and services to run the programs has also increased. Additional part-time staff, equipment, jerseys, trophies along with more sports officials are all needed to support the participation increase and accommodate those on the wait lists. The Department is requesting to increase expenses while offsetting those expenses with an increase to revenue.

---

**Objective Analysis:**

Acceptance of this amendment will allow the Parks and Recreation Department to continue to maintain its level of service to the community. If not approved, Youth Sports will need to limit the size of our leagues by adding maximums to youth sports leagues and create waiting lists.

---

**Policy Compliant:**

This action is compliant with City and Council policies.

---

**Financial Impact:**

There is no anticipated financial impact related to this item due to expected revenue offsetting the expenses.

---

**Budget Impact:**

Approval of this item will amend the FY2024 budget by moving budget authority in the amount of

\$218,300 within the General Fund from the General Contingency to the Parks and Recreation Department. This action represents a transfer of spending authority and does not increase or decrease the total adopted citywide expenditure budget.

**FTE Impact:**

The number of full-time equivalents (FTE) in the Parks and Recreation Department will increase by .6 for a total of 101.8 FTE.

---

**ATTACHMENTS:**

1. Res 2024-17 Increased Participation-FINAL
2. youth sports budget amendmentL

**RESOLUTION # 2024-17**

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SURPRISE, ARIZONA, AMENDING THE FISCAL YEAR 2024 BUDGET BY MOVING BUDGET AUTHORITY OF \$218,300 WITHIN THE GENERAL FUND FROM GENERAL CONTINGENCY TO THE PARKS & RECREATION OPERATING BUDGET, MOVING \$218,300 REVENUE CONTINGENCY TO THE PARKS & RECREATION DEPARTMENT TO SUPPORT THE INCREASED PARTICIPATION OF RECREATION PROGRAMS, AND AMENDING THE FULL-TIME EQUIVALENT (FTE) COUNT.**

**WHEREAS**, the FY2024 budget was adopted by Council Resolution #2023-85 on June 6, 2023, which included funding for recreation programs;

**WHEREAS**, due to increased participation in recreation programs, additional expenses are being incurred to support the increases;

**WHEREAS**, the department is receiving additional revenue for the participation increases to offset the increased expenses;

**WHEREAS**, increasing part-time salaries will increase the Parks & Recreation FTE count by .6 for a total of 101.8;

**WHEREAS**, this action will necessitate a budget amendment; and

**WHEREAS**, the City of Surprise Administrative Policies requires the approval of the Mayor and Council for budget amendments of this nature.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the City of Surprise, Arizona, as follows.

**Section 1.** That the statements and schedules attached as *Exhibit A* and incorporated by reference are adopted, amending the budget of the City of Surprise, Arizona for the fiscal year July 1, 2023 through June 30, 2024.

**APPROVED AND ADOPTED** this \_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Skip Hall, Mayor

Attest:

Approved as to form:

\_\_\_\_\_  
Kristi Passarelli, City Clerk

\_\_\_\_\_  
Robert Wingo, City Attorney



**RESOLUTION # 2024-17**  
**Exhibit A**

1. Appropriation - The allocation below represents a movement of budget authority in the amount of \$218,300 from Expense Contingency to the General Fund within the Parks & Recreation Department for Personnel Services, Supplies and Services. This allocation also represents a movement of budget authority in the amount of \$218,300 from Revenue Contingency to the General Fund within the Parks & Recreation Department for Charges for Services. Due to an increase in participation for recreation programs, the Parks & Recreation Department is requesting additional spending authority to support the participant increase. Additional revenues collected for registration fees will offset the increase in expenses. This action represents a transfer of spending authority and does not increase or decrease the total adopted citywide expenditure budget.

<b>Fund</b>	<b>Department</b>	<b>Project/Category</b>	<b>Rev/ Exp</b>	<b>Current Budget</b>	<b>Increase/ (Decrease)</b>	<b>Amended Budget</b>
General Fund	Parks and Recreation	Personnel Services	E	7,992,000	25,000	8,017,000
General Fund	Parks and Recreation	Supplies	E	1,539,800	94,300	1,634,100
General Fund	Parks and Recreation	Services	E	3,486,100	99,000	3,585,100
Contingency	General Operations	Contingency	E	71,508,300	(218,300)	71,290,000
General Fund	Parks and Recreation	Charges for Services	R	2,605,000	218,300	2,823,300
Contingency	General Operations	Other	R	75,807,700	(218,300)	75,589,400
<b>Expense Total</b>				<b>84,526,200</b>	<b>-</b>	<b>84,526,200</b>
<b>Revenue Total</b>				<b>78,412,700</b>	<b>-</b>	<b>78,412,700</b>

2. Full-Time Equivalent (FTE) – Increase of .6 FTE.

<b>Fund</b>	<b>Department</b>	<b>Current FTEs</b>	<b>Increase/ (Decrease)</b>	<b>Amended FTEs</b>
General Fund	Parks & Recreation	101.2	0.6	101.8



**SURPRISE**  
ARIZONA

# **Parks and Recreation Youth Sports Budget Amendment**

February 20, 2024

# Budget Amendment

- Recreation sports has seen an increase in participation due to quality of programming and population growth.
- Revenue will cover 100% of direct costs such as uniforms, officials, DUSD facility usage and part-time salaries

Budget Amendment	
Expenses	218,300
Revenue	(218,300)
Total	-
FTE Addition	.6

Recreation Division

# SPORTS



**232 Programs/ 19,600 Participants**

Youth Sports	17 10,800	Flag Football, Soccer, Basketball, Tee-Ball, Baseball, Softball, Volleyball
Adult Sports	40 5,000	Co-ed Softball, Men's Softball, Basketball, Flag Football, Volleyball
Sports Camps & Classes	175 3,800	Baseball, Softball, Basketball, Volleyball, Soccer, Football, Tennis, Lacrosse, Speed & Agility

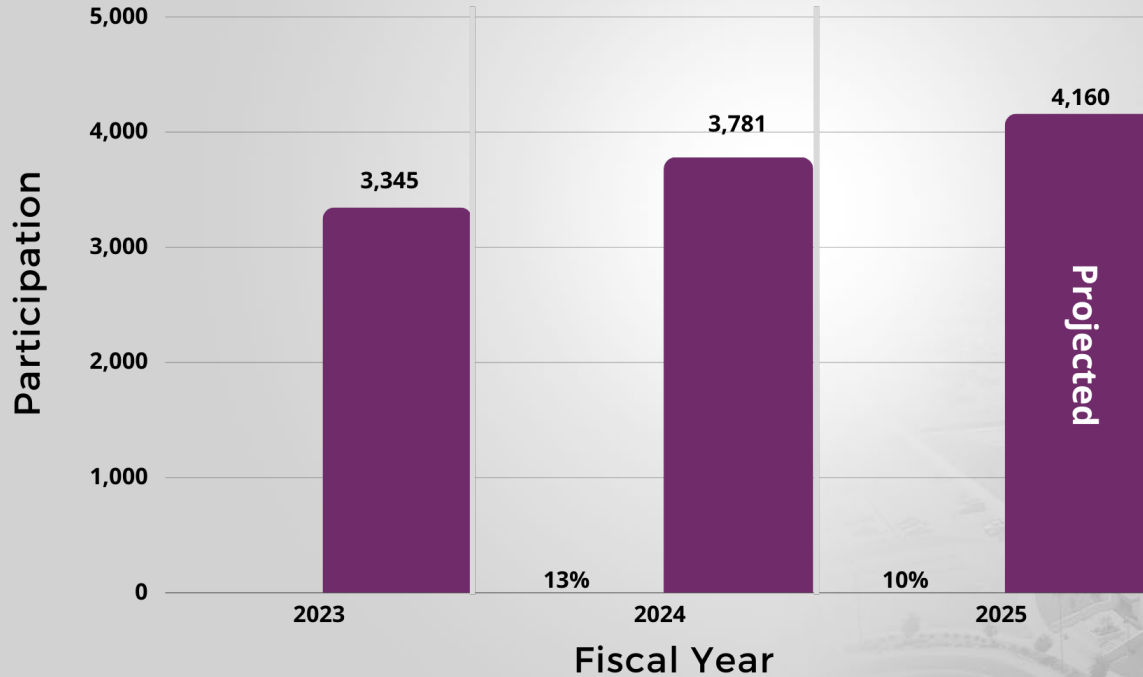


# Youth Sports League Single Season Participation Comparison

Fall Sports Participants	2022	2023
Soccer	1,499	1,713
Baseball	528	582
Softball	336	374
Tee-ball	352	373
Volleyball	630	739
<b>Total Participants</b>	<b>3,345</b>	<b>3,781</b>



# Youth Sports League Single Season Participation Comparison



## Fall Sports

- Soccer
- Baseball
- Softball
- Tee-ball
- Volleyball

# Budget Amendment Summary

- Net Zero increase
- FY25 Budget will have a similar request
- Youth Leagues are currently not held to a maximum
  - No waitlisting currently for city youth leagues during registration periods

Budget Amendment	
Expenses	218,300
Revenue	(218,300)
Total	-
FTE Addition	.6



**SURPRISE**

ARIZONA

**QUESTIONS OR  
COMMENTS?**

**Thank You**





**CITY OF SURPRISE**  
**Regular City Council Meeting**

---

Council Meeting Date: February 20, 2024      Contact Person: Chris Sexton  
Submitting Department: Community Development      District: District 4  
Staff Recommendations:

---

Consent: No      Regular: No      Public Hearing: Yes      Report/Discussion: No

---

**Agenda Wording:**

Consideration and action pertaining to a Comprehensive Sign Program (CSP) for the NWC Dysart and Bell aka Bella Fiesta, located at the northwest corner of Bell Road and Dysart Road, zoned Community Commercial (C-2); Case FS23-0673.

---

**Motion:**

I move to approve the Comprehensive Sign Program for NWC Dysart and Bell, subject to stipulations 'a' and 'b'.

---

**Background:**

Royal Sign Company, on behalf of the property owner, requests approval of a Comprehensive Sign Program to ensure a cohesive sign design for the Bella Fiesta project located at the northwest corner of Bell Road and Dysart Road. On January 18, 2024, the Planning and Zoning Commission passed a motion to recommend approval of the Comprehensive Sign Program (CSP) to the Mayor and City Council, case FS23-0673.

---

**Objective Analysis:**

The proposed CSP for the NWC Dysart and Bell project is to provide signage design requirements to ensure a cohesive sign design for the development. The CSP meets the Surprise Land Development Ordinance (LDO) requirements for signs within a commercial center.

---

**Policy Compliant:**

The requested CSP is consistent with the Surprise Land Development Ordinance and advances the goals and policies of the General Plan.

---

**Financial Impact:**

While this item does not have an immediate or direct financial impact, ongoing development activity in the city will inevitably have a future financial impact as additional resources are needed to provide city services.

---

**Budget Impact:**

There is no anticipated budget impact related to this item.

---

**FTE Impact:**

This item does not have an impact on current staffing levels.

---

**ATTACHMENTS:**

1. 00-FS23-0673 NWC Dysart and Bell - CSP - Staff Report
  2. 01-FS23-0673 NWC Bell and Dysart - CSP - Vicinity Map
  3. 02-FS23-0673 NWC Bell and Dysart - CSP - Zoning Map
  4. 03-FS23-0673 NWC Bell and Dysart - CSP - CSP document
  5. 04-FS23-0673 NWC Bell and Dysart - CSP - Citizen Participation Report
  6. 05-FS23-0673 NWC Bell and Dysart - CSP - Affidavit of Posting
  7. FS23-0673 NWC Bell and Dysart CSP - Presentation
-

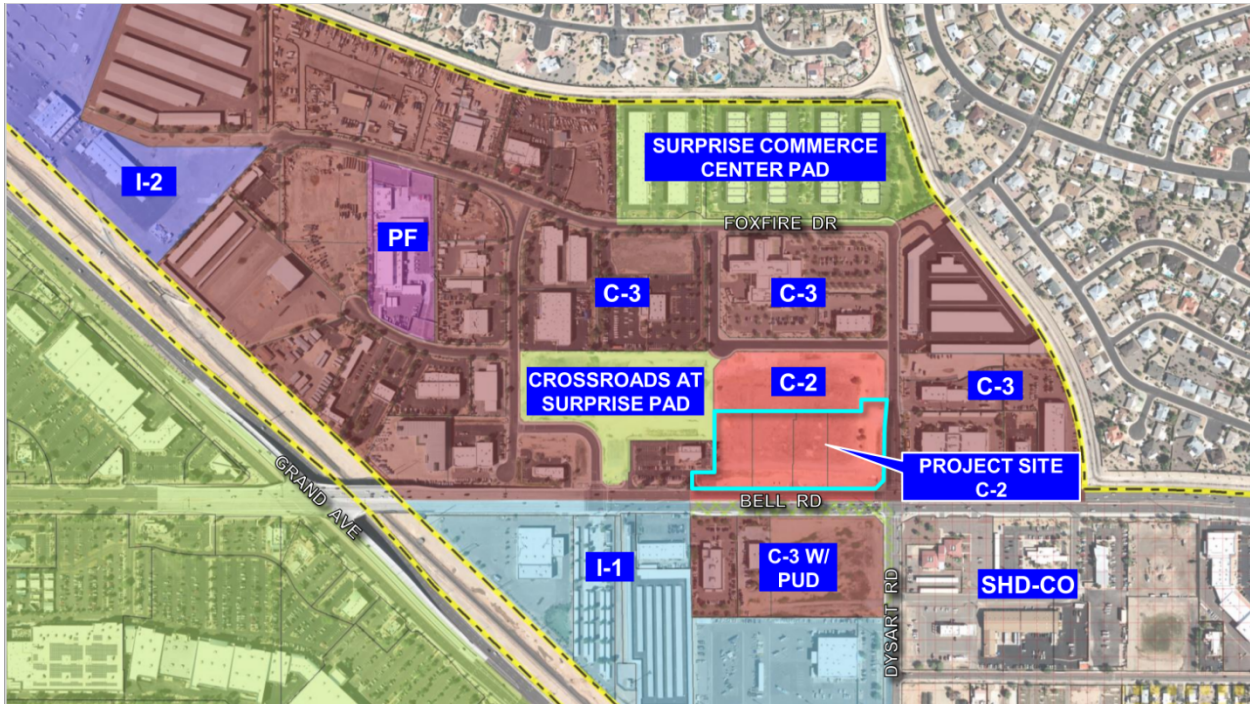
# Comprehensive Sign Program

REPORT TO THE CITY COUNCIL

1	<b>Case:</b>	<b>FS23-0673</b>
2		
3	<b>Project Name:</b>	NWC Bell and Dysart – Comprehensive Sign Program
4		
5	<b>Council District:</b>	4 – Mulberry
6		
7	<b>Meeting Date:</b>	<b>February 20, 2024</b>
8		
9	<b>Planner:</b>	Chris Sexton, Planner II
10		
11		
12	<b>Owner:</b>	NWC Dysart & Bell, LLC
13		
14	<b>Applicant:</b>	Royal Sign Company
15		
16	<b>Request:</b>	Comprehensive Sign Program (CSP) for the Bella Fiesta commerce center
17		
18		
19	<b>Site Location:</b>	Generally located near the northwest corner of Bell Road and Dysart Road
20		
21		
22	<b>Site Size:</b>	5.78 acres (approx.)
23		
24	<b>Density:</b>	N/A
25		
26	<b>General Plan</b>	
27	<b>Conformance:</b>	The proposal is consistent with the Surprise General Plan 2035
28		
29		
30	<b>Support/Opposition:</b>	None known
31		
32	<b>Planning and Zoning</b>	
33	<b>Recommendation:</b>	The Planning and Zoning Commission moved to recommend <b>approval</b> to the City Council, subject to stipulations ‘a’ and ‘b’
34		
35		
36		
37		
38		
39		
40	<b><u>Project Description:</u></b>	
41		

42 Royal Sign Company, on behalf of the property owner, requests approval of a  
 43 Comprehensive Sign Program (CSP) to ensure a cohesive sign design for the Bella Fiesta  
 44 project located at the northwest corner of Bell Road and Dysart Road.  
 45

46 **Existing Zoning:**



Crossroad at Surprise PAD	C-2 – Regional Commercial	C-3 – Regional Commercial
Crossroad at Surprise PAD	<b>C-2 – Community Commercial</b>	C-3 – Regional Commercial
I-1 – Light Industrial	C-3 with PUD – Commercial	SHD-CO – Surprise Heritage District – Commercial Overlay

47 **Background:**

48 **May 23, 1996:** The subject parcel was annexed into the City under Ordinance 96-08.

49  
 50 **September 20, 2022:** The Mayor and City Council approved a Zone Change from C-3 to  
 51 C-2 under case FS22-0438, on the subject parcel.  
 52

53 **August 21, 2023:** The applicant submitted the CSP under the subject case number.

54  
 55 **September 5, 2023:** City Council approved the Final Plat to split one (1) 10-acre vacant  
 56 parcel into five (5) parcels under case, FS22-1224.

57 **November 14, 2023:** The applicant held a Neighborhood Outreach Meeting, which was  
 58 properly advertised. There were no attendees. The Citizen Participation Report is attached.



59  
60 **January 18, 2024:** The Planning and Zoning Commission moved to recommend approval of  
61 this Comprehensive Sign Program to the Mayor and City Council, subject to stipulations 'a'  
62 and 'b'.

63  
64 **Citizen Outreach:**

65 The applicant held a Neighborhood Outreach Meeting on November 14, 2023, at the Holiday  
66 Inn Express. The request was posted and advertised in accordance with city code and state  
67 statute. There were no attendees. There is no known opposition to the CSP request.

68  
69 **Discussion:**

70 The purpose of the proposed CSP for the Bella Fiesta commerce center is to provide signage  
71 design requirements that are appropriate to the character of the development. The proposed  
72 CSP contains guidelines for the different types of signs within the commercial center.

73  
74 This CSP proposes the following signage and requirements for the Bella Fiesta project:

75  
76 Two (2) major monument signs; one (1) along Bell Road and one (1) along Dysart Road.  
77 These signs will be double-sided and up to a maximum of 15' tall and allow a total of 120  
78 square feet of sign area on each face of the sign. Section 109-1.9.C.5 of the Land  
79 Development Ordinance (LDO) allows major monument signs to have a height up to 17' and  
80 a total sign area of 120 square feet. This proposed sign type falls within the guidelines of the  
81 LDO.

82  
83 Three (3) secondary monument signs; all strategically placed along Bell Road. These signs  
84 will also be double-sided, 8' tall maximum, and allow a total of 32 square feet of sign area for  
85 each face of the sign. This proposed sign type meets the requirements of the LDO for minor  
86 monument signs.

87 Per this proposed CSP, wall signage will be limited to one and a half (1.5) square feet of sign  
88 area per one (1) linear foot of business frontage, or a maximum of two hundred square feet,  
89 whichever is less. No tenant sign will exceed 80 percent of the leased frontage. Section 109-  
90 1.9.B.1 of the LDO limits the signage area for wall signs to one and one-half (1.5) square foot  
91 per one (1) linear foot of building elevation on which the sign is mounted. This proposed  
92 frontage wall sign area meets the requirements of the LDO.

93  
94 **Summary:**

95 Staff believes the proposed CSP provides a mechanism whereby the applicant may create  
96 signage that is consistent with the design of the Bella Fiesta project. The proposed signage  
97 meets the requirements of Section 109-1.15 with respect to Comprehensive Sign Programs  
98 and does not introduce a sign type that is otherwise prohibited. The applicant's purpose is to  
99 create a comprehensive sign program for this development to ensure a cohesive sign design  
100 for the Bella Fiesta project.

101  
102 **Findings:**

- 103 • The proposed Comprehensive Sign Program is consistent with the Surprise General  
104 Plan 2035.
- 105 • The proposed signs may be approved through a Comprehensive Sign Program.
- 106 • The reviewing agencies have indicated no objections to the request.

107  
108 **Recommendation:**

109 Based on the findings noted above, the Planning and Zoning Commission moved to  
110 recommend **approval** of the subject Comprehensive Sign Program to the Mayor and City  
111 Council, subject to stipulations ‘a’ and ‘b’ as outlined below:

- 112 a. Development and use of the signage for the site shall be consistent with  
113 the project narrative entitled “NWC Dysart & Bell Comprehensive Sign Plan”,  
114 prepared by Royal Signs, consisting of eleven (11) pages, and stamped  
115 received October 30, 2023.
- 116 b. Non-compliance with the stipulations of approval of this case will be treated as  
117 a violation in accordance with the applicable provisions of the Surprise  
118 Municipal Code.

119  
120  
121  
122 However, should the City Council wish to deny the request, the City Council should make its  
123 own findings and base its decision on those alternative findings.

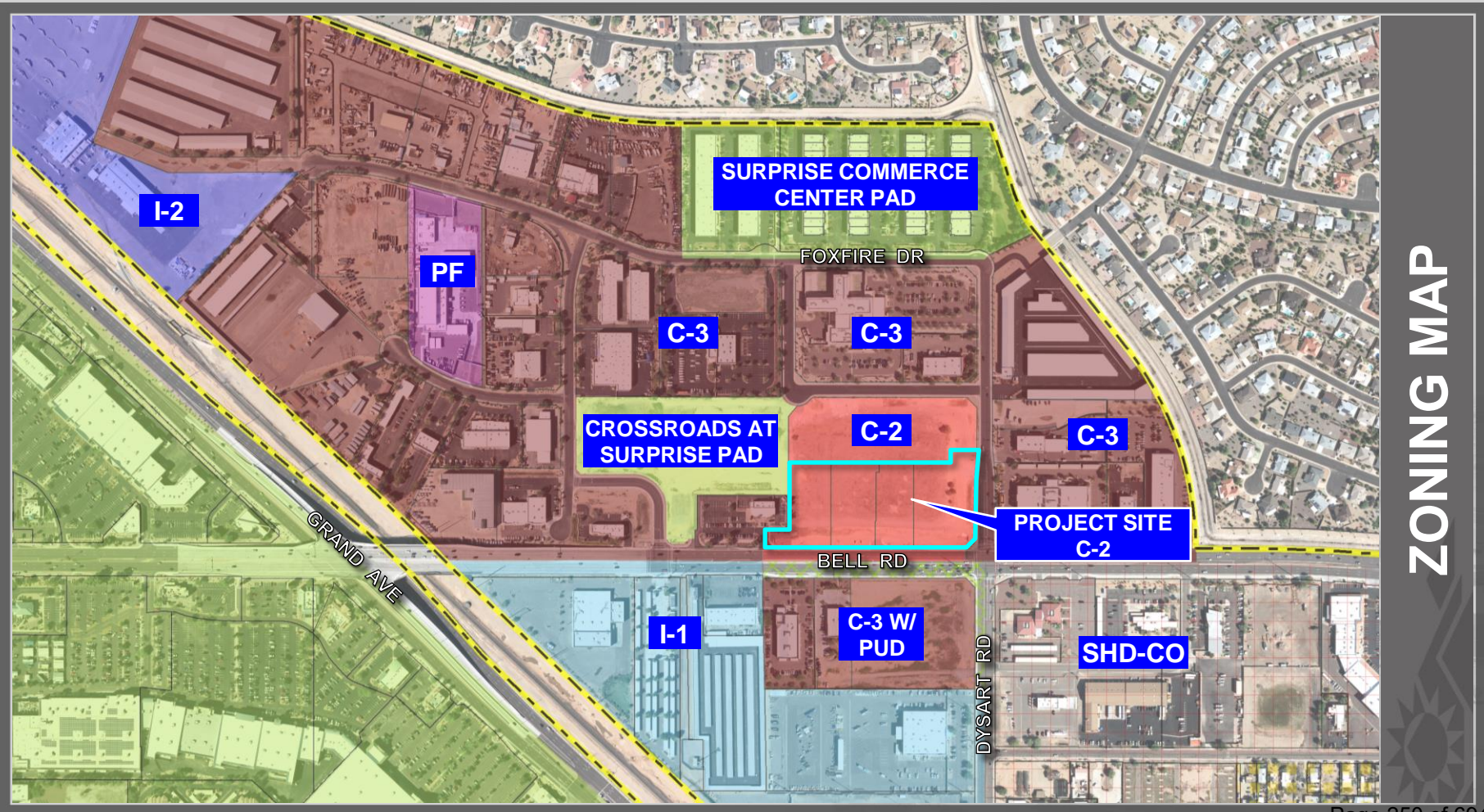
124  
125 **Attachments:**

- 126 01 Vicinity Map
- 127 02 Zoning Map
- 128 03 CSP Document
- 129 04 Citizen Participation Report
- 130 05 Affidavit of Posting
- 131 PPT



VICINITY MAP



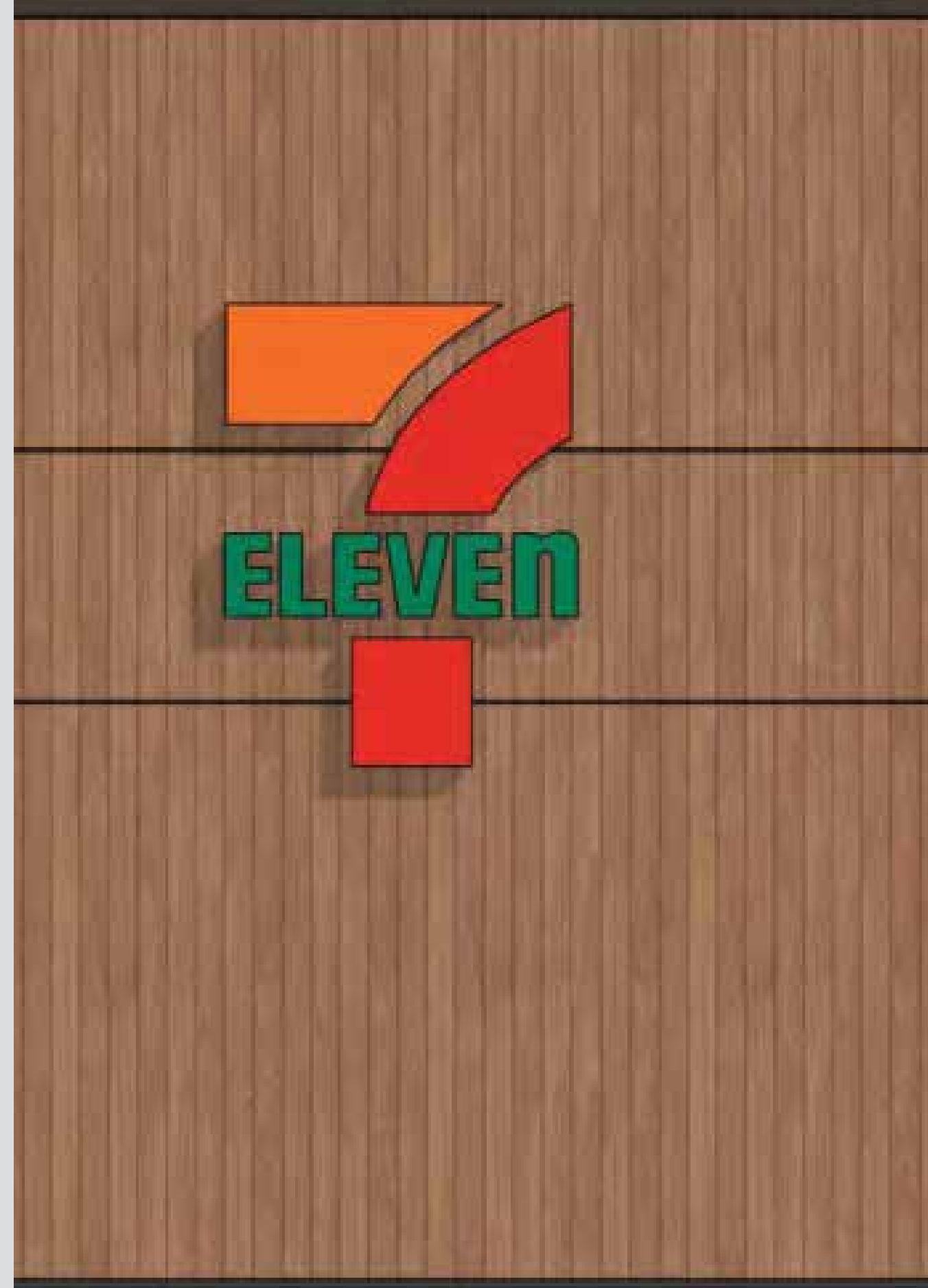


**ZONING MAP**



# NWC Dysart & Bell

NWC Dysart & Bell | Surprise, AZ 85378



**PROJECT**

NWC Dysart & Bell  
Surprise, AZ 85378

**ZONING**

Community Commercial (C-2)

**PROJECT NARRATIVE**

\*Verbiage provided by Withey Morris

**LANDLORD INFORMATION**

De Rito Partners  
9120 E. Talking Stick Way  
Suite E1  
Scottsdale, AZ 85250

Ron Caruso  
480.834.8500

**SIGNAGE CONSULTANT**

Royal Sign Co.  
2631 N. 31st Ave.  
Phoenix, AZ 85009

Raymond Owens  
602.278.6286

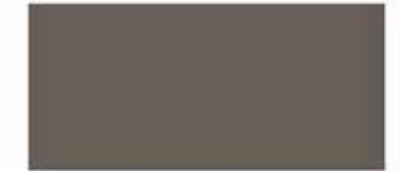
**PROJECT MATERIAL & COLOR BOARD  
(FOR REFERENCE)**



Berridge Metal Roof R- Panels  
Dark Bronze



Kawneer  
Dark Bronze



Sherwin Williams  
SW 7505 Manor House



Sherwin Williams  
SW 2735 Rockweed



Echelon Cordova Stone  
Ground Face  
Alabaster



Eldorado Smooth Face  
Boot Brown



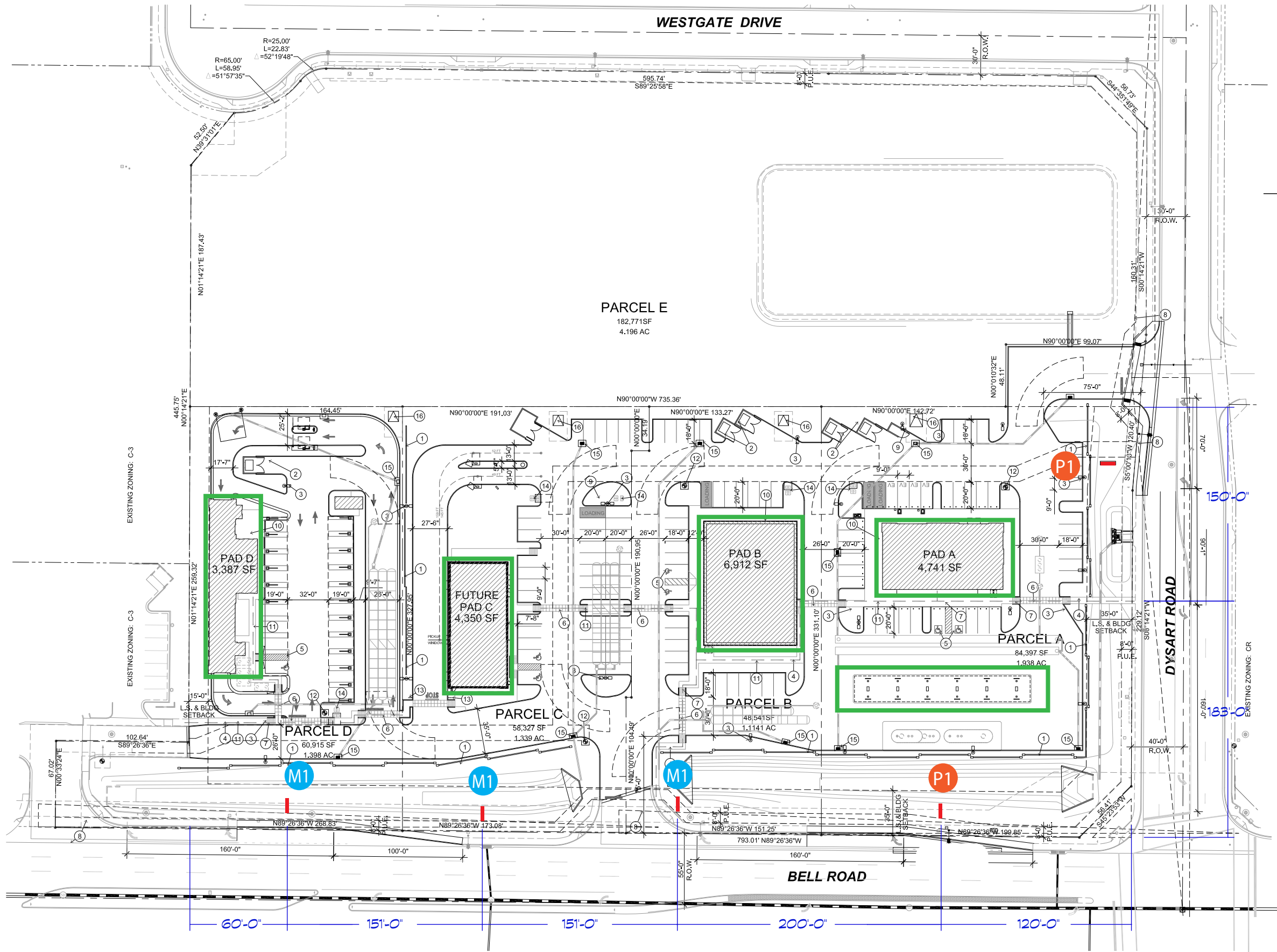
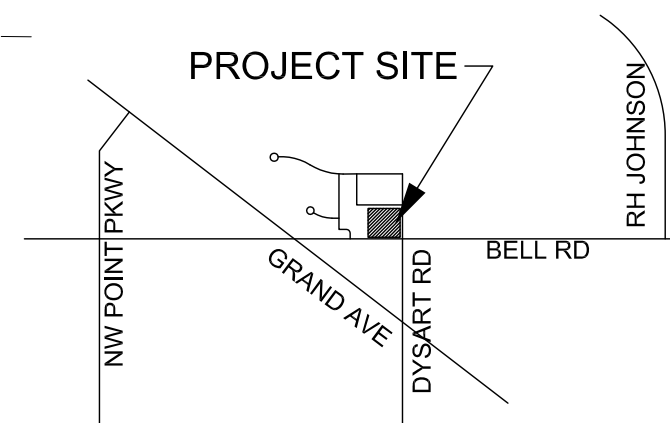
Nichiha Vintagewood  
Cedar



Eldorado Stone  
Mountain Ledge  
Pioneer

**SITE PLAN**




1" = 80'



**POTENTIAL SIGN LOCATIONS**

- P1 PAD "A" MONUMENT SIGNS
- M1 PAD B, C, & D MONUMENT SIGNS
- T TENANT WALL SIGNS

## Sign Design Criteria Matrix (NWC Dysart & Bell)

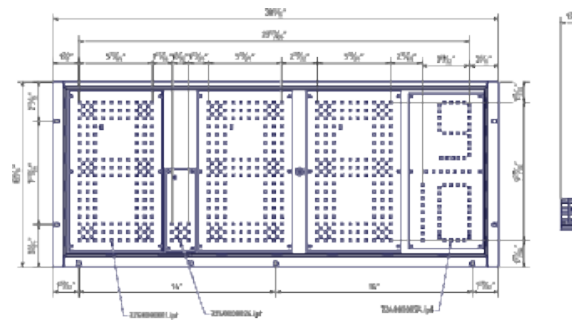
Sign Type	Size	Location	Height	Illumination	Materials
 <b>Wall Signage</b>	<p>All tenants are allowed 1.5 square foot of signage for every 1 linear foot of leased frontage, or a maximum of 200 sf, whichever is less.</p> <p>Section 109-1.9(B)(1)(e): The maximum width of a building sign shall not exceed 80% of the leased tenant frontage for a multi-tenant building, or building elevation for a single-tenant building.</p> <p>Not to exceed 80% of designated sign area in height or width</p>	<p>Permitted on all building elevations, within the sign envelope created the facade's architectural features</p>	<p>Wall signage must fit inside the natural limitations of the sign envelope created by the building architecture, and must not extend above the roofline.</p>	<p>Facelit, backlit, or a combination thereof. Pan Channel or Reverse Pan Channel Letters, using LED illumination.</p> <p>Non-illuminated, Reverse Pan or Flat Cut Out characters.</p>	<p>Aluminum, acrylic, painted metal.</p> <p>All electrical sign components must be U.L. rated.</p> <p>No labels will be permitted on the exposed surface of signs, except those required by local ordinances.</p> <p>All penetrations of the building structure required for sign installation must be neatly sealed in a watertight condition.</p>
 <b>PAD "A" Monument Signs</b>	<p>Thirty-six (36) square feet, but may increase twelve (12) square foot for every 1 foot increase in height, up to a max of 120 square feet.</p> <p>The maximum height is 15', but may include 2' of non-illuminated architectural embellishment</p> <p>Sign(s) shall adhere to the requirements of <b>Class VI</b> (major) monument signs per the LDO.</p>	<p>Quantity: two (2) (see site plan - pg. 2)</p> <p>1) On Dysart Rd 2) Intersection of Bell Rd &amp; Dysart Rd.</p> <p>*Monument signs must be located 150' apart</p>	<p>15' overall height, but may include an additional 2' of non-illuminated architectural embellishment.</p>	<p>Internally-illuminated, LEDs</p>	<p>Aluminum, acrylic, painted metal.</p> <p>All electrical sign components must be U.L. rated.</p>
 <b>PAD "B, C &amp; D" Monument Signs</b>	<p>Area: Thirty-two (32) square feet max Height: 8'-0" max</p> <p>Sign(s) shall adhere to the requirements of <b>Class V</b> (minor) monument signs per the LDO.</p>	<p>Quantity: three (3)</p> <p>Along W. Bell Rd - (see site plan - pg. 2)</p> <p>*Monument signs must be located 150' apart</p>	<p>8'-0" overall height</p>	<p>Internally-illuminated, LEDs</p>	<p>Aluminum, acrylic, painted metal.</p> <p>All electrical sign components must be U.L. rated.</p>

If these criteria are silent on any sign type, then the Sign Code applies.



P1

STREET SIDE



10" CUT SHEET

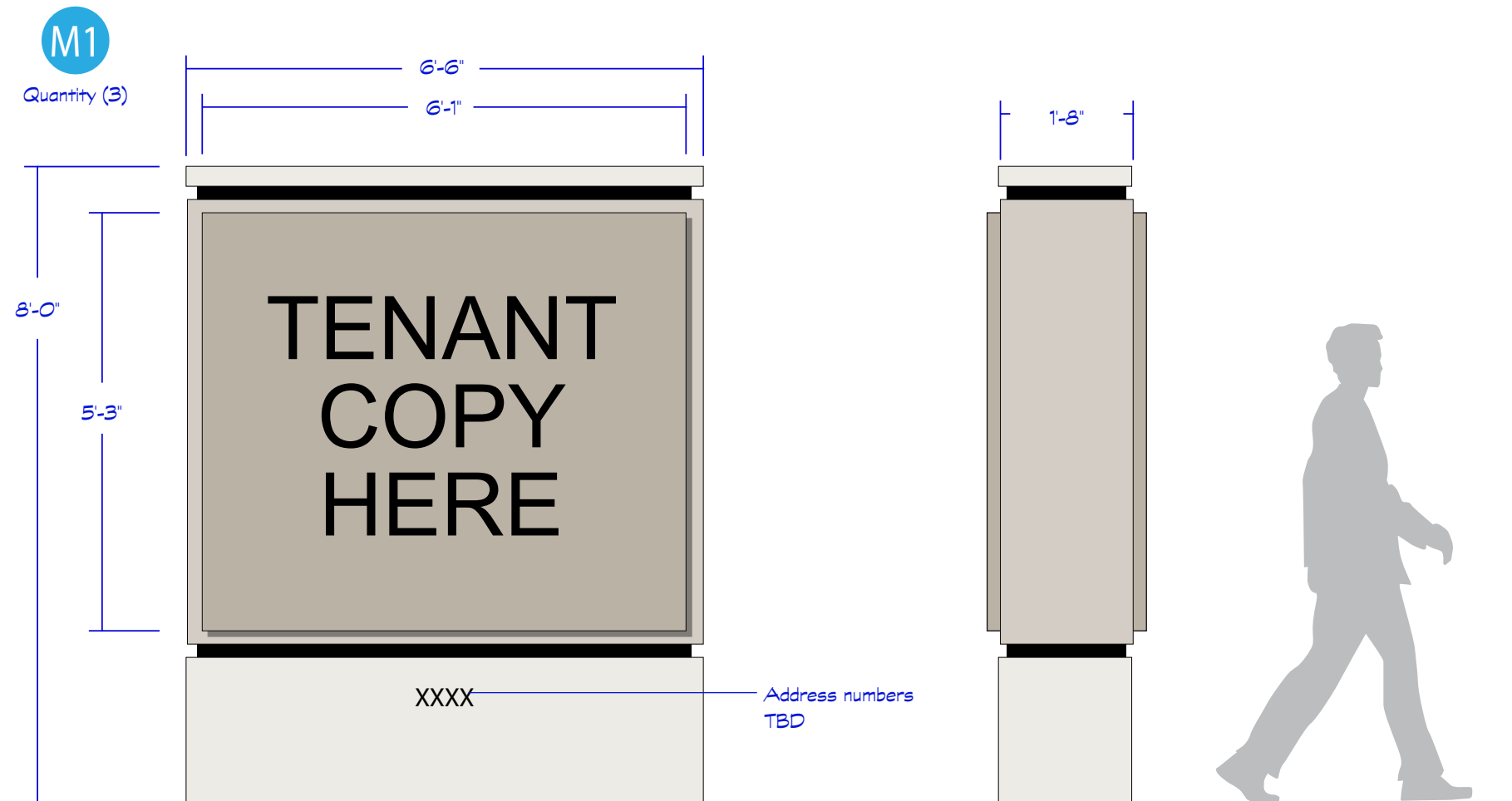
NOTE: ALL TRACKING AND PLATES ARE APPLIED TO THE SECOND SURFACE



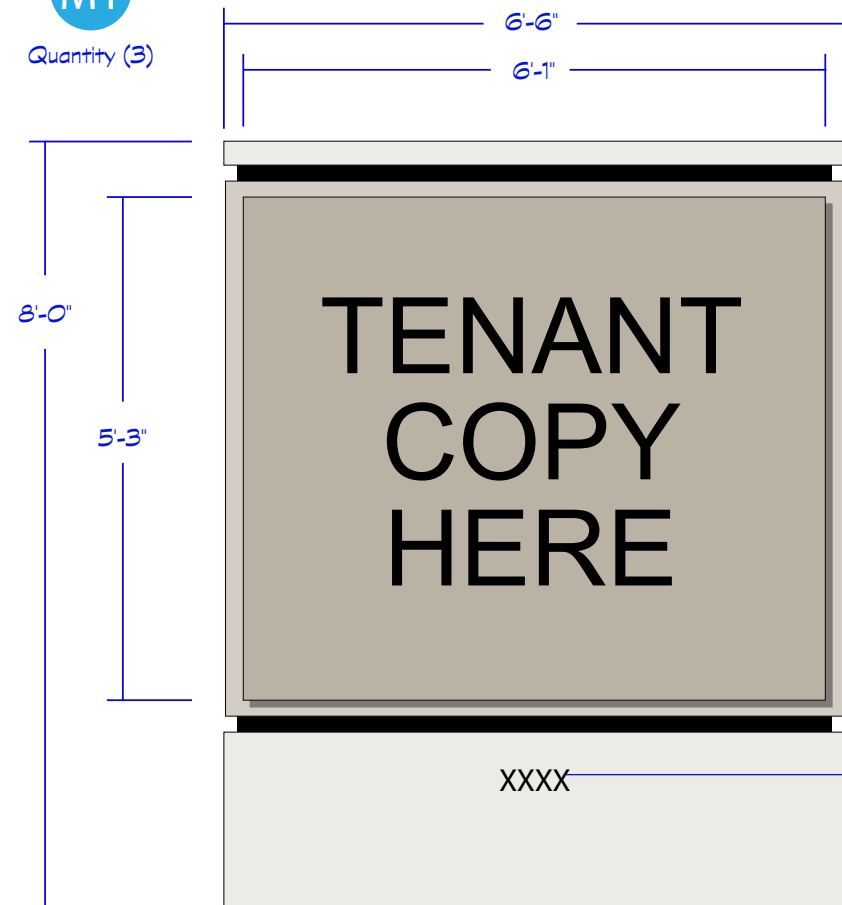
Front & Side View - NEW MONUMENT SIGN

SCALE 3/4" QUANTITY OF TWO (2) IDENTICAL SIGNS ON THIS PROPERTY

SQUARE FOOTAGE:  
Display Square Footage (Cabinets Combined): 56.94







**M1**  
Quantity (3)



Address numbers  
TBD

\*Sample Design.  
\*Max Height: 8'-0"  
\*Max Sign Area: 32 square feet

MANUFACTURE AND INSTALL, THREE (3) DOUBLE-FACED UL LISTED WHITE L.E.D. TECH. INTERNALLY-ILLUMINATED FREE-STANDING ALUM. CONSTRUCTED MONUMENT I.D. AS FOLLOWS:

-  (.090) GRADE ALUMINUM CONSTRUCTED EMBELISHMENTS (TOPS)
-  (.090) GRADE ALUMINUM CONSTRUCTED UL LISTED WHITE L.E.D. INTERNALLY-ILLUMINATED MONUMENT STRUCTURE PAINTED TO MATCH ONSITE COMPLEX ARCHITECTURAL BUILD ELEMENTS TO MAINTAIN SITE VISUAL CONTINUITY
-  (2") DEEP (.090) GRADE ALUMINUM CONSTRUCTED TENANT PAN(S) TO ACCEPT ROUTED & ACRYLIC BACKED TENANT COPY WITH 3M™ SCOTCHCAL™ TRANSLUCENT VINYL APPLIED BRANDING COLORATION
-  MASONRY BASE ELEMENT WITH (1) ONE SET PER SIDE (1/4") THICK ALUMINUM ADDRESS NUMERALS PAINTED TO SPEC'S TO MATCH ONSITE COMPLEX ARCHITECTURAL BUILD ELEMENTS TO MAINTAIN SITE VISUAL CONTINUITY

FLUSH MOUNTED TO GRADE AS DEMONSTRATED.

**SPEC PLAN**  
SCALE: 1/2" = 1'-0"



## TENANT BUILDING SIGNAGE

### Overall Standards

- On-site signs shall not exceed two (2) square feet in any area for each linear foot of business frontage.
- If designated as a wall sign, it shall not project more than two (2) feet from the building, or structure to which it is attached.
- No attached sign shall exceed two hundred (200) square feet in area.
- All designs and layouts must meet the intent of this criteria per the user type's sections that follow. Unique approaches, creative designs, forms, and the use of "custom" wall units are highly encouraged to create an "urban sense." Unless part of a nationally registered and/or trademarked logo, rectangular shaped units should be avoided unless integral to the graphic identity.
- All tenants within the commercial element of the site shall be permitted to utilize their standard corporate identification programs, subject to sign area limitation.
- The Owner/Manager Association reserve the right to combine, split or extend envelopes behind the tenant's frontage, to accommodate unforeseen signage configurations. All such modifications will require staff approval from the City of Surprise.

### Signage Types

- All building signage shall be halo-illuminated reverse pan channel characters and logos, non-illuminated reverse pan channel characters and logos, or face-illuminated pan channel characters and logos. Non-illuminated flat cut out characters may also be used for secondary lettering.

- Signs shall be wall or window mounted, on or under an architectural projection.
- No tenant will be allowed more than one wall mounted sign per elevation.
- All building mounted signage is to be designed to keep the building fascias and finishes in like-new quality, keeping penetrations into the high end finishes for mounting and illumination to a minimum.
- When mounted on a building, the sign shall be located on or below the fascia or parapet wall of the primary building.

### Design - Colors and Typography

- Colors shall be per the Tenant's corporate standards with the exception that no fluorescent colors will be allowed, other than for accent. Retainers for pan channels should match letter face color to create a more sophisticated design. For National Tenants, returns and retainers may be per corporate standards with Owner/Landlord or their Agent's approval.
- Typeface, marks/icons and logos may be utilized, subject to the approval of Owner/Landlord or their Agent's prior to submittal for permitting through the City of Surprise.

All Signs must be pre-approved by the Building Owner/Association prior to applying for a permit with the City of Surprise.

Owner shall obtain all necessary permits for signs and the construction and installation of all signs.

All signs shall be in accordance with the current Surprise Municipal Code

## SIGN AREA & SIZE RESTRICTIONS

### Sign Area Calculation

Allowable Sign Area for Attached Signs is calculated as two (2) square feet for each lineal foot of Leased Frontage unless otherwise noted. Where a sign consists only of individual letters, numerals, symbols or other similar components, the total area of the sign shall be calculated by the sum of the areas of the smallest square or rectangle that encloses all the text and graphics as shown in Figure 1 at right.

### Sign Envelope

is an area not to exceed 80% of the vertical and 80% of the horizontal background of the building surface upon which the sign is to be installed. Sign envelope does not define the total allowable sign area. It defines the outermost reaches that a sign can occupy. Sign area calculations based on lineal feet of leased space still apply. See Figure 3 at right.

### Sign Letter Sizes

No single sign letter, cabinet or single line of copy shall be taller than 15% of building height or the maximum height of designated/approved sign band - whichever is shorter. Multi-lined copy or total sign height must not exceed designated sign band. A non-illuminated backer panel or plate, or non (face) illuminated backer cabinet or panel may exceed maximum letter height but cannot exceed maximum sign band. These backer cabinets/panels/plates will be counted all together with other sign components for total sign area.



FIGURE 1

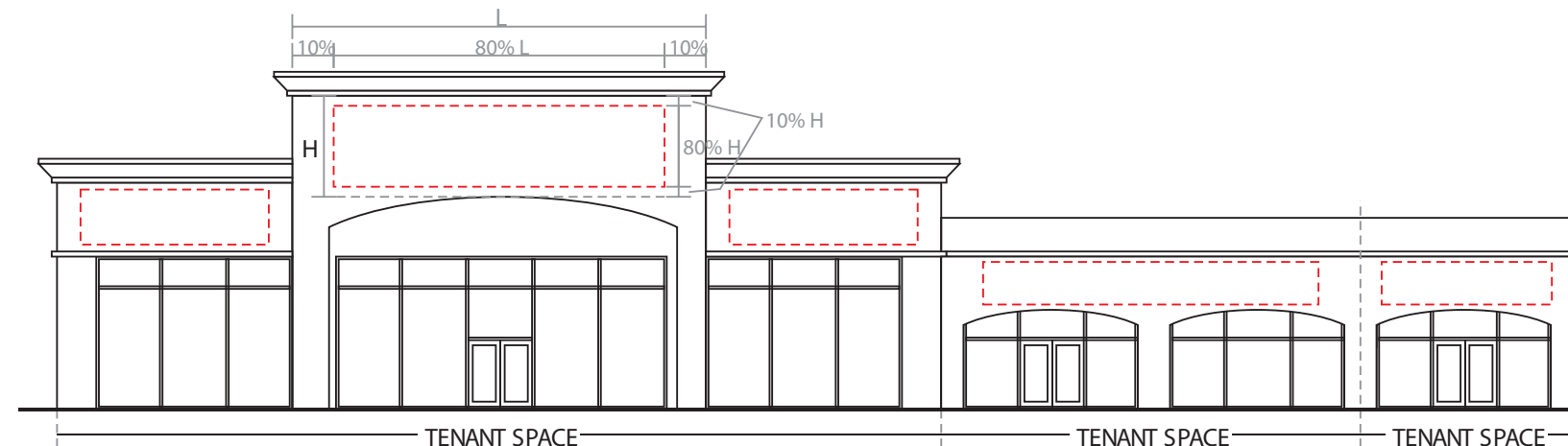


FIGURE 3



## SIGNAGE CONSTRUCTION

### Installation Method:

All building mounted signage is to be designed to keep the building fascias and finishes in like-new quality, keeping penetrations into the high end finishes for mounting and illumination to a minimum.

### Halo-Illuminated Reverse Pan Channel letters/logos:

All Letter returns: Minimum .050 aluminum with full welded seams. Faces of minimum 1/8" thick aluminum. Backs to be .177 Clear Lexan. Internal LED illumination. Mounted a minimum of 1-1/2" from building surface to allow for appropriate lighting effect.

### Non-Illuminated Reverse Pan Channel letters/logos:

All Letter returns: Minimum .050 aluminum with full welded seams. Faces of minimum 1/8" thick aluminum. Mounted flush or off building surface as required.

### Face-Illuminated Pan Channel letters/logos:

All Letter returns: Minimum .050 aluminum with full welded seams. Faces of minimum 1/4" thick acrylic. Translucent Vinyl graphics may be applied 1st surface to faces. Backs to be Minimum .050 aluminum. Mounted flush to building surface as required.

### Custom Illuminated Cabinet Signs:

All returns: Minimum .050 aluminum with full welded seams. Faces of minimum 1/4" thick acrylic or 1/8" aluminum with push-thru acrylic elements. Translucent Vinyl graphics may be applied 1st surface to acrylic faces. Retainers (when required) to be of aluminum construction. Mounted flush to building surface as required.

### Hardware:

All sign attachment hardware is to be discrete, kept to a minimum and should be finished in a manner consistent with quality fabrication processes.

### Letter Drain Holes:

All drain holes (weep holes) should be shielded with a cover to inhibit light leaks through the drain holes.

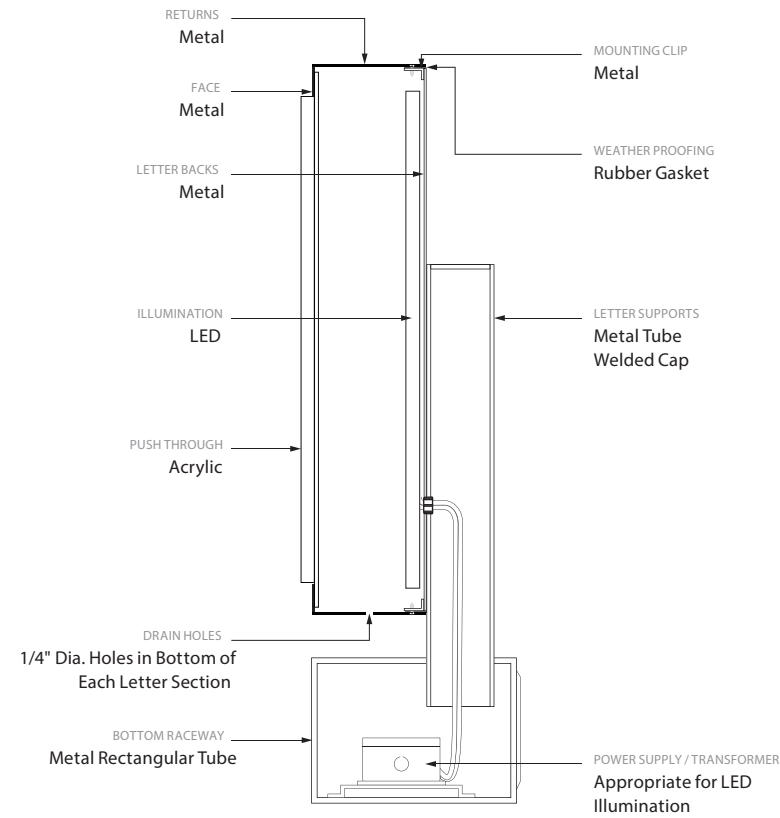
### Labels:

Only labeling required by UL or local ordinance shall be allowed on the exposed surface of signs. All required labels must be applied to top of Letters.

See page 10-11 of this document for sign sections & construction/attachment specifications.

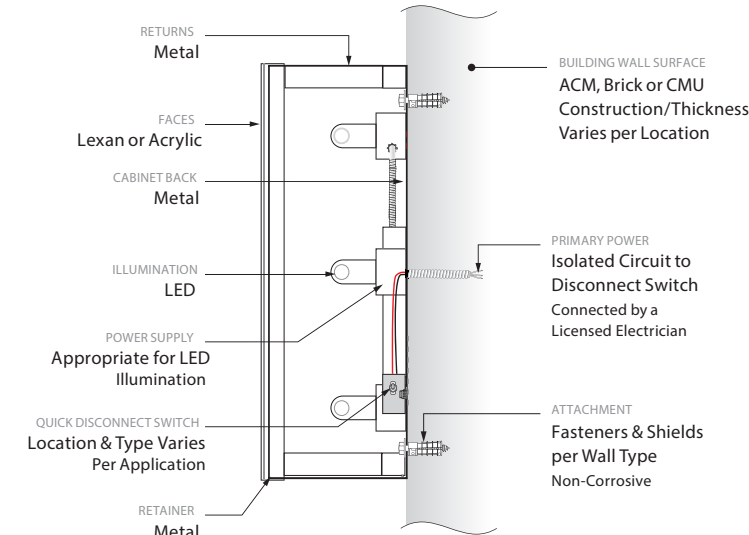
## SIGNAGE RESTRICTIONS

- Signage may not be "off the shelf" - prefabricated
- Maximum depth of 12" from face of building fascia to the front face of any signage element.
- No printed, hand lettered, window painted signs allowed.
- No Neon Illumination.
- Flashing, moving, or audible signs are not permitted.
- Exposed raceways will not be allowed.
- Ground signage shall not be located within any sight visibility triangles.



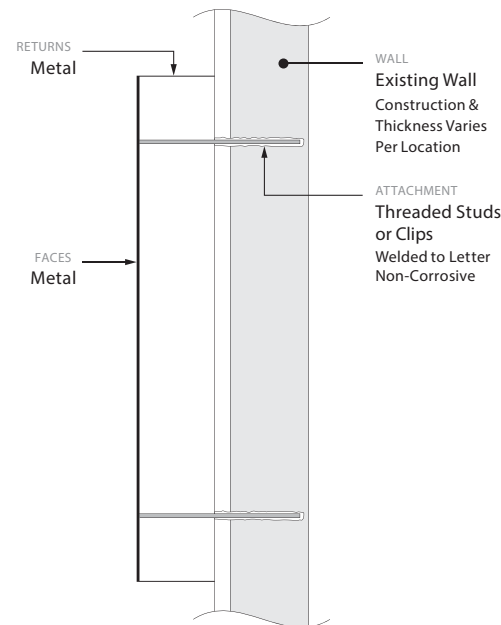
Pan Channel Letter w/ Push Through Acrylic Face Internally Illuminated

G Section Detail - Typical  
Pan Channel Letter / LED Internally Illuminated / Push Through Acrylic on Face / Bottom Raceway Mounted



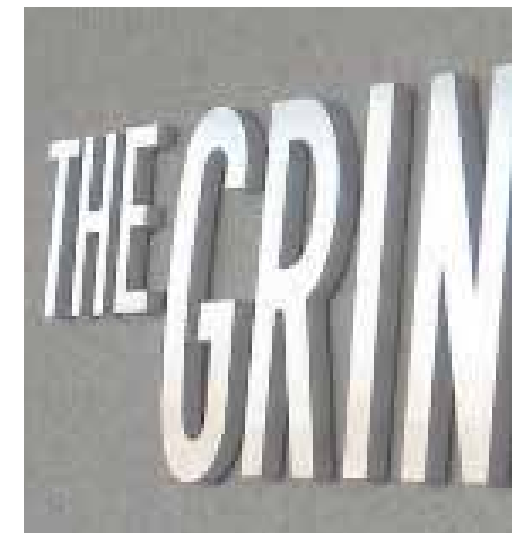
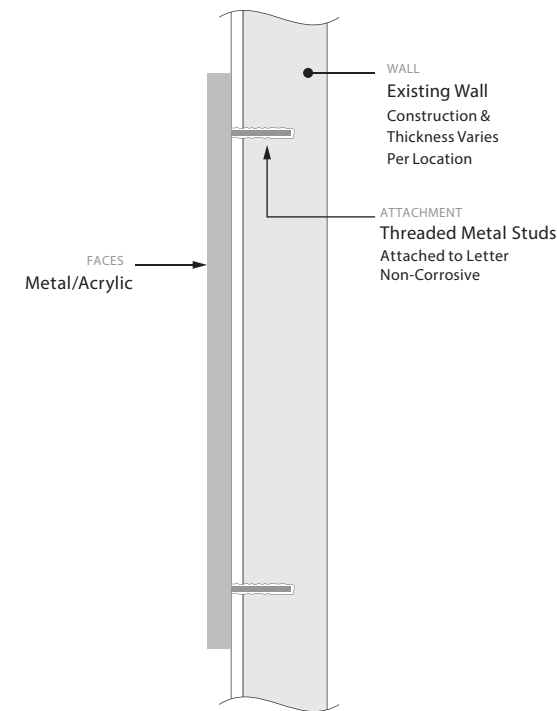
Illuminated Sign Cabinet Internally Illuminated

H Section Detail - Typical  
Face-Lit Sign Cabinet / Internally Illuminated



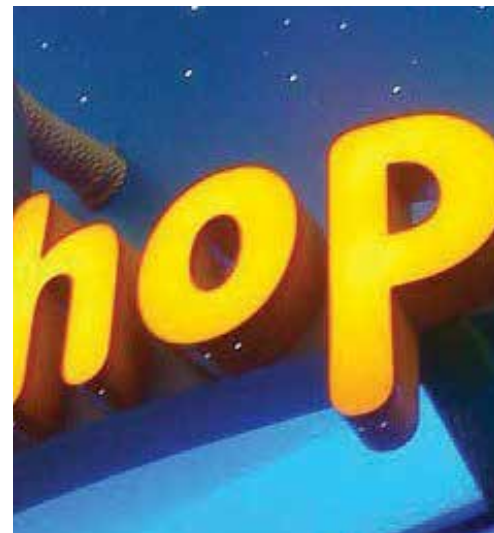
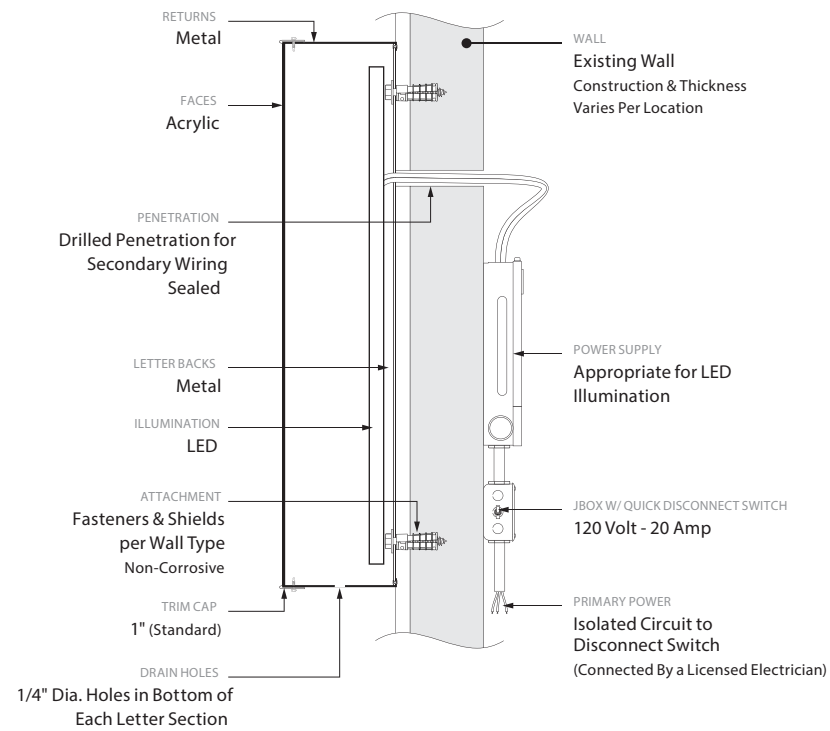
Reverse Pan Channel Letter Non-Illuminated

C Section Detail - Typical  
Reverse Pan Channel Letter / Non-Illuminated / Flush Mounted

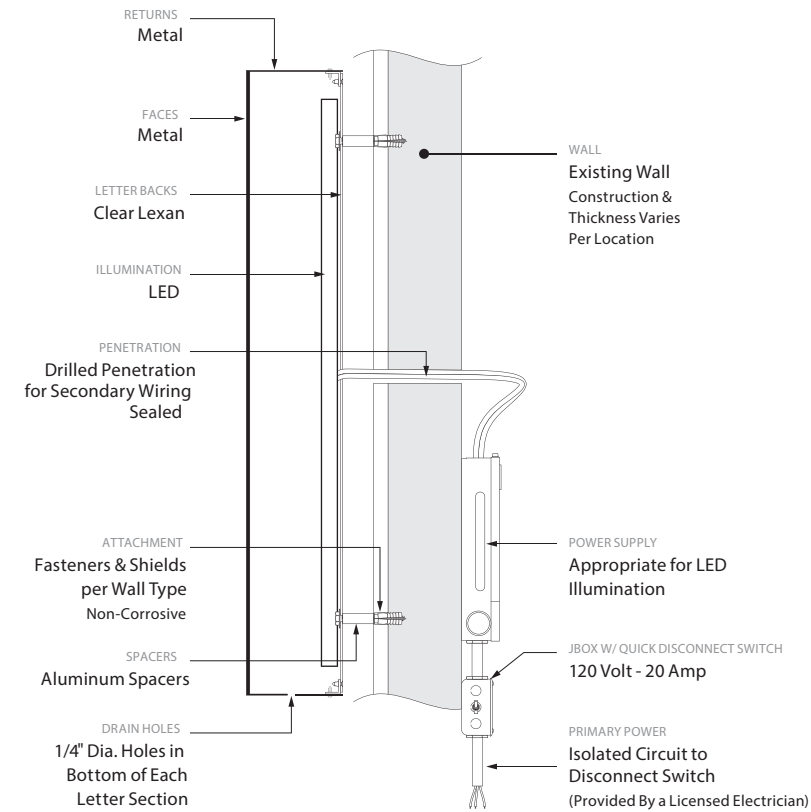


Flat Cut Out Letter Non-Illuminated

D Section Detail - Typical  
Flat Cut Out Letter / Non-Illuminated / Flush Mounted



Pan Channel Letter Internally Illuminated

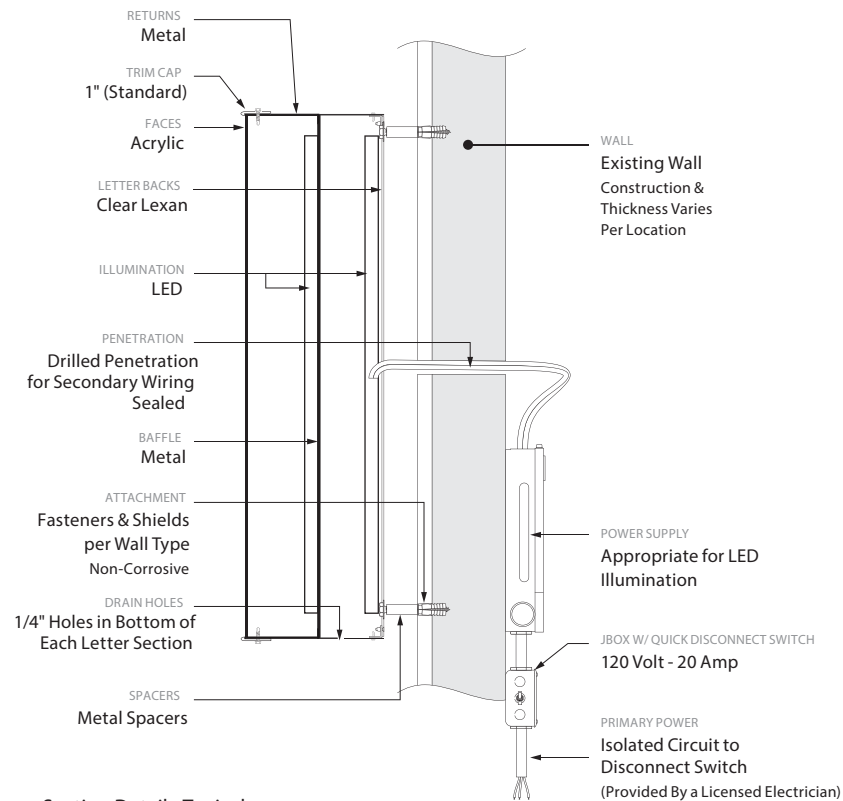


Reverse Pan Channel Letter Halo-Illuminated

NOTE: Back-Plate for Halo Illumination May be Required on Signs Installed on Awnings.

A Section Detail - Typical  
Pan Channel Letter / LED Internally Illuminated / Flush Mounted

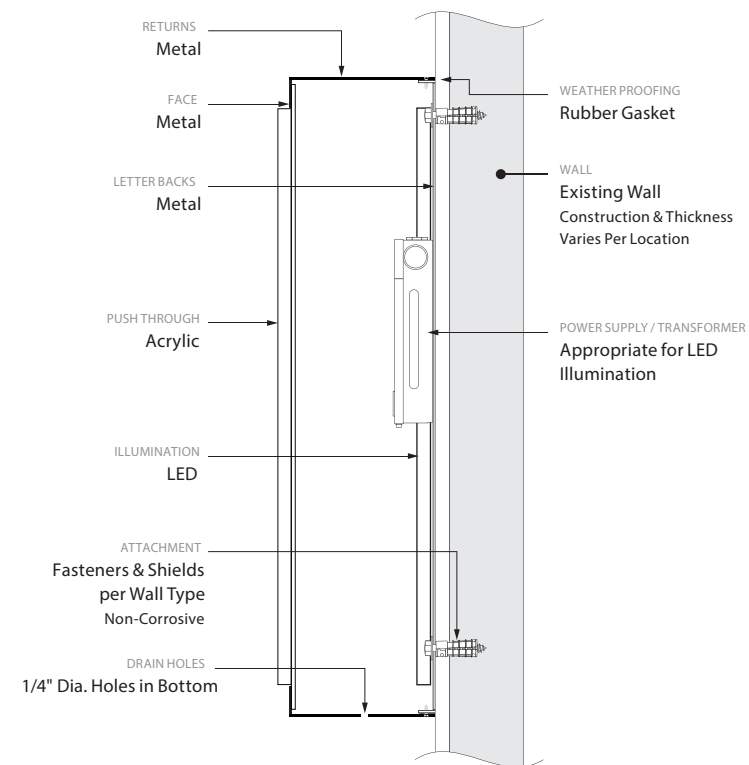
B Section Detail - Typical  
Reverse Pan Channel Letter / LED Halo-Illuminated / Mounted Off Wall



Channel Letter Face and Halo Illuminated

NOTE: Back-Plate for Halo Illumination May be Required on Signs Installed on Awnings.

E Section Detail - Typical  
Channel Letter / Face and Halo Illuminated



Cabinet w/ Push Through Acrylic Face Internally Illuminated

F Section Detail - Typical  
Cabinet / Internally Illuminated / Push-Thru Acrylic Face

**1. CITIZEN PARTICIPATION REPORT FOR  
NWC DYSART & BELL RD CSP  
(CASE NO. FS23-0673)**

Submitted:  
December 13, 2023



## 2. Project Description/Request

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We are proposing a Comprehensive Sign Plan (CSP) for the shopping center located at the Northwest Corner of Dysart Rd & W. Bell Rd. The CSP proposes a straightforward plan which adheres to the City of Surprise's Land Development Ordinance. The intent of the CSP is to pre-determine the quantity and locations of monument signs for the PAD tenants in the shopping center. Through the guidelines of the CSP, we seek to ensure a harmonious visual environment for all tenants and visitors of the shopping center by preventing the clutter of signage.

## 3. Outreach/Notification Timeline

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- **October 2023:** Initial neighborhood meeting notice letters were mailed by the City to all property owners within 300 feet of the Property and all applicable registered neighborhood associations.
- **October 30, 2023:** The subject site was posted with two (2) neighborhood meeting signs.
- **November 14, 2023:** An in-person neighborhood meeting was held at 6:00 p.m. at the Holiday Inn Express (Desert Cactus), 16540 N Bullard Ave, Surprise AZ 85374.
- **December 7, 2023:** The signs posted to the site were updated to include public hearing dates.

## 4. Notification Affidavits

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- See **Tab 1**.

## 5. Neighborhood Meeting Summary

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The applicant team, along with a member of city staff, attended the neighborhood meeting. There were no interested neighbors or stakeholders which attended the neighborhood meeting.

## 6. Summary

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The applicant will continue to be available to neighbors to answer questions throughout the rezoning process. The applicant will also continue to review opportunities to address specific neighbor inputs including regarding traffic access and more.

# Tab 1

**AFFIDAVIT OF POSTING**

Application No: FS23-0673  
Applicant Name: Withey Morris  
Location: NWC Dysart Rd & Bell Rd  
Date Site Posted: 10/30/23

In order to assist in providing adequate notice to interested parties, the applicant for any *type of public hearing* in the City of Surprise shall erect two (2) signs giving notice of the *date, time and place* of the scheduled hearings. These signs must be erected not less than **fifteen (15) days prior to** the date of the first hearing. The signs shall also include the nature of the request as contained on the formal zoning application. The size and format of this sign shall meet requirements established by the Planning and Zoning Department (see page 2).

Such notice shall be clearly legible and placed at a prominent location on the site – Generally adjacent and perpendicular to the public right-of-way. It shall be the *responsibility of the applicant* to erect and to maintain the sign on the subject property and to maintain the hearing information on the sign until final disposition of the case.

It shall also be the *responsibility of the applicant* to remove the signs within one week after the final disposition of the case.

I confirm that the site has been posted as required above, for the case noted above. A picture of the site posting, and photos of any subsequent changes/updates made to the sign, have also been submitted.

Meghan Liggett \_\_\_\_\_ Date 10-30-23  
Applicant/Representative Signature

This instrument was acknowledged before me on 10/30/23, by Meghan Liggett. I witness whereof I hereunto set my hand and official seal.



Marybeth Conrad  
Notary Public  
10-25-24  
My commission expires

Return completed and notarized **affidavit** and all relevant **photos** to the Planning and Zoning Department at least **fifteen (15) days prior to** the scheduled meeting(s).

# Notice of Public Hearing

## City of Surprise

In-Person  
**Neighborhood Meeting**      **Planning & Zoning**      **City Council**

Date: November 14, 2023

Date: TBD

Date: TBD

Time: 6:00 P.M.

Time: 6:00 P.M.

Time: 6:00 P.M.

Location: Holiday Inn Express  
(Desert Cactus)  
16540 N Bullard Ave  
Surprise, AZ 85374

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

### Meeting Location



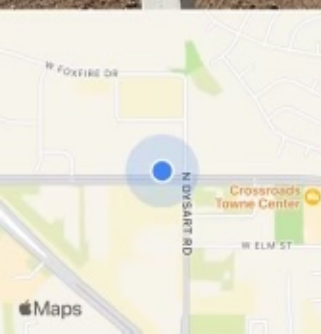
Case Number: FS23-0673

Comprehensive Sign Program for the Bella Fiesta project  
located at the northwest corner of Bell Road and Dysart Road.

### Project Location



For more information, call: 623-222-3011    [www.Surpriseaz.gov](http://www.Surpriseaz.gov)





# Notice of Public Hearing City of Surprise

In-Person

## Neighborhood Meeting

Date: November 14, 2023

Time: 6:00 P.M.

Location: Holiday Inn Express  
(Desert Cactus)  
16540 N Bullard Ave  
Surprise, AZ 85374

## Planning & Zoning

Date: TBD

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

## City Council

Date: TBD

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

### Meeting Location



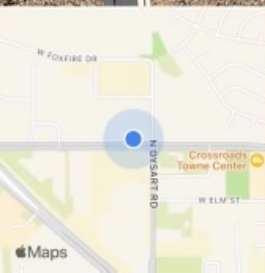
Case Number: FS23-0673

Comprehensive Sign Program for the Bella Fiesta project  
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### Project Location



For more information, call: 623-222-3011 [www.Surpriseaz.gov](http://www.Surpriseaz.gov)



# Notice of Public Hearing

## City of Surprise

In-Person

### Neighborhood Meeting

Date: November 14, 2023

Time: 6:00 P.M.

Location: Holiday Inn Express  
(Desert Cactus)  
16540 N Bullard Ave  
Surprise, AZ 85374

#### Meeting Location



### Planning & Zoning

Date: TBD

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

### City Council

Date: TBD

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

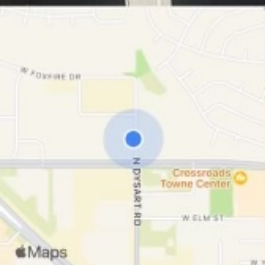
#### Project Location



Case Number: FS23-0673

Comprehensive Sign Program for the Bella Fiesta project  
located at the northwest corner of Bell Road and Dysart Road.

For more information, call: 623-222-3011 [www.Surpriseaz.gov](http://www.Surpriseaz.gov)



# Notice of Public Hearing City of Surprise

In-Person

## Neighborhood Meeting

Date: November 14, 2023

Time: 6:00 P.M.

Location: Holiday Inn Express  
(Desert Cactus)  
16540 N Bullard Ave  
Surprise, AZ 85374

## Planning & Zoning

Date: TBD

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

## City Council

Date: TBD

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

Meeting Location



Project Location



Case Number: FS23-0673

Comprehensive Sign Program for the Bella Fiesta project  
located at the northwest corner of Bell Road and Dysart Road.

For more information, call: 623-222-3011 [www.Surpriseaz.gov](http://www.Surpriseaz.gov)



**AFFIDAVIT OF POSTING**

Application No: FS23-0673  
Applicant Name: Withey Morris  
Location: NWC Dysart Rd & Bell Rd  
Date Site Posted: 12/07/23

In order to assist in providing adequate notice to interested parties, the applicant for any *type of public hearing* in the City of Surprise shall erect two (2) signs giving notice of the *date, time and place* of the scheduled hearings. These signs must be erected not less than **fifteen (15) days prior to** the date of the first hearing. The signs shall also include the nature of the request as contained on the formal zoning application. The size and format of this sign shall meet requirements established by the Planning and Zoning Department (see page 2).

Such notice shall be clearly legible and placed at a prominent location on the site – Generally adjacent and perpendicular to the public right-of-way. It shall be the *responsibility of the applicant* to erect and to maintain the sign on the subject property and to maintain the hearing information on the sign until final disposition of the case.

It shall also be the *responsibility of the applicant* to remove the signs within one week after the final disposition of the case.

I confirm that the site has been posted as required above, for the case noted above. A picture of the site posting, and photos of any subsequent changes/updates made to the sign, have also been submitted.

*[Signature]* Applicant/Representative Signature 12-7-2023 Date

This instrument was acknowledged before me on 12/07/23, by Patrick Anspaugh I witness whereof I hereunto set my hand and official seal.



*[Signature]* Notary Public 3/31/27  
My commission expires

Return completed and notarized **affidavit** and all relevant **photos** to the Planning and Zoning Department at least **fifteen (15) days prior to** the scheduled meeting(s).



# Notice of Public Hearing

## City of Surprise

In-Person

### Neighborhood Meeting

Date: November 14, 2023

Time: 6:00 P.M.

Location: Holiday Inn Express  
(Desert Cactus)  
16540 N Bullard Ave  
Surprise, AZ 85374

### Planning & Zoning

Date: January 18, 2024

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

### City Council

Date: February 20, 2024

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

#### Meeting Location



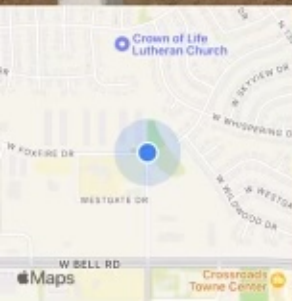
Case Number: FS23-0673

Comprehensive Sign Program for the Bella Fiesta project  
located at the northwest corner of Bell Road and Dysart Road.

#### Project Location



For more information, call: 623-222-3011 [www.Surpriseaz.gov](http://www.Surpriseaz.gov)



December 7, 2023 at 11:53 AM  
N Dysart Rd  
Surprise, AZ 85375

# Notice of Public Hearing

## City of Surprise

In-Person

### Neighborhood Meeting

Date: November 14, 2023

Time: 6:00 P.M.

Location: Holiday Inn Express  
(Desert Cactus)  
16540 N Bullard Ave  
Surprise, AZ 85374

### Planning & Zoning

Date: January 18, 2024

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

### City Council

Date: February 20, 2024

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

#### Meeting Location



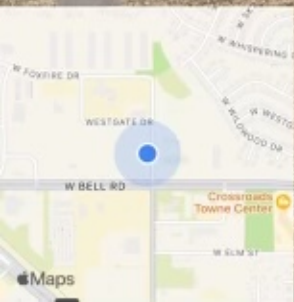
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Comprehensive Sign Program for the Bella Fiesta project  
located at the northwest corner of Bell Road and Dysart Road.

For more information, call: 623-222-3011 [www.Surpriseaz.gov](http://www.Surpriseaz.gov)



December 7, 2023 at 11:53 AM  
N Dysart Rd  
Surprise AZ 85375

# Notice of Public Hearing City of Surprise

In-Person

## Neighborhood Meeting

Date: November 14, 2023

Time: 6:00 P.M.

Location: Holiday Inn Express  
(Desert Cactus)  
16540 N Bullard Ave  
Surprise, AZ 85374

## Planning & Zoning

Date: January 18, 2024

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

## City Council

Date: February 20, 2024

Time: 6:00 P.M.

Location: 16000 N Civic Center Plaza  
Surprise, AZ 85374

### Meeting Location



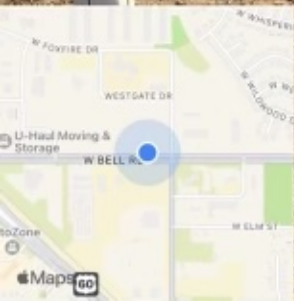
Case Number: FS23-0673

Comprehensive Sign Program for the Bella Fiesta project  
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### Project Location



For more information, call: 623-222-3011 [www.Surpriseaz.gov](http://www.Surpriseaz.gov)



December 7, 2023 at 11:57 AM  
13136 - 13154 W Bell Rd  
Surprise, AZ 85375



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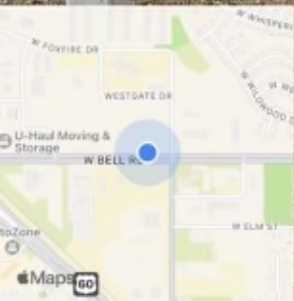
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December 7, 2023 at 11:58 AM  
13136-13154 W Bell Rd  
Surprise, AZ 85375



**AFFIDAVIT OF POSTING**

Application No: FS23-0673  
Applicant Name: Withey Morris  
Location: NWC Dysart Rd & Bell Rd  
Date Site Posted: 12/07/23

In order to assist in providing adequate notice to interested parties, the applicant for any *type of public hearing* in the City of Surprise shall erect two (2) signs giving notice of the *date, time and place* of the scheduled hearings. These signs must be erected not less than **fifteen (15) days prior to** the date of the first hearing. The signs shall also include the nature of the request as contained on the formal zoning application. The size and format of this sign shall meet requirements established by the Planning and Zoning Department (see page 2).

Such notice shall be clearly legible and placed at a prominent location on the site – Generally adjacent and perpendicular to the public right-of-way. It shall be the *responsibility of the applicant* to erect and to maintain the sign on the subject property and to maintain the hearing information on the sign until final disposition of the case.

It shall also be the *responsibility of the applicant* to remove the signs within one week after the final disposition of the case.

I confirm that the site has been posted as required above, for the case noted above. A picture of the site posting, and photos of any subsequent changes/updates made to the sign, have also been submitted.

*[Signature]* Applicant/Representative Signature 12-7-2023 Date

This instrument was acknowledged before me on 12/07/23, by Patrick Anspaugh I witness whereof I hereunto set my hand and official seal.



*[Signature]* Notary Public 3/31/27  
My commission expires

Return completed and notarized **affidavit** and all relevant **photos** to the Planning and Zoning Department at least **fifteen (15) days prior to** the scheduled meeting(s).

# Notice of Public Hearing

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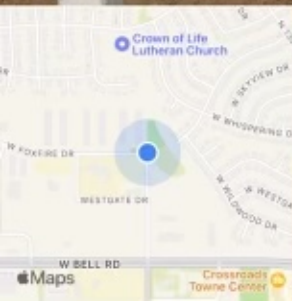
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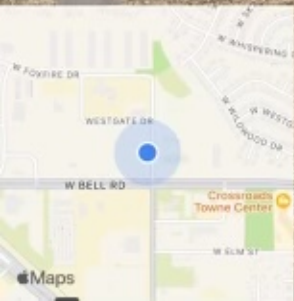
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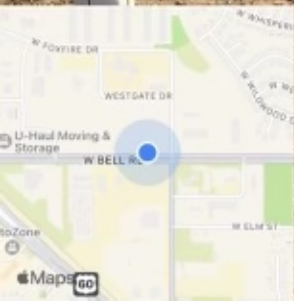
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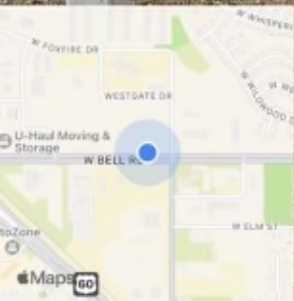
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December 7, 2023 at 11:58 AM  
13136-13154 W Bell Rd  
Surprise, AZ 85375  
Page 279 of 694



**SURPRISE**  
ARIZONA

**FS23-0673**  
**NWC Bell and Dysart**  
**Comprehensive Sign Program**

City Council  
February 20, 2024





PROJECT SITE

FOXFIRE DR

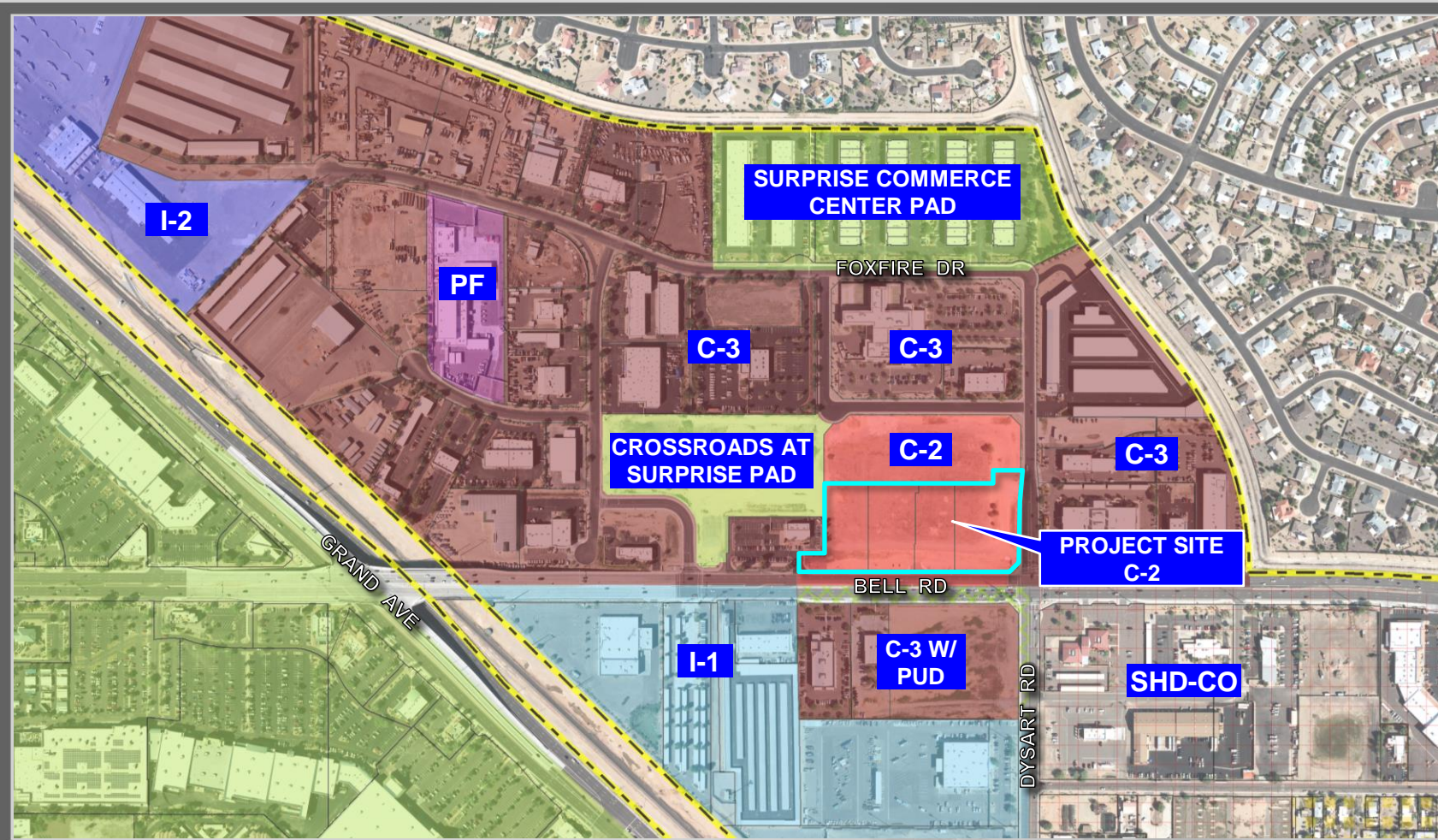
BELL RD

DYSART RD

GRAND AVE

VICINITY MAP





I-2

PF

C-3

C-3

CROSSROADS AT  
SURPRISE PAD

C-2

C-3

PROJECT SITE  
C-2

GRAND AVE

FOXFIRE DR

BELL RD

I-1

C-3 W/  
PUD

DYSART RD

SHD-CO

ZONING MAP

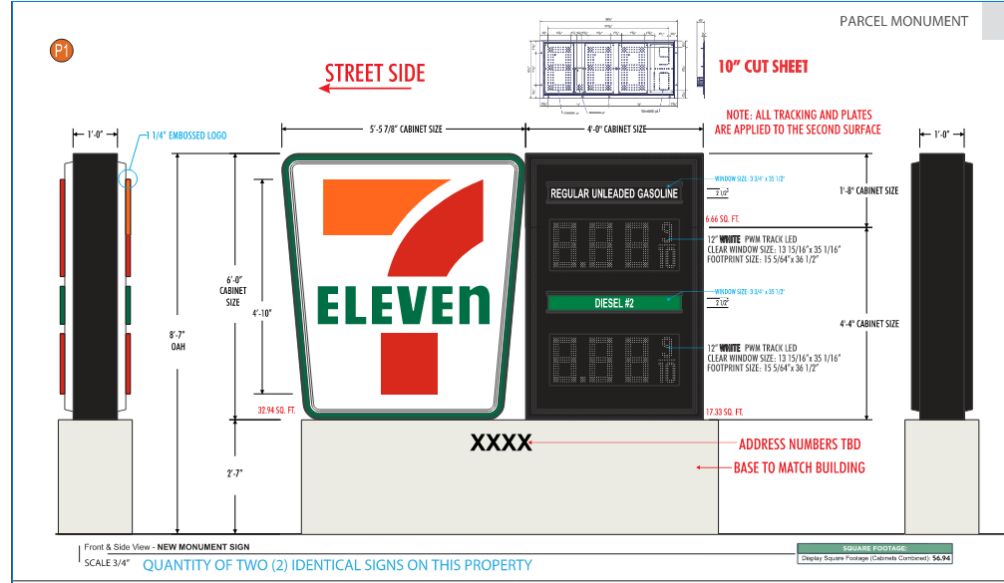
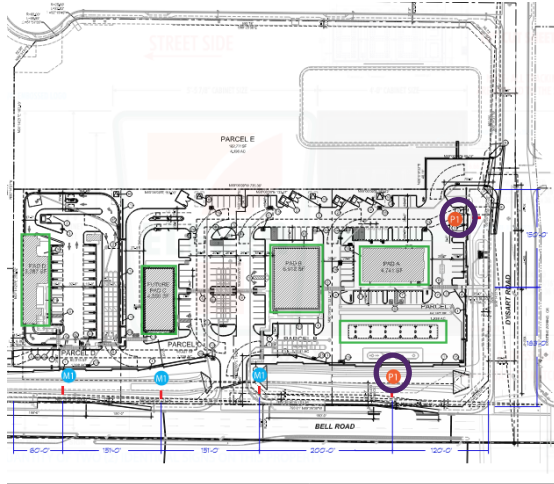


# LDO

Max Height:  
17'  
Allowed Sign  
Area: 120 sq.  
ft.

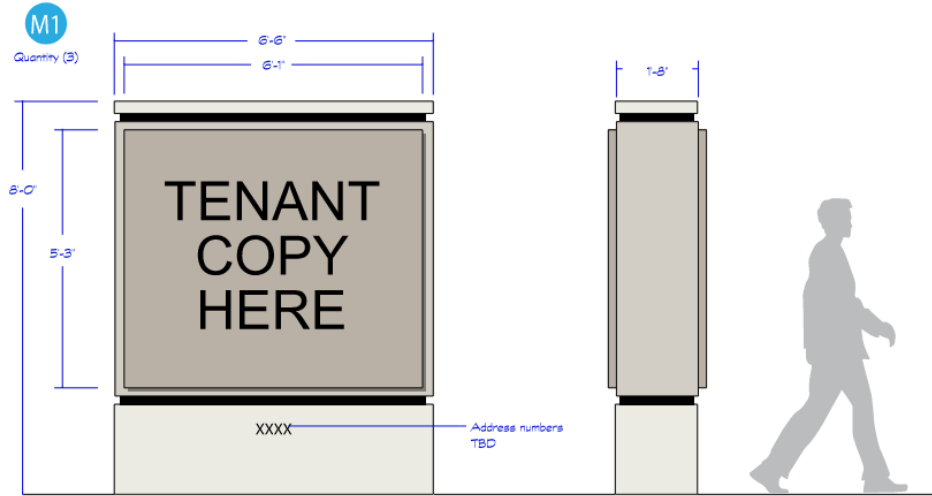
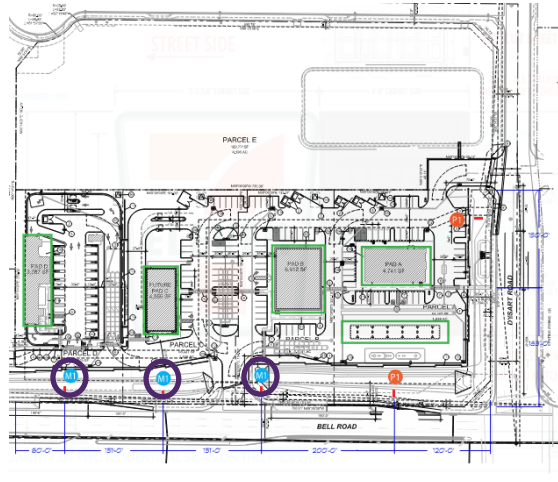
# CSP

Height: 15'  
Sign Area: 120  
sq. ft.



**MAJOR MONUMENT SIGN**

LDO	CSP
Max Height: 8' Allowed Sign Area: 32 sq. ft.	Height: 8' Sign Area: 32 sq. ft.



\*Sample Design.  
 \*Max Height: 8'-0"  
 \*Max Sign Area: 32 square feet

**MINOR MONUMENT SIGN**

LDO	CSP
Allowed Sign Area: 1.5 sq. ft. / Linear ft.	Sign Area: Main Elevation: 1.5 sq. ft. / Linear ft. Other Elevations: 1.5 sq. ft. / Linear ft.

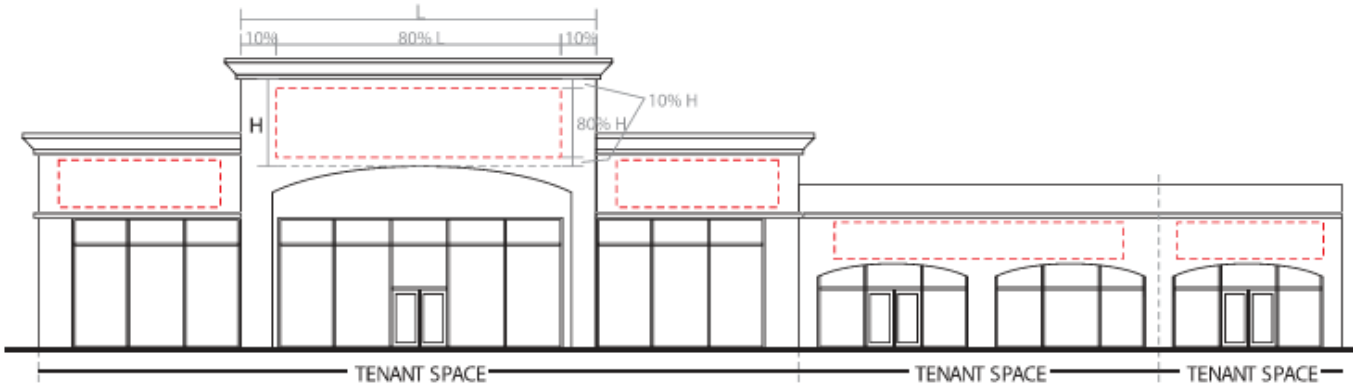
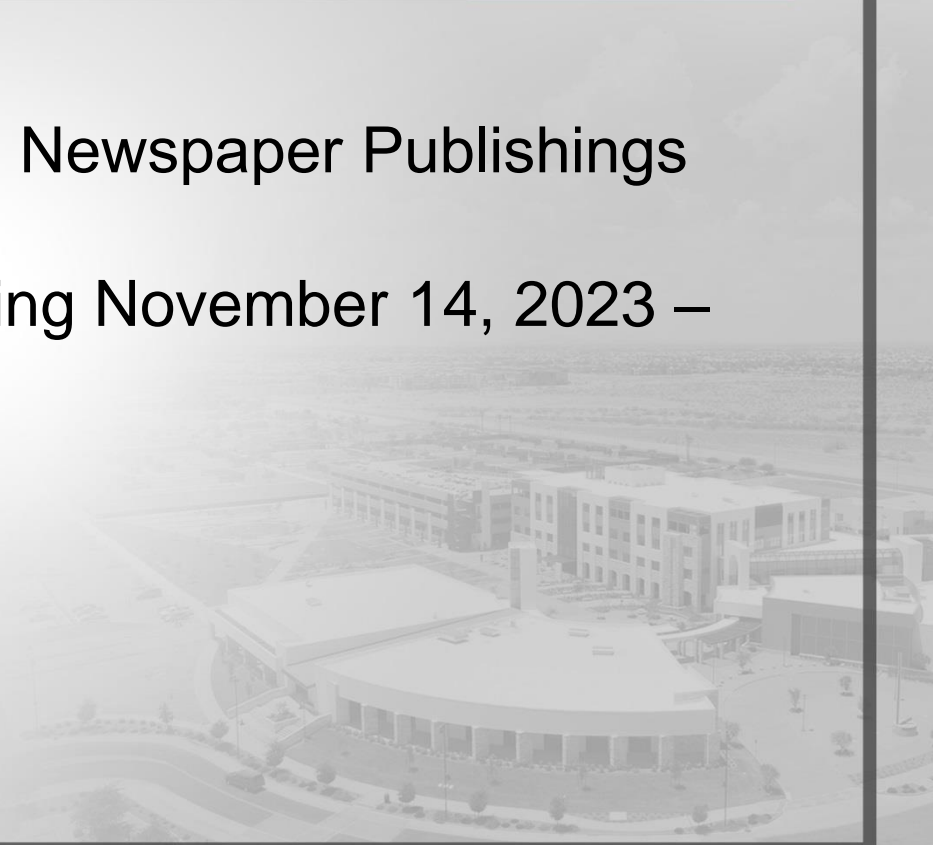


FIGURE 3



# OUTREACH

- Site Posting, 300' Mailers, Newspaper Publishings
- Citizen Participation Meeting November 14, 2023 –  
Holiday Inn Express
  - No attendees
  - No concerns







# RECOMMENDATION

Planning and Zoning Commission Recommendation:

Approve subject to stipulations 'a' through 'b'



**SURPRISE**  
ARIZONA

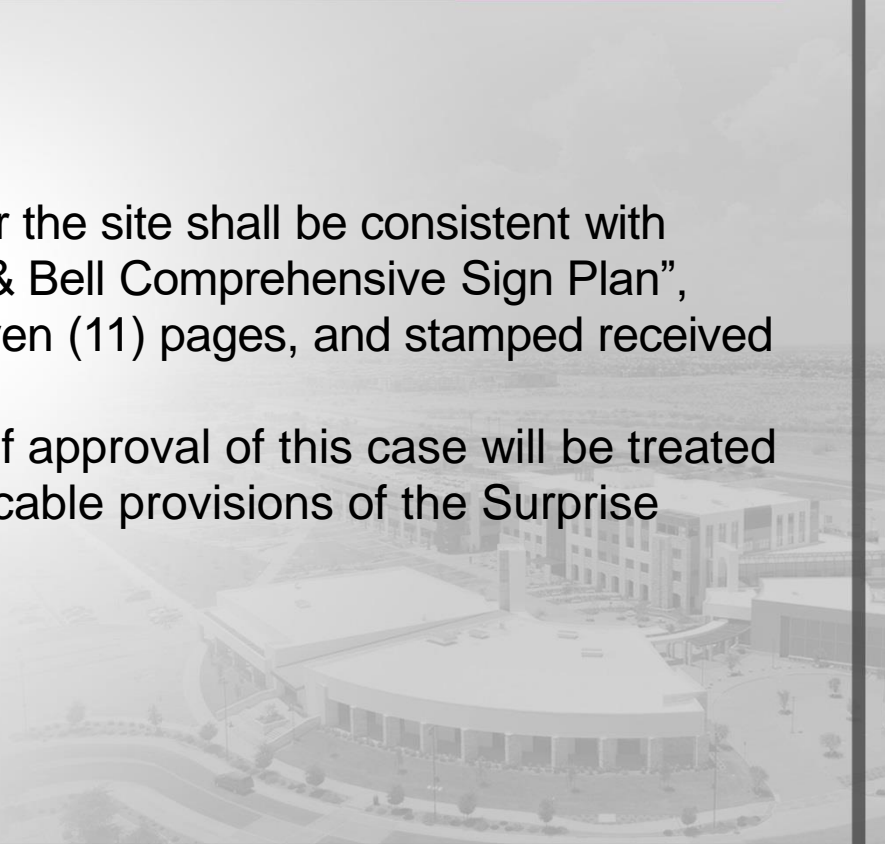
**QUESTIONS OR  
COMMENTS?**

**Thank You**





# Stipulations

- a. Development and use of the signage for the site shall be consistent with the project narrative entitled “NWC Dysart & Bell Comprehensive Sign Plan”, prepared by Royal Signs, consisting of eleven (11) pages, and stamped received October 30, 2023.
  - b. Non-compliance with the stipulations of approval of this case will be treated as a violation in accordance with the applicable provisions of the Surprise Municipal Code.
- 





**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024

Contact Person: Tracy Montgomery, Deputy City Manager

Submitting Department: City Manager Office

District: Citywide

Staff Recommendations:

---

Consent: No

Regular: Yes

Public Hearing: No

Report/Discussion: No

---

**Agenda Wording:**

Consideration and action pertaining to approval of an amendment to the Surprise Municipal Code, Chapter 54, Article IV, relating to parking on the streets and rights-of-way within the City of Surprise; Ordinance #2024-07.

---

**Motion:**

I move to approve Ordinance #2024-07.

---

**Background:**

As growth of the commercial corridor continues to expand along the Loop 303 and in the City's industrial park, the need to find parking solutions for the trucking community within the City has continued to grow. Currently, the City does not have any designated parking locations and the City currently does not have an operational truck stop within City limits, both of which limit the overnight parking options for the trucking community. Faced with the lack of parking options, the trucking community has utilized right-of-way adjacent to some of the City's roadways close to Loop 303 to meet their needs.

---

**Objective Analysis:**

To identify the location, accessibility, and safety measures for an optimal truck parking solution that meets the needs of drivers, ensures regulatory compliance, and enhances operational efficiency.

---

**Policy Compliant:**

This item is compliant with all City and Council policies.

---

**Financial Impact:**

There is no anticipated financial impact related to this item.

---

**Budget Impact:**

There is currently no budget impact, the budget will be reviewed in FY25.

**FTE Impact:**

This item does not have an impact on current staff levels.

---

**ATTACHMENTS:**

1. Truck Parking Regular Council 02202024
  2. Semi Parking Survey As Of 120923
  3. 24.02.12 Ord 2024-07 Parking Ordinance Ch. 54 (1)
-



**SURPRISE**  
ARIZONA

# Surprise Municipal Code Amendment – Truck Parking

ACM Tracy Montgomery  
February 20, 2024

# ITEMS AND ACTION FOR TODAY

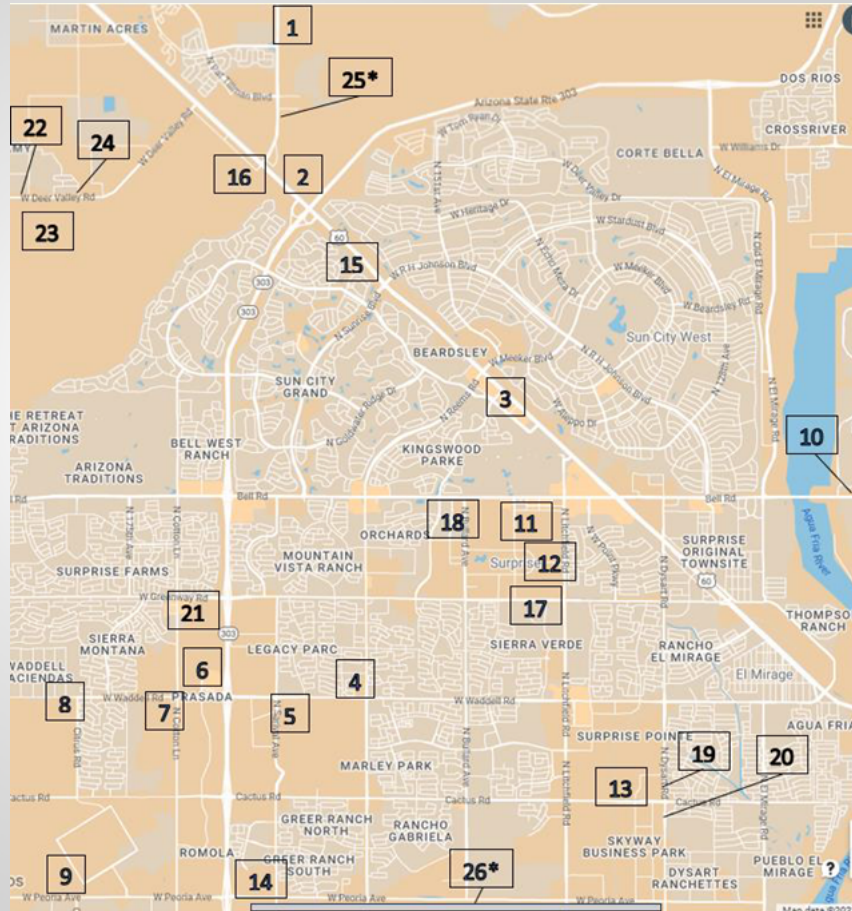
- Answers to questions asked at the last Council Workshop.
- Parking locations prioritized as directed at the last Council Workshop.
- Request the Council amend Surprise Municipal Code Chapter 54 to clarify the limits of parking trucks, recreational vehicles, and trailers on City streets and rights-of-way.



# QUESTION #1

HOW MANY TRUCKS,  
AND WHERE?

AUGUST TO  
DECEMBER SURVEY.



MAP POSITION	LOCATION	8/19	8/25	9/1	9/8	9/16	9/22	9/30	10/6	10/14	10/20	10/28	11/3	11/9	11/18	11/27	12/1	12/9	AVG
1	W SAN YSIDRO / N 163 AVE	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
2	W US60 / N LOOP 303	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
3	14000 BLK W MOUNTAIN VIEW BLVD	2	1	2	1	2	1	3	3	1	0	1	2	1	2	1	2	1	1.5
4	W WADDELL RD / N REEMS RD	3	3	3	4	3	2	2	3	4	1	3	1	1	4	2	2	7	2.8
5	W WADDELL RD / N SARIVAL AVE	4	5	3	6	4	2	7	1	6	5	6	1	3	7	4	3	7	4.4
6	14100 N PRASADA GATEWAY	4	1	4	2	3	3	4	2	2	1	4	2	3	5	3	0	3	2.7
7	W WADDELL RD / N COTTON LN	20	20	18	24	25	17	22	25	29	14	22	16	17	21	11	19	22	20.1
8	W WADDELL RD / N CITRUS RD	2	0	0	0	2	1	1	0	1	0	1	0	0	1	0	0	2	0.6
9	W PEORIA AVE / N CORTESSA PKWY	2	0	3	5	5	3	3	3	5	3	3	3	3	4	4	2	1	3.1
10	11600 BLK W BELL RD	2	1	2	2	2	1	2	2	1	2	1	0	1	3	2	2	1	1.6
11	16600 BLK N CIVIC CENTER DR	1	0	0	0	1	0	0	1	0	1	0	0	0	1	1	1	0	0.4
12	14000 BLK W STATLER BLVD	1	1	2	2	2	5	3	1	2	1	4	2	2	2	4	4	3	2.4
13	13500 BLK W CACTUS RD	4	2	3	3	2	1	3	3	5	2	3	3	6	4	5	3	8	3.5
14	W PEORIA AVE / N SARIVAL AVE	1	1	1	1	2	1	3	1	0	1	0	0	0	0	2	0	0	0.8
15	W US60 / W SUNRISE BLVD				1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2
16	W US60 / N 163 AVE				1	1	0	1	1	1	0	1	0	1	0	1	0	0	0.6
17	W GREENWAY RD / N 142 AVE				1	0	0	0	0	0	1	0	0	0	1	1	2	0	0.4
18	W YOUNG ST / N STADIUM WAY				2	1	1	1	2	2	2	2	1	0	1	0	2	1	1.3
19	W CACTUS RD / N DYSART RD							2	0	1	2	1	1	1	1	1	1	1	1.1
20	N DYSART RD / W LAUREL LN							1	0	0	0	0	0	0	0	0	0	0	0.1
21	N COTTON LN / W CUSTER LN							1	0	2	2	1	2	1	0	0	1	3	1.2
22	W DEER VALLEY RD / N 185 AVE							2	1	1	1	3	0	2	2	1	1	2	1.5
23	W DEER VALLEY RD / N 183 AVE							1	1	1	1	0	0	0	0	1	1	0	0.5
24	W DEER VALLEY RD / N CITRUS RD							1	1	1	1	1	0	0	1	2	2	1	1.0
TOTAL NUMBER OF VEHICLES BY WEEK WITHIN CITY LIMITS		48	35	42	57	56	39	63	51	65	41	57	34	42	60	46	48	63	49.1
WEEKEND AVERAGE		[Aug 19, Sept 16, Sept 30, Oct 14, Oct 28, Nov 18, Dec 9]																	58.9
WEEKDAY AVERAGE		[Aug 25, Sept 1, Sept 8, Sept 22, Oct 6, Oct 20, Nov 3, Nov 9, Nov 27, Dec 1]																	43.5
25*	EAST SIDE N 163 AVE / W PLANADA LN							3	2	3	2	1	1	2	5	2	3	2	2.4
26*	SOUTH SIDE W PEORIA AVE (N DYSART RD TO LOOP 303)	22	19	15	22	25	21	23	21	21	21	25	24	21	23	19	22	20	21.4
TOTAL NUMBER OF VEHICLES BY WEEK INCLUDING THOSE OUTSIDE OF CITY LIMITS*		70	54	57	79	81	60	89	74	89	64	83	59	65	88	67	73	85	72.0
WEEKEND AVERAGE INCLUDING THOSE OUTSIDE OF CITY LIMITS*		[Aug 19, Sept 16, Sept 30, Oct 14, Oct 28, Nov 18, Dec 9]																	83.6
WEEKDAY AVERAGE INCLUDING THOSE OUTSIDE OF CITY LIMITS*		[Aug 25, Sept 1, Sept 8, Sept 22, Oct 6, Oct 20, Nov 3, Nov 9, Nov 27, Dec 1]																	65.2

# HOW MANY TRUCKS?

Average trucks per day in city limits	49.1
Most trucks a day in city limits	65
Average trucks per day including *perimeter locations	72
Most trucks in a day including *perimeter locations	89
Weekend average including *perimeter locations	83.6
Weekday average including *perimeter locations	65.2

TOTAL NUMBER OF VEHICLES BY WEEK WITHIN CITY LIMITS		48	35	42	57	56	39	63	51	65	41	57	34	42	60	46	48	63	49.1
WEEKEND AVERAGE		(Aug 19, Sept 16, Sept 30, Oct 14, Oct 28, Nov 18, Dec 9)																	58.9
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## QUESTION #2 - LOADING AND UNLOADING

- Previously allowed for 2 hours
- Changed to “While actually engaged in temporarily loading and unloading...”

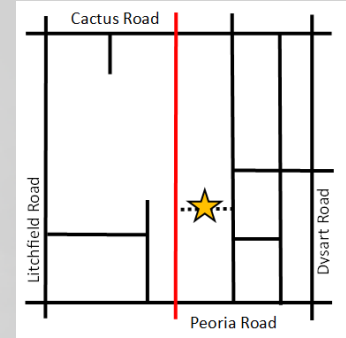
**Sec. 54-114. Parking ~~in residential zones and~~ upon city streets **AND RIGHTS OF WAY AS DEFINED HEREIN** are prohibited acts.**

- (a) No person shall park a truck **OR ANY TRAILER** on any street ~~within a residential zone~~, except as follows:
- (1) While **ACTUALLY ENGAGED IN TEMPORARILY** loading and unloading the truck **OR ANY TRAILER**.



# PARKING OPTIONS

#1 – Hope Drive Alignment (**completed**) - leveled with millings and signage. Provides 22 spots  
\$150k City Install



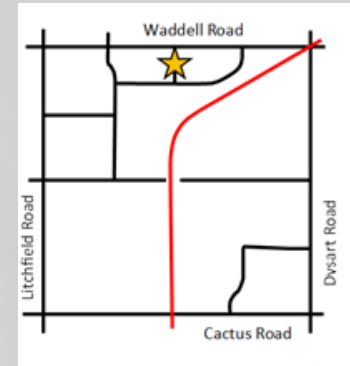
# PARKING OPTIONS

## #1 - Parking Solution – Hope Drive Alignment (completed)



# PARKING OPTIONS

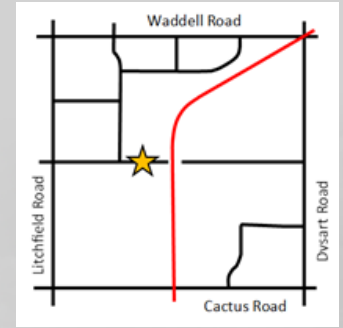
#2 - 135<sup>th</sup> Ave, Waddell to Willow - Estimated 7 spots – paved road (1-way). (Completed)  
\$10K City Install/\$200K contractor





# PARKING OPTIONS

#3 - Sweetwater Ave, 137<sup>th</sup> Ave - 10 spots – ½ paved road (add millings & a turn-around). (In process -ROW) \$125k City install





## ONGOING MAINTENANCE ?

- Annual cost of \$110k to \$125k is estimated for maintenance of all three locations
- Staff will monitor parking locations and track cost of necessary improvements
- Possible budget amendment next year depending on expense

# PRIMARY AMENDMENTS

**Parking Ordinance – Surprise Municipal Code Chapter 54, Article IV, Division 1. (Definitions Clean-up – no impact to the issue of truck parking).**

- Update definitions to match A.R.S. Title 28. (“Street”, “Road/way”, “Motor Vehicle”, and “Right-of-Way”).
- Further describe parking violations to include “Truck”, “Trailer”, and “Recreational Vehicle or Non-motorized vehicle” (in addition to “Vehicle”).

# PRIMARY AMENDMENTS

## Parking Ordinance – Surprise Municipal Code Chapter 54, Article IV, Division 2.

- Adds “Trailers” to the list of vehicles and expands the prohibited area to include “within City Rights-of-Way”.

***DIVISION 2. TRUCK, TRAILERS, RECREATIONAL AND HIGH PROFILE VEHICLE PARKING ~~IN RESIDENTIAL ZONES AND UPON CITY STREETS AND WITHIN CITY RIGHTS-OF-WAY~~***

# PRIMARY AMENDMENTS

**Sec. 54-114. Parking ~~in residential zones and~~ upon city streets AND RIGHTS OF WAY AS DEFINED HEREIN are prohibited acts.**

- (a) No person shall park a truck **OR ANY TRAILER** on any street ~~within a residential zone~~, except as follows:
- (1) While **ACTUALLY ENGAGED IN TEMPORARILY** loading and unloading the truck **OR ANY TRAILER**.
  - (2) While services are being provided by the truck's occupant. This does not include any maintenance or service of the truck itself.
  - (3) For a period of time not to exceed one hour.
  - (4) **WHERE SPECIFICALLY PERMITTED BY THE CITY.**
- (b) No person shall park a recreational vehicle, or **ANY TRAILER INCLUDING A** utility trailer on any street ~~within a residential zone~~, except in conformance with this section. A person may park a recreational vehicle or utility trailer for a period not to exceed 72 hours up to two times per month, provided:



**Request: City Council approve ordinance #24-07 which will:**

“AMEND SURPRISE MUNICIPAL CODE CHAPTER 54, ARTICLE IV, DIVISIONS 1 AND 2, BY AMENDING DIVISION 1 TO ADD DEFINITIONS AND TO CLARIFY EXISTING PROVISIONS, AND BY AMENDING DIVISION 2 TO APPLY TO ALL ZONES WITHIN THE CITY AND TO FURTHER CLARIFY THE LIMITS OF PARKING TRUCKS, RECREATIONAL VEHICLES, AND TRAILERS ON CITY STREETS AND WITHIN CITY RIGHTS-OF-WAY.”



**SURPRISE**  
ARIZONA

**QUESTIONS OR  
COMMENTS?**

Thank You

## Parking Citation Fees

54-114A	Parking-Truck on Residential Street	\$86.00	\$30.00	\$116.00
54-114B	Parking RV/Trailer on Residential Street	\$86.00	\$30.00	\$116.00
54-114C	Parking RV/Trailer on front/side/rear yard of Residence	\$86.00	\$30.00	\$116.00
54-114D	Parking Truck/RV/Trailer W/I 30' of Curb	\$86.00	\$30.00	\$116.00
54-114E	Parking Truck/RV/Trailer Using Jack Stand	\$86.00	\$30.00	\$116.00

## Common Definitions

**A Truck is:** a vehicle weighing 18,000 or more pounds, or a combination of vehicles weighing in excess of 26,000 pounds, or a box truck or semi-trailer cab.

**A Semi-Trailer is:** a vehicle that is with or without motive power, other than a pole trailer or single-axle tow dolly, that is designed for carrying persons or property and for being drawn by a motor vehicle and that is constructed so that some part of its weight and that of its load rests on or is carried by another vehicle.



## Common Definitions

**A Trailer is:** a vehicle that is with or without motive power, other than a pole trailer or single-axle tow dolly, that is designed for carrying persons or property and for being drawn by a motor vehicle and that is constructed so that no part of its weight rests on the towing vehicle.

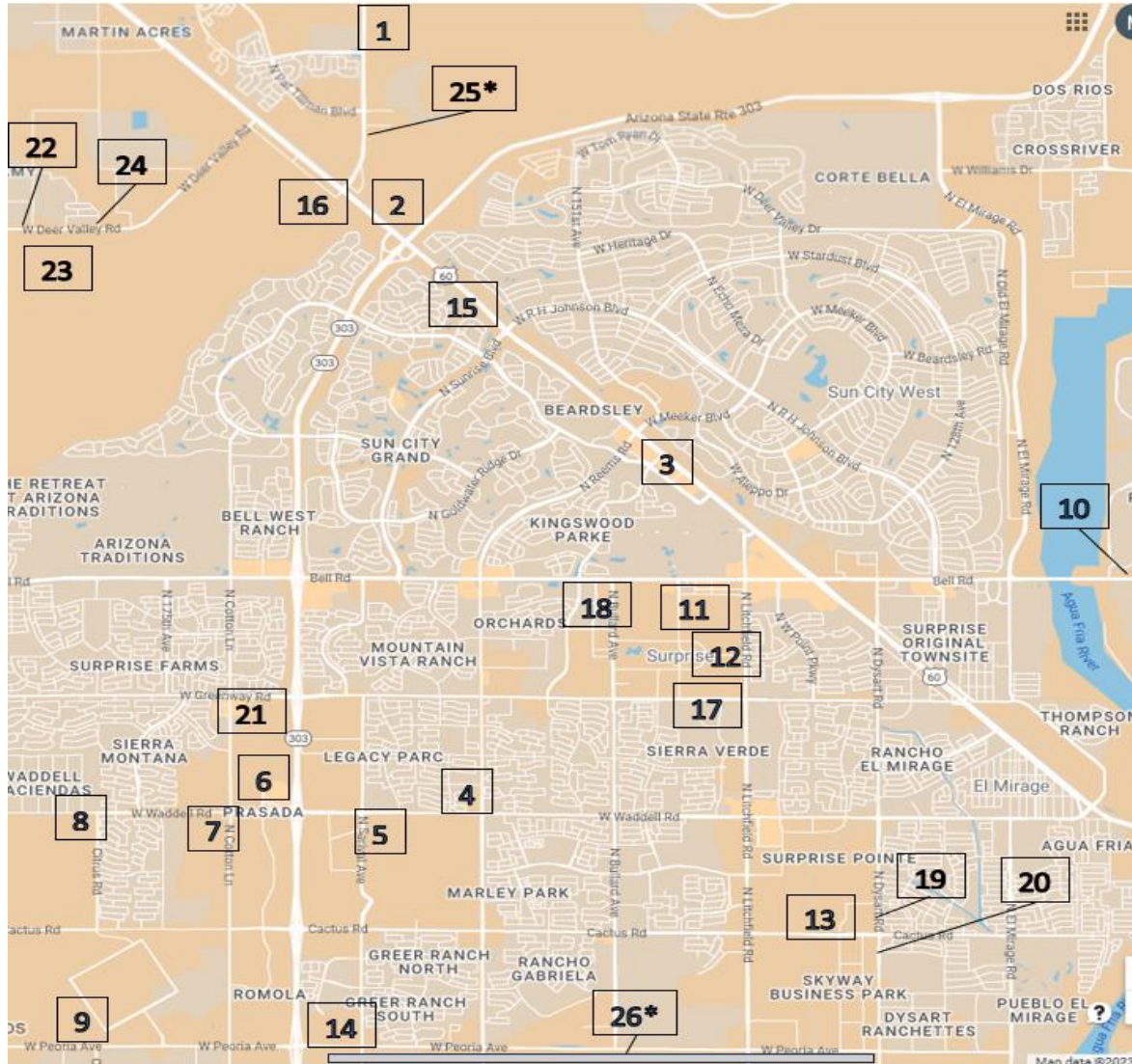
**A Utility Trailer is:** a vehicle without motive power, other than a pole trailer or semitrailer, designed for carrying property and for being drawn by a motor vehicle. (Landscapers, construction materials, large tools)

City of Surprise  
Community Development  
**SEMI/BOX TRUCK ILLEGAL PARKING SURVEY**

MAP POSITION	LOCATION	8/19	8/25	9/1	9/8	9/16	9/22	9/30	10/6	10/14	10/20	10/28	11/3	11/9	11/18	11/27	12/1	12/9	AVG
1	W SAN YSIDRO / N 163 AVE	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
2	W US60 / N LOOP 303	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
3	14000 BLK W MOUNTAIN VIEW BLVD	2	1	2	1	2	1	3	3	1	0	1	2	1	2	1	2	1	1.5
4	W WADDELL RD / N REEMS RD	3	3	3	4	3	2	2	3	4	1	3	1	1	4	2	2	7	2.8
5	W WADDELL RD / N SARIVAL AVE	4	5	3	6	4	2	7	1	6	5	6	1	3	7	4	3	7	4.4
6	14100 N PRASADA GATEWAY	4	1	4	2	3	3	4	2	2	1	4	2	3	5	3	0	3	2.7
7	W WADDELL RD / N COTTON LN	20	20	18	24	25	17	22	25	29	14	22	16	17	21	11	19	22	20.1
8	W WADDELL RD / N CITRUS RD	2	0	0	0	2	1	1	0	1	0	1	0	0	1	0	0	2	0.6
9	W PEORIA AVE / N CORTESSA PKWY	2	0	3	5	5	3	3	3	5	3	3	3	3	4	4	2	1	3.1
10	11600 BLK W BELL RD	2	1	2	2	2	1	2	2	1	2	1	0	1	3	2	2	1	1.6
11	16600 BLK N CIVIC CENTER DR	1	0	0	0	1	0	0	1	0	1	0	0	0	1	1	1	0	0.4
12	14000 BLK W STATLER BLVD	1	1	2	2	2	5	3	1	2	1	4	2	2	2	4	4	3	2.4
13	13500 BLK W CACTUS RD	4	2	3	3	2	1	3	3	5	2	3	3	6	4	5	3	8	3.5
14	W PEORIA AVE / N SARIVAL AVE	1	1	1	1	2	1	3	1	0	1	0	0	0	0	2	0	0	0.8
15	W US60 / W SUNRISE BLVD				1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2
16	W US60 / N 163 AVE				1	1	0	1	1	1	0	1	0	1	0	1	0	0	0.6
17	W GREENWAY RD / N 142 AVE				1	0	0	0	0	0	1	0	0	0	1	1	2	0	0.4
18	W YOUNG ST / N STADIUM WAY				2	1	1	1	2	2	2	2	1	0	1	0	2	1	1.3
19	W CACTUS RD / N DYSART RD							2	0	1	2	1	1	1	1	1	1	1	1.1
20	N DYSART RD / W LAUREL LN							1	0	0	0	0	0	0	0	0	0	0	0.1
21	N COTTON LN / W CUSTER LN							1	0	2	2	1	2	1	0	0	1	3	1.2
22	W DEER VALLEY RD / N 185 AVE							2	1	1	1	3	0	2	2	1	1	2	1.5
23	W DEER VALLEY RD / N 183 AVE							1	1	1	1	0	0	0	0	1	1	0	0.5
24	W DEER VALLEY RD / N CITRUS RD							1	1	1	1	1	0	0	1	2	2	1	1.0
<b>TOTAL NUMBER OF VEHICLES BY WEEK WITHIN CITY LIMITS</b>		<b>48</b>	<b>35</b>	<b>42</b>	<b>57</b>	<b>56</b>	<b>39</b>	<b>63</b>	<b>51</b>	<b>65</b>	<b>41</b>	<b>57</b>	<b>34</b>	<b>42</b>	<b>60</b>	<b>46</b>	<b>48</b>	<b>63</b>	<b>49.1</b>
<b>WEEKEND AVERAGE</b>		<b>(Aug 19, Sept 16, Sept 30, Oct 14, Oct 28, Nov18, Dec 9)</b>																	<b>58.9</b>
<b>WEEKDAY AVERAGE</b>		<b>(Aug 25, Sept 1, Sept 8, Sept 22, Oct 6, Oct 20, Nov 3, Nov 9, Nov 27, Dec 1)</b>																	<b>43.5</b>
25*	EAST SIDE N 163 AVE / W PLANADA LN							3	2	3	2	1	1	2	5	2	3	2	2.4
26*	SOUTH SIDE W PEORIA AVE (N DYSART RD TO LOOP 303)	22	19	15	22	25	21	23	21	21	21	25	24	21	23	19	22	20	21.4
<b>TOTAL NUMBER OF VEHICLES BY WEEK INCLUDING THOSE OUTSIDE OF CITY LIMITS*</b>		<b>70</b>	<b>54</b>	<b>57</b>	<b>79</b>	<b>81</b>	<b>60</b>	<b>89</b>	<b>74</b>	<b>89</b>	<b>64</b>	<b>83</b>	<b>59</b>	<b>65</b>	<b>88</b>	<b>67</b>	<b>73</b>	<b>85</b>	<b>72.0</b>
<b>WEEKEND AVERAGE INCLUDING THOSE OUTSIDE OF CITY LIMITS*</b>		<b>(Aug 19, Sept 16, Sept 30, Oct 14, Oct 28, Nov 18, Dec 9)</b>																	<b>83.6</b>
<b>WEEKDAY AVERAGE INCLUDING THOSE OUTSIDE OF CITY LIMITS*</b>		<b>(Aug 25, Sept 1, Sept 8, Sept 22, Oct 6, Oct 20, Nov 3, Nov 9, Nov 27, Dec 1)</b>																	<b>65.2</b>

\*Location is outside Surprise city limits, but due to its visibility it is frequently the subject of resident complaints.

City of Surprise  
Community Development  
**SEMI/BOX TRUCK ILLEGAL PARKING SURVEY**



\*Location is outside Surprise city limits, but due to its visibility it is frequently the subject of resident complaints.

**ORDINANCE # 2024-07**

**AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE CITY OF SURPRISE, ARIZONA, AMENDING SURPRISE MUNICIPAL CODE CHAPTER 54, ARTICLE IV, BY ADDING DEFINITIONS AND CLARIFYING LIMITS OF PARKING TRUCKS, RECREATIONAL VEHICLES, AND TRAILERS ON CITY STREETS AND RIGHTS-OF-WAY; INCLUDING SEVERABILITY; ESTABLISHING AN EFFECTIVE DATE; AND REPEALING CONFLICTING ORDINANCES.**

**WHEREAS**, the Arizona Revised Statutes vest the authority in the City of Surprise City Council to adopt ordinances or regulations relating to the control and movement of traffic, including the standing, stopping, or parking of vehicles;

**WHEREAS**, the Arizona Revised Statutes vest the authority in the City Council to impose civil penalties for the violation of the ordinances or regulations;

**WHEREAS**, the City of Surprise Municipal Code currently regulates the parking of Trucks, Recreational Vehicles, and Trailers on City streets in residential zones, but does not clearly address the parking of said vehicles in zones other than residential;

**WHEREAS**, the City has seen a proliferation of the parking of Trucks, Recreational Vehicles, and Trailers on City property, City streets, and within City rights-of-way;

**WHEREAS**, the parking of Trucks, Recreational Vehicles, and Trailers on City property, City streets, and within City rights-of-way has become unsightly and can be dangerous to pedestrians, bicyclists, other motorists, and the traveling public at large by reducing lines of sight, increasing the chances of collisions and other traffic related incidents, and increasing potential liability to the City by reducing the safety of the City's interconnected system of streets, roadways, arterials, and rights-of-way; and

**NOW, THEREFORE, BE IT ORDAINED** by the Mayor and Council of the City of Surprise, Arizona, as follows:

**Section 1.** Chapter 54, Article IV., Division 1, Sections 54-88, 89, 92, and 93 of the Surprise Municipal Code is hereby amended as follows:

**Sec. 54-88. Definitions.**

In this article, unless the context otherwise ~~requires~~ **AMENDED HEREIN requires**, definitions are as in A.R.S. title 28 (A.R.S. § 28-101 et seq.), **AS AMENDED. IN THE EVENT OF a conflict, ~~and if a conflict arises~~, the latest amended version of such definition in THIS ARTICLE SHALL CONTROL UNLESS OTHERWISE PREEMPTED BY** the Arizona Revised Statutes. ~~governs:~~

*Crosswalk* means:  
Ordinance No. 2024-07  
Rev 02/24



- (1) That part of a **STREET OR** roadway at an intersection included within the prolongations or connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or, in absence of curbs, from the edges of the traversable **STREET OR** roadway.
- (2) Any portion of a **STREET OR** roadway at an intersection or elsewhere that is distinctly indicated for pedestrian crossing by lines or other markings on the surface.

*Intersection* means the area embraced within the prolongation or connection of the lateral curblines, or if none, the lateral boundary lines of the **STREETS AND/OR** roadways of two highways that join one another at, or approximately at, right angles, or the area within which vehicles traveling on different highways joining at any other angle may come in conflict. If a highway includes two roadways 30 or more feet apart, each crossing of each **STREET OR** roadway of the divided highway by an intersecting highway is a separate intersection. If the intersecting highway also includes two **STREETS OR** roadways 30 or more feet apart, each crossing of two **STREETS OR** roadways of the highways is a separate intersection.

*Motor vehicle* means a self-propelled vehicle that is operated on **OR OFF** the **STREETS AND** highways of this state and that is propelled by the use of motor vehicle fuel or electricity. For the purposes of this definition, the term "motor vehicle fuel" includes all products that are commonly or commercially known or sold as gasoline, including casinghead gasoline, natural gasoline and all flammable liquids, and that are composed of a mixture of selected hydrocarbons expressly manufactured and blended for the purpose of effectively and efficiently operating internal combustion engines.

*Park, if prohibited,* means the standing of a **MOTOR** vehicle, whether occupied or not, otherwise than temporarily for the purpose of and while actually engaged in loading or unloading.

**ROAD OR ROADWAY MEANS THAT PORTION OF A STREET, RIGHT OF WAY OR HIGHWAY THAT IS IMPROVED, DESIGNED OR ORDINARILY USED FOR VEHICULAR TRAVEL, EXCLUSIVE OF THE BERM OR SHOULDER.**

*Sidewalk* means that portion of a street that is between the curblines or the lateral lines of a roadway and the adjacent property lines and that is intended for the use of pedestrians.

*Stop, if required,* means complete cessation from movement.

*Stop, stopping or standing, if prohibited,* means any stopping or standing of an occupied or unoccupied vehicle, except when necessary to avoid conflict with other traffic or in compliance with directions of a police officer or traffic control device.

**STREET OR RIGHT-OF-WAY MEANS THE ENTIRE WIDTH BETWEEN THE BOUNDARY LINES OF EVERY RIGHT-OF-WAY INCLUDING ANY IMPROVED AND/OR UNIMPROVED SHOULDER, OR ANY BERM ADJACENT THERETO LYING WITHIN THE RIGHT-OF-WAY.**

*Surprise Recreation Campus* means the certain properties and areas including vacant lots, paved parking lots, streets, and fields located no more than one-quarter mile east and west of Bullard Road, and immediately north of Greenway Road and south of Bell Road.

*Traffic control device* means any official sign, signal, marking or device that is placed or erected for the purpose of regulating, warning, or guiding traffic.

(Code 2007, § 10.20.010)

STATE LAW REFERENCE(S)—SIMILAR PROVISIONS, A.R.S. §§ 28-101, 28-601, 28-871 ET SEQ.

### **Sec. 54-89. Parking violations.**

- (a) Except **AS SPECIFICALLY PERMITTED IN THIS CHAPTER 54, OR** if necessary to avoid conflict with other traffic or if in compliance with the law or the directions of a police officer or traffic control device, a person may not stop, stand or park a **MOTOR** vehicle, **OR ANY TRUCK, TRAILER, RECREATIONAL VEHICLE OR NON-MOTORIZED VEHICLE**, in any of the following places:
- (1) On a sidewalk.
  - (2) In front of a public or private driveway, except that this does not apply to a **MOTOR** vehicle or the driver of a **MOTOR** vehicle engaged in the official delivery of the United States mail, if both of the following apply:
    - a. The driver does not leave the **MOTOR** vehicle.
    - b. The **MOTOR** vehicle is stopped only momentarily.
  - (3) Within an intersection.
  - (4) Within 15 feet of a fire hydrant.
  - (5) On a crosswalk.
  - (6) Within either:
    - a. 30 feet of a crosswalk at an intersection; or
    - b. Within 300 feet of a school crosswalk when the "no passing 15 mph" school sign is placed in the **STREET OR** roadway.
  - (7) Within 30 feet on approach to any flashing beacon, stop sign, yield sign, or traffic control signal located at the side of a **STREET OR** roadway.
  - (8) Within 50 feet of the nearest rail or a railroad crossing or within eight feet six inches of the center of any railroad track, except while a **MOTOR motor** vehicle with motive power attached is loading or unloading railroad cars.
  - (9) Within 20 feet of the driveway entrance to a fire station and on the side of a street opposite the entrance to any fire station within 75 feet of the entrance when properly posted.

- (10) Alongside or opposite a street excavation or obstruction when stopping, standing or parking would obstruct traffic.
- (11) On the roadway side of a **MOTOR** vehicle stopped or parked at the edge or curb of a street.
- (12) On a bridge or other elevated structure on a highway or within a highway tunnel.
- (13) At any place where official signs prohibit standing or stopping.
- (14) In a fire lane.
- (15) Within any specially designated or marked parking space provided for physically disabled persons, unless the **MOTOR ~~motor~~** vehicle is transporting a person who has been issued a valid placard or international symbol of access special plates and:
  - a. The **MOTOR ~~motor~~** vehicle displays the valid permanently disabled or temporarily disabled removable windshield placard;
  - b. The **MOTOR ~~motor~~** vehicle displays international symbol of access special plates that are currently registered to the vehicle; or
  - c. A person who is chauffeuring a person with a physical disability without a placard or international symbol of access special plates may park momentarily in a parking space; provided, pursuant to this article, for the purpose of loading or unloading the person with a physical disability, and a complaint may not be issued to the driver for the momentary parking.
- (16) Areas not specially marked or designated within the area known as the Surprise Recreation Campus.
- (17) Within 300 feet of a fire.
- (18) Within 10 feet of the entrance of a building, structure or lot upon which there is a fire.
- (19) Within 10 feet of the entrance to any fire station or other place where fire apparatus is stored.
- (b) A person who stops or parks a **MOTOR** vehicle on a **STREET OR** roadway where there are adjacent curbs may stop or park the **MOTOR** vehicle with its right-hand wheels parallel to and within 18 inches of the right-hand curb.

(Code 2007, § 10.20.020; Ord. No. 2015-08, § 1(4), 5-19-2015, eff. 7-1-2015; Ord. No. 2020-06, § 1, 6-16-20)

Editor's note(s)—It should be noted that the amendments made by Ord. No. 2015-08 are set out in Resolution No. 2015-48.

State law reference(s)—Similar provisions, A.R.S. §§ 28-873, 28-874, 28-881 et seq.

**Sec. 54-92. Methods of parking.**

- (a) *Standing or parking close to curb.* No person shall stand or park a **MOTOR** vehicle in a **STREET OR** roadway other than parallel with the edge of **STREET OR** roadway headed in the direction of lawful traffic movement and with the outboard wheels within 18 inches of the curb or edge of the **STREET OR** roadway, except where angled or diagonal parking is authorized or required.
- (b) *Signs or markings indicating on-street angled parking.* The community development director, with the advice and consent of the city engineer, shall determine upon what streets angled parking shall be permitted and shall cause to be marked or sign such streets.

(Code 2007, §§ 12.10.010, 12.10.020)

State law reference(s)—Similar provisions, A.R.S. § 28-874.

**Sec. 54-93. Stop when traffic obstructed.**

No driver may enter an intersection or a marked crosswalk unless the **MOTOR** vehicle he is operating will not obstruct the passage of other vehicles or pedestrians, notwithstanding any traffic-control signal indicating to proceed.

(Ord. No. 2015-08, § 1(5), 5-19-2015, eff. 7-1-2015)

Editor's note(s)—It should be noted that the amendments made by Ord. No. 2015-08 are set out in Resolution No. 2015-48.

**Section 2.** Chapter 54, Article IV., Division 2, Sections 54-113 and 114 of the Surprise Municipal Code is hereby amended as follows:

*DIVISION 2. TRUCK, **TRAILERS**, RECREATIONAL AND HIGH PROFILE VEHICLE PARKING ~~IN RESIDENTIAL ZONES AND UPON CITY STREETS AND WITHIN CITY RIGHTS-OF-WAY~~*

**Sec. 54-113. Definitions.**

The following words, terms and phrases, when used in this division, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*Curb return* means the curved section of a curb located at a corner of an intersection, connecting a curb on one street to another curb on the intersecting street. A curb return starts at the point where the curb begins to turn toward the direction of the intersecting street and ends at the point where it meets the curb on the intersecting street.

*Front street* means the street located in front of a residence.

*Recreational vehicle* means:



- (1) A portable camping trailer mounted on wheels and constructed with collapsible partial sidewalls that fold for towing by another vehicle and unfolds for camping;
- (2) A motor home or bus designed to provide temporary living quarters for recreational, camping or travel use, and built on or permanently attached to a self-propelled ~~MOTOR~~ motor vehicle chassis or on a chassis, cab or van that is an integral part of the completed vehicle;
- (3) A park trailer built on a single chassis, mounted on wheels and designed to be connected to utilities necessary for operation of installed fixtures and appliances and has a gross trailer area of not less than 320 square feet and not more than 400 square feet when it is set up, except that it does not include fifth wheel trailers;
- (4) A travel trailer mounted on wheels, designed to provide temporary living quarters for recreational, camping or travel use, of a size or weight that may or may not require special highway movement permits when towed by a ~~MOTOR~~ motorized vehicle and has a trailer area of less than 320 square feet. This subdivision includes fifth wheel trailers. If a unit requires a size or weight permit, it shall be manufactured to the standards for park trailers in A 119.5 of the American National Standards Institute Code;
- (5) A portable truck camper constructed to provide temporary living quarters for recreational, travel or camping use and consisting of a roof, floor and sides designed to be loaded onto and unloaded from the bed of a pickup truck.

~~Street means the entire width between the boundary lines of every right-of-way including the improved or unimproved shoulder.~~

~~Truck means a MOTOR vehicle, OR COMMERCIAL MOTOR VEHICLE AS DEFINED IN A.R.S. TITLE 28, weighing 18,000 or more pounds, INCLUDING ANY or a combination of MOTOR AND OTHER vehicles weighing in excess of 26,000 pounds, or a box truck, or semi-trailer cab WHICH SHALL INCLUDE A TRUCK TRACTOR AND/OR VEHICLE TRANSPORTER AS DEFINED IN A.R.S. TITLE 28.~~

~~Utility trailer means a vehicle without motive power, other than a pole trailer or semitrailer, designed for carrying property and for being drawn by a motor vehicle.~~

(Code 2007, § 10.06.010; Ord. No. 2015-21, § 1(Att. A), 12-1-15)

**Sec. 54-114. Parking ~~in residential zones and~~ upon city streets AND RIGHTS OF WAY AS DEFINED HEREIN are prohibited acts.**

- (a) No person shall park a truck ~~OR ANY TRAILER~~ on any street ~~within a residential zone~~, except as follows:
  - (1) While ~~ACTUALLY ENGAGED IN TEMPORARILY~~ loading and unloading the truck ~~OR ANY TRAILER~~.
  - (2) While services are being provided by the truck's occupant. This does not include any maintenance or service of the truck itself.

(3) For a period of time not to exceed one hour.

**(4) WHERE SPECIFICALLY PERMITTED BY THE CITY.**

- (b) No person shall park a recreational vehicle, or **ANY TRAILER INCLUDING A** utility trailer on any street ~~within a residential zone~~, except in conformance with this section. A person may park a recreational vehicle or utility trailer for a period not to exceed 72 hours up to two times per month, provided:
- (1) The recreational vehicle or utility trailer does not block the driveway of another property owner;
  - (2) The street adjacent to the recreational vehicle or utility trailer available for vehicular traffic is no less than 20 feet wide; and
  - (3) While parked on the street, a person may perform activities necessary to prepare for vehicle usage or to clean up the vehicle upon return from its usage. Under no circumstances shall any person be allowed to sleep, cook, inhabit or perform other activities associated with temporary or permanent living quarters within, on or around a recreational vehicle while parked on a street.
- (c) No person shall park a truck, recreational vehicle, or **ANY utility**-trailer in the front, side, or rear yard of any residence, so that any portion of the truck, **RECREATIONAL VEHICLERV** or ~~utility~~-trailer is closer to the front street than any portion of the residence, unless the truck, **RECREATIONAL VEHICLERV**, or ~~utility~~-trailer is completely hidden from view in a garage or other permanent structure specifically intended for such use.
- (d) No person shall park a truck, recreational vehicle or ~~utility~~-trailer within 30 feet of the curb return of an intersection while parked on **ANYa** street ~~in a residential zone~~.
- (e) No person shall park a truck, recreational vehicle or ~~utility~~-trailer on a street using a jack stand or similar support device unless the person places under each jack stand or support device a piece of wood, plywood or other item of other construction that has a surface of at least 36 square inches and is capable of distributing the weight of the vehicle in such a manner that the underlying street is not damaged or disturbed.

(Code 2007, § 10.06.020; Ord. No. 2015-21, § 1(Att. A), 12-1-15)

**Section 3.** All ordinances, resolutions or codes in conflict with the provisions of this Ordinance or Code adopted by this Ordinance are repealed.

**Section 4.** If any section, subsection, sentence, clause, phrase or portion of this Ordinance or any part of these amendments to the Surprise Municipal Code adopted herein is for any reason held to be invalid or unconstitutional by decision of any court of competent jurisdiction, such decision will not be read to affect the validity of the remaining portions thereof.

**Section 5.** This Ordinance will become effective at the time and manner prescribed by law.

**PASSED AND ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Skip Hall, Mayor

Attest:

Approved as to form:

\_\_\_\_\_  
Kristi Passarelli, City Clerk

\_\_\_\_\_  
Robert Wingo, City Attorney



CITY OF SURPRISE  
Regular City Council Meeting

Council Meeting Date: February 20, 2024

Contact Person: Kendra Pettis, DIR -  
SPORTS/TOURISM

Submitting Department: Sports and Tourism

District: Citywide

Staff Recommendations: None

Consent: No

Regular: Yes

Public Hearing: No

Report/Discussion: No

**Agenda Wording:**

Consideration and action pertaining to approval of an amendment to the Fiscal Year 2024 budget moving budget authority of \$5,000 from General Contingency to services in the Tourism Fund and approval of the Tourism Fund Reimbursement Agreement with The Vista Center for the Arts; Resolution #2024-33.

**Motion:**

I move to approve Resolution #2024-33.

**Background:**

The Vista Center for the Arts is owned and operated by the Dysart Unified School District. The Tourism Subcommittee and City Council voted in 2022 to support The Vista's programming through a maximum of \$45,000 of Tourism Fund reimbursements to help attract shows to the Vista and increase attendance and visitation to the City of Surprise. The 2022-2023 season had 18 shows with over 16,000 in attendance and over 1 million impressions through advertising.

The current FY24 budget has \$45,000 allocated to The Vista; The Tourism Subcommittee recommended to approve an additional \$5,000 for a total amount of up to \$50,000 from the Tourism Fund allocated for reimbursement to support the programming and marketing efforts of The Vista for the 2023-2024 season. This request is in line with the Tourism Strategic Plan of attracting events and entertainment to Surprise with a goal of building out year-round activities for both residents and visitors, as well as supporting the economic vitality of the community.

**Objective Analysis:**

The objective of partnering with The Vista and supporting their events through the Tourism Fund is to enhance the marketing reach to attract more visitors to Surprise, showcase additional arts and cultural events within the City and increase the economic impact within the community.

**Policy Compliant:**

This item is compliant with the Tourism Strategic Plan, Council Strategic Plan and city policies.



**Financial Impact:**

This action will allow for the expenditure of an additional maximum of \$5,000 for a total of \$50,000 from the Tourism Fund, which will be paid on a reimbursement basis for tourism activity associated with this program.

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**Budget Impact:**

This action will allow for the movement of budget authority in the amount of \$5,000 from General Contingency to services within the Tourism Fund. This action represents a transfer of spending authority and does not increase or decrease the total adopted citywide expenditure limit.

**FTE Impact:**

This item does not have an impact on current staff levels.

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**ATTACHMENTS:**

1. 24.02.05 The Vista Reimbursement Agreement 2023-2024 clean
  2. Res 2024-33 VistaEvent\_TourismFund
-



THE CITY OF SURPRISE, ARIZONA  
16000 North Civic Center Plaza, Surprise, AZ 85374

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## TOURISM FUND REIMBURSEMENT AGREEMENT

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This Tourism Fund Reimbursement Agreement ("Agreement") is entered by and between the City of Surprise, Arizona, an Arizona municipal corporation (the "City"), and Dysart Unified School District through its The Vista Center for the Arts ("Vista"), collectively referred to as the "Parties" and each individually as a "Party."

### RECITALS

WHEREAS, the City of Surprise City Council adopted the FY2024 Comprehensive Financial Management Policies (the "Policy") by Council Resolution #2023-85 on June 6, 2023;

WHEREAS, pursuant to the Policy, the City currently imposes a four and fifty-two hundredths percent (4.52%) transaction privilege tax on transient lodging, of which one percent (1.00%) is recorded in the General Fund and the remaining three and fifty-two hundredths percent (3.52%) is recorded in the City's Tourism Fund;

WHEREAS, of the amount recorded in the Tourism Fund, the Mayor and Council designated that seventy-five percent (75%) be spent for sports tourism facility development and improvement, while twenty-five percent (25%) be spent on marketing, studies and special events;

WHEREAS, in April 2018, the Mayor and Council of the City of Surprise adopted revisions to the City's Tourism Five Year Strategic Plan, in an effort to attract new visitors to the City by offering new and enhanced event and entertainment opportunities ("Strategic Plan");

WHEREAS, on November 20, 2023, the City's Tourism Fund Sub-Committee recommended approval of the allocation of Tourism Funds not to exceed Fifty Thousand Dollars (\$50,000) for Vista's 2023-2024 events, an increase of \$5,000 from the current FY24 budget; and

WHEREAS, pursuant to Resolution #2024-XX, the City Council approved the allocation of Tourism Funds for Vista's 2023-2024 events, in an amount not to exceed Fifty Thousand Dollars (\$50,000).

## AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and the covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound hereby, the City and Vista agree as follows:

### **1. REIMBURSEMENTS; RESPONSIBILITIES OF VISTA**

- 1.1. Total Possible Reimbursement. The City will reimburse Vista up to, but no more than, Fifty Thousand and 00/100 Dollars (\$50,000) under this Agreement, for expenses and costs that are eligible for reimbursement through the Tourism Fund. The criteria for Tourism Fund reimbursable expenses is set forth in the Tourism Fund Application, which is hereby incorporated by reference. In particular, the Tourism Fund may be used for: "Marketing of event or project"; "Event entertainment"; and/or "Direct operational costs of event or project". The total reimbursable amount(s) and reimbursement eligibility criteria is further described in Sections 1.2 and 1.3 below.
- 1.2. Marketing Reimbursement. Vista may request reimbursement payments in an amount not to exceed Thirty Thousand and 00/100 Dollars (\$30,000) for all eligible costs associated with Vista's 2023-24 events. The payments described in this section are only available on a reimbursement basis and if the following criteria is met:
  - 1.2.1. Vista may request up to \$30,000 in reimbursement payments for the use of regional or national media contracts including but not limited to billboards, print, radio, television and social media advertisements, or entertainer contract fees for a single performance that exceeds 1,000 tickets in gross box office attendance.
  - 1.2.2. Vista shall include "Surprise, Arizona" either in print or audibly in any and all advertisements or marketing related to Vista's 2023-24 events for which Vista will seek reimbursement.
  - 1.2.3. Vista shall submit an invoice requesting reimbursement to the City for approval. Vista shall include an itemized invoice or receipt displaying all marketing costs that has been paid by Vista as well as a copy of the advertisement which must include "Surprise, Arizona" to be eligible for reimbursement.
  - 1.2.4. Vista may submit requests for reimbursements prior to the event dates for the marketing reimbursements as long as the invoice has already been paid for by Vista.
- 1.3. Performance Reimbursement. Vista may request reimbursement of up to Twenty Thousand and 00/100 Dollars (\$20,000) in reimbursement payments through post-event performance standards if the criteria set forth in this section is met (up to \$5,000 based on room nights; up to \$15,000 based on event attendance).
  - 1.3.1. Room Nights. Vista may request reimbursement of up to Five thousand and 00/100 (\$5,000) for hotel room nights generated through Vista's 2023-24 events based off the following criteria and benchmarks:
    - b) For every One Hundred (100) Surprise hotel room nights confirmed during the term of this Agreement, Vista may seek up to \$2,500 for reimbursement.
    - d) Vista shall submit a hotel tracking form to be signed by the respective hotels, which is attached hereto as **Exhibit A**, which is incorporated by

reference.

1.3.2. Event Attendance. Vista may request reimbursement of up to Fifteen thousand and 00/100 (\$15,000) based upon the total attendance numbers for Vista's 2023-24 events and the following criteria and benchmarks:

a) For every One Thousand (1,000) in attendance confirmed throughout Vista's 2023-24 event attendance, Vista may seek up to \$2,500 for reimbursement.

c) Vista shall submit a ticket sales report for all eligible 2023-24 Vista events. Such report shall be detailed by individual events and performances.

1.3.3. Additional Performance Reimbursement Criteria.

a) Vista may seek reimbursement for the use of regional or national media contracts including print, radio, television, and social media advertisements, or entertainer contract fees for a single performance that exceeds 1,000 tickets in gross box office attendance.

b) Vista shall name "Surprise, Arizona," either in print or audibly (if through a radio/television advertisement), in all advertisements and/or marketing materials for Vista's 2023-24 events seeking reimbursement under this Agreement.

c) Vista may request reimbursement by submitting an itemized invoice or receipt to the City, including the marketing costs paid by Vista and a copy of any advertisements/marketing used in the performance of this Agreement.

14. Additional Reimbursement Criteria.

1.4.1 The City will only reimburse Vista up to Fifty Percent (50%) of its total 2023-24 event expense budget which could include marketing costs, performance fees and event operational costs such as staging equipment. The total reimbursement amount of \$50,000 is intended to support a full year of events and was based off Vista's estimated expense budget of over \$600,000 listed in the original Tourism Fund Application proposal. The City may, upon notice to Vista, audit Vista's books and other records in order to verify compliance with this Agreement and in accordance with the reimbursable expenses set forth in Section 1. In no event shall said reimbursements exceed the total amount of \$50,000.00 or fifty percent (50%) of the eligible event expenses (as described in Section 1), up to \$50,000.00, whichever is less.

## **2. ADDITIONAL RESPONSIBILITIES OF VISTA**

2.1. Events. Vista shall perform its 2023-24 events in order to seek reimbursement of eligible expenses. The City will not provide reimbursement for any event dates that are cancelled or otherwise do not occur.

2.2. Records. Vista shall maintain and provide to the City all receipts, invoices, purchase orders, and all other documentation or records to support the eligible reimbursement payments set forth in Section 1.

2.3. Website. Vista shall provide a link to the *Explore Surprise* website



([www.exploresurprise.com](http://www.exploresurprise.com)) on Vista's website to promote Surprise tourism opportunities.

### **3. RESPONSIBILITIES OF THE CITY**

- 3.1. The City shall pay no up-front costs/fees associated with this Agreement. The City will reimburse Vista for all eligible costs/fees, as further described in Section 1. All of City's financial contributions to Vista shall be on a reimbursement basis only. Vista shall provide One Hundred Percent (100%) of all up-front costs/fees.
- 3.2. The City shall, within thirty (30) business days following the City's receipt of Vista's request for reimbursement, review and, if approved, issue a reimbursement payment to Vista for each eligible Tourism Fund reimbursement. Criteria for eligible payments are set forth in Section 1.

### **4. TERM; TERMINATION; AMENDMENTS; ASSIGNMENT**

- 4.1. Term. This Agreement shall be effective from the date that this Agreement is fully executed by all Parties ("Effective Date") and shall continue in full force and effect until June 30, 2024, unless terminated earlier in accordance with the terms of this Agreement.
- 4.2. Conflicts of Interest. This Agreement is subject to A.R.S. § 38-511, and may be terminated in accordance therewith.
- 4.3. Termination for Convenience. This Agreement is for the convenience of the City and may be immediately terminated without cause after receipt by Vista of written notice by the City. Upon termination for convenience, Vista will be reimbursed for all eligible, undisputed amounts up to the termination date.
- 4.4. Termination for Cause; Cure Period. Either Party may terminate this Agreement for cause in the event of a material breach of this Agreement, provided that the non-breaching Party must provide written notice of the material breach and a thirty (30) calendar day cure period.
- 4.5. Fund Appropriation Contingency. Vista understands that the continuation of this Agreement is subject to the budget of the City providing for the contract item as an expenditure. The City cannot assure that the budget item for funding this Agreement will be approved in the future. In such event, the City may terminate this Agreement.
- 4.6. Amendment. This Agreement may only be amended upon the written signature of both Parties.
- 4.7. Assignment. Vista may not assign or subcontract this Agreement without the prior written approval of the City.

### **5. INDEMNIFICATION; LIMITATION OF LIABILITY**

- 5.1. Indemnification. To the fullest extent permitted by law, Vista shall indemnify, defend and hold harmless the City and its council members, managers, officers, boards, commissions, officials, employees, or agents (collectively, the "Indemnified Party"), for, from, and against any and all losses, claims, damages, liabilities, costs, and expenses (including, but not limited to, reasonable attorneys' fees, claims processing, investigation, court costs and the costs of appellate proceedings) to which any such Indemnified Party may become subject, under any theory of liability whatsoever ("Claims"), including negligence, insofar

as such Claims (or actions with respect thereof) relate to, arise out of, or are caused by, or in connection with this Agreement.

- 5.2. Limitation of Liability. To the fullest extent permitted by law, in no event shall the City or its council members, managers, officers, boards, commissions, officials, employees, or agents be liable for any monetary damages, whatsoever (including, but not limited to, special, incidental, direct, indirect, or consequential damages, damages for loss of business profits, business interruption, or any other pecuniary loss), however caused, and on any legal or equitable theory of liability, and whether or not for breach of contract, negligence or otherwise, even if the City has been advised of the possibility of such damages. Vista may only seek an action for injunctive relief or specific performance under this Agreement.

## **6. MISCELLANEOUS**

- 6.1. Approvals. For the avoidance of doubt, this Agreement addresses reimbursement payments for eligible expenses (as further discussed in Section 1). Nothing herein is intended to operate as an approval in lieu of any other approval necessary for Vista's 2023-24 events, including, but in no way limited to, the need for a Surprise city business license, proof of a non-profit tax status (if applicable), a facility use license agreement for any use of City property, a temporary use permit, and/or evidence of insurance for the events. Vista must execute all other related documents and/or obtain all approvals necessary for the reimbursements being made under this Agreement; failure to execute all such other documents or obtain all such other approvals may result in non-payment.
- 6.2. Related Documents. Vista shall comply with and this Agreement incorporates by reference the City of Surprise Tourism Fund Application and its related documents, including the Tourism Fund guidelines.
- 6.3. Recitals. All of the recitals set forth above are incorporated by this reference and made a part of this Agreement as if fully set forth herein.
- 6.4. Notice. Any notice or other communication required or permitted to be given under this Agreement must be in writing. Except as otherwise expressly permitted in this Agreement, notices will be deemed to have been duly given if (i) delivered to the Party at the address set forth below, (ii) deposited in the U.S. Mail, registered or certified, return receipt requested, to the address set forth below, (iii) given to a recognized and reputable overnight delivery service, to the address set forth below, or (iv) delivered by facsimile or email transmission to the number or address set forth below or at such other address and to the attention of such other person or officer, as a Party may designate in writing by notice duly given pursuant to this Section.

If to the City of Surprise:  
City of Surprise  
16000 N. Civic Center Plaza  
Surprise, Arizona 85374  
ATTN: Sports and Tourism Dept.  
Email: Kendra.Pettis@surpriseaz.gov

With a copy to:  
Surprise City Attorney's Office  
16000 N. Civic Center Plaza  
Surprise, Arizona 85374  
Facsimile: 623-222-1101  
Email: LegalFiles@surpriseaz.gov

If to The Vista Center for the Arts:  
Dysart Unified School District  
15660 N. Parkview Place

Surprise, AZ 85374  
ATTN: Craig Mussi  
Email: Craig.Mussi@dysart.org

Notices are deemed received: (i) when delivered to the Party, (ii) three business days after being placed in the U.S. Mail, properly addressed, with sufficient postage, (iii) the following business day after being given to a recognized overnight delivery service, with the person giving the notice paying all required charges and instructing the delivery service to deliver on the following business day, or (iv) when received by facsimile or email transmission with a delivery or read receipt during the normal business hours of the recipient. If a copy of a notice is also given to a Party's counsel or other recipient, the provisions above governing the date on which a notice is deemed to have been received by a Party will mean and refer to the date on which the Party, and not its counsel or other recipient to which a copy of the notice may be sent, is deemed to have received the notice.

- 6.5. Applicable Law. This Agreement shall be governed by and construed in accordance with the substantive laws of the State of Arizona without giving effect to the principles of conflict of laws. Any action brought to interpret, enforce, or construe any provision of this Agreement shall be commenced and maintained in a court of competent jurisdiction located in Maricopa County, Arizona.
- 6.6. Public Records. This Agreement and the City are subject to laws pertaining to open and public records, including without limitation, Arizona public record laws under Arizona Revised Statutes (A.R.S.) Title 39 and the Freedom of Information Act (FOIA). Nothing herein shall prevent the release of the terms and conditions of this Agreement pursuant to a public records request.
- 6.7. City Marks. Vista shall not use any name or trade name and/or any logo, trademark, copyright, or other intellectual property owned by the City without the City's prior express written approval.
- 6.8. Waiver. No failure by the Parties to insist upon the strict performance of any term or condition hereof or to exercise any right, power or remedy consequent upon a breach thereof shall constitute a waiver of any such breach or of any such term. No waiver of any breach shall affect or alter this Agreement, which shall continue in full force and effect, nor the respective rights of the City or Vista with respect to any other then existing or subsequent breach.
- 6.9. Relationship. Each Party will act in its individual capacity and not as an agent, employee, partner, joint venturer, or associate of the other. An employee or agent of one Party may not be deemed or construed to be the employee or agent of the other for any purpose whatsoever. This Agreement shall not be construed as creating a joint venture, partnership, or any other cooperative or joint arrangement between the City and Vista. Vista is advised that taxes or Social Security payments will not be withheld from any City payments issued hereunder and Vista agrees to be fully and solely responsible for the payment of such taxes or any other tax applicable to this Agreement. Vista, its employees, and subcontractors are not entitled to workers' compensation benefits from the City. The City does not have the authority to supervise or control the actual work of Vista, its employees, or subcontractors. Vista, and not the City, will determine the time of its performance of the Services so long as Vista meets the requirements of this Agreement. Vista is neither prohibited from entering into other contracts nor prohibited from practicing its profession elsewhere.
- 6.10. Taxes. Vista shall be responsible for paying all applicable taxes under this Agreement,

including, without limitation, any transaction privilege taxes.

- 6.11. Force Majeure. Except for payment for sums due, neither Party will be liable to the other nor deemed in default or breach under this Agreement if and to the extent that such Party's performance of this Agreement is prevented by reason of Force Majeure. The term "Force Majeure" means an occurrence that is beyond the control of the Party affected and occurs without its fault or negligence. Without limiting the foregoing, Force Majeure includes: acts of God; acts of the public enemy; war; acts of terror, hate crimes affecting public order; riots; strikes; mobilization; labor disputes; civil disorders; plague; pandemics (including without limitation, the COVID-19 pandemic); epidemics; quarantine orders or directives by a governmental entity; outbreaks of infectious disease or any other public health crisis, including without limitation, quarantine or other employee restrictions; fire; floods; lockouts, injunctions-interventions-acts, or failures or refusals to act by government authority; events or obstacles resulting from a governmental authority's response to the foregoing; and other similar occurrences beyond the control of the Party declaring Force Majeure which such Party is unable to prevent by exercising reasonable diligence. The Force Majeure notifies the other Party of the existence of the Force Majeure and will be deemed to continue as long as the results or effects of the Force Majeure prevent the Party from resuming performance in accordance with this Agreement.
- 6.12. No Creation of Encumbrances. Vista shall have no authority to do any act or make any contract that may create or be the basis for any lien, mortgage, or other encumbrance upon any interest of the City in the real property that includes the Licensed Area.
- 6.13. Compliance with Federal Immigration Laws and Regulations. Vista warrants that it complies with all federal immigration laws and regulations that relate to its employees and that it complies with A.R.S. § 23-214(A). Vista acknowledges that pursuant to A.R.S. § 41-4401, a breach of this warranty is a material breach of this Agreement subject to penalties up to and including termination of this Agreement, and that the City retains the legal right to inspect the papers of any employee who works on the Agreement to ensure compliance with this warranty.
- 6.14. Compliance with A.R.S. § 35-393.01. Vista hereby certifies that it does not, and will not, participate in during the term of this Agreement, a boycott of Israel in accordance with A.R.S. § 35-393.01. Vista hereby agrees to indemnify and hold harmless the City, its agents, and employees from any claims or causes of action relating to the City's action based upon reliance upon this representation, including the payment of all costs and attorney fees uncured by the City in defending such an action.
- 6.15. Attorneys' Fees. In the event either Party brings any action for any relief, declaratory or otherwise, arising out of this Agreement or on account of any breach or default hereof, the prevailing Party is entitled to receive from the other Party reasonable attorneys' fees and reasonable costs and expenses, determined by the court sitting without a jury, which will accrue on the commencement of such action and will be enforced whether or not such action is prosecuted through judgment.
- 6.16. Conflicting Terms. In the event of a conflict between this Agreement and any Exhibits, the terms of this Agreement will govern.
- 6.17. Counterparts. This Agreement may be executed in one or more counterparts, and each originally executed duplicate counterpart of this Agreement shall be deemed to possess the full force and effect of the original.
- 6.18. Severability. If any provision of this Agreement is held invalid by a court of competent jurisdiction, such holding will not affect any other provision of the Agreement which may



remain in effect without the invalid provision.

- 6.19. Entire Agreement. This Agreement represents the entire agreement of the Parties. All previous agreements entered into prior to this Agreement are hereby revoked and superseded by this Agreement. No representations, warranties, inducements, or oral agreements have been made by any of the Parties except as expressly set forth in this Agreement. This Agreement will be construed and interpreted according to its plain meaning, and no presumption will be deemed to apply in favor of or against the Party drafting the Agreement. The headings in this Agreement are for convenience only, and will not be used to modify, limit, or extend any provision. The Parties acknowledge and agree that each has had the opportunity to seek and utilize legal counsel in drafting, reviewing, and entering into this Agreement.

*SIGNATURES ON THE FOLLOWING PAGE.*

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date this Agreement is fully executed by all Parties.

**CITY OF SURPRISE**

**DYSART UNIFIED SCHOOL DISTRICT**

By: \_\_\_\_\_

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

APPROVED AS TO FORM:

By: \_\_\_\_\_  
City Attorney's Office

# EXHIBIT A – HOTEL TRACKING FORM

<b>City of Surprise - Sports and Tourism Major Event Hotel Tracking Form</b> <small>The City of Surprise Sports and Tourism Department asks that each hotel complete the room tracking form prior to the event and following the event in the appropriate sections.                      Once completed, please submit the form to Cecilia Covarrubio via email at Cecilia.Covarrubio@surpriseaz.gov                      If you have any questions, please do not hesitate to call 623-222-2253 or email Cecilia.Covarrubio@surpriseaz.gov</small>						
<b>Property:</b>			<b>Month/Year:</b>			
Event Dates	Event Name	Event Description	Room Nights Tracking	Projected	Actual	Total Room Nights
			Booked through Hotel Planner			
			Booked Through Hotel			
			Other (booked - associated with event)			
Event Dates	Event Name	Event Description	Room Nights Tracking	Projected	Actual	Total Room Nights
			Booked through Hotel Planner			
			Booked Through Hotel			
			Other (booked - associated with event)			
Event Dates	Event Name	Event Description	Room Nights Tracking	Projected	Actual	Total Room Nights
			Hotel Planner			
			Hotel			
			Other (Associated with event)			
Event Dates	Event Name	Event Description	Room Nights Tracking	Projected	Actual	Total Room Nights
			Hotel Planner			
			Hotel			
			Other (Associated with event)			
<b>Additional Comments:</b>						
<i>Hotel Representative Acknowledgment</i> By signing below, you are certifying that the room tracking is based upon the data your property collected during the outlined time and it is as accurate as possible.						
<b>Signature:</b>			<b>Date:</b>			

**RESOLUTION # 2024-33**

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SURPRISE, ARIZONA, AMENDING THE FISCAL YEAR 2024 BUDGET BY MOVING BUDGET AUTHORITY IN THE AMOUNT OF \$5,000 FROM GENERAL CONTINGENCY TO THE TOURISM FUND AND APPROVAL OF THE TOURISM FUND REIMBURSEMENT AGREEMENT WITH THE VISTA CENTER OF THE ARTS.**

**WHEREAS**, the FY2024 City of Surprise Comprehensive Financial Management Policies (“Policy”), were adopted by Council Resolution #2023-85 on June 6, 2023;

**WHEREAS**, pursuant to the Policy, the City currently imposes a four and fifty-two hundredths percent (4.52%) transaction privilege tax on transient lodging, of which one percent (1.00%) is recorded in the General Fund and the remaining three and fifty-two hundredths percent (3.52%) is recorded in the City’s Tourism Fund to be used for promoting tourism;

**WHEREAS**, of the amount recorded in the Tourism Fund, the Mayor and Council designated that seventy-five percent (75%) be spent for sports tourism facility development and improvement, while twenty-five percent (25%) be spent on marketing, studies and special events;

**WHEREAS**, on December 3, 2019, the Mayor and Council adopted a “Strategic Plan” seeking to attract visitors to the City with new and enhanced event and entertainment opportunities;

**WHEREAS**, on November 20, 2023, pursuant to the Policy and the Strategic Plan, the Tourism Fund Sub-committee recommended to approve the allocation of tourism funds not to exceed \$50,000 total for Vista’s 2023-2024 events, an increase of \$5,000 from the current FY24 budget and;

**WHEREAS**, the FY2024 budget was adopted by Council Resolution #2023-85 on June 6, 2023;

**WHEREAS**, this action will necessitate a budget amendment; and

**WHEREAS**, the City of Surprise Administrative Policies requires the approval of the Mayor and Council for budget amendments of this nature.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the City of Surprise, Arizona, as follows:



**Section 1.** That the statements and schedules attached as *Exhibit A* and incorporated by reference are adopted, amending the budget of the City of Surprise, Arizona for the fiscal year July 1, 2023 through June 30, 2024.

**Section 2.** That the Tourism Fund Reimbursement Agreement between the City of Surprise and Dysart's Vista Center for the Arts, attached as *Exhibit B* and incorporated by reference, is approved.

**Section 3.** The City Manager, or his designee, is hereby authorized to execute and submit all documents and other necessary or desirable instruments in connection with said agreement.

**APPROVED AND ADOPTED** this \_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Skip Hall, Mayor

Attest:

Approved as to form:

\_\_\_\_\_  
Kristi Passarelli, City Clerk

\_\_\_\_\_  
Robert Wingo, City Attorney

**RESOLUTION # 2024-33**  
**Exhibit A**

1. Appropriation - The allocation listed below represents a movement of budget authority in the amount of \$5,000 from General Contingency to the services within the Tourism Fund to increase the budget for the 2023-2024 Vista events. This action represents a transfer of spending authority and does not increase or decrease the total adopted citywide expenditure budget.

<b>Fund</b>	<b>Department</b>	<b>Project/Category</b>	<b>Rev/ Exp</b>	<b>Current Budget</b>	<b>Increase/ (Decrease)</b>	<b>Amended Budget</b>
Contingency	General Operations	Contingency	E	71,064,200	(5,000)	71,059,200
Tourism	Sports and Tourism	Services	E	620,000	5,000	625,000
<b>Expense Total</b>				<b>71,684,200</b>	<b>-</b>	<b>71,684,200</b>



**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024

Contact Person: Andrea Davis, DIRECTOR - FINANCE

Submitting Department: Finance

District: Citywide

Staff Recommendations:

---

Consent: No

Regular: Yes

Public Hearing: No

Report/Discussion: No

---

**Agenda Wording:**

Consideration and action pertaining to adoption of the City of Surprise Land Use Assumptions and Infrastructure Improvements Plan, as amended, and directing the City Manager to provide notice of the City's intent to impose development impact fees; Resolution #2024-31.

---

**Motion:**

I move to approve Resolution #2024-31.

---

**Background:**

A.R.S. §9-463.05 requires cities to update Land Use Assumptions (LUA) and Infrastructure Improvements Plans (IIP) at least every five years. The LUA and IIP were last adopted by the City on March 11, 2019.

---

**Objective Analysis:**

Adoption of the Land Use Assumptions (LUA) and and the Infrastructure Improvements Plan (IIP) will allow the City to be in compliance with A.R.S. §9-463.05, and to implement updated development impact fees in fiscal year 2025.

---

**Policy Compliant:**

This action is consistent with City and Council Policy and is ensuring the City is compliant with A.R.S. §9-463.05.

---

**Financial Impact:**

The Land Use Assumptions and Infrastructure Improvements Plan need to be adopted timely in order to publicly notice the City's intent to update development impact fees. Notice cannot be given for updating development impact fees until the LUA and IIP are adopted in their final form.

---

**Budget Impact:**

There is no anticipated budget impact related to this item.

**FTE Impact:**

This item does not have an impact on current staff levels.

---

**ATTACHMENTS:**

1. Surprise LUA IIP & DRAFT Fees 02.20.24
  2. DRAFT Surprise LUA IIP & Fees 02.13.24 Redline
  3. Summary of Changes From 11.13.23
  4. Res 2024-31 LUA and IIP adoption
-



**Land Use Assumptions,  
Infrastructure Improvements Plan,  
and DRAFT Development Fee Report**

**Prepared for:  
Surprise, Arizona**

**February 20, 2024**



**4701 Sangamore Road**

**Suite S240**

**Bethesda, MD 20816**

**301.320.6900**

**[www.TischlerBise.com](http://www.TischlerBise.com)**

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## EXECUTIVE SUMMARY

The City of Surprise, Arizona, contracted with TischlerBise to document land use assumptions, prepare the Infrastructure Improvements Plan (hereinafter referred to as the “IIP”), and update development fees pursuant to Arizona Revised Statutes (“ARS”) § 9-463.05 (hereafter referred to as the “Enabling Legislation”). Municipalities in Arizona may assess development fees to offset infrastructure costs to a municipality for necessary public services. The development fees must be based on an Infrastructure Improvements Plan and Land Use Assumptions. The IIP for each type of infrastructure is in the middle section of this document. The proposed development fees are displayed in the Development Fee Report in the next section.

Development fees are one-time payments used to construct system improvements needed to accommodate new development. The fee represents future development’s proportionate share of infrastructure costs. Development fees may be used for infrastructure improvements or debt service for growth related infrastructure. In contrast to general taxes, development fees may not be used for operations, maintenance, replacement, or correcting existing deficiencies. This update of Surprise’s Infrastructure Improvements Plan and associated update to its development fees includes the following necessary public services:

1. Fire Facilities
2. Parks and Recreational Facilities
3. Police Facilities
4. Water Facilities
5. Water Resource Facilities
6. Wastewater Facilities

This plan includes all necessary elements required to be in full compliance with the Enabling Legislation.

### ARIZONA DEVELOPMENT FEE ENABLING LEGISLATION

The Enabling Legislation governs how development fees are calculated for municipalities in Arizona.

#### Necessary Public Services

Under the requirements of the Enabling Legislation, development fees may only be used for construction, acquisition or expansion of public facilities that are necessary public services. “Necessary public service” means any of the following categories of facilities that have a life expectancy of three or more years and that are owned and operated on behalf of the municipality: water, wastewater, storm water, library, street, fire, police, and parks and recreational. Additionally, a necessary public service includes any facility that was financed before June 1, 2011, and that meets the following requirements:

1. Development fees were pledged to repay debt service obligations related to the construction of the facility.
2. After August 1, 2014, any development fees collected are used solely for the payment of principal and interest on the portion of the bonds, notes, or other debt service obligations issued before June 1, 2011, to finance construction of the facility.

**Infrastructure Improvements Plan**

Development fees must be calculated pursuant to an IIP. For each necessary public service that is the subject of a development fee, by law, the IIP shall include the following seven elements:

1. A description of the existing necessary public services in the service area and the costs to 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.
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.
3. 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.
4. 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.
5. 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.
6. The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years.
7. 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.

**Qualified Professionals**

The IIP must be developed by qualified professionals using generally accepted engineering and planning practices. A qualified professional is defined as “a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person’s license, education, or experience.” TischlerBise is a fiscal, economic, and planning consulting firm specializing in the cost of growth services. Our services include development fees, fiscal impact analysis, infrastructure financing analyses, user fee/cost of service studies, capital improvement plans, and fiscal software. TischlerBise has prepared over 800 development fee studies over the past 30 years for local governments across the United States.

## Conceptual Development Fee Calculation

In contrast to project-level improvements, development fees fund growth-related infrastructure that will benefit multiple development projects, or the entire service area (usually referred to as system improvements). The first step is to determine an appropriate demand indicator for the particular type of infrastructure. The demand indicator measures the number of service units for each unit of development. For example, an appropriate indicator of the demand for parks is population growth and the increase in population can be estimated from the average number of persons per housing unit. The second step in the development fee formula is to determine infrastructure improvement units per service unit, typically called level-of-service (LOS) standards. In keeping with the park example, a common LOS standard is improved park acres per thousand people. The third step in the development fee formula is the cost of various infrastructure units. To complete the park example, this part of the formula would establish a cost per acre for land acquisition and/ or park amenities.

## Evaluation of Credits/Offsets

Regardless of the methodology, a consideration of credits/offsets is integral to the development of a legally defensible development fee. There are two types of credits/offsets that should be addressed in development fee studies and ordinances. The first is a revenue credit/offset due to possible double payment situations, which could occur when other revenues may contribute to the capital costs of infrastructure covered by the development fee. This type of credit/offset is integrated into the fee calculation, thus reducing the fee amount. The second is a site-specific credit or developer reimbursement for dedication of land or construction of system improvements. This type of credit is addressed in the administration and implementation of the development fee program. For ease of administration, TischlerBise normally recommends developer reimbursements for system improvements.

## INTRODUCTION TO DEVELOPMENT FEES

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Development fees are one-time payments used to fund capital improvements necessitated by future development. Development fees have been utilized by local governments in various forms for at least fifty years. Development fees do have limitations and should not be regarded as the total solution for infrastructure financing needs. Rather, they should be considered one component of a comprehensive portfolio to ensure adequate provision of public facilities with the goal of maintaining current levels of service in a community. Any community considering facility fees should note the following limitations:

- 1) Fees can only be used to finance capital infrastructure and cannot be used to finance ongoing operations and / or maintenance and rehabilitation costs.
- 2) Fees cannot be deposited in the General Fund. The funds must be accounted for separately in individual accounts and earmarked for the capital expenses for which they were collected.
- 3) Fees cannot be used to correct existing infrastructure deficiencies unless there is a funding plan in place to correct the deficiency for all current residents and businesses in the community.



## REQUIRED FINDINGS

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There are three reasonable relationship requirements for development fees that are closely related to “rational nexus” or “reasonable relationship” requirements enunciated by a number of state courts. Although the term “dual rational nexus” is often used to characterize the standard by which courts evaluate the validity of development fees under the U. S. Constitution, we prefer a more rigorous formulation that recognizes three elements: “impact or need,” “benefit,” and “proportionality.” The dual rational nexus test explicitly addresses only the first two, although proportionality is reasonably implied, and was specifically mentioned by the U.S. Supreme Court in the *Dolan* case. The reasonable relationship language of the statute is considered less strict than the rational nexus standard used by many courts. Individual elements of the nexus standard are discussed further in the following paragraphs.

**Demonstrating an Impact.** All future development in a community creates additional demands on some, or all, public facilities provided by local government. If the supply of facilities is not increased to satisfy that additional demand, the quality or availability of public services for the entire community will deteriorate. Development fees may be used to recover the cost of development-related facilities, but only to the extent that the need for facilities is a consequence of development that is subject to the fees. The *Nollan* decision reinforced the principle that development exactions may be used only to mitigate conditions created by the developments upon which they are imposed. That principle clearly applies to development fees. In this study, the impact of development on improvement needs is analyzed in terms of quantifiable relationships between various types of development and the demand for specific facilities, based on applicable level-of-service standards.

**Demonstrating a Benefit.** A sufficient benefit relationship requires that development fee revenues be segregated from other funds and expended only on the facilities for which the fees were charged. Fees must be expended in a timely manner and the facilities funded by the fees must serve the development paying the fees. However, nothing in the U.S. Constitution or the State enabling Act authorizing development fees requires that facilities funded with fee revenues be available *exclusively* to development paying the fees. In other words, existing development may benefit from these improvements as well.

Procedures for the earmarking and expenditure of fee revenues are typically mandated by the State Enabling Legislation, as are procedures to ensure that the fees are expended expeditiously or refunded. All requirements are intended to ensure that developments benefit from the fees they are required to pay. Thus, an adequate showing of benefit must address procedural as well as substantive issues.

**Demonstrating Proportionality.** The requirement that exactions be proportional to the impacts of development was clearly stated by the U.S. Supreme Court in the *Dolan* case (although the relevance of that decision to development fees has been debated) and is logically necessary to establish a proper nexus. Proportionality is established through the procedures used to identify development-related facility costs, and in the methods used to calculate development fees for various types of facilities and categories of development. The demand for facilities is measured in terms of relevant and measurable attributes of development.

## DEVELOPMENT FEE REPORT

Development fees for the necessary public services made necessary by new development must be based on the same level of service (LOS) provided to existing development in the service area. There are three basic methodologies used to calculate development fees. They examine the past, present, and future status of infrastructure. The objective of evaluating these different methodologies is to determine the best measure of the demand created by new development for additional infrastructure capacity. Each methodology has advantages and disadvantages in a particular situation and can be used simultaneously for different cost components.

Reduced to its simplest terms, the process of calculating development fees involves two main steps: (1) determining the cost of development-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of development fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following paragraphs discuss basic methodologies for calculating development fees and how those methodologies can be applied.

- **Cost Recovery** (past improvements) - The rationale for recoupment, often called cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new growth will benefit. This methodology is often used for utility systems that must provide adequate capacity before new development can take place.
- **Incremental Expansion** (concurrent improvements) - The incremental expansion methodology documents current LOS standards for each type of public facility, using both quantitative and qualitative measures. This approach assumes there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. Revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increments to keep pace with development.
- **Plan-Based** (future improvements) - The plan-based methodology allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a long-range facility plan and development potential is identified by a land use plan. There are two basic options for determining the cost per demand unit: (1) total cost of a public facility can be divided by total demand units (average cost), or (2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning timeframe (marginal cost).

**DEVELOPMENT FEE COMPONENTS**

Shown below, Figure 1 summarizes service areas, methodologies, and infrastructure cost components.

**Figure 1: Proposed Development Fee Service Areas, Methodologies, and Cost Components**

Necessary Public Service	Service Area	Cost Recovery	Incremental Expansion	Plan-Based	Cost Allocation
Fire Facilities	Citywide	N/A	Primary Apparatus, Secondary Apparatus	Fire Stations, Fire Facilities, Development Fee Report	Population, Vehicle Trips
Parks and Recreational Facilities	Citywide	N/A	Park Land, Park Amenities, Recreation Facilities	Development Fee Report	Population, Jobs
Police Facilities	Citywide	N/A	Police Facilities Land, Police Vehicles, Police Equipment	Police Facilities, Development Fee Report	Population, Vehicle Trips
Water Facilities	SPA 1	Water Infrastructure	N/A	Water Infrastructure, Development Fee Report	Average Day Gallons
	SPA 2	N/A	N/A	Water Infrastructure, Development Fee Report	Average Day Gallons
	SPA 3	N/A	N/A	Water Infrastructure, Development Fee Report	Average Day Gallons
	SPA 4	N/A	N/A	Water Infrastructure, Development Fee Report	Average Day Gallons
Water Resource Facilities	Citywide	N/A	N/A	Water Resource, Development Fee Report	Acre-Feet
Wastewater Facilities	SPA 1	Wastewater Infrastructure	N/A	Wastewater Infrastructure, Development Fee Report	Average Day Gallons
	SPA 2	N/A	N/A	Wastewater Infrastructure, Development Fee Report	Average Day Gallons
	SPA 3	N/A	N/A	Wastewater Infrastructure, Development Fee Report	Average Day Gallons
	SPA 4	N/A	N/A	Wastewater Infrastructure, Development Fee Report	Average Day Gallons
	SPA 5	N/A	N/A	Wastewater Infrastructure, Development Fee Report	Average Day Gallons

**CURRENT DEVELOPMENT FEES**

Current development fees are assessed per dwelling unit for residential development and per 1,000 square feet of floor area for nonresidential development. Current development fees for water, water resource, and wastewater are assessed by meter size.

**Figure 2: Current Development Fees by Development Type**

Residential Fees per Unit					
Development Type	Fire	Parks & Recreational	Police	General Government	Total
Single Family	\$789	\$1,060	\$385	\$208	\$2,442
Multi-Family	\$481	\$647	\$235	\$143	\$1,506
Mobile Home	\$442	\$594	\$216	\$132	\$1,384

Nonresidential Fees per 1,000 Square Feet					
Development Type	Fire	Parks & Recreational	Police	General Government	Total
Industrial	\$166	\$32	\$81	\$49	\$328
Warehouse	\$95	\$32	\$46	\$28	\$201
Retail/Commercial	\$876	\$32	\$427	\$261	\$1,596
Office	\$497	\$74	\$243	\$148	\$962
Public/Institutional	\$308	\$85	\$150	\$92	\$635

**SPA 1**

**Figure 3: Current Development Fees by Meter Size**

Fees per Meter - SPA 1				
Meter Size	Water	Water Resource	Wastewater	Current Fees
0.75-inch	\$2,985	\$2,279	\$2,192	\$7,456
1.00-inch	\$4,985	\$3,806	\$3,661	\$12,452
1.50-inch	\$9,940	\$7,589	\$7,299	\$24,828
2.00-inch	\$15,910	\$12,147	\$11,683	\$39,740
3.00-inch	\$31,850	\$24,317	\$23,389	\$79,556
4.00-inch	\$49,760	\$37,991	\$36,541	\$124,292
6.00-inch	\$99,490	\$75,959	\$73,059	\$248,508
8.00-inch	\$159,190	\$121,539	\$116,899	\$397,628

**SPA 2**

**Figure 4: Current Development Fees by Meter Size**

Fees per Meter - SPA 2				
Meter Size	Water	Water Resource	Wastewater	Current Fees
0.75-inch	\$2,836	\$2,279	\$2,544	\$7,659
1.00-inch	\$4,736	\$3,806	\$4,248	\$12,790
1.50-inch	\$9,444	\$7,589	\$8,472	\$25,505
2.00-inch	\$15,116	\$12,147	\$13,560	\$40,823
3.00-inch	\$30,260	\$24,317	\$27,144	\$81,721
4.00-inch	\$47,276	\$37,991	\$42,408	\$127,675
6.00-inch	\$94,524	\$75,959	\$84,792	\$255,275
8.00-inch	\$151,244	\$121,539	\$135,672	\$408,455

**SPA 3**

**Figure 5: Current Development Fees by Meter Size**

Fees per Meter - SPA 3				
Meter Size	Water	Water Resource	Wastewater	Current Fees
0.75-inch	\$2,486	\$2,279	\$0	\$4,765
1.00-inch	\$4,152	\$3,806	\$0	\$7,958
1.50-inch	\$8,278	\$7,589	\$0	\$15,867
2.00-inch	\$13,250	\$12,147	\$0	\$25,397
3.00-inch	\$26,526	\$24,317	\$0	\$50,843
4.00-inch	\$41,442	\$37,991	\$0	\$79,433
6.00-inch	\$82,858	\$75,959	\$0	\$158,817
8.00-inch	\$132,578	\$121,539	\$0	\$254,117

**SPA 4**

**Figure 6: Current Development Fees by Meter Size**

Fees per Meter - SPA 4				
Meter Size	Water	Water Resource	Wastewater	Current Fees
0.75-inch	\$0	\$2,279	\$0	\$2,279
1.00-inch	\$0	\$3,806	\$0	\$3,806
1.50-inch	\$0	\$7,589	\$0	\$7,589
2.00-inch	\$0	\$12,147	\$0	\$12,147
3.00-inch	\$0	\$24,317	\$0	\$24,317
4.00-inch	\$0	\$37,991	\$0	\$37,991
6.00-inch	\$0	\$75,959	\$0	\$75,959
8.00-inch	\$0	\$121,539	\$0	\$121,539



**SPA 5**

**Figure 7: Current Development Fees by Meter Size**

Fees per Meter - SPA 5				
Meter Size	Water	Water Resource	Wastewater	Current Fees
0.75-inch	\$0	\$2,279	\$0	\$2,279
1.00-inch	\$0	\$3,806	\$0	\$3,806
1.50-inch	\$0	\$7,589	\$0	\$7,589
2.00-inch	\$0	\$12,147	\$0	\$12,147
3.00-inch	\$0	\$24,317	\$0	\$24,317
4.00-inch	\$0	\$37,991	\$0	\$37,991
6.00-inch	\$0	\$75,959	\$0	\$75,959
8.00-inch	\$0	\$121,539	\$0	\$121,539

**PROPOSED DEVELOPMENT FEES**

Proposed development fees will be assessed per dwelling unit for residential development and per 1,000 square feet of floor area for nonresidential development. Proposed development fees for water, water resource, and wastewater will be assessed by meter size.

The proposed fees represent the maximum allowable fees. Surprise may adopt fees that are less than the amounts shown; however, a reduction in development fee revenue will necessitate an increase in other revenues, a decrease in planned capital improvements, and/or a decrease in level-of-service standards. All costs in the Development Fee Report represent current dollars with no assumed inflation over time. If costs change significantly over time, development fees should be recalculated.

Calculations throughout this report are based on an analysis conducted using Excel software. Most results are discussed in the report using two, three, and four decimal places, which represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

**Figure 8: Proposed Development Fees by Development Type**

Residential Fees per Unit					
Development Type	Fire	Parks & Recreational	Police	General Government <sup>1</sup>	Total
Single Family	\$1,737	\$1,800	\$581	\$208	\$4,326
Multi-Family	\$1,064	\$1,102	\$356	\$143	\$2,665
Mobile Home	\$734	\$760	\$245	\$132	\$1,871

Nonresidential Fees per 1,000 Square Feet					
Development Type	Fire	Parks & Recreational	Police	General Government <sup>1</sup>	Total
Industrial	\$394	\$115	\$275	\$49	\$833
Warehouse	\$200	\$34	\$140	\$28	\$402
Retail/Commercial	\$2,381	\$211	\$1,662	\$261	\$4,515
Office	\$1,141	\$324	\$796	\$148	\$2,409
Public/Institutional	\$790	\$203	\$551	\$92	\$1,636

1. Grandfathered fee not calculated in this report

**SPA 1**

**Figure 9: Proposed Development Fees by Meter Size**

Fees per Meter - SPA 1				
Meter Size	Water	Water Resource	Wastewater	Proposed Fees
0.75-inch	\$5,325	\$3,649	\$4,481	\$13,455
1.00-inch	\$8,892	\$6,093	\$7,484	\$22,469
1.50-inch	\$17,732	\$12,150	\$14,923	\$44,805
2.00-inch	\$28,381	\$19,448	\$23,886	\$71,715
3.00-inch	\$56,816	\$38,932	\$47,817	\$143,565
4.00-inch	\$88,764	\$60,824	\$74,705	\$224,293
6.00-inch	\$177,476	\$121,611	\$149,365	\$448,452
8.00-inch	\$283,972	\$194,585	\$238,993	\$717,550

**SPA 2**

**Figure 10: Proposed Development Fees by Meter Size**

Fees per Meter - SPA 2				
Meter Size	Water	Water Resource	Wastewater	Proposed Fees
0.75-inch	\$5,296	\$3,649	\$9,003	\$17,948
1.00-inch	\$8,844	\$6,093	\$15,035	\$29,972
1.50-inch	\$17,636	\$12,150	\$29,979	\$59,765
2.00-inch	\$28,228	\$19,448	\$47,984	\$95,660
3.00-inch	\$56,508	\$38,932	\$96,059	\$191,499
4.00-inch	\$88,284	\$60,824	\$150,075	\$299,183
6.00-inch	\$176,516	\$121,611	\$300,060	\$598,187
8.00-inch	\$282,436	\$194,585	\$480,114	\$957,135

**SPA 3**

**Figure 11: Proposed Development Fees by Meter Size**

Fees per Meter - SPA 3				
Meter Size	Water	Water Resource	Wastewater	Proposed Fees
0.75-inch	\$3,142	\$3,649	\$9,108	\$15,899
1.00-inch	\$5,248	\$6,093	\$15,210	\$26,551
1.50-inch	\$10,464	\$12,150	\$30,329	\$52,943
2.00-inch	\$16,749	\$19,448	\$48,544	\$84,741
3.00-inch	\$33,529	\$38,932	\$97,179	\$169,640
4.00-inch	\$52,384	\$60,824	\$151,825	\$265,033
6.00-inch	\$104,736	\$121,611	\$303,560	\$529,907
8.00-inch	\$167,584	\$194,585	\$485,714	\$847,883

**SPA 4**

**Figure 12: Proposed Development Fees by Meter Size**

Fees per Meter - SPA 4				
Meter Size	Water	Water Resource	Wastewater	Proposed Fees
0.75-inch	\$2,966	\$3,649	\$9,190	\$15,805
1.00-inch	\$4,954	\$6,093	\$15,347	\$26,394
1.50-inch	\$9,878	\$12,150	\$30,601	\$52,629
2.00-inch	\$15,811	\$19,448	\$48,981	\$84,240
3.00-inch	\$31,651	\$38,932	\$98,053	\$168,636
4.00-inch	\$49,450	\$60,824	\$153,191	\$263,465
6.00-inch	\$98,870	\$121,611	\$306,289	\$526,770
8.00-inch	\$158,198	\$194,585	\$490,081	\$842,864

**SPA 5**

**Figure 13: Proposed Development Fees by Meter Size**

Fees per Meter - SPA 5				
Meter Size	Water	Water Resource	Wastewater	Proposed Fees
0.75-inch	-	\$3,649	\$9,190	\$12,839
1.00-inch	-	\$6,093	\$15,347	\$21,440
1.50-inch	-	\$12,150	\$30,601	\$42,751
2.00-inch	-	\$19,448	\$48,981	\$68,429
3.00-inch	-	\$38,932	\$98,053	\$136,985
4.00-inch	-	\$60,824	\$153,191	\$214,015
6.00-inch	-	\$121,611	\$306,289	\$427,900
8.00-inch	-	\$194,585	\$490,081	\$684,666

**DIFFERENCE BETWEEN PROPOSED AND CURRENT DEVELOPMENT FEES**

This section of the report includes the differences between the proposed and current development fees.

**Figure 14: Difference Between Proposed and Current Development Fees by Development Type**

Residential Fees per Unit					
Development Type	Fire	Parks & Recreational	Police	General Government	Difference
Single Family	\$948	\$740	\$196	\$0	\$1,884
Multi-Family	\$583	\$455	\$121	\$0	\$1,159
Mobile Home	\$292	\$166	\$29	\$0	\$487

Nonresidential Fees per 1,000 Square Feet					
Development Type	Fire	Parks & Recreational	Police	General Government	Difference
Industrial	\$228	\$83	\$194	\$0	\$505
Warehouse	\$105	\$2	\$94	\$0	\$201
Retail/Commercial	\$1,505	\$179	\$1,235	\$0	\$2,919
Office	\$644	\$250	\$553	\$0	\$1,447
Public/Institutional	\$482	\$118	\$401	\$0	\$1,001

**SPA 1**

**Figure 15: Difference Between Proposed and Current Development Fees by Meter Size**

Fees per Meter - SPA 1				
Meter Size	Water	Water Resource	Wastewater	Difference
0.75-inch	\$2,340	\$1,370	\$2,289	\$5,999
1.00-inch	\$3,907	\$2,287	\$3,823	\$10,017
1.50-inch	\$7,792	\$4,561	\$7,624	\$19,977
2.00-inch	\$12,471	\$7,301	\$12,203	\$31,975
3.00-inch	\$24,966	\$14,615	\$24,428	\$64,009
4.00-inch	\$39,004	\$22,833	\$38,164	\$100,001
6.00-inch	\$77,986	\$45,652	\$76,306	\$199,944
8.00-inch	\$124,782	\$73,046	\$122,094	\$319,922



**SPA 2**

**Figure 16: Difference Between Proposed and Current Development Fees by Meter Size**

Fees per Meter - SPA 2				
Meter Size	Water	Water Resource	Wastewater	Difference
0.75-inch	\$2,460	\$1,370	\$6,459	\$10,289
1.00-inch	\$4,108	\$2,287	\$10,787	\$17,182
1.50-inch	\$8,192	\$4,561	\$21,507	\$34,260
2.00-inch	\$13,112	\$7,301	\$34,424	\$54,837
3.00-inch	\$26,248	\$14,615	\$68,915	\$109,778
4.00-inch	\$41,008	\$22,833	\$107,667	\$171,508
6.00-inch	\$81,992	\$45,652	\$215,268	\$342,912
8.00-inch	\$131,192	\$73,046	\$344,442	\$548,680

**SPA 3**

**Figure 17: Difference Between Proposed and Current Development Fees by Meter Size**

Fees per Meter - SPA 3				
Meter Size	Water	Water Resource	Wastewater	Difference
0.75-inch	\$656	\$1,370	\$9,108	\$11,134
1.00-inch	\$1,096	\$2,287	\$15,210	\$18,593
1.50-inch	\$2,186	\$4,561	\$30,329	\$37,076
2.00-inch	\$3,499	\$7,301	\$48,544	\$59,344
3.00-inch	\$7,003	\$14,615	\$97,179	\$118,797
4.00-inch	\$10,942	\$22,833	\$151,825	\$185,600
6.00-inch	\$21,878	\$45,652	\$303,560	\$371,090
8.00-inch	\$35,006	\$73,046	\$485,714	\$593,766

**SPA 4**

**Figure 18: Difference Between Proposed and Current Development Fees by Meter Size**

Fees per Meter - SPA 4				
Meter Size	Water	Water Resource	Wastewater	Difference
0.75-inch	\$2,966	\$1,370	\$9,190	\$13,526
1.00-inch	\$4,954	\$2,287	\$15,347	\$22,588
1.50-inch	\$9,878	\$4,561	\$30,601	\$45,040
2.00-inch	\$15,811	\$7,301	\$48,981	\$72,093
3.00-inch	\$31,651	\$14,615	\$98,053	\$144,319
4.00-inch	\$49,450	\$22,833	\$153,191	\$225,474
6.00-inch	\$98,870	\$45,652	\$306,289	\$450,811
8.00-inch	\$158,198	\$73,046	\$490,081	\$721,325

SPA 5

Figure 19: Difference Between Proposed and Current Development Fees by Meter Size

Fees per Meter - SPA 5				
Meter Size	Water	Water Resource	Wastewater	Difference
0.75-inch	-	\$1,370	\$9,190	\$10,560
1.00-inch	-	\$2,287	\$15,347	\$17,634
1.50-inch	-	\$4,561	\$30,601	\$35,162
2.00-inch	-	\$7,301	\$48,981	\$56,282
3.00-inch	-	\$14,615	\$98,053	\$112,668
4.00-inch	-	\$22,833	\$153,191	\$176,024
6.00-inch	-	\$45,652	\$306,289	\$351,941
8.00-inch	-	\$73,046	\$490,081	\$563,127

**LAND USE ASSUMPTIONS**

Arizona’s Development Fee Act requires the preparation of Land Use Assumptions, which are defined in Arizona Revised Statutes § 9-463.05(T)(6) as:

*“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.”*

The estimates and projections of residential and nonresidential development in this Land Use Assumptions document are for all areas within Surprise. The current demographic estimates and future development projections will be used in the Infrastructure Improvements Plan (IIP) and in the calculation of development fees. Current demographic data estimates for 2023 are used in calculating levels of service (LOS) provided to existing development in Surprise. Arizona’s Enabling Legislation requires fees to be updated at least every five years and limits the IIP to a maximum of 10 years.

The Infrastructure Improvements Plan (IIP) and the Development Fee Report include multiple service areas. The Fire Facilities IIP, the Parks and Recreational Facilities IIP, and the Police Facilities IIP use a citywide service area. The service area for the Water Facilities IIP, the Water Resource Facilities IIP, and the Wastewater Facilities IIP is shown in Figure L1.

**SUMMARY OF GROWTH INDICATORS**

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Key land use assumptions include population, housing units, and employment projections. TischlerBise projects future development using data provided by the Maricopa Association of Governments (MAG). Development projections are summarized in Figure L13. These projections will be used to estimate fee revenue and to indicate the anticipated need for growth-related infrastructure. However, development fee methodologies are designed to reduce sensitivity to development projections in the determination of the proportionate share fee amounts. If actual development occurs at a slower rate than projected, fee revenue will decline, but so will the need for growth-related infrastructure. In contrast, if development occurs at a faster rate than anticipated, fee revenue will increase, but Surprise will also need to accelerate infrastructure improvements to keep pace with the actual rate of development. During the next 10 years, residential development projections indicate a population increase of 83,656 persons in 35,921 housing units, and nonresidential development projections indicate an employment increase of 16,444 jobs in approximately 8,542,000 square feet of floor area.

Figure L1: Utility Development Impact Fee Service Area

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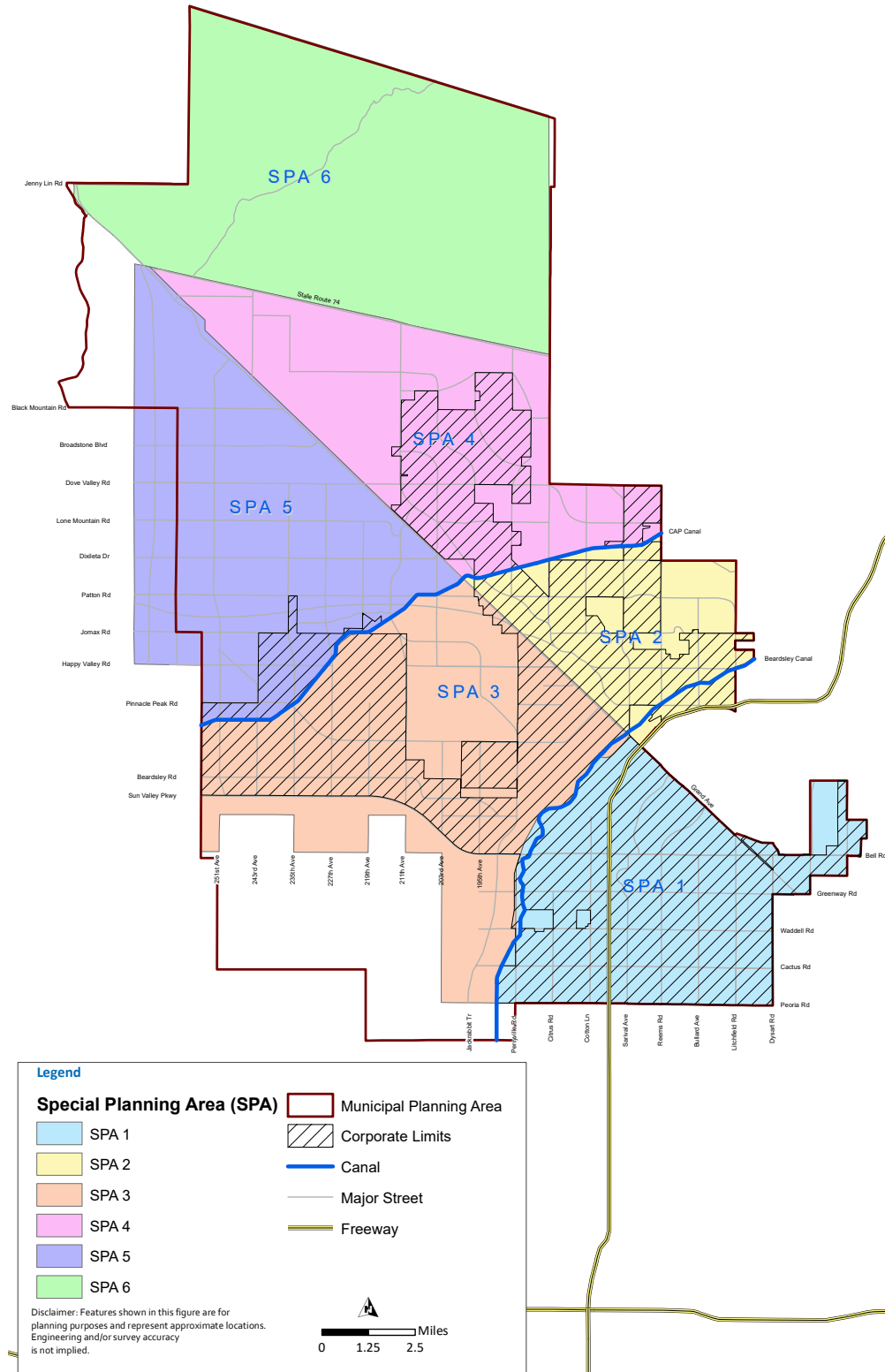


Figure 1.1 Municipal Planning Area

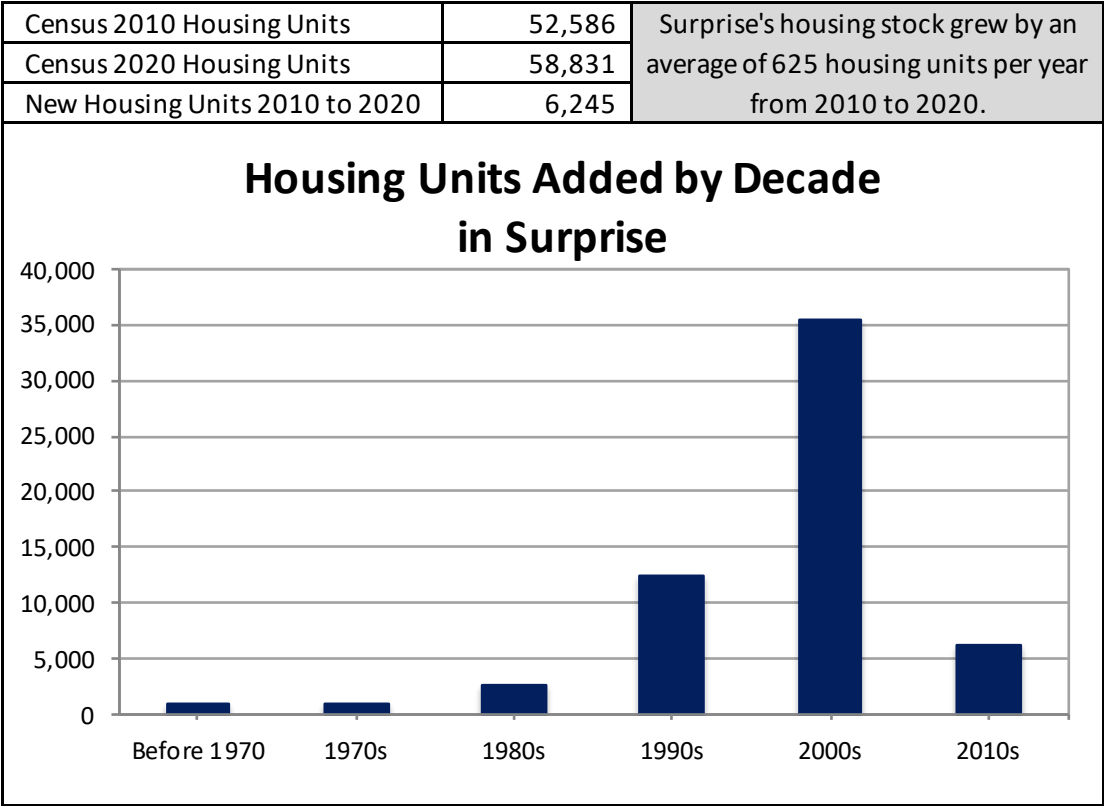
**RESIDENTIAL DEVELOPMENT**

This section details current estimates and future projections of residential development including population and housing units.

**Recent Residential Construction**

Development fees require an analysis of current levels of service. For residential development, current levels of service are determined using estimates of population and housing units. Shown below, Figure L2 indicates the estimated number of housing units added by decade according to data obtained from the U.S. Census Bureau. In the previous decade, Surprise’s housing stock grew by an average of 625 housing units per year.

**Figure L2: Housing Units by Decade**



Source: U.S. Census Bureau, Census 2020 Summary File 1, Census 2010 Summary File 1, 2017-2021 5-Year American Community Survey (for 2000s and earlier, adjusted to yield total units in 2010).



## Occupancy Factors

According to the U.S. Census Bureau, a household is a housing unit occupied by year-round residents. Development fees often use per capita standards and persons per housing unit (PPHU) or persons per household (PPH) to derive proportionate share fee amounts. When fee calculations use PPHU, infrastructure standards are derived using year-round population. When fee calculations use PPH, the development fee methodology assumes a higher percentage of housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. TischlerBise recommends that development fees for residential development use persons per housing unit.

Residential development fees group housing units into three categories. Single-family units include detached and attached units. Multi-family units include duplexes and structures with two or more units on an individual parcel of land. Mobile home units include mobile homes and recreational vehicles. Figure L3 below shows the occupancy estimates for Surprise based on 2017-2021 American Community Survey 5-Year Estimates. Single-family units averaged 2.58 persons per housing unit, multi-family units averaged 1.58 persons per housing unit, and mobile home units averaged 1.09 persons per housing unit. The estimates shown below are used only to calculate occupancy factors and may not match population and housing unit estimates shown throughout this report.

**Figure L3: Occupancy Factors**

Housing Type	Persons	Households	Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix	Vacancy Rate
Single Family <sup>1</sup>	130,567	46,291	2.82	50,626	2.58	86.6%	8.56%
Multi-Family <sup>2</sup>	7,708	4,089	1.89	4,865	1.58	8.3%	15.95%
Mobile Home <sup>3</sup>	3,256	1,825	1.78	2,992	1.09	5.1%	39.00%
Total	141,531	52,205	2.71	58,483	2.42	100.0%	10.73%

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

1. Includes detached and attached (i.e., townhouses) units.
2. Includes dwellings in structures with two or more units.
3. Includes mobile homes and RV units.

## Residential Estimates

According to estimates published by the U.S. Census Bureau, Surprise’s 2020 population included 141,758 persons living in 58,831 housing units. The Maricopa Association of Governments (MAG) released updated socioeconomic projections in June 2023. Using traffic analysis zone (TAZ) data provided by MAG, and occupancy factors shown in Figure L3, existing residential development in 2023 included 172,866 persons living in 73,013 housing units.

**Figure L4: Residential Estimates**

Surprise, Arizona	2020	2023
	Census <sup>1</sup>	Base Year
Population	141,758	172,866
Housing Units	58,831	73,013

1. U.S. Census Bureau, 2020
2. TischlerBise calculation using Maricopa Association of Governments (MAG) housing unit projections and ACS occupancy factors.

**Residential Projections**

Population and housing unit projections illustrate the possible future pace of service demands, revenues, and expenditures. To the extent these factors change, the projected need for infrastructure will also change. If development occurs at a faster rate than projected, the demand for infrastructure will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will decrease at a corresponding rate. For this study, the analysis assumes the occupancy factors shown in Figure L3 will remain constant throughout the 10-year projection period.

TischlerBise projects residential development using housing unit data provided by the Maricopa Association of Governments (MAG) and data provided by Community Development Department staff (multi-family development in SPA 1 and SPA 2 only). To project housing units from 2023 to 2030, TischlerBise applies a straight-line projection from MAG 2020 housing unit estimates to MAG 2030 housing unit projections. To project housing units from 2030 to 2033, TischlerBise applies a straight-line projection from MAG 2030 housing unit projections to MAG 2040 housing unit projections. For multi-family development in SPA 1 and SPA 2, the analysis uses data provided by Community Development Department staff (instead of MAG data) that reflects multi-family development currently in the development pipeline. Based on these assumptions, 10-year projections include an increase of 35,921 housing units.

To convert housing units to population, the analysis multiplies occupancy factors shown in Figure L3 to the housing unit projections shown below. For example, the 10-year increase of 27,023 single-family units multiplied by 2.58 persons per housing unit equals 69,718 persons in new single-family units. Based on these assumptions, the 10-year projections include an increase of 83,656 persons.

**Figure L5: Residential Projections**

Surprise, Arizona	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Population</b>												
Single-Family	153,323	160,839	168,354	175,870	183,386	190,901	198,417	205,932	211,636	217,339	223,042	69,718
Multi-Family	16,194	17,552	18,910	20,268	21,626	22,984	24,342	25,700	27,087	28,474	29,862	13,667
Mobile Home	3,349	3,378	3,407	3,436	3,465	3,494	3,523	3,552	3,575	3,597	3,619	270
<b>Total</b>	<b>172,866</b>	<b>181,769</b>	<b>190,671</b>	<b>199,574</b>	<b>208,477</b>	<b>217,380</b>	<b>226,282</b>	<b>235,185</b>	<b>242,297</b>	<b>249,410</b>	<b>256,522</b>	<b>83,656</b>
<b>Housing Units</b>												
Single-Family	59,934	62,847	65,760	68,673	71,586	74,499	77,412	80,325	82,536	84,746	86,957	27,023
Multi-Family	9,973	10,833	11,692	12,552	13,411	14,271	15,130	15,990	16,868	17,746	18,624	8,650
Mobile Home	3,106	3,133	3,159	3,186	3,213	3,239	3,266	3,293	3,313	3,333	3,354	248
<b>Total</b>	<b>73,013</b>	<b>76,813</b>	<b>80,612</b>	<b>84,411</b>	<b>88,210</b>	<b>92,010</b>	<b>95,809</b>	<b>99,608</b>	<b>102,717</b>	<b>105,825</b>	<b>108,934</b>	<b>35,921</b>

## NONRESIDENTIAL DEVELOPMENT

This section details current estimates and future projections of nonresidential development including jobs and nonresidential floor area.

### Nonresidential Demand Factors

TischlerBise uses the term jobs to refer to employment by place of work. In Figure L6, gray shading indicates the nonresidential development prototypes used to derive employment densities. For nonresidential development, TischlerBise uses data published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021). The prototype for industrial development is Industrial Park (ITE 130) with 864 square feet of floor area per employee. For warehouse development, the proxy is Warehousing (ITE 150) with 2,953 square feet of floor area per employee. Public/institutional development uses Nursing Home (ITE 620) with 490 square feet of floor area per employee. For office development, the proxy is General Office (ITE 710) with 307 square feet of floor area per employee. The prototype for retail/commercial development is Shopping Center (ITE 820) with 471 square feet of floor area per employee.

**Figure L6: Nonresidential Demand Units**

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit <sup>1</sup>	Wkdy Trip Ends Per Employee <sup>1</sup>	Employees per Dmd Unit	Square Feet Per Employee
110	Light Industrial	1,000 Sq Ft	4.87	3.10	1.57	637
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	4.75	2.51	1.89	528
150	Warehousing	1,000 Sq Ft	1.71	5.05	0.34	2,953
310	Hotel	room	7.99	14.34	0.56	na
520	Elementary School	student	2.27	22.50	0.10	na
525	High School	student	1.94	21.95	0.09	na
540	Community College	student	1.15	14.61	0.08	na
565	Day Care	student	4.09	21.38	0.19	na
610	Hospital	1,000 Sq Ft	10.77	3.77	2.86	350
620	Nursing Home	1,000 Sq Ft	6.75	3.31	2.04	490
710	General Office (avg size)	1,000 Sq Ft	10.84	3.33	3.26	307
720	Medical-Dental Office	1,000 Sq Ft	36.00	8.71	4.13	242
730	Government Office	1,000 Sq Ft	22.59	7.45	3.03	330
750	Office Park	1,000 Sq Ft	11.07	3.54	3.13	320
760	Research & Dev Center	1,000 Sq Ft	11.08	3.37	3.29	304
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	37.01	17.42	2.12	471

1. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

**Nonresidential Estimates**

The Maricopa Association of Governments (MAG) released updated socioeconomic projections in June 2023. According to MAG estimates, site-based employment included 22,366 jobs in 2020. According to data provided by the Maricopa County Tax Assessor, nonresidential development included 20,327,059 square feet of floor area in 2020. To estimate employment in 2023, TischlerBise applied a straight-line projection from MAG 2020 employment estimates to MAG 2030 employment projections. To estimate nonresidential floor area in 2023, TischlerBise used a combination of recently completed projects and ITE employment density factors. For 2023, projected nonresidential development includes 27,035 jobs and 25,386,225 square feet of nonresidential floor area.

**Figure L7: Nonresidential Estimates**

Industry Type	2020 Jobs <sup>1</sup>	Percent of Total Jobs	2020 Estimated Floor Area <sup>2</sup>
Industrial	1,864	8%	822,847
Warehouse	389	2%	4,423,342
Retail/Commercial	11,555	52%	6,670,736
Office	5,739	26%	2,056,628
Public/Institutional	2,819	13%	6,353,506
<b>Total</b>	<b>22,366</b>	<b>100%</b>	<b>20,327,059</b>

- 1. Socioeconomic Projections (June 2023), Maricopa Association of Governments (MAG).
- 2. Maricopa County Tax Assessor, 2020.

Industry Type	2023 Jobs <sup>1</sup>	Percent of Total Jobs	2023 Estimated Floor Area <sup>1</sup>
Industrial	2,603	10%	2,097,956
Warehouse	542	2%	5,332,128
Retail/Commercial	12,309	46%	7,380,433
Office	7,920	29%	3,396,615
Public/Institutional	3,661	14%	7,179,094
<b>Total</b>	<b>27,035</b>	<b>100%</b>	<b>25,386,225</b>

- 1. TischlerBise estimate.

### Nonresidential Projections

Employment and floor area projections are used to illustrate the possible future pace of service demands, revenues, and expenditures. To the extent these factors change, the projected need for infrastructure will also change. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease.

TischlerBise projects nonresidential development using employment data, by development type, provided by the Maricopa Association of Governments (MAG). To project employment from 2023 to 2030, TischlerBise applies a straight-line projection from MAG 2020 employment estimates to MAG 2030 employment projections. To project employment from 2030 to 2033, TischlerBise applies a straight-line projection from MAG 2030 employment projections to MAG 2040 employment projections. Based on these assumptions, 10-year projections include an increase of 16,444 jobs citywide. To convert employment to nonresidential floor area, the analysis multiplies nonresidential demand factors shown in Figure L6 by the employment projections shown below. For example, the 10-year increase of 2,245 industrial jobs multiplied by 864 square feet per industrial job equals approximately 1,938,000 square feet of additional industrial development. Based on these assumptions, 10-year projections include an increase of approximately 8,542,000 square feet of nonresidential floor area citywide.

**Figure L8: Nonresidential Projections**

Surprise, Arizona	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Employment</b>												
Industrial	2,603	2,849	3,095	3,341	3,587	3,833	4,079	4,326	4,500	4,673	4,847	2,245
Warehouse	542	594	645	696	748	799	850	901	938	974	1,010	468
Retail/Commercial	12,309	12,560	12,812	13,063	13,314	13,565	13,817	14,068	14,541	15,014	15,486	3,178
Office	7,920	8,647	9,374	10,101	10,828	11,555	12,282	13,009	13,950	14,890	15,831	7,911
Public/Institutional	3,661	3,941	4,222	4,503	4,783	5,064	5,344	5,625	5,852	6,078	6,305	2,644
<b>Total</b>	<b>27,035</b>	<b>28,591</b>	<b>30,148</b>	<b>31,704</b>	<b>33,260</b>	<b>34,816</b>	<b>36,373</b>	<b>37,929</b>	<b>39,779</b>	<b>41,629</b>	<b>43,479</b>	<b>16,444</b>
<b>Nonres. Sq Ft (x1,000)</b>												
Industrial	2,098	2,310	2,523	2,736	2,948	3,161	3,373	3,586	3,736	3,886	4,036	1,938
Warehouse	5,332	5,484	5,635	5,787	5,938	6,089	6,241	6,392	6,499	6,606	6,714	1,381
Retail/Commercial	7,380	7,499	7,617	7,735	7,854	7,972	8,090	8,208	8,431	8,653	8,876	1,496
Office	3,397	3,620	3,843	4,067	4,290	4,513	4,737	4,960	5,249	5,538	5,827	2,430
Public/Institutional	7,179	7,317	7,454	7,592	7,729	7,867	8,005	8,142	8,253	8,364	8,475	1,296
<b>Total</b>	<b>25,386</b>	<b>26,229</b>	<b>27,073</b>	<b>27,916</b>	<b>28,759</b>	<b>29,602</b>	<b>30,445</b>	<b>31,289</b>	<b>32,168</b>	<b>33,048</b>	<b>33,928</b>	<b>8,542</b>



## AVERAGE WEEKDAY VEHICLE TRIPS

Surprise will use average weekday vehicle trips (AWVT) for fire facilities fees and police facilities fees. Components used to determine AWVT include average weekday vehicle trip generation rates, adjustments for commuting patterns, and adjustments for pass-by trips.

### Residential Trip Generation Rates

For residential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021). For single-family development, the proxy is Single Family Detached Housing (ITE 210), and this type of development generates 9.43 average weekday vehicle trip ends per unit. For multi-family development, the proxy is Multifamily Housing Low-Rise (ITE 220), and this type of development generates 6.74 average weekday vehicle trip ends per unit. For mobile home development, the proxy is Mobile Home Park (ITE 240), and this type of development generates 7.12 average weekday vehicle trip ends per unit.

### Nonresidential Trip Generation Rates

For nonresidential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021). The prototype for industrial development is Industrial Park (ITE 130) which generates 3.37 average weekday vehicle trip ends per 1,000 square feet of floor area. For warehouse development, the proxy is Warehousing (ITE 150), and it generates 1.71 average weekday vehicle trip ends per 1,000 square feet of floor area. Public/institutional development uses Nursing Home (ITE 620) and generates 6.75 average weekday vehicle trip ends per 1,000 square feet of floor area. For office development, the proxy is General Office (ITE 710), and it generates 10.84 average weekday vehicle trip ends per 1,000 square feet of floor area. The prototype for retail/commercial development is Shopping Center (ITE 820) which generates 37.01 average weekday vehicle trips per 1,000 square feet of floor area.

**Figure L9: Average Weekday Vehicle Trip Ends by Land Use**

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit <sup>1</sup>	Wkdy Trip Ends Per Employee <sup>1</sup>	Employees per Dmd Unit	Square Feet Per Employee
110	Light Industrial	1,000 Sq Ft	4.87	3.10	1.57	637
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	4.75	2.51	1.89	528
150	Warehousing	1,000 Sq Ft	1.71	5.05	0.34	2,953
310	Hotel	room	7.99	14.34	0.56	na
565	Day Care	student	4.09	21.38	0.19	na
610	Hospital	1,000 Sq Ft	10.77	3.77	2.86	350
620	Nursing Home	1,000 Sq Ft	6.75	3.31	2.04	490
710	General Office (avg size)	1,000 Sq Ft	10.84	3.33	3.26	307
720	Medical-Dental Office	1,000 Sq Ft	36.00	8.71	4.13	242
730	Government Office	1,000 Sq Ft	22.59	7.45	3.03	330
750	Office Park	1,000 Sq Ft	11.07	3.54	3.13	320
760	Research & Dev Center	1,000 Sq Ft	11.08	3.37	3.29	304
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	37.01	17.42	2.12	471

1. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

### Trip Rate Adjustments

To calculate vehicle trips, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the trip adjustment factor is 50 percent.

### Commuter Trip Adjustment

Residential development has a larger trip adjustment factor of 64 percent to account for commuters leaving Surprise for work. According to the 2009 National Household Travel Survey (see Table 30) weekday work trips are typically 31 percent of production trips (i.e., all out-bound trips, which are 50 percent of all trip ends). As shown in Figure L10, the U.S. Census Bureau’s OnTheMap web application indicates 90 percent of resident workers traveled outside of Surprise for work in 2019. In combination, these factors ( $0.31 \times 0.50 \times 0.90 = 0.14$ ) support the additional 14 percent allocation of trips to residential development.

**Figure L10: Commuter Trip Adjustment**

Trip Adjustment Factor for Commuters	
Employed Residents	55,711
Residents Living and Working in Surprise	5,624
Residents Commuting Outside Surprise for Work	50,087
Percent Commuting out of Surprise	90%
Additional Production Trips <sup>1</sup>	14%
Residential Trip Adjustment Factor	64%

Source: U.S. Census Bureau, OnTheMap Application (version 6.8.1) and LEHD Origin-Destination Employment Statistics, 2019.

1. According to the National Household Travel Survey (2009)\*, published in December 2011 (see Table 30), home-based work trips are typically 30.99 percent of “production” trips, in other words, out-bound trips (which are 50 percent of all trip ends). Also, LED OnTheMap data from 2019 indicate that 90 percent of Surprise’s workers travel outside the city for work. In combination, these factors ( $0.3099 \times 0.50 \times 0.90 = 0.139$ ) account for 14 percent of additional production trips. The total adjustment factor for residential includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (14 percent of production trips) for a total of 64 percent.

\*<http://nhts.ornl.gov/publications.shtml> ; Summary of Travel Trends - Table "Daily Travel Statistics by Weekday vs. Weekend"

### Adjustment for Primary Trips

For retail/commercial and office development, the primary trip factor is less than 100 percent because these types of development attract vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For retail/commercial development, ITE data indicate 45 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 55 percent of attraction trips have the retail/commercial site as their primary destination. Because attraction trips are half of all trips, the retail/commercial trip adjustment factor is 55 percent multiplied by 50 percent, or approximately 28 percent of the trip ends. For office development, 90 percent of attraction trips are assumed to be primary trips based on detailed studies conducted as part of Tindale-Oliver 2016 Hillsborough County Mobility Fee Study. Because attraction trips are half of all trips, the office trip adjustment factor is 90 percent multiplied by 50 percent, or 45 percent of the trip ends.

**Average Weekday Vehicle Trip Estimate**

Shown below in Figure L11, multiplying average weekday vehicle trip ends and trip adjustment factors (discussed on the previous page) by Surprise’s existing development units provides the average weekday vehicle trips generated by existing development. As shown below, Surprise’s existing citywide development generates 542,897 vehicle trips on an average weekday.

**Figure L11: Average Weekday Vehicle Trips by Land Use**

Development Type	Development Unit	ITE Code	Avg Wkday VTE	Trip Adjustment	2023 Dev Units	2023 Veh Trips
Single Family	HU	210	9.43	64%	59,934	361,715
Multi-Family	HU	220	6.74	64%	9,973	43,021
Mobile Home	HU	240	7.12	64%	3,106	14,153
Industrial	KSF	130	3.37	50%	2,098	3,535
Warehouse	KSF	150	1.71	50%	5,332	4,559
Retail/Commercial	KSF	820	37.01	28%	7,380	75,116
Office	KSF	710	10.84	45%	3,397	16,569
Public/Institutional	KSF	620	6.75	50%	7,179	24,229
<b>Total</b>						<b>542,897</b>

### Average Weekday Vehicle Trip Projections

Shown below, Figure L12 includes a projection of citywide vehicle trips. TischlerBise uses the nonresidential projections shown below for the fire and police service areas.

**Figure L12: Average Weekday Vehicle Trip Projections**

Surprise, Arizona		Base	1	2	3	4	5	6	7	8	9	10	10-Year
		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Increase
Development	Single Family Units	59,934	62,847	65,760	68,673	71,586	74,499	77,412	80,325	82,536	84,746	86,957	27,023
	Multi-Family Units	9,973	10,833	11,692	12,552	13,411	14,271	15,130	15,990	16,868	17,746	18,624	8,650
	Mobile Home Units	3,106	3,133	3,159	3,186	3,213	3,239	3,266	3,293	3,313	3,333	3,354	248
	Industrial KSF	2,098	2,310	2,523	2,736	2,948	3,161	3,373	3,586	3,736	3,886	4,036	1,938
	Warehouse KSF	5,332	5,484	5,635	5,787	5,938	6,089	6,241	6,392	6,499	6,606	6,714	1,381
	Retail/Commercial KSF	7,380	7,499	7,617	7,735	7,854	7,972	8,090	8,208	8,431	8,653	8,876	1,496
	Office KSF	3,397	3,620	3,843	4,067	4,290	4,513	4,737	4,960	5,249	5,538	5,827	2,430
	Public/Institutional KSF	7,179	7,317	7,454	7,592	7,729	7,867	8,005	8,142	8,253	8,364	8,475	1,296
Average Weekday Vehicle Trips	Single-Family Trips	361,715	379,295	396,876	414,457	432,037	449,618	467,199	484,779	498,120	511,461	524,802	163,087
	Multi-Family Trips	43,021	46,729	50,436	54,144	57,851	61,559	65,266	68,974	72,761	76,548	80,335	37,314
	Mobile Home Trips	14,153	14,274	14,396	14,518	14,640	14,761	14,883	15,005	15,097	15,190	15,282	1,130
	Residential Trips	418,888	440,298	461,708	483,118	504,528	525,938	547,348	568,758	585,978	603,199	620,419	201,531
	Industrial Trips	3,535	3,893	4,251	4,609	4,967	5,326	5,684	6,042	6,295	6,548	6,801	3,266
	Warehouse Trips	4,559	4,688	4,818	4,947	5,077	5,206	5,336	5,465	5,557	5,649	5,740	1,181
	Retail/Commercial Trips	75,116	76,320	77,524	78,728	79,932	81,135	82,339	83,543	85,808	88,073	90,338	15,222
	Office Trips	16,569	17,658	18,748	19,837	20,926	22,016	23,105	24,195	25,604	27,013	28,423	11,854
	Public/Institutional Trips	24,229	24,694	25,158	25,623	26,087	26,551	27,016	27,480	27,855	28,230	28,605	4,375
	Nonresidential Trips	124,008	127,254	130,499	133,744	136,989	140,235	143,480	146,725	151,119	155,513	159,906	35,898
<b>Total Vehicle Trips</b>		<b>542,897</b>	<b>567,552</b>	<b>592,207</b>	<b>616,862</b>	<b>641,517</b>	<b>666,173</b>	<b>690,828</b>	<b>715,483</b>	<b>737,097</b>	<b>758,711</b>	<b>780,325</b>	<b>237,429</b>

**DEVELOPMENT PROJECTIONS**

Provided below is a summary of development projections used in the Development Fee Report. Base year estimates for 2023 are used in the fee calculations. Development projections are used to illustrate a possible future pace of demand for service units and cash flows resulting from revenues and expenditures associated with those demands.

**Figure L13: Development Projections**

Surprise, Arizona	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Population</b>												
Single-Family	153,323	160,839	168,354	175,870	183,386	190,901	198,417	205,932	211,636	217,339	223,042	69,718
Multi-Family	16,194	17,552	18,910	20,268	21,626	22,984	24,342	25,700	27,087	28,474	29,862	13,667
Mobile Home	3,349	3,378	3,407	3,436	3,465	3,494	3,523	3,552	3,575	3,597	3,619	270
<b>Total</b>	<b>172,866</b>	<b>181,769</b>	<b>190,671</b>	<b>199,574</b>	<b>208,477</b>	<b>217,380</b>	<b>226,282</b>	<b>235,185</b>	<b>242,297</b>	<b>249,410</b>	<b>256,522</b>	<b>83,656</b>
<b>Housing Units</b>												
Single-Family	59,934	62,847	65,760	68,673	71,586	74,499	77,412	80,325	82,536	84,746	86,957	27,023
Multi-Family	9,973	10,833	11,692	12,552	13,411	14,271	15,130	15,990	16,868	17,746	18,624	8,650
Mobile Home	3,106	3,133	3,159	3,186	3,213	3,239	3,266	3,293	3,313	3,333	3,354	248
<b>Total</b>	<b>73,013</b>	<b>76,813</b>	<b>80,612</b>	<b>84,411</b>	<b>88,210</b>	<b>92,010</b>	<b>95,809</b>	<b>99,608</b>	<b>102,717</b>	<b>105,825</b>	<b>108,934</b>	<b>35,921</b>
<b>Employment</b>												
Industrial	2,603	2,849	3,095	3,341	3,587	3,833	4,079	4,326	4,500	4,673	4,847	2,245
Warehouse	542	594	645	696	748	799	850	901	938	974	1,010	468
Retail/Commercial	12,309	12,560	12,812	13,063	13,314	13,565	13,817	14,068	14,541	15,014	15,486	3,178
Office	7,920	8,647	9,374	10,101	10,828	11,555	12,282	13,009	13,950	14,890	15,831	7,911
Public/Institutional	3,661	3,941	4,222	4,503	4,783	5,064	5,344	5,625	5,852	6,078	6,305	2,644
<b>Total</b>	<b>27,035</b>	<b>28,591</b>	<b>30,148</b>	<b>31,704</b>	<b>33,260</b>	<b>34,816</b>	<b>36,373</b>	<b>37,929</b>	<b>39,779</b>	<b>41,629</b>	<b>43,479</b>	<b>16,444</b>
<b>Nonres. Sq Ft (x1,000)</b>												
Industrial	2,098	2,310	2,523	2,736	2,948	3,161	3,373	3,586	3,736	3,886	4,036	1,938
Warehouse	5,332	5,484	5,635	5,787	5,938	6,089	6,241	6,392	6,499	6,606	6,714	1,381
Retail/Commercial	7,380	7,499	7,617	7,735	7,854	7,972	8,090	8,208	8,431	8,653	8,876	1,496
Office	3,397	3,620	3,843	4,067	4,290	4,513	4,737	4,960	5,249	5,538	5,827	2,430
Public/Institutional	7,179	7,317	7,454	7,592	7,729	7,867	8,005	8,142	8,253	8,364	8,475	1,296
<b>Total</b>	<b>25,386</b>	<b>26,229</b>	<b>27,073</b>	<b>27,916</b>	<b>28,759</b>	<b>29,602</b>	<b>30,445</b>	<b>31,289</b>	<b>32,168</b>	<b>33,048</b>	<b>33,928</b>	<b>8,542</b>



## FIRE FACILITIES

ARS § 9-463.05 (T)(7)(f) defines the eligible facilities and assets for the Fire Facilities IIP:

*“Fire and police facilities, including all appurtenances, equipment and vehicles. Fire and police facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the municipality, vehicles and equipment used to provide administrative services, helicopters or airplanes or a facility that is used for training firefighters or officers from more than one station or substation.”*

The Fire Facilities IIP includes components for fire stations, fire facilities, primary apparatus, support apparatus, and the cost of preparing the Fire Facilities IIP and related development fee report. The plan-based methodology is used for fire stations, fire facilities, and the development fee report. The incremental expansion methodology is used for primary apparatus and support apparatus.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Fire Facilities IIP and development fees will allocate the cost of fire services between residential and nonresidential based on fire calls for service. Based on call data for FY2020 – FY2022, residential development generates approximately 75 percent of fire calls for service and nonresidential development accounts for the remaining 25 percent.

**Figure F1: Proportionate Share**

Description	FY 2020	FY 2021	FY 2022	Total
Residential	10,082	11,784	12,369	34,235
Nonresidential	3,684	3,424	4,190	11,298
Total	13,766	15,208	16,559	45,533

Description	FY 2020	FY 2021	FY 2022	Total
Residential	73%	77%	75%	75%
Nonresidential	27%	23%	25%	25%
Total	100%	100%	100%	100%

Source: Surprise Fire Department

The proportionate share of costs attributable to residential development will be allocated to population and then converted to an appropriate amount by type of housing unit. Since nonresidential calls for service were unavailable by specific nonresidential use, TischlerBise recommends using vehicle trips as the nonresidential demand indicator for fire services. Trip generation rates are highest for retail/commercial development and lowest for industrial development. Office and public/institutional trip generation rates fall between the other two categories. This ranking of trip generation rates is consistent with the relative demand for fire services from nonresidential development.

### SERVICE AREA

Surprise’s Fire Department strives to provide a uniform response time within the city limits; therefore, there is a single service area for the Fire Facilities IIP.

**RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT**

ARS § 9-463.05(E)(4) 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 F2 displays the demand indicators for residential and nonresidential land uses. For residential development, the table displays the number of persons per housing unit. For nonresidential development, the table displays the number of average weekday vehicle trips per thousand square feet of floor area.

**Figure F2: Ratio of Service Unit to Development Unit**

Residential Development			
Development Type	Persons per Housing Unit <sup>1</sup>		
Single-Family	2.58		
Multi-Family	1.58		
Mobile Home	1.09		

Nonresidential Development			
Development Type	AWVTE per 1,000 Sq Ft <sup>1</sup>	Trip Rate Adjustment	AWVT per 1,000 Sq Ft <sup>1</sup>
Industrial	3.37	50%	1.69
Warehouse	1.71	50%	0.86
Retail/Commercial	37.01	28%	10.18
Office	10.84	45%	4.88
Public/Institutional	6.75	50%	3.38

1. See Land Use Assumptions

**ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES**

ARS § 9-463.05(E)(1) requires:

*“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.”*

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.”*

**Fire Stations – Plan-Based**

Surprise currently provides 109,621 square feet of fire stations to existing development, and Surprise plans to construct additional fire stations to serve future development.

**Figure F3: Existing Fire Stations**

Description	Square Feet
Fire Station 301	15,531
Fire Station 302	7,000
Fire Station 303	13,632
Fire Station 304	20,824
Fire Station 305	16,472
Fire Station 306	10,145
Fire Station 307	10,145
Fire Station 308	15,872
<b>Total</b>	<b>109,621</b>

Source: Surprise Fire Department

Surprise plans to use future development fee revenue to repay the outstanding obligation related to Fire Station 303. The total obligation for Fire Station 303 is \$94,005, and the outstanding obligation is \$3,788. Based on a cost of approximately \$7 per square foot (\$94,005 total obligation / 13,632 total square feet), the proportionate share of Fire Station 303 related to the outstanding obligation is 549 square feet (\$3,788 outstanding obligation / \$7 per square foot).

**Figure F4: Fire Station 303 Obligation**

Fire Station 303	Square Feet	Obligation <sup>1</sup>	Cost per Sq Ft
Outstanding Obligation	549	\$3,788	\$7
Retired Obligation	13,083	\$90,217	\$7
<b>Total</b>	<b>13,632</b>	<b>\$94,005</b>	<b>\$7</b>

Source: Surprise Fire Department

1. Surprise Finance Department

As shown below in Figure F5, Surprise plans to repay outstanding obligations related to Fire Station 303 and to construct 54,000 square feet of fire stations during the next 10 years. The total cost is \$70,503,788, and the associated floor area is 54,549 square feet. Based on these projects, the analysis uses a cost of \$1,292 per square foot for fire stations (\$70,503,788 total cost / 54,549 total square feet).

**Figure F5: Fire Station Cost Factors**

Description	Square Feet	Cost	Cost per Sq Ft
Fire Station 303	549	\$3,788	\$7
Future Fire Station	16,000	\$18,000,000	\$1,125
Future Fire Station	16,000	\$21,000,000	\$1,313
Future Fire Station	22,000	\$31,500,000	\$1,432
<b>Total</b>	<b>54,549</b>	<b>\$70,503,788</b>	<b>\$1,292</b>

Source: Surprise Fire Department

Surprise plans to provide 163,621 square feet of fire stations to all development in 2033. To allocate the proportionate share of demand for fire stations to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure F1. The planned level of service for residential development is 0.4796 square feet per person (163,621 total square feet X 75 percent residential share / 256,522 persons). The planned nonresidential level of service is 0.2539 square feet per vehicle trip (163,621 total square feet X 25 percent nonresidential share / 159,926 vehicle trips).

Based on the outstanding obligations for Fire Station 303 and the construction cost estimates for future fire stations shown in Figure F5, the analysis uses a cost of \$1,292 per square foot (\$70,503,788 total cost / 54,549 total square feet). For fire stations, the cost is \$619.85 per person (0.4796 square feet per person X \$1,292 per square foot) and \$328.15 per vehicle trip (0.2539 square feet per vehicle trip X \$1,292 per square foot).

**Figure F6: Planned Level of Service**

Cost Factors	
Cost per Square Foot	\$1,292

Level-of-Service (LOS) Standards	
Existing Square Feet <sup>1</sup>	109,072
Cost Recovery Square Feet <sup>2</sup>	549
Planned Square Feet	54,000
<b>Total Square Feet</b>	<b>163,621</b>
Residential	
Residential Share	75%
2033 Population	256,522
Square Feet per Person	0.4796
<b>Cost per Person</b>	<b>\$619.85</b>
Nonresidential	
Nonresidential Share	25%
2033 Vehicle Trips	159,906
Square Feet per Vehicle Trip	0.2539
<b>Cost per Vehicle Trip</b>	<b>\$328.15</b>

Source: Surprise Fire Department

1. Excludes share related to outstanding obligations
2. Fire Station 303 share of outstanding obligations

### Fire Facilities – Plan-Based

Surprise currently provides 25,000 square feet of fire facilities to existing development, and Surprise plans to construct additional fire facilities to serve future development.

**Figure F7: Existing Fire Facilities**

Description	Square Feet
Public Safety Building (share)	10,000
Evidence & Readiness Center	15,000
<b>Total</b>	<b>25,000</b>

Source: Surprise Fire Department

Surprise plans to use future development fee revenue to repay the outstanding obligation related to the Public Safety Building. The total obligation is \$1,563,515, and the outstanding obligation is \$63,023. Based on a cost of approximately \$156 per square foot (\$1,563,515 total obligation / 10,000 total square feet), the proportionate share of the Public Safety Building related to the outstanding obligation is 403 square feet (\$63,023 outstanding obligation / \$156 per square foot).

**Figure F8: Public Safety Building Obligation**

Public Safety Building	Square Feet	Obligation <sup>1</sup>	Cost per Sq Ft
Outstanding Obligation	403	\$63,023	\$156
Retired Obligation	9,597	\$1,500,492	\$156
<b>Total</b>	<b>10,000</b>	<b>\$1,563,515</b>	<b>\$156</b>

Source: Surprise Fire Department

1. Surprise Finance Department

As shown below in Figure F9, Surprise plans to repay outstanding obligations related to the Public Safety Building and to construct a Public Safety Administration and Operations facility during the next 10 years. The planned Public Safety Administration and Operations facility is 90,000 square feet, and it will replace the existing Public Safety Building for a net increase of 80,000 square feet (90,000 planned square feet – 10,000 existing square feet). The total cost of planned fire facilities is \$100,063,023, and the associated floor area is 90,403 square feet. Based on these projects, the analysis uses a cost of \$1,107 per square foot for fire facilities (\$100,063,023 total cost / 90,403 total square feet). The planned Public Safety Administration and Operations facility will serve all development in Surprise through 2043.

**Figure F9: Fire Facilities Cost Factors**

Description	Square Feet	Cost	Cost per Sq Ft
Public Safety Building	403	\$63,023	\$156
Public Safety Admin & Ops	90,000	\$100,000,000	\$1,111
<b>Total</b>	<b>90,403</b>	<b>\$100,063,023</b>	<b>\$1,107</b>

Source: Surprise Fire Department



Surprise plans to provide 105,000 square feet of fire facilities to serve all development in 2043. To allocate the proportionate share of demand for fire facilities to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure F1. The planned level of service for residential development is 0.2499 square feet per person (105,000 total square feet X 75 percent residential share / 315,975 persons). The planned nonresidential level of service is 0.1278 square feet per vehicle trip (105,000 total square feet X 25 percent nonresidential share / 203,844 vehicle trips).

Based on the outstanding obligations for the Public Safety Building and the construction cost estimate for the future Public Safety Administration and Operations facility shown in Figure F9, the analysis uses a cost of \$1,107 per square foot (\$100,063,023 total cost / 90,403 total square feet). For fire facilities, the cost is \$276.55 per person (0.2499 square feet per person X \$1,107 per square foot) and \$141.47 per vehicle trip (0.1278 square feet per vehicle trip X \$1,107 per square foot).

**Figure F10: Planned Level of Service**

Cost Factors	
Cost per Square Foot	\$1,107

Level-of-Service (LOS) Standards	
Existing Square Feet <sup>1</sup>	24,597
Cost Recovery Square Feet <sup>2</sup>	403
Planned Square Feet	90,000
Replacement Square Feet <sup>3</sup>	(10,000)
Total Square Feet	105,000
Residential	
Residential Share	75%
2043 Population	315,975
Square Feet per Person	0.2499
Cost per Person	\$276.55
Nonresidential	
Nonresidential Share	25%
2043 Vehicle Trips	203,844
Square Feet per Vehicle Trip	0.1278
Cost per Vehicle Trip	\$141.47

Source: Surprise Fire Department

1. Excludes share related to outstanding obligations
2. Public Safety Building share of outstanding obligations
3. The Public Safety Administration and Operations facility will replace the existing Public Safety Building

**Primary Apparatus – Incremental Expansion**

Surprise currently serves existing development with 12 primary apparatus, and Surprise plans to acquire additional primary apparatus to serve future development. To allocate the proportionate share of demand for primary apparatus to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure F1. The existing level of service for residential development is 0.00005 units per person (12 units X 75 percent residential share / 172,866 persons). The nonresidential level of service is 0.00002 units per vehicle trip (12 units X 25 percent nonresidential share / 124,008 vehicle trips).

Based on the replacement cost of the existing primary apparatus fleet, the analysis uses \$1,408,333 per unit (\$16,900,000 total cost / 12 units) as a proxy for future primary apparatus costs. For primary apparatus, the cost is \$73.51 per person (0.00005 units per person X \$1,408,333 per unit) and \$33.82 per vehicle trip (0.00002 units per vehicle trip X \$1,408,333 per unit).

**Figure F11: Existing Level of Service**

Description	Units	Unit Cost	Total Cost
Engine	11	\$1,300,000	\$14,300,000
Ladder Truck	1	\$2,600,000	\$2,600,000
<b>Total</b>	<b>12</b>	<b>\$1,408,333</b>	<b>\$16,900,000</b>

Cost Factors	
Weighted Average per Unit	\$1,408,333

Level-of-Service (LOS) Standards	
Existing Units	12
Residential	
Residential Share	75%
2023 Population	172,866
Units per Person	0.00005
<b>Cost per Person</b>	<b>\$73.51</b>
Nonresidential	
Nonresidential Share	25%
2023 Vehicle Trips	124,008
Units per Vehicle Trip	0.00002
<b>Cost per Vehicle Trip</b>	<b>\$33.82</b>

Source: Surprise Fire Department

**Support Apparatus – Incremental Expansion**

Surprise currently serves existing development with 10 support apparatus, and Surprise plans to acquire additional support apparatus to serve future development. To allocate the proportionate share of demand for support apparatus to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure F1. The existing level of service for residential development is 0.00004 units per person (10 units X 75 percent residential share / 172,866 persons). The nonresidential level of service is 0.00002 units per vehicle trip (10 units X 25 percent nonresidential share / 124,008 vehicle trips).

Based on the replacement cost of the existing support apparatus fleet, the analysis uses \$394,000 per unit (\$3,940,000 total cost / 10 units) as a proxy for future support apparatus costs. For support apparatus, the cost is \$17.14 per person (0.00004 units per person X \$394,000 per unit) and \$7.88 per vehicle trip (0.00002 units per vehicle trip X \$394,000 per unit).

**Figure F12: Existing Level of Service**

Description	Units	Unit Cost	Total Cost
Brush Truck	2	\$450,000	\$900,000
Tanker	1	\$350,000	\$350,000
Ambulance	5	\$500,000	\$2,500,000
BC Response Vehicle	2	\$95,000	\$190,000
<b>Total</b>	<b>10</b>	<b>\$394,000</b>	<b>\$3,940,000</b>

Cost Factors	
Weighted Average per Unit	\$394,000

Level-of-Service (LOS) Standards	
Existing Units	10
Residential	
Residential Share	75%
2023 Population	172,866
Units per Person	0.00004
<b>Cost per Person</b>	<b>\$17.14</b>
Nonresidential	
Nonresidential Share	25%
2023 Vehicle Trips	124,008
Units per Vehicle Trip	0.00002
<b>Cost per Vehicle Trip</b>	<b>\$7.88</b>

Source: Surprise Fire Department

### Development Fee Report – Plan-Based

The cost to prepare the Fire Facilities IIP and related development fee report totals \$16,230. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of future development from the *Land Use Assumptions* document, the cost is \$0.27 per person and \$0.25 per vehicle trip.

**Figure F13: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Fire	\$16,230	Residential	75%	Population	44,514	\$0.27
		Nonresidential	25%	Vehicle Trips	16,226	\$0.25

### Bond Credit

Shown below, Surprise will issue \$100.0 million in G.O. bonds to construct transportation and public safety projects, and public safety projects will account for \$34.0 million of bond funding. To prevent future development from paying for future improvements through development fees and through future bond payments, the development fee study includes a credit for future bond payments. As shown in Figure F14, the analysis allocates public safety costs 50.2 percent to fire and 49.8 percent to police.

**Figure F14: Bond Allocation**

Series 2024 / 2027 Bond Use	Cost	Share
Transportation	\$66,000,000	66%
Public Safety	\$34,000,000	34%
Total	\$100,000,000	100%

Public Safety Use	Cost	Fire Share	Police Share
Fire Station	\$15,300,000	\$15,300,000	\$0
Police Substation	\$15,200,000	\$0	\$15,200,000
Land for Public Safety Facilities	\$3,500,000	\$1,755,738	\$1,744,262
Total	\$34,000,000	\$17,055,738	\$16,944,262
Share	100.0%	50.2%	49.8%

Source: Surprise Finance Department

To allocate the proportionate share of bond costs to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure F1. The analysis divides annual principal payments by population for residential development and by vehicle trips for nonresidential development. To calculate the bond credit, the analysis calculates the net present value of future principal payments. The proposed fire development fees include a credit of \$17.39 per person and \$8.95 per vehicle trip.

**Figure F15: Fire Bond Credit**

Fire Share of Series 2024 and Series 2027 Bonds							
Fiscal Year	Annual Principal Payment	Residential Share	Population	Principal per Person	Nonresidential Share	Vehicle Trips	Principal per Veh Trip
2024	\$0	\$0	181,769	\$0.00	\$0	127,254	\$0.00
2025	\$0	\$0	190,671	\$0.00	\$0	130,499	\$0.00
2026	\$5,117	\$3,847	199,574	\$0.02	\$1,270	133,744	\$0.01
2027	\$63,106	\$47,448	208,477	\$0.23	\$15,658	136,989	\$0.11
2028	\$53,726	\$40,395	217,380	\$0.19	\$13,331	140,235	\$0.10
2029	\$186,760	\$140,420	226,282	\$0.62	\$46,340	143,480	\$0.32
2030	\$214,902	\$161,579	235,185	\$0.69	\$53,323	146,725	\$0.36
2031	\$243,897	\$183,379	242,297	\$0.76	\$60,518	151,119	\$0.40
2032	\$274,597	\$206,462	249,410	\$0.83	\$68,135	155,513	\$0.44
2033	\$305,298	\$229,545	256,522	\$0.89	\$75,753	159,906	\$0.47
2034	\$338,556	\$254,551	262,467	\$0.97	\$84,005	164,300	\$0.51
2035	\$375,226	\$282,122	268,413	\$1.05	\$93,104	168,694	\$0.55
2036	\$412,749	\$310,334	274,358	\$1.13	\$102,414	173,088	\$0.59
2037	\$451,977	\$339,829	280,303	\$1.21	\$112,148	177,482	\$0.63
2038	\$493,764	\$371,247	286,249	\$1.30	\$122,516	181,875	\$0.67
2039	\$772,625	\$580,915	292,194	\$1.99	\$191,710	186,269	\$1.03
2040	\$809,295	\$608,486	298,139	\$2.04	\$200,808	190,663	\$1.05
2041	\$846,817	\$636,699	304,085	\$2.09	\$210,119	195,057	\$1.08
2042	\$886,898	\$666,834	310,030	\$2.15	\$220,064	199,450	\$1.10
2043	\$927,832	\$697,611	315,975	\$2.21	\$230,221	203,844	\$1.13
2044	\$971,324	\$730,312	321,921	\$2.27	\$241,012	208,238	\$1.16
2045	\$897,985	\$675,170	327,866	\$2.06	\$222,815	212,632	\$1.05
2046	\$938,066	\$705,305	333,811	\$2.11	\$232,760	217,025	\$1.07
2047	\$980,705	\$737,365	339,757	\$2.17	\$243,340	221,419	\$1.10
2048	\$1,024,197	\$770,065	345,702	\$2.23	\$254,132	225,813	\$1.13
2049	\$1,070,248	\$804,689	351,647	\$2.29	\$265,558	230,207	\$1.15
2050	\$1,118,856	\$841,237	357,593	\$2.35	\$277,619	234,601	\$1.18
2051	\$1,169,171	\$879,067	363,538	\$2.42	\$290,104	238,994	\$1.21
2052	\$1,222,044	\$918,821	369,483	\$2.49	\$303,223	243,388	\$1.25
<b>Total</b>	<b>\$17,055,738</b>	<b>\$12,823,736</b>		<b>\$17.39</b>	<b>\$4,232,002</b>		<b>\$8.95</b>



## PROJECTED DEMAND FOR SERVICES AND COSTS

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ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

As shown in the *Land Use Assumptions* document, Surprise’s population is expected to increase by 83,656 persons and nonresidential vehicle trips are expected to increase by 35,898 trips over the next 10 years. To reach the planned level of service, Surprise will need to construct 54,000 square feet of fire stations and 90,000 square feet of fire facilities over the next 10 years. To maintain the existing level of service, Surprise will need to expand the apparatus fleet by approximately five primary units and approximately four support units over the next 10 years. The following pages include a more detailed projection of demand for services and costs for the Fire Facilities IIP.

**Fire Stations – Plan-Based**

Surprise will use development fees to repay obligations associated with Fire Station 303 and to construct additional fire stations over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 40,120 square feet of planned fire facilities (83,656 additional persons X 0.4796 square feet per person). With projected nonresidential growth of 35,898 vehicle trips, future nonresidential development demands approximately 9,114 square feet of planned fire facilities (35,898 additional vehicle trips X 0.2539 square feet per vehicle trip). Future development demands 49,234 square feet of fire facilities at a cost of \$63,633,980 (49,233.8 square feet X \$1,292 per square foot). The remaining cost of \$6,869,808 represents existing development’s share of planned fire stations (\$70,503,788 total fire stations cost - \$63,633,980 growth cost).

**Figure F16: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Fire Stations	0.4796 Square Feet	per Person	\$1,292
	0.2539 Square Feet	per Vehicle Trip	

Demand for Fire Stations					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2023	172,866	124,008	82,902.5	31,484.7	114,387.2
2024	181,769	127,254	87,172.1	32,308.6	119,480.7
2025	190,671	130,499	91,441.6	33,132.6	124,574.2
2026	199,574	133,744	95,711.1	33,956.5	129,667.7
2027	208,477	136,989	99,980.7	34,780.5	134,761.1
2028	217,380	140,235	104,250.2	35,604.4	139,854.6
2029	226,282	143,480	108,519.8	36,428.3	144,948.1
2030	235,185	146,725	112,789.3	37,252.3	150,041.6
2031	242,297	151,119	116,200.2	38,367.8	154,568.1
2032	249,410	155,513	119,611.2	39,483.4	159,094.5
2033	256,522	159,906	123,022.1	40,598.9	163,621.0
10-Yr Increase	83,656	35,898	40,119.6	9,114.2	49,233.8

Growth-Related Expenditures	\$51,853,982	\$11,779,998	\$63,633,980
Non-Growth Expenditures	\$1,155,861	\$5,713,947	\$6,869,808
Total Expenditures	\$53,009,843	\$17,493,945	\$70,503,788

**Fire Facilities – Plan-Based**

Surprise will use development fees to repay obligations associated with the Public Safety Building and to construct the Public Safety Administration and Operations facility within the next 10 years. Based on a 20-year projected population increase of 143,109 persons, future residential development demands approximately 35,756 square feet of planned fire facilities (143,109 additional persons X 0.2499 square feet per person). With a 20-year projected increase of 79,836 vehicle trips, future nonresidential development demands approximately 10,204 square feet of planned fire facilities (79,836 additional vehicle trips X 0.1278 square feet per vehicle trip). Future development demands approximately 45,960 square feet of fire facilities at a cost of \$50,870,851 (45,959.8 square feet X \$1,107 per square foot). The remaining cost of \$49,192,172 represents existing development’s share of planned fire facilities (\$100,063,023 total fire facilities cost - \$50,870,851 growth cost).

**Figure F17: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Fire Facilities	0.2499 Square Feet	per Person	\$1,107
	0.1278 Square Feet	per Vehicle Trip	

Demand for Fire Facilities					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2023	172,866	124,008	43,190.6	15,849.6	59,040.2
2024	181,769	127,254	45,415.0	16,264.3	61,679.3
2025	190,671	130,499	47,639.3	16,679.1	64,318.4
2026	199,574	133,744	49,863.7	17,093.9	66,957.6
2027	208,477	136,989	52,088.0	17,508.7	69,596.7
2028	217,380	140,235	54,312.4	17,923.4	72,235.8
2029	226,282	143,480	56,536.7	18,338.2	74,875.0
2030	235,185	146,725	58,761.1	18,753.0	77,514.1
2031	242,297	151,119	60,538.1	19,314.6	79,852.7
2032	249,410	155,513	62,315.1	19,876.1	82,191.3
2033	256,522	159,906	64,092.2	20,437.7	84,529.9
2038	286,249	181,875	71,519.4	23,245.6	94,764.9
2043	315,975	203,844	78,946.6	26,053.4	105,000.0
20-Yr Increase	143,109	79,836	35,756.0	10,203.8	45,959.8

Growth-Related Expenditures	\$39,576,667	\$11,294,183	\$50,870,851
Non-Growth Expenditures	\$35,657,945	\$13,534,228	\$49,192,172
Total Expenditures	\$75,234,612	\$24,828,411	\$100,063,023

**Primary Apparatus – Incremental Expansion**

Surprise plans to maintain its level of service for primary apparatus over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately four primary apparatus (83,656 additional persons X 0.00005 units per person). With projected nonresidential growth of 35,898 vehicle trips, future nonresidential development demands approximately one primary apparatus (35,898 additional vehicle trips X 0.00002 units per vehicle trip). Future development demands approximately five primary apparatus at a cost of \$7,363,111 (5.2 units X \$1,408,333 per unit). Surprise may use development fees to expand its primary apparatus fleet.

**Figure F18: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Primary Apparatus	0.00005 Units	per Person	\$1,408,333
	0.00002 Units	per Vehicle Trip	

Demand for Primary Apparatus					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2023	172,866	124,008	9.0	3.0	12.0
2024	181,769	127,254	9.5	3.1	12.5
2025	190,671	130,499	10.0	3.1	13.1
2026	199,574	133,744	10.4	3.2	13.6
2027	208,477	136,989	10.9	3.3	14.2
2028	217,380	140,235	11.3	3.4	14.7
2029	226,282	143,480	11.8	3.4	15.3
2030	235,185	146,725	12.3	3.5	15.8
2031	242,297	151,119	12.6	3.6	16.3
2032	249,410	155,513	13.0	3.7	16.8
2033	256,522	159,906	13.4	3.8	17.2
10-Yr Increase	83,656	35,898	4.4	0.9	5.2

Growth-Related Expenditures	\$6,149,213	\$1,213,898	\$7,363,111
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**Support Apparatus – Incremental Expansion**

Surprise plans to maintain its level of service for support apparatus over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately four support apparatus (83,656 additional persons X 0.00004 units per person). With projected nonresidential growth of 35,898 vehicle trips, future nonresidential development demands approximately one support apparatus (35,898 additional vehicle trips X 0.00002 units per vehicle trip). Future development demands approximately four support apparatus at a cost of \$1,716,607 (4.4 units X \$394,000 per unit). Surprise may use development fees to expand its support apparatus fleet.

**Figure F19: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Support Apparatus	0.00004 Units	per Person	\$394,000
	0.00002 Units	per Vehicle Trip	

Demand for Support Apparatus					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2023	172,866	124,008	7.5	2.5	10.0
2024	181,769	127,254	7.9	2.5	10.5
2025	190,671	130,499	8.3	2.6	10.9
2026	199,574	133,744	8.7	2.7	11.4
2027	208,477	136,989	9.1	2.7	11.8
2028	217,380	140,235	9.5	2.8	12.3
2029	226,282	143,480	9.8	2.9	12.7
2030	235,185	146,725	10.2	2.9	13.2
2031	242,297	151,119	10.5	3.0	13.6
2032	249,410	155,513	10.8	3.1	14.0
2033	256,522	159,906	11.2	3.2	14.4
10-Yr Increase	83,656	35,898	3.6	0.7	4.4

Growth-Related Expenditures	\$1,433,604	\$283,003	\$1,716,607
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**FIRE FACILITIES DEVELOPMENT FEES**

**Revenue Credit/Offset**

A revenue credit/offset is necessary for development fees, because Surprise’s construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).



**Fire Facilities Development Fees**

Infrastructure components and cost factors for fire facilities are summarized in the upper portion of Figure F20. The cost per service unit for fire facilities is \$673.15 per person and \$233.93 per vehicle trip.

Fire facilities development fees for residential development are assessed according to the number of persons per housing unit. The fee of \$1,737 for a single-family unit is calculated using a cost per service unit of \$673.15 per person multiplied by a demand unit of 2.58 persons per housing unit.

Nonresidential development fees are calculated using vehicle trips as the service unit. The fee of \$394 per 1,000 square feet of industrial development is derived from a cost per service unit of \$233.93 per vehicle trip multiplied by a demand unit of 1.69 vehicle trips per 1,000 square feet.

**Figure F20: Fire Facilities Development Fees**

Fee Component	Cost per Person	Cost per Trip
Fire Stations	\$619.85	\$328.15
Fire Facilities	\$276.55	\$141.47
Primary Apparatus	\$73.51	\$33.82
Support Apparatus	\$17.14	\$7.88
Development Fee Report	\$0.27	\$0.25
Bond Credit	(\$17.39)	(\$8.95)
Subtotal	\$969.93	\$502.62
Excess Construction Sales Tax	(\$296.78)	(\$268.69)
Total	\$673.15	\$233.93

Residential Fees per Unit				
Development Type	Persons per Housing Unit <sup>1</sup>	Proposed Fees	Current Fees	Difference
Single-Family	2.58	\$1,737	\$789	\$948
Multi-Family	1.58	\$1,064	\$481	\$583
Mobile Home	1.09	\$734	\$442	\$292

Nonresidential Fees per 1,000 Square Feet				
Development Type	AWVT per 1,000 Sq Ft <sup>1</sup>	Proposed Fees	Current Fees	Difference
Industrial	1.69	\$394	\$166	\$228
Warehouse	0.86	\$200	\$95	\$105
Retail/Commercial	10.18	\$2,381	\$876	\$1,505
Office	4.88	\$1,141	\$497	\$644
Public/Institutional	3.38	\$790	\$308	\$482

1. See Land Use Assumptions

**FIRE FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains the forecast of revenues required by Arizona’s enabling legislation (ARS § 9-463.05(E)(7)). In accordance with state law, this report includes an IIP for fire facilities needed to accommodate future development. Projected fee revenue shown in Figure F21 is based on the development projections in the *Land Use Assumptions* document and the updated fire facilities development fees. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue over the next 20 years equals \$104,251,232 and total projected expenditures equal \$160,316,042. The remaining balance represents existing development’s share of planned costs for fire stations and fire facilities.

**Figure F21: Fire Facilities Development Fee Revenue**

Fee Component	Growth Share		Existing Share	Total
	Years 1-10	Years 11-20		
Fire Stations	\$63,633,980	\$0	\$6,869,808	\$70,503,788
Fire Facilities	\$28,213,394	\$22,657,457	\$49,192,172	\$100,063,023
Primary Apparatus	\$7,363,111	\$0	\$0	\$7,363,111
Support Apparatus	\$1,716,607	\$0	\$0	\$1,716,607
Development Fee Report	\$16,230	\$0	\$0	\$16,230
Bond Credit	(\$1,776,069)	\$0	\$0	(\$1,776,069)
Excess Constr. Sales Tax	(\$17,570,649)	\$0	\$0	(\$17,570,649)
<b>Total</b>	<b>\$81,596,604</b>	<b>\$22,657,457</b>	<b>\$56,061,981</b>	<b>\$160,316,042</b>

		Single Family \$1,737 per unit	Multi-Family \$1,064 per unit	Mobile Home \$734 per unit	Industrial \$394 per 1,000 sq ft	Warehouse \$200 per 1,000 sq ft	Ret/Comm \$2,381 per 1,000 sq ft	Office \$1,141 per 1,000 sq ft	Public/Inst \$790 per 1,000 sq ft
Year		Hsg Unit	Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF	KSF
Base	2023	59,934	9,973	3,106	2,098	5,332	7,380	3,397	7,179
Year 1	2024	62,847	10,833	3,133	2,310	5,484	7,499	3,620	7,317
Year 2	2025	65,760	11,692	3,159	2,523	5,635	7,617	3,843	7,454
Year 3	2026	68,673	12,552	3,186	2,736	5,787	7,735	4,067	7,592
Year 4	2027	71,586	13,411	3,213	2,948	5,938	7,854	4,290	7,729
Year 5	2028	74,499	14,271	3,239	3,161	6,089	7,972	4,513	7,867
Year 6	2029	77,412	15,130	3,266	3,373	6,241	8,090	4,737	8,005
Year 7	2030	80,325	15,990	3,293	3,586	6,392	8,208	4,960	8,142
Year 8	2031	82,536	16,868	3,313	3,736	6,499	8,431	5,249	8,253
Year 9	2032	84,746	17,746	3,333	3,886	6,606	8,653	5,538	8,364
Year 10	2033	86,957	18,624	3,354	4,036	6,714	8,876	5,827	8,475
10-Year Increase		27,023	8,650	248	1,938	1,381	1,496	2,430	1,296
Projected Revenue		\$56,461,798	\$11,239,514	\$214,302	\$1,159,872	\$419,535	\$6,031,172	\$4,492,657	\$1,574,723

Projected Fee Revenue (Years 1-10)	\$81,593,573
Projected Fee Revenue (Years 11-20)	\$22,657,659
<b>Total Expenditures</b>	<b>\$160,316,042</b>

**10-YEAR CAPITAL PLAN**

The figure shown below includes potential fire capital expenditures during the next 10 years. The list of potential capital expenditures is representational of future growth-related fire capital expenditures.

**Figure F22: Fire Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	Ambulance (x2)	2024	\$1,100,000
CIP	Fire Station	2024	\$18,000,000
CIP	Fire Station	2026-2028	\$21,000,000
CIP	Fire Station	2030+	\$31,500,000
CIP	Ladder Truck	2028	\$2,508,000
CIP	Public Safety Admin & Ops	2030+	\$100,000,000
Debt Service	Fire Station 303	2024	\$3,788
Debt Service	Public Safety Building (share)	2024	\$63,023
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$16,230
<b>Total</b>			<b>\$174,191,041</b>

## PARKS AND RECREATIONAL FACILITIES IIP

ARS § 9-463.05 (T)(7)(g) defines the facilities and assets that can be included in the Parks and Recreational Facilities IIP:

*“Neighborhood parks and recreational facilities on real property up to thirty acres in area, or parks and recreational facilities larger than thirty acres if the facilities provide a direct benefit to the development. Park and recreational facilities do not include 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.”*

The Parks and Recreational Facilities IIP includes components for park land, park amenities, recreation facilities, and the cost of preparing the Parks and Recreational Facilities IIP and related Development Fee Report. The incremental expansion methodology is used for park land, park amenities, and recreation facilities. The plan-based methodology is used for the Development Fee Report.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Parks and Recreational Facilities IIP and development fees allocate the cost of necessary public services between residential and nonresidential based on functional population. The Arizona Office of Economic Opportunity estimates Surprise’s 2019 population equal to 136,194 persons. Based on 2019 estimates from the U.S. Census Bureau’s OnTheMap web application, 16,952 inflow commuters traveled to Surprise for work in 2019. The proportionate share is based on cumulative impact hours per year with a resident potentially impacting parks and recreational facilities 8,760 hours per year and an inflow commuter potentially impacting parks and recreational facilities 1,600 hours per year. For parks and recreational facilities, residential development generates 98 percent of demand and nonresidential development generates the remaining two percent of demand.

**Figure PR1: Proportionate Share**

Development Type	Service Unit	Impact Days per Year	Total Impact Hours per Year	Proportionate Share
Residential	136,194 residents	8,760 hours	1,193,059,440	98%
Nonresidential	16,952 inflow commuters	1,600 hours	27,123,200	2%
Total			1,220,182,640	100%

Residential Impact: 8,760 hours per year (24 hours per day X 365 days per year)

Nonresidential Impact: 1,600 hours per year (8 hours per day X 4 days per week X 50 weeks per year)

### SERVICE AREA

Surprise provides access to parks and recreational facilities throughout the city; therefore, there is a single service area for the Parks and Recreational Facilities IIP.

**RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT**

ARS § 9-463.05(E)(4) 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 PR2 displays the demand indicators for residential and nonresidential land uses. For residential development, the table displays the number of persons per housing unit. For nonresidential development, the table displays the number of jobs per thousand square feet of floor area.

**Figure PR2: Ratio of Service Unit to Development Unit**

Residential Development	
Development Type	Persons per Housing Unit <sup>1</sup>
Single-Family	2.58
Multi-Family	1.58
Mobile Home	1.09

Nonresidential Development	
Development Type	Jobs per 1,000 Sq Ft <sup>1</sup>
Industrial	1.16
Warehouse	0.34
Retail/Commercial	2.12
Office	3.26
Public/Institutional	2.04

1. See Land Use Assumptions

**ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES**

ARS § 9-463.05(E)(1) requires:

*“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.”*

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.”*



**Park Land – Incremental Expansion**

Surprise currently provides 357.30 acres of park land and plans to acquire and develop additional park land to serve future development. Surprise Recreation Campus includes the Spring Training Campus, and this analysis excludes the portion of the park that includes the Spring Training Campus. The analysis includes 306.55 acres of eligible park land.

**Figure PR3: Existing Park Land**

Description	Total Acres	Eligible Acres
Bicentennial Park / Lizard Run	17.94	17.94
DreamCatcher Park	4.14	4.14
Gaines Park (North and South)	4.20	4.20
Heritage (Marley) Park North	12.01	12.01
Heritage (Marley) Park South	15.61	15.61
Section 10 / Pocket Park	1.02	1.02
Mark Coronado Park	7.55	7.55
Sierra Montana Park	9.42	9.42
Surprise Community Park <sup>1</sup>	30.80	30.80
Dick McComb Park East	21.94	21.94
Dick McComb Park West	30.00	30.00
Johnson Townhome Park	0.60	0.60
Surprise Tennis / Racquet Complex	22.76	22.76
Veramonte Park	8.58	8.58
Youth Baseball Complex	4.60	4.60
Asante Community Park	53.80	53.80
Stonebrook Park	3.19	3.19
3 Star Park	0.94	0.94
The Fields at Countryside	12.20	12.20
Surprise Recreation Campus <sup>2</sup>	96.00	45.25
<b>Total</b>	<b>357.30</b>	<b>306.55</b>

1. Excludes library and aquatics center
2. Eligible Acres: Excludes Spring Training Campus

To allocate the proportionate share of demand for park land to residential and nonresidential development, this analysis uses the proportionate share shown in Figure PR1. The existing level of service for residential development is 0.00174 acres per person (306.55 eligible acres X 98 percent residential share / 172,866 persons). For nonresidential development, the existing level of service is 0.00023 acres per job (306.55 eligible acres X two percent nonresidential share / 27,035 jobs).

Based on estimates provided by the Surprise Parks and Recreation Department, the cost to acquire park land is \$180,000 per acre and the cost of site development is \$459,000 per acre. The analysis uses a total cost of \$639,000 per acre. For park land, the cost is \$1,110.50 per person (0.00174 acres per person X \$639,000 per acre) and \$144.91 per job (0.00023 acres per job X \$639,000 per acre).

**Figure PR4: Existing Level of Service**

Cost Factors	
Land Acquisition (per acre)	\$180,000
Site Development <sup>1</sup> (per acre)	\$459,000
<b>Total (per acre)</b>	<b>\$639,000</b>

Level-of-Service (LOS) Standards	
Eligible Acres	306.55
Residential	
Residential Share	98%
2023 Population	172,866
Eligible Acres per Person	0.00174
<b>Cost per Person</b>	<b>\$1,110.50</b>
Nonresidential	
Nonresidential Share	2%
2023 Jobs	27,035
Eligible Acres per Job	0.00023
<b>Cost per Job</b>	<b>\$144.91</b>

Source: Surprise Parks and Recreation Department  
 1. Includes drainage, earthwork, landscaping, water, sewer, electricity, paving, signage, etc.

### Park Amenities – Incremental Expansion

Surprise currently provides 179.5 park amenities in its existing parks and plans to construct additional park amenities to serve future development. Based on costs provided by Surprise’s Parks and Recreation Department to construct recent park amenities, the total cost of existing park amenities is \$65,563,295.

**Figure PR5: Existing Park Amenities**

Description	Units	Unit Cost	Total Cost
Baseball Field, Lighted	4.0	\$777,793	\$3,111,171
Baseball/Softball Field, Not Lighted	2.0	\$340,613	\$681,226
Softball Field, Adult, Lighted	10.0	\$775,057	\$7,750,570
Multi-Purpose Field, Not Lighted	7.5	\$112,860	\$846,450
Multi-Purpose Field, Lighted	14.0	\$776,862	\$10,876,069
Soccer Field, Lighted	2.0	\$1,558,162	\$3,116,324
Basketball Court, Lighted	5.5	\$223,020	\$1,226,610
Basketball Court, Not Lighted	3.5	\$113,280	\$396,480
Tennis Court, Lighted	25.0	\$152,100	\$3,802,500
Pickleball Court	16.0	\$105,565	\$1,689,045
Sand Volleyball Court	7.0	\$83,333	\$583,333
Single Picnic Ramada (12' x 12')	22.0	\$56,250	\$1,237,500
Double Picnic Ramada (12' x 24')	11.0	\$93,750	\$1,031,250
Pavillion (24' x 24')	1.0	\$259,600	\$259,600
Playground, Small (40' x 50')	8.0	\$534,000	\$4,272,000
Playground, Large (80' x 100')	6.0	\$704,000	\$4,224,000
Dog Park	2.0	\$702,000	\$1,404,000
Restroom	12.0	\$534,404	\$6,412,852
Restroom / Concession Facilities	3.0	\$787,500	\$2,362,500
Splash Pad	3.0	\$800,000	\$2,400,000
Skate Park at Dick McComb Park	1.0	\$750,000	\$750,000
Paved Parking Lot	13.0	\$521,380	\$6,777,936
Lizard Run Pedestrian Bridge	1.0	\$351,878	\$351,878
<b>Total</b>	<b>179.5</b>	<b>\$365,255</b>	<b>\$65,563,295</b>

Source: Surprise Parks and Recreation Department

To allocate the proportionate share of demand for park amenities to residential and nonresidential development, this analysis uses the proportionate share shown in Figure PR1. The existing level of service for residential development is 0.00102 units per person (179.5 units X 98 percent residential share / 172,866 persons). For nonresidential development, the existing level of service is 0.00013 units per job (179.5 units X two percent nonresidential share / 27,035 jobs).

Based on the total cost of existing park amenities, the weighted average cost for existing park amenities is \$365,255 per unit (\$65,563,295 total cost / 179.5 units). For park amenities, the cost is \$371.69 per person (0.00102 units per person X \$365,255 per unit) and \$48.50 per job (0.00013 units per job X \$365,255 per unit).

**Figure PR6: Existing Level of Service**

Cost Factors	
Weighted Average per Unit	\$365,255

Level-of-Service (LOS) Standards	
Existing Units	179.5
Residential	
Residential Share	98%
2023 Population	172,866
Units per Person	0.00102
<b>Cost per Person</b>	<b>\$371.69</b>
Nonresidential	
Nonresidential Share	2%
2023 Jobs	27,035
Units per Job	0.00013
<b>Cost per Job</b>	<b>\$48.50</b>

Source: Surprise Parks and Recreation Department

### Recreation Facilities – Incremental Expansion

Surprise currently provides 43,400 square feet of recreation facilities and plans to construct additional recreation facilities to serve future development. The Enabling Legislation limits recreation facilities to “three thousand square feet that provide a direct benefit to development.” To comply with the Enabling Legislation, Surprise will use 12,000 square feet in the level-of-service standards.

To allocate the proportionate share of demand for recreation facilities to residential and nonresidential development, this analysis uses proportionate share shown in Figure PR1. The level of service for residential development is 0.0680 eligible square feet per person (12,000 eligible square feet X 98 percent residential share / 172,866 persons). The nonresidential level of service is 0.0089 eligible square feet per job (12,000 eligible square feet X two percent nonresidential share / 27,035 jobs).

Surprise provided a construction cost of \$600 per square foot. For recreation facilities, the cost is \$40.82 per person (0.0680 eligible square feet per person X \$600 per square foot) and \$5.33 per job (0.0089 eligible square feet per job X \$600 per square foot).

**Figure PR7: Existing Level of Service**

Description	Total Square Feet	Eligible Square Feet
Villanueva Gym	10,100	3,000
Tennis and Racquet Complex	9,300	3,000
Countryside Recreation Center	14,000	3,000
Sierra Montana Recreation Center	10,000	3,000
<b>Total</b>	<b>43,400</b>	<b>12,000</b>

Cost Factors	
Cost per Square Foot	\$600

Level-of-Service (LOS) Standards	
Eligible Square Feet	12,000
Residential	
Residential Share	98%
2023 Population	172,866
Eligible Square Feet per Person	0.0680
<b>Cost per Person</b>	<b>\$40.82</b>
Nonresidential	
Nonresidential Share	2%
2023 Jobs	27,035
Eligible Square Feet per Job	0.0089
<b>Cost per Job</b>	<b>\$5.33</b>

Source: Surprise Parks and Recreation Department



**Development Fee Report – Plan-Based**

The cost to prepare the Parks and Recreational Facilities IIP and development fees totals \$15,000. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new development from the *Land Use Assumptions* document, the cost is \$0.33 per person and \$0.04 per job.

**Figure PR8: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Parks and Recreational	\$15,000	Residential	98%	Population	44,514	\$0.33
		Nonresidential	2%	Jobs	7,782	\$0.04

**PROJECTED DEMAND FOR SERVICES AND COSTS**

ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

As shown in the *Land Use Assumptions* document, Surprise’s population is projected to increase by 83,656 persons and employment is expected to increase by 16,444 jobs over the next 10 years. To maintain the existing levels of service, Surprise will need to acquire and develop approximately 149 acres of park land, construct approximately 87 park amenities, and construct approximately 5,800 square feet of recreation facilities over the next 10 years. The following pages include a more detailed projection of demand for services and costs for the Parks and Recreational Facilities IIP.

### Park Land – Incremental Expansion

Surprise plans to maintain its existing level of service for park land over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 145.4 acres of park land (83,656 additional persons X 0.00174 eligible acres per person). With projected employment growth of 16,444 jobs, future nonresidential development demands approximately 3.7 acres of park land (16,444 additional jobs X 0.00023 eligible acres per job). Future development demands 149.11 additional acres of park land at a cost of \$95,283,250 (149.11 acres X \$639,000 per acre). Surprise may use development fees to acquire and develop additional park land.

**Figure PR9: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Acre
Park Land	0.00174 Eligible Acres	per Person	\$639,000
	0.00023 Eligible Acres	per Job	

Demand for Park Land					
Year	Population	Jobs	Eligible Acres		
			Residential	Nonresidential	Total
2023	172,866	27,035	300.42	6.13	306.55
2024	181,769	28,591	315.89	6.48	322.37
2025	190,671	30,148	331.36	6.84	338.20
2026	199,574	31,704	346.83	7.19	354.02
2027	208,477	33,260	362.31	7.54	369.85
2028	217,380	34,816	377.78	7.90	385.67
2029	226,282	36,373	393.25	8.25	401.50
2030	235,185	37,929	408.72	8.60	417.32
2031	242,297	39,779	421.08	9.02	430.10
2032	249,410	41,629	433.44	9.44	442.88
2033	256,522	43,479	445.80	9.86	455.66
10-Yr Increase	83,656	16,444	145.38	3.73	149.11

Growth-Related Expenditures	\$92,900,286	\$2,382,964	\$95,283,250
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**Park Amenities – Incremental Expansion**

Surprise plans to maintain its existing level of service for park amenities over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 85.1 park amenities (83,656 additional persons X 0.00102 amenities per person). With projected employment growth of 16,444 jobs, future nonresidential development demands approximately 2.2 park amenities (16,444 additional jobs X 0.00013 amenities per job). Future development demands 87.3 additional park amenities at a cost of \$31,891,515 (87.3 amenities X \$365,255 per amenity). Surprise may use development fees to construct additional park amenities.

**Figure PR10: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Park Amenities	0.00102 Units	per Person	\$365,255
	0.00013 Units	per Job	

Demand for Park Amenities					
Year	Population	Jobs	Units		
			Residential	Nonresidential	Total
2023	172,866	27,035	175.9	3.6	179.5
2024	181,769	28,591	185.0	3.8	188.8
2025	190,671	30,148	194.0	4.0	198.0
2026	199,574	31,704	203.1	4.2	207.3
2027	208,477	33,260	212.1	4.4	216.6
2028	217,380	34,816	221.2	4.6	225.8
2029	226,282	36,373	230.3	4.8	235.1
2030	235,185	37,929	239.3	5.0	244.4
2031	242,297	39,779	246.6	5.3	251.8
2032	249,410	41,629	253.8	5.5	259.3
2033	256,522	43,479	261.0	5.8	266.8
10-Yr Increase	83,656	16,444	85.1	2.2	87.3

Growth-Related Expenditures	\$31,093,932	\$797,583	\$31,891,515
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**Recreation Facilities – Incremental Expansion**

Surprise plans to maintain its eligible level of service for recreation over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 5,691 square feet of recreation facilities (83,656 additional persons X 0.0680 eligible square feet per person). With projected employment growth of 16,444 jobs, future nonresidential development demands approximately 146 square feet of recreation facilities (16,444 additional jobs X 0.0089 eligible square feet per job). Future development demands approximately 5,837.1 square feet of recreation facilities at a cost of \$3,502,248 (5,837.1 square feet X \$600 per square foot). Surprise may use development fees to construct additional recreation facilities.

**Figure PR11: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Recreation Facilities	0.0680 Eligible Sq Ft	per Person	\$600
	0.0089 Eligible Sq Ft	per Job	

Demand for Recreation Facilities					
Year	Population	Jobs	Eligible Square Feet		
			Residential	Nonresidential	Total
2023	172,866	27,035	11,760.0	240.0	12,000.0
2024	181,769	28,591	12,365.6	253.8	12,619.5
2025	190,671	30,148	12,971.3	267.6	13,238.9
2026	199,574	31,704	13,576.9	281.4	13,858.4
2027	208,477	33,260	14,182.6	295.3	14,477.9
2028	217,380	34,816	14,788.2	309.1	15,097.3
2029	226,282	36,373	15,393.9	322.9	15,716.8
2030	235,185	37,929	15,999.5	336.7	16,336.3
2031	242,297	39,779	16,483.4	353.1	16,836.5
2032	249,410	41,629	16,967.2	369.6	17,336.8
2033	256,522	43,479	17,451.1	386.0	17,837.1
10-Yr Increase	83,656	16,444	5,691.1	146.0	5,837.1

Growth-Related Expenditures	\$3,414,659	\$87,589	\$3,502,248
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**PARKS AND RECREATIONAL FACILITIES DEVELOPMENT FEES**

**Revenue Credit/Offset**

A revenue credit/offset is necessary for development fees, because Surprise’s construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).

The analysis also includes a site development credit of \$218.13 per person and \$28.46 per job. This credit reduces site development costs included with park land.

**Parks and Recreational Facilities Development Fees**

Infrastructure components and cost factors for parks and recreational facilities are summarized in the upper portion of Figure PR12. The cost per service unit is \$697.67 per person and \$99.39 per job.

Parks and recreational facilities fees for residential development are assessed according to the number of persons per housing unit. The fee of \$1,800 for a single-family unit is calculated using a cost per service unit of \$697.67 per person multiplied by a demand unit of 2.58 persons per housing unit.

Nonresidential development fees are calculated using jobs as the service unit. The fee of \$115 per 1,000 square feet of industrial development is derived from a cost per service unit of \$99.39 per job multiplied by a demand unit of 1.16 jobs per 1,000 square feet.

**Figure PR12: Parks and Recreational Facilities Development Fees**

Fee Component	Cost per Person	Cost per Job
Park Land	\$1,110.50	\$144.91
Park Amenities	\$371.69	\$48.50
Recreation Facilities	\$40.82	\$5.33
Development Fee Report	\$0.33	\$0.04
Subtotal	\$1,523.34	\$198.78
Excess Construction Sales Tax	(\$607.54)	(\$70.93)
Site Development Cost Credit	(\$218.13)	(\$28.46)
Total	\$697.67	\$99.39

Residential Fees per Unit						
Development Type	Persons per Housing Unit <sup>1</sup>	Proposed Fees	Adopted Fees <sup>2</sup>	Difference from Adopted	Current Fees	Difference from Current
Single-Family	2.58	\$1,800	\$1,845	(\$45)	\$1,060	\$740
Multi-Family	1.58	\$1,102	\$1,227	(\$125)	\$647	\$455
Mobile Home	1.09	\$760	\$1,289	(\$529)	\$594	\$166

Nonresidential Fees per 1,000 Square Feet						
Development Type	Jobs per 1,000 Sq Ft <sup>1</sup>	Proposed Fees	Adopted Fees <sup>2</sup>	Difference from Adopted	Current Fees	Difference from Current
Industrial	1.16	\$115	\$32	\$83	\$32	\$83
Warehouse	0.34	\$34	\$32	\$2	\$32	\$2
Retail/Commercial	2.12	\$211	\$32	\$179	\$32	\$179
Office	3.26	\$324	\$74	\$250	\$74	\$250
Public/Institutional	2.04	\$203	\$85	\$118	\$85	\$118

1. See Park Land Use Assumptions  
 2. Adopted fees for residential development include a grandfathered park fee that has been retired



**PARKS AND RECREATIONAL FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)). In accordance with state law, this report includes an IIP for parks and recreational facilities needed to accommodate new development. Projected fee revenue shown in Figure PR13 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for parks and recreational facilities shown in Figure PR12. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue equals \$84,380,104, and projected expenditures equal \$84,380,663.

**Figure PR13: Parks and Recreational Facilities Development Fee Revenue**

Fee Component	Growth Share	Existing Share	Total
Park Land	\$95,283,250	\$0	\$95,283,250
Park Amenities	\$31,891,515	\$0	\$31,891,515
Recreation Facilities	\$3,502,248	\$0	\$3,502,248
Development Fee Report	\$15,000	\$0	\$15,000
Excess Constr. Sales Tax	(\$27,595,880)	\$0	(\$27,595,880)
Site Dev. Cost Credit	(\$18,715,470)	\$0	(\$18,715,470)
<b>Total</b>	<b>\$84,380,663</b>	<b>\$0</b>	<b>\$84,380,663</b>

		Single Family \$1,800 per unit	Multi-Family \$1,102 per unit	Mobile Home \$760 per unit	Industrial \$115 per 1,000 sq ft	Warehouse \$34 per 1,000 sq ft	Ret/Comm \$211 per 1,000 sq ft	Office \$324 per 1,000 sq ft	Public/Inst \$203 per 1,000 sq ft
Year		Hsg Unit	Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF	KSF
Base	2023	59,934	9,973	3,106	2,098	5,332	7,380	3,397	7,179
Year 1	2024	62,847	10,833	3,133	2,310	5,484	7,499	3,620	7,317
Year 2	2025	65,760	11,692	3,159	2,523	5,635	7,617	3,843	7,454
Year 3	2026	68,673	12,552	3,186	2,736	5,787	7,735	4,067	7,592
Year 4	2027	71,586	13,411	3,213	2,948	5,938	7,854	4,290	7,729
Year 5	2028	74,499	14,271	3,239	3,161	6,089	7,972	4,513	7,867
Year 6	2029	77,412	15,130	3,266	3,373	6,241	8,090	4,737	8,005
Year 7	2030	80,325	15,990	3,293	3,586	6,392	8,208	4,960	8,142
Year 8	2031	82,536	16,868	3,313	3,736	6,499	8,431	5,249	8,253
Year 9	2032	84,746	17,746	3,333	3,886	6,606	8,653	5,538	8,364
Year 10	2033	86,957	18,624	3,354	4,036	6,714	8,876	5,827	8,475
10-Year Increase		27,023	8,650	248	1,938	1,381	1,496	2,430	1,296
Projected Revenue		\$68,156,825	\$13,710,899	\$264,149	\$294,926	\$61,470	\$451,981	\$1,089,288	\$350,565

Projected Fee Revenue	\$84,380,104
Total Expenditures	\$84,380,663

**10-YEAR CAPITAL PLAN**

The figure shown below includes potential parks and recreational capital expenditures during the next 10 years. The list of potential capital expenditures is representational of future growth-related parks and recreational capital expenditures.

**Figure PR14: Parks and Recreational Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	City Park Improvements	2025-2028	\$6,500,000
CIP	McMicken Park - Design	2025	\$2,700,000
CIP	New Park - Perryville & Cactus	2024	\$8,836,800
CIP	Park West Surprise (SPA 1)	2028-2032	\$15,000,000
CIP	Park North Surprise (SPA 2)	2028-2032	\$25,000,000
CIP	Park Northwest Surprise (SPA 3)	2028-2032	\$15,000,000
CIP	Trails	2028-2032	\$10,000,000
Dev Agreement	Developer Obligation - Asante Park	2024-2034	\$3,688,893
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$15,000
<b>Total</b>			<b>\$86,740,693</b>

Source: Surprise Parks and Recreation Department

## POLICE FACILITIES IIP

ARS § 9-463.05 (T)(7)(f) defines the eligible facilities and assets for the Police Facilities IIP:

*“Fire and police facilities, including all appurtenances, equipment and vehicles. Fire and police facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the municipality, vehicles and equipment used to provide administrative services, helicopters or airplanes or a facility that is used for training firefighters or officers from more than one station or substation.”*

The Police Facilities IIP includes components for police facilities, police facilities land, police vehicles, police equipment, and the cost of preparing the Police Facilities IIP and related Development Fee Report. The incremental expansion methodology, based on the current level of service, is used for police facilities land, police vehicles, and police equipment. The plan-based methodology is used for police facilities and the Development Fee Report.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Police Facilities IIP and development fees will allocate the cost of police infrastructure between residential and nonresidential using calls for service. Based on FY2020-FY2022 call data provided by the Surprise Police Department, residential development accounts for approximately 61 percent of demand and nonresidential development accounts for the remaining 39 percent of demand.

**Figure P1: Proportionate Share**

Description	FY 2020	FY 2021	FY 2022	Total
Residential	30,742	29,529	29,151	89,422
Nonresidential	20,089	19,238	18,838	58,165
Total	50,831	48,767	47,989	147,587

Description	FY 2020	FY 2021	FY 2022	Total
Residential	60%	61%	61%	61%
Nonresidential	40%	39%	39%	39%
Total	100%	100%	100%	100%

Source: Surprise Police Department

The proportionate share of costs attributable to residential development will be allocated to population and then converted to an appropriate amount by type of housing unit. Since nonresidential calls for service were unavailable by specific nonresidential use, TischlerBise recommends using vehicle trips as the nonresidential demand indicator for police services. Trip generation rates are highest for retail/commercial development and lowest for industrial development. Office and public/institutional trip generation rates fall between the other two categories. This ranking of trip generation rates is consistent with the relative demand for police services from nonresidential development.

**SERVICE AREA**

Surprise’s Police Department strives to provide a uniform response time within the city limits; therefore, there is a single service area for the Police Facilities IIP.

**RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT**

ARS § 9-463.05(E)(4) 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 P2 displays the demand indicators for residential and nonresidential land uses. For residential development, the table displays the persons per housing unit. For nonresidential development, the table displays the number of average weekday vehicle trips generated per thousand square feet of floor area.

**Figure P2: Ratio of Service Unit to Development Unit**

Residential Development	
Development Type	Persons per Housing Unit <sup>1</sup>
Single-Family	2.58
Multi-Family	1.58
Mobile Home	1.09

Nonresidential Development			
Development Type	AWVTE per 1,000 Sq Ft <sup>1</sup>	Trip Rate Adjustment	AWVT per 1,000 Sq Ft <sup>1</sup>
Industrial	3.37	50%	1.69
Warehouse	1.71	50%	0.86
Retail/Commercial	37.01	28%	10.18
Office	10.84	45%	4.88
Public/Institutional	6.75	50%	3.38

1. See Land Use Assumptions

**ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES**

ARS § 9-463.05(E)(1) requires:

*“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.”*

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.”*

**Police Facilities – Plan-Based**

Surprise currently provides 70,844 square feet of police facilities to existing development, and Surprise plans to construct additional police facilities to serve future development.

**Figure P3: Existing Police Facilities**

Description	Square Feet	Acres
Public Safety Building (share)	42,500	7.82
Evidence & Readiness Center	27,944	4.54
Techcelerator Police Storage	400	0.00
<b>Total</b>	<b>70,844</b>	<b>12.36</b>

Source: Surprise Police Department

Surprise plans to use future development fee revenue to repay the outstanding obligation related to the Public Safety Building. The total obligation is \$2,786,022, and the outstanding obligation is \$135,214. Based on a cost of approximately \$65 per square foot (\$2,768,022 total obligation / 42,500 total square feet), the proportionate share of the Public Safety Building related to the outstanding obligation is 2,076 square feet (\$135,214 outstanding obligation / \$65 per square foot).

**Figure P4: Public Safety Building Obligation**

Public Safety Building	Square Feet	Obligation <sup>1</sup>	Cost per Sq Ft
Outstanding Debt	2,076	\$135,214	\$65
Retired Debt	40,424	\$2,632,808	\$65
<b>Total</b>	<b>42,500</b>	<b>\$2,768,022</b>	<b>\$65</b>

Source: Surprise Police Department

1. Surprise Finance Department

As shown below in Figure P5, Surprise plans to repay outstanding obligations related to the Public Safety Building and to construct 60,000 square feet of police facilities during the next 10 years. The total cost is \$48,135,214, and the associated floor area is 62,076 square feet. Based on these projects, the analysis uses a cost of \$775 per square foot for police facilities (\$48,135,214 total cost / 62,076 total square feet). The planned police facilities will serve all development in Surprise through 2038.

**Figure P5: Police Facilities Cost Factors**

Description	Square Feet	Cost	Cost per Sq Ft
Public Safety Building (share)	2,076	\$135,214	\$65
Future Police Substation	30,000	\$22,000,000	\$733
Future Police Substation	30,000	\$26,000,000	\$867
<b>Total</b>	<b>62,076</b>	<b>\$48,135,214</b>	<b>\$775</b>

Source: Surprise Police Department



Surprise plans to provide 130,844 square feet of police facilities to all development in 2038. To allocate the proportionate share of demand for police facilities to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure P1. The planned level of service for residential development is 0.2770 square feet per person (130,844 total square feet X 61 percent residential share / 286,249 persons). The planned nonresidential level of service is 0.2835 square feet per vehicle trip (130,844 total square feet X 39 percent nonresidential share / 181,875 vehicle trips).

Based on the outstanding obligations for the Public Safety Building and the construction cost estimates for future police facilities shown in Figure P5, the analysis uses a cost of \$775 per square foot (\$48,135,214 total cost / 62,076 total square feet). For police facilities, the cost is \$214.76 per person (0.2770 square feet per person X \$775 per square foot) and \$219.85 per vehicle trip (0.2835 square feet per vehicle trip X \$775 per square foot).

**Figure P6: Planned Level of Service**

Cost Factors	
Cost per Square Foot	\$775

Level-of-Service (LOS) Standards	
Existing Square Feet <sup>1</sup>	68,768
Cost Recovery Square Feet <sup>2</sup>	2,076
Planned Square Feet	60,000
<b>Total Square Feet</b>	<b>130,844</b>
Residential	
Residential Share	61%
2038 Population	286,249
Square Feet per Person	0.2770
<b>Cost per Person</b>	<b>\$214.76</b>
Nonresidential	
Nonresidential Share	39%
2038 Vehicle Trips	181,875
Square Feet per Vehicle Trip	0.2835
<b>Cost per Vehicle Trip</b>	<b>\$219.85</b>

Source: Surprise Police Department

1. Excludes share related to outstanding obligations
2. Public Safety Building share of outstanding obligations

### Police Facilities Land – Incremental Expansion

Surprise police facilities currently occupy 12.36 acres of land, and Surprise plans to acquire additional land for police facilities to serve future development. To allocate the proportionate share of demand for land to residential and nonresidential development, this analysis uses calls for service outlined in Figure P1. The existing level of service for residential development is 0.00004 acres per person (12.36 acres X 61 percent residential share / 172,866 persons). The nonresidential level of service is 0.00004 acres per vehicle trip (12.36 acres X 39 percent nonresidential share / 124,008 vehicle trips).

Based on the weighted average cost of potential land acquisitions provided by the Surprise Police Department, the land acquisition cost is \$162,000 per acre (\$810,000 total cost / 5.0 acres). For police facilities land, the cost is \$7.02 per person (0.00004 acres per person X \$162,000 per acre) and \$6.36 per vehicle trip (0.00004 acres per vehicle trip X \$162,000 per acre).

**Figure P7: Existing Level of Service**

Cost Factors	
Cost per Acre	\$162,000

Level-of-Service (LOS) Standards	
Existing Acres	12.36
Residential	
Residential Share	61%
2023 Population	172,866
Acres per Person	0.00004
Cost per Person	\$7.02
Nonresidential	
Nonresidential Share	39%
2023 Vehicle Trips	124,008
Acres per Vehicle Trip	0.00004
Cost per Vehicle Trip	\$6.36

Source: Surprise Police Department

Description	Acres	Cost	Cost per Acre
Land - Police Facilities	3.00	\$500,000	\$166,667
Land - Police Facilities	2.00	\$310,000	\$155,000
<b>Total</b>	<b>5.00</b>	<b>\$810,000</b>	<b>\$162,000</b>

Source: Surprise Police Department

**Police Vehicles – Incremental Expansion**

Surprise has 141 police vehicles in its existing fleet with a total cost of \$12,274,500, and Surprise plans to acquire additional police vehicles to serve future development. The weighted average cost of the existing fleet is \$87,053 per unit (\$12,274,500 total cost / 141 units).

**Figure P8: Existing Police Vehicles**

Description	Units	Unit Cost	Total Cost
Patrol Vehicle - Marked	66	\$89,000	\$5,874,000
Police Heavy Van	1	\$225,000	\$225,000
CID and Unmarked Vehicles	27	\$66,500	\$1,795,500
MCC	1	\$1,000,000	\$1,000,000
Motorcycle	9	\$39,000	\$351,000
BearCat	1	\$450,000	\$450,000
Side by Side	2	\$25,000	\$50,000
Side by Side (Ranger)	1	\$20,000	\$20,000
Motorcycle - Unmarked	3	\$60,000	\$180,000
K9	5	\$90,000	\$450,000
Animal Control	3	\$75,000	\$225,000
CP Vehicle	5	\$89,000	\$445,000
Patrol Lieutenant Vehicle	6	\$75,000	\$450,000
ASD Commander & LT	2	\$66,500	\$133,000
POD Commander	2	\$66,500	\$133,000
Property & Evidence vans	2	\$72,000	\$144,000
TSD Commander & LT	2	\$66,500	\$133,000
Property & Evidence Van	2	\$72,000	\$144,000
Crime Scene Van	1	\$72,000	\$72,000
<b>Total</b>	<b>141</b>	<b>\$87,053</b>	<b>\$12,274,500</b>

Source: Surprise Police Department

To allocate the proportionate share of demand for police vehicles to residential and nonresidential development, this analysis uses calls for service outlined in Figure P1. The existing level of service for residential development is 0.0005 units per person (141 vehicles X 61 percent residential share / 172,866 persons). The nonresidential level of service is 0.0004 units per vehicle trip (141 vehicles X 39 percent nonresidential share / 124,008 vehicle trips).

Based on the total cost of existing police vehicles, the weighted average cost for a new police vehicle is \$87,053 per vehicle (\$12,274,500 total cost / 141 units). For police vehicles, the cost is \$43.02 per person (0.0005 units per person X \$87,053 per vehicle) and \$39.01 per vehicle trip (0.0004 units per vehicle trip X \$87,053 per vehicle).

**Figure P9: Existing Level of Service**

Cost Factors	
Weighted Average per Unit	\$87,053

Level-of-Service (LOS) Standards	
Existing Units	141
Residential	
Residential Share	61%
2023 Population	172,866
Units per Person	0.0005
Cost per Person	\$43.02
Nonresidential	
Nonresidential Share	39%
2023 Vehicle Trips	124,008
Units per Vehicle Trip	0.0004
Cost per Vehicle Trip	\$39.01

Source: Surprise Police Department

**Police Equipment – Incremental Expansion**

Surprise has 1,324 units of police equipment with a total cost of \$13,614,115, and Surprise plans to acquire additional units to serve future development. To allocate the proportionate share of demand for police equipment to residential and nonresidential development, this analysis uses calls for service outlined in Figure P1. The existing level of service for residential development is 0.0046 units per person (1,324 units X 61 percent residential share / 172,866 persons). The nonresidential level of service is 0.0042 units per vehicle trip (1,324 units X 39 percent nonresidential share / 124,008 vehicle trips).

Based on the total cost of existing police equipment, the weighted average cost for a new unit is \$10,823 per unit (\$13,614,115 total cost / 1,324 units). For police equipment, the cost is \$47.72 per person (0.0046 units per person X \$10,283 per unit) and \$43.27 per vehicle trip (0.0042 units per vehicle trip X \$10,283 per unit).

**Figure P10: Existing Level of Service**

Cost Factors	
Existing Equipment (Units)	1,324
Existing Equipment (Cost)	\$13,614,115
Weighted Average per Unit	\$10,283

Level-of-Service (LOS) Standards	
Existing Units	1,324
Residential	
Residential Share	61%
2023 Population	172,866
Units per Person	0.0046
Cost per Person	\$47.72
Nonresidential	
Nonresidential Share	39%
2023 Vehicle Trips	124,008
Units per Vehicle Trip	0.0042
Cost per Vehicle Trip	\$43.27

Source: Surprise Police Department



### Development Fee Report – Plan-Based

The cost to prepare the Police Facilities IIP and related Development Fee Report totals \$16,230. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from the *Land Use Assumptions* document, the cost is \$0.22 per person and \$0.39 per vehicle trip.

**Figure P11: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Police	\$16,230	Residential	61%	Population	44,514	\$0.22
		Nonresidential	39%	Vehicle Trips	16,226	\$0.39

### Bond Credit

Shown below, Surprise will issue \$100.0 million in G.O. bonds to construct transportation and public safety projects, and public safety projects will account for \$34.0 million of bond funding. To prevent future development from paying for future improvements through development fees and through future bond payments, the development fee study includes a credit for future bond payments. As shown in Figure P12, the analysis allocates public safety costs 50.2 percent to fire and 49.8 percent to police.

**Figure P12: Bond Allocation**

Series 2024 / 2027 Bond Use	Cost	Share
Transportation	\$66,000,000	66%
Public Safety	\$34,000,000	34%
<b>Total</b>	<b>\$100,000,000</b>	<b>100%</b>

Public Safety Use	Cost	Fire Share	Police Share
Fire Station	\$15,300,000	\$15,300,000	\$0
Police Substation	\$15,200,000	\$0	\$15,200,000
Land for Public Safety Facilities	\$3,500,000	\$1,755,738	\$1,744,262
<b>Total</b>	<b>\$34,000,000</b>	<b>\$17,055,738</b>	<b>\$16,944,262</b>
<b>Share</b>	<b>100.0%</b>	<b>50.2%</b>	<b>49.8%</b>

Source: Surprise Finance Department

To allocate the proportionate share of bond costs to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure P1. The analysis divides annual principal payments by population for residential development and by vehicle trips for nonresidential development. To calculate the bond credit, the analysis calculates the net present value of future principal payments. The proposed police development fees include a credit of \$13.92 per person and \$14.12 per vehicle trip.

**Figure P13: Police Bond Credit**

Police Share of Series 2024 and Series 2027 Bonds							
Fiscal Year	Annual Principal Payment	Residential Share	Population	Principal per Person	Nonresidential Share	Vehicle Trips	Principal per Veh Trip
2024	\$0	\$0	181,769	\$0.00	\$0	127,254	\$0.00
2025	\$0	\$0	190,671	\$0.00	\$0	130,499	\$0.00
2026	\$5,083	\$3,080	199,574	\$0.02	\$2,003	133,744	\$0.01
2027	\$62,694	\$37,986	208,477	\$0.18	\$24,708	136,989	\$0.18
2028	\$53,374	\$32,339	217,380	\$0.15	\$21,035	140,235	\$0.15
2029	\$185,540	\$112,417	226,282	\$0.50	\$73,122	143,480	\$0.51
2030	\$213,498	\$129,357	235,185	\$0.55	\$84,141	146,725	\$0.57
2031	\$242,303	\$146,810	242,297	\$0.61	\$95,493	151,119	\$0.63
2032	\$272,803	\$165,289	249,410	\$0.66	\$107,513	155,513	\$0.69
2033	\$303,302	\$183,769	256,522	\$0.72	\$119,533	159,906	\$0.75
2034	\$336,344	\$203,788	262,467	\$0.78	\$132,555	164,300	\$0.81
2035	\$372,774	\$225,861	268,413	\$0.84	\$146,913	168,694	\$0.87
2036	\$410,051	\$248,447	274,358	\$0.91	\$161,604	173,088	\$0.93
2037	\$449,023	\$272,060	280,303	\$0.97	\$176,963	177,482	\$1.00
2038	\$490,536	\$297,213	286,249	\$1.04	\$193,324	181,875	\$1.06
2039	\$767,575	\$465,069	292,194	\$1.59	\$302,506	186,269	\$1.62
2040	\$804,005	\$487,142	298,139	\$1.63	\$316,864	190,663	\$1.66
2041	\$841,283	\$509,728	304,085	\$1.68	\$331,555	195,057	\$1.70
2042	\$881,102	\$533,854	310,030	\$1.72	\$347,248	199,450	\$1.74
2043	\$921,768	\$558,493	315,975	\$1.77	\$363,275	203,844	\$1.78
2044	\$964,976	\$584,673	321,921	\$1.82	\$380,303	208,238	\$1.83
2045	\$892,115	\$540,527	327,866	\$1.65	\$351,589	212,632	\$1.65
2046	\$931,934	\$564,653	333,811	\$1.69	\$367,281	217,025	\$1.69
2047	\$974,295	\$590,319	339,757	\$1.74	\$383,976	221,419	\$1.73
2048	\$1,017,503	\$616,498	345,702	\$1.78	\$401,005	225,813	\$1.78
2049	\$1,063,252	\$644,218	351,647	\$1.83	\$419,035	230,207	\$1.82
2050	\$1,111,544	\$673,477	357,593	\$1.88	\$438,067	234,601	\$1.87
2051	\$1,161,529	\$703,763	363,538	\$1.94	\$457,766	238,994	\$1.92
2052	\$1,214,056	\$735,589	369,483	\$1.99	\$478,468	243,388	\$1.97
<b>Total</b>	<b>\$16,944,262</b>	<b>\$10,266,418</b>		<b>\$13.92</b>	<b>\$6,677,844</b>		<b>\$14.12</b>

## PROJECTED DEMAND FOR SERVICES AND COSTS

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ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

As shown in the *Land Use Assumptions* document, Surprise’s population is expected to increase by 83,656 persons and nonresidential vehicle trips are expected to increase by 35,898 vehicle trips over the next 10 years. To reach the planned level of service, Surprise will construct 60,000 square feet of police facilities over the next 10 years. To maintain the existing levels of service, Surprise will need to acquire approximately five acres of land, 57 police vehicles, and 539 units of police equipment over the next 10 years. The following pages include a more detailed projection of demand for services and costs for the Police Facilities IIP.

**Police Facilities – Plan-Based**

Surprise will use development fees to repay obligations associated with the Public Safety Building and to construct police facilities within the next 10 years. Based on a 15-year projected population increase of 113,383 persons, future residential development demands approximately 31,402 square feet of planned police facilities (113,383 additional persons X 0.2770 square feet per person). With a 15-year projected increase of 57,867 vehicle trips, future nonresidential development demands approximately 16,407 square feet of planned police facilities (57,867 additional vehicle trips X 0.2835 square feet per vehicle trip). Future development demands approximately 47,809 square feet of police facilities at a cost of \$37,071,899 (47,808.6 square feet X \$775 per square foot). The remaining cost of \$11,063,315 represents existing development’s share of planned police facilities (\$48,135,214 total police facilities cost - \$37,071,899 growth cost).

**Figure P14: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Police Facilities	0.2770 Square Feet	per Person	\$775
	0.2835 Square Feet	per Vehicle Trip	

Demand for Police Facilities					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2023	172,866	124,008	47,875.8	35,159.7	83,035.4
2024	181,769	127,254	50,341.4	36,079.8	86,421.2
2025	190,671	130,499	52,807.1	36,999.9	89,807.0
2026	199,574	133,744	55,272.7	37,920.0	93,192.7
2027	208,477	136,989	57,738.3	38,840.1	96,578.5
2028	217,380	140,235	60,204.0	39,760.2	99,964.2
2029	226,282	143,480	62,669.6	40,680.3	103,350.0
2030	235,185	146,725	65,135.3	41,600.5	106,735.7
2031	242,297	151,119	67,105.1	42,846.2	109,951.3
2032	249,410	155,513	69,074.9	44,092.0	113,166.8
2033	256,522	159,906	71,044.6	45,337.7	116,382.4
2034	262,467	164,300	72,691.2	46,583.5	119,274.7
2035	268,413	168,694	74,337.8	47,829.2	122,167.0
2036	274,358	173,088	75,984.4	49,075.0	125,059.3
2037	280,303	177,482	77,630.9	50,320.7	127,951.7
2038	286,249	181,875	79,277.5	51,566.5	130,844.0
15-Yr Increase	113,383	57,867	31,401.7	16,406.8	47,808.6

Growth-Related Expenditures	\$24,349,663	\$12,722,236	\$37,071,899
Non-Growth Expenditures	\$4,815,149	\$6,248,166	\$11,063,315
Total Expenditures	\$29,164,812	\$18,970,402	\$48,135,214

### Police Facilities Land – Incremental Expansion

Surprise plans to maintain its existing level of service for police facilities land over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands an additional 3.62 acres of land (83,656 additional persons X 0.00004 acres per person). With a 10-year projected increase of 35,898 vehicle trips, future nonresidential development demands an additional 1.41 acres of land (35,898 additional vehicle trips X 0.00004 acres per vehicle trip). Future development demands 5.04 acres of land at a cost of \$815,678 (5.04 acres X \$162,000 per acre). Surprise may use development fees to acquire additional land for police facilities.

**Figure P15: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Acre
Police Facilities Land	0.00004 Acres	per Person	\$162,000
	0.00004 Acres	per Vehicle Trip	

Demand for Police Facilities Land					
Year	Population	Vehicle Trips	Acres		
			Residential	Nonresidential	Total
2023	172,866	124,008	7.49	4.87	12.36
2024	181,769	127,254	7.88	5.00	12.88
2025	190,671	130,499	8.26	5.13	13.39
2026	199,574	133,744	8.65	5.25	13.90
2027	208,477	136,989	9.03	5.38	14.41
2028	217,380	140,235	9.42	5.51	14.93
2029	226,282	143,480	9.80	5.64	15.44
2030	235,185	146,725	10.19	5.76	15.95
2031	242,297	151,119	10.50	5.94	16.44
2032	249,410	155,513	10.81	6.11	16.92
2033	256,522	159,906	11.11	6.28	17.40
10-Yr Increase	83,656	35,898	3.62	1.41	5.04

Growth-Related Expenditures	\$587,204	\$228,474	\$815,678
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**Police Vehicles – Incremental Expansion**

Surprise plans to maintain its existing level of service for police vehicles over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 41 police vehicles (83,656 additional persons X 0.0005 vehicles per person). With a 10-year projected increase of 35,898 vehicle trips, future nonresidential development demands approximately 16 police vehicles (35,898 additional vehicle trips X 0.0004 vehicles per vehicle trip). Future development demands approximately 57 police vehicles at a cost of \$4,999,412 (57.4 units X \$87,053 per vehicle). Surprise may use development fees to expand its police vehicle fleet.

**Figure P16: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Police Vehicles	0.0005 Units	per Person	\$87,053
	0.0004 Units	per Vehicle Trip	

Demand for Police Vehicles					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2023	172,866	124,008	85.4	55.6	141.0
2024	181,769	127,254	89.8	57.0	146.9
2025	190,671	130,499	94.2	58.5	152.7
2026	199,574	133,744	98.6	59.9	158.6
2027	208,477	136,989	103.0	61.4	164.4
2028	217,380	140,235	107.4	62.8	170.3
2029	226,282	143,480	111.8	64.3	176.1
2030	235,185	146,725	116.2	65.7	182.0
2031	242,297	151,119	119.7	67.7	187.5
2032	249,410	155,513	123.3	69.7	192.9
2033	256,522	159,906	126.8	71.7	198.4
10-Yr Increase	83,656	35,898	41.3	16.1	57.4

Growth-Related Expenditures	\$3,599,058	\$1,400,353	\$4,999,412
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### Police Equipment – Incremental Expansion

Surprise plans to maintain its existing level of service for police equipment over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 388 units of police equipment (83,656 additional persons X 0.0046 units per person). With a 10-year projected increase of 35,898 vehicle trips, future nonresidential development demands approximately 151 units of police equipment (35,898 additional vehicle trips X 0.0042 units per vehicle trip). Future development demands approximately 539 units of equipment at a cost of \$5,545,038 (539.3 units X \$10,283 per unit). Surprise may use development fees to acquire additional police equipment.

**Figure P17: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Police Equipment	0.0046 Units	per Person	\$10,283
	0.0042 Units	per Vehicle Trip	

Demand for Police Equipment					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2023	172,866	124,008	802.2	521.8	1,324.0
2024	181,769	127,254	843.5	535.5	1,379.0
2025	190,671	130,499	884.8	549.1	1,433.9
2026	199,574	133,744	926.1	562.8	1,488.9
2027	208,477	136,989	967.5	576.4	1,543.9
2028	217,380	140,235	1,008.8	590.1	1,598.8
2029	226,282	143,480	1,050.1	603.7	1,653.8
2030	235,185	146,725	1,091.4	617.4	1,708.8
2031	242,297	151,119	1,124.4	635.9	1,760.3
2032	249,410	155,513	1,157.4	654.4	1,811.8
2033	256,522	159,906	1,190.4	672.8	1,863.3
10-Yr Increase	83,656	35,898	388.2	151.1	539.3

Growth-Related Expenditures	\$3,991,853	\$1,553,185	\$5,545,038
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### POLICE FACILITIES DEVELOPMENT FEES

#### Revenue Credit/Offset

A revenue credit/offset is necessary for development fees, because Surprise’s construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).

**Police Facilities Development Fees**

Infrastructure components and cost factors for police facilities are summarized in the upper portion of Figure P18. The cost per service unit for police facilities is \$225.14 per person and \$163.28 per vehicle trip.

Police facilities development fees for residential development are assessed according to the number of persons per housing unit. The fee of \$581 for single-family unit is calculated using a cost per service unit of \$225.14 per person multiplied by a demand unit of 2.58 persons per housing unit.

Nonresidential development fees are calculated using vehicle trips as the service unit. The fee of \$275 per 1,000 square feet of industrial development is derived from a cost per service unit of \$163.28 per vehicle trip multiplied by a demand unit of 1.69 vehicle trips per 1,000 square feet.

**Figure P18: Police Facilities Development Fees**

Fee Component	Cost per Person	Cost per Trip
Police Facilities	\$214.76	\$219.85
Police Facilities Land	\$7.02	\$6.36
Police Vehicles	\$43.02	\$39.01
Police Equipment	\$47.72	\$43.27
Development Fee Report	\$0.22	\$0.39
Bond Credit	(\$13.92)	(\$14.12)
Subtotal	\$298.82	\$294.76
Excess Construction Sales Tax	(\$73.68)	(\$131.48)
Total	\$225.14	\$163.28

Residential Fees per Unit				
Development Type	Persons per Housing Unit <sup>1</sup>	Proposed Fees	Current Fees	Difference
Single-Family	2.58	\$581	\$385	\$196
Multi-Family	1.58	\$356	\$235	\$121
Mobile Home	1.09	\$245	\$216	\$29

Nonresidential Fees per 1,000 Square Feet				
Development Type	AWVT per 1,000 Sq Ft <sup>1</sup>	Proposed Fees	Current Fees	Difference
Industrial	1.69	\$275	\$81	\$194
Warehouse	0.86	\$140	\$46	\$94
Retail/Commercial	10.18	\$1,662	\$427	\$1,235
Office	4.88	\$796	\$243	\$553
Public/Institutional	3.38	\$551	\$150	\$401

1. See Land Use Assumptions

**POLICE FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains revenue forecasts required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure P19 is based on the development projections in the *Land Use Assumptions* document and the updated police facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 15 years equals \$41,363,153, and projected expenditures equal \$52,426,959. The remaining balance represents existing development’s share of planned costs for police facilities.

**Figure P19: Police Facilities Development Fee Revenue**

Fee Component	Growth Share		Existing Share	Total
	Years 1-10	Years 11-15		
Police Facilities	\$25,857,996	\$11,213,903	\$11,063,315	\$48,135,214
Police Facilities Land	\$815,678	\$0	\$0	\$815,678
Police Vehicles	\$4,999,412	\$0	\$0	\$4,999,412
Police Equipment	\$5,545,038	\$0	\$0	\$5,545,038
Development Fee Report	\$16,230	\$0	\$0	\$16,230
Bond Credit	(\$1,671,375)	\$0	\$0	(\$1,671,375)
Excess Constr. Sales Tax	(\$5,413,237)	\$0	\$0	(\$5,413,237)
<b>Total</b>	<b>\$30,149,742</b>	<b>\$11,213,903</b>	<b>\$11,063,315</b>	<b>\$52,426,959</b>

Year		Single Family	Multi-Family	Mobile Home	Industrial	Warehouse	Ret/Comm	Office	Public/Inst
		\$581 per unit	\$356 per unit	\$245 per unit	\$275 per 1,000 sq ft	\$140 per 1,000 sq ft	\$1,662 per 1,000 sq ft	\$796 per 1,000 sq ft	\$551 per 1,000 sq ft
	Year	Hsg Unit	Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF	KSF
Base	2023	59,934	9,973	3,106	2,098	5,332	7,380	3,397	7,179
Year 1	2024	62,847	10,833	3,133	2,310	5,484	7,499	3,620	7,317
Year 2	2025	65,760	11,692	3,159	2,523	5,635	7,617	3,843	7,454
Year 3	2026	68,673	12,552	3,186	2,736	5,787	7,735	4,067	7,592
Year 4	2027	71,586	13,411	3,213	2,948	5,938	7,854	4,290	7,729
Year 5	2028	74,499	14,271	3,239	3,161	6,089	7,972	4,513	7,867
Year 6	2029	77,412	15,130	3,266	3,373	6,241	8,090	4,737	8,005
Year 7	2030	80,325	15,990	3,293	3,586	6,392	8,208	4,960	8,142
Year 8	2031	82,536	16,868	3,313	3,736	6,499	8,431	5,249	8,253
Year 9	2032	84,746	17,746	3,333	3,886	6,606	8,653	5,538	8,364
Year 10	2033	86,957	18,624	3,354	4,036	6,714	8,876	5,827	8,475
10-Year Increase		27,023	8,650	248	1,938	1,381	1,496	2,430	1,296
Projected Revenue		\$18,057,460	\$3,582,173	\$69,984	\$726,562	\$262,800	\$3,691,780	\$2,775,273	\$983,188

Projected Fee Revenue (Years 1-10)	\$30,149,220
Projected Fee Revenue (Years 11-15)	\$11,213,933
<b>Total Expenditures</b>	<b>\$52,426,959</b>

**10-YEAR CAPITAL PLAN**

The figure shown below includes potential police capital expenditures during the next 10 years. The list of potential capital expenditures is representational of future growth-related police capital expenditures.

**Figure P20: Police Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	Armored Surveillance Van	2024	\$200,000
CIP	Patrol Take Home Vehicles	2024	\$2,931,200
CIP	Police Substation	2025	\$24,121,799
CIP	Police Substation	2026-2028	\$28,850,000
Debt Service	Public Safety Building (share)	2024	\$135,214
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$16,230
<b>Total</b>			<b>\$56,254,443</b>



## WATER FACILITIES IIP

ARS § 9-463.05 (T)(7)(a) defines the eligible facilities and assets for the Water Facilities IIP:

*“Water facilities, including the supply, transportation, treatment, purification and distribution of water, and any appurtenances for those facilities.”*

The Water Facilities IIP includes components for wells, arsenic treatment, booster pump stations, storage tanks, water lines (SPA 1 only), land, and the cost of preparing the Water Facilities IIP and related Development Fee Report. SPA 1 uses a combined cost recovery and plan-based methodology. SPA 2 and SPA 3 use a plan-based methodology.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Water Facilities IIP and development fees will allocate the cost of necessary public services between both residential and nonresidential development using max day demand factors.

### SERVICE AREA

As shown in Figure W1, the City’s Municipal Planning Area (MPA) is divided into six Special Planning Areas (SPAs). The SPAs are separated by major geographic barriers - Grand Avenue/BNSF Railroad line, the Beardsley Canal, the Central Arizona Project (CAP) Canal, and SR 74. The SPA borders form natural boundaries for the water service areas. Surprise will assess water facilities development fees in SPA 1, SPA 2, SPA 3, and SPA 4.

The City’s existing water facilities consist of three separate systems located in SPA 1, SPA 2, and SPA 3 with limited potential for interconnection. The existing service areas are acceptable for these facilities as they are defined as the incorporated area, or City utility service area, and may be expanded in the future within the respective SPAs. The water system relies on groundwater, which is pumped to the surface by wells. The wells are connected by transmission lines that convey the water to a water supply facility (WSF), where the water is treated, stored in tanks, and pumped into a system of pressurized distribution lines. The WSFs are interconnected within SPAs where practical to provide emergency backup. It is reasonable to use the SPAs as water service areas.

The City is not the only water provider in its planning area. In addition to individual developments that use on-site wells and do not connect to the City’s distribution system, there are also several private water providers.

Figure W1: Water Facilities Development Fee Service Area

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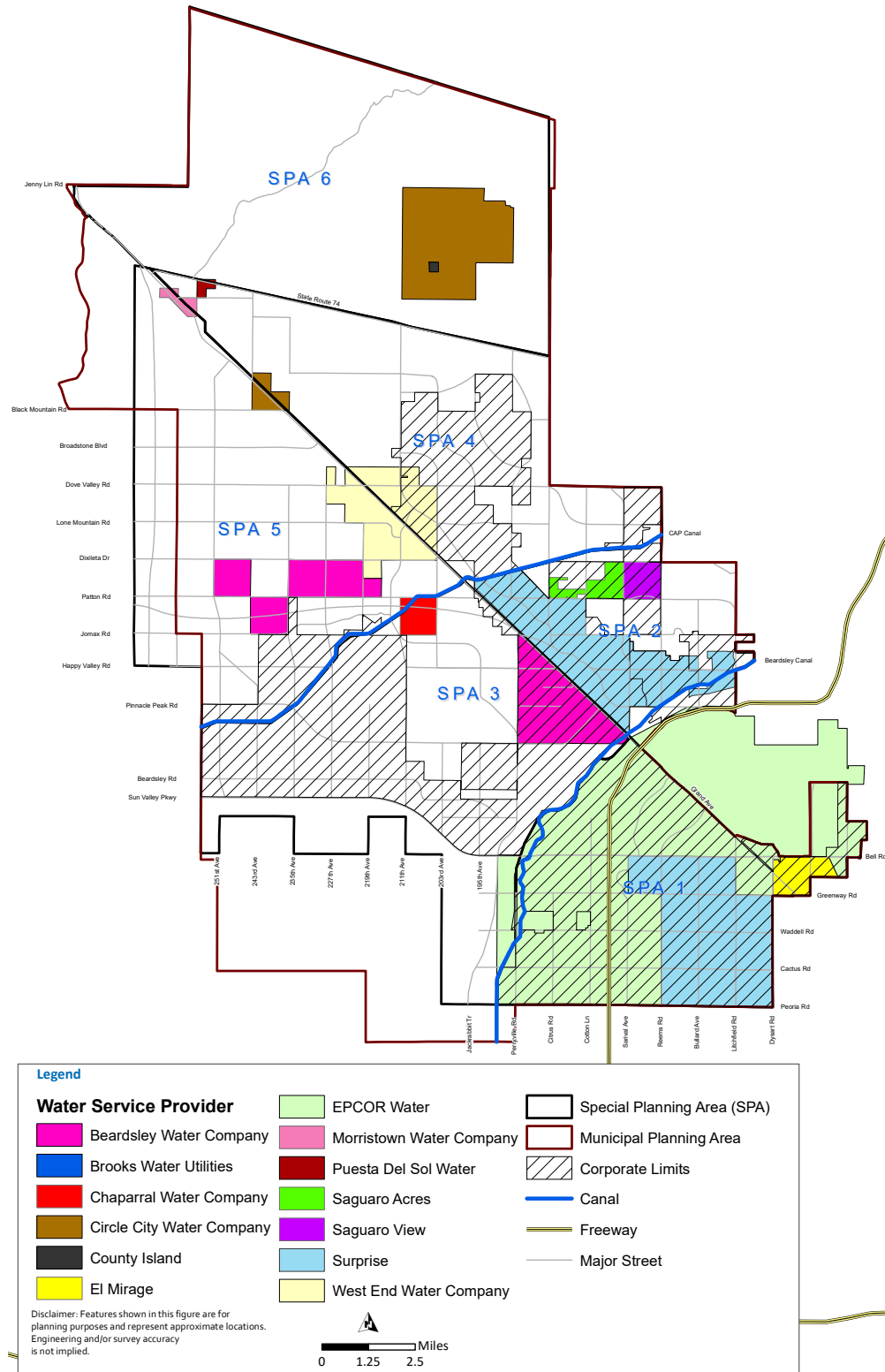


Figure 1.2 Water Service Providers

**RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT**

ARS § 9-463.05(E)(4) 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.”*

To calculate water and wastewater development fees, the demand associated with different types of customers must be expressed in a common unit of measurement called a service unit. The service unit for the City’s water and wastewater fees is an equivalent demand unit (EDU). An EDU is a single-family dwelling unit, or its equivalent in terms of water demand, defined as the potential demand resulting from a 0.75-inch diameter or smaller meter. According to the 2022 Water Resource Master Plan, average day demand from a single-family unit is 320 gallons. The analysis uses average day demand of 320 gallons per EDU.

The number of water service units associated with meters larger than 0.75 inches is determined by the capacity of the water meter relative to the capacity of a 0.75-inch meter. Figure W2 presents EDU multipliers for various meter sizes based on meter capacities from the American Water Works Association.

**Figure W2: Ratio of Service Unit to Development Unit**

Demand per Equivalent Demand Unit	
Development Type	Average Day Demand <sup>1</sup>
Single Family (EDU)	320

Demand per Equivalent Demand Unit		
Meter Size	Capacity Ratio <sup>2</sup>	Average Day Demand
0.75-inch	1.00	320
1.00-inch	1.67	534
1.50-inch	3.33	1,066
2.00-inch	5.33	1,706
3.00-inch	10.67	3,414
4.00-inch	16.67	5,334
6.00-inch	33.33	10,666
8.00-inch	53.33	17,066

1. 2022 Water Resource Master Plan
2. AWWA Manual of Water Supply Practices M-1, 7th Edition

**ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES**

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.”*

**Existing Demand**

Using water demand factors from the 2022 Water Resource Master Plan, average day demand from Surprise water customers in 2023 is approximately 10.11 million gallons.

**Figure W3: Existing Demand**

Year	Average Day Demand (mgd)				Equivalent Demand Units (EDU)			
	SPA 1	SPA 2	SPA 3	Total	SPA 1	SPA 2	SPA 3	Total
Base 2023	7.51	1.93	0.67	10.11	23,469	6,037	2,080	31,586

Level of service (LOS) generally refers to the ratio of capacity to demand. One of the principles of development fee analysis is that future development should not be required to pay for a higher LOS than existing development currently receives. Consequently, it is important to determine the existing LOS.

For water facilities, the capacity of water production facilities is generally used as reflective of the capacity of the entire water system. However, some components of the system may have more capacity or less capacity than needed for full utilization of production facilities. The existing water system consists of wells, water supply facilities (WSFs) consisting of booster pump stations, storage tanks, and water treatment facilities serving a group of wells, transmission lines from wells to WSFs, distribution lines from WSFs to customers, and land for wells and WSFs.

**Wells**

Existing well production capacity is summarized in Figure W4. Total capacity of individual wells is shown in acre-feet per year (ac-ft/yr) and millions of gallons per day (MGD). The City’s design criteria indicate the capacity of a system of wells should be measured in terms of firm capacity (total capacity less the capacity of the largest well) to account for the eventuality that a well may be out of service. Firm capacity is determined at the level of the group of wells served by a water supply facility. Existing well firm capacity is 19.56 million gallons for SPA 1, 5.72 million gallons for SPA 2, and 2.45 million gallons for SPA 3.

Figure W4: Existing Well Firm Capacity

Description	Max Permitted Volume		Firm Capacity
	(ac-ft/yr)	(mgd)	
<b>SPA 1</b>			
Mountain Vista Ranch Water Supply Facility			
Mountain Vista Ranch 1	4,032	3.60	n/a
Mountain Vista Ranch 2	2,178	1.94	1.94
<b>Subtotal, Mountain Vista Ranch WSF</b>	<b>6,210</b>	<b>5.54</b>	<b>1.94</b>
Ashton Ranch Water Supply Facility			
Ashton Ranch 1	3,064	2.74	2.74
Orchards	4,816	4.30	n/a
Surprise Center	1,460	1.30	1.30
Royal Ranch	1,872	1.67	1.67
Sierra Verde	2,100	1.88	1.88
<b>Subtotal, Ashton Ranch WSF</b>	<b>13,312</b>	<b>11.89</b>	<b>7.59</b>
Roseview Water Supply Facility			
Roseview	839	0.75	n/a
Litchfield Manor	710	0.63	0.63
<b>Subtotal, Roseview WSF</b>	<b>1,549</b>	<b>1.38</b>	<b>0.63</b>
Rancho Gabriela Water Supply Facility			
Rancho Gabriela 1	1,290	1.15	1.15
Rancho Gabriela 2	971	0.87	0.87
Surprise Pointe	1,210	1.08	1.08
Summit	2,903	2.59	2.59
Marley Park 1	4,032	3.60	n/a
Marley Park 2	928	0.83	0.83
Marley Park 3	3,226	2.88	2.88
<b>Subtotal, Rancho Gabriela WSF</b>	<b>14,560</b>	<b>13.00</b>	<b>9.40</b>
<b>Subtotal, SPA 1</b>	<b>35,631</b>	<b>31.81</b>	<b>19.56</b>
<b>SPA 2</b>			
Desert Oasis Water Supply Facility			
Desert Oasis 1	1,258	1.12	1.12
Desert Oasis 2	1,291	1.15	1.15
Asante 1	1,935	1.73	n/a
Asante 4	1,435	1.28	1.28
<b>Subtotal, Desert Oasis WSF</b>	<b>5,919</b>	<b>5.28</b>	<b>3.56</b>
Rancho Mercado Water Supply Facility			
Rancho Mercado 1	2,421	2.16	2.16
Rancho Mercado 2	2,421	2.16	n/a
<b>Subtotal, Rancho Mercado WSF</b>	<b>4,842</b>	<b>4.32</b>	<b>2.16</b>
<b>Subtotal, SPA 2</b>	<b>10,761</b>	<b>9.61</b>	<b>5.72</b>
<b>SPA 3</b>			
West Deer Valley Water Supply Facility			
Buena Vista 1	2,870	2.56	n/a
Buena Vista 2	2,742	2.45	2.45
<b>Subtotal, West Deer Valley WSF</b>	<b>5,612</b>	<b>5.01</b>	<b>2.45</b>
<b>Subtotal, SPA 3</b>	<b>5,612</b>	<b>5.01</b>	<b>2.45</b>
<b>Total</b>	<b>52,004</b>	<b>46.43</b>	<b>27.73</b>

Source: 2022 Water Resource Master Plan, Table 4.1



Firm capacity deals with the reliability of the well system to produce water. That capacity must be adequate to accommodate periods of peak water demand. The City’s water design criteria require firm capacity be adequate to accommodate max day demand (two times average day demand). The existing levels of service for wells in SPA 1, SPA 2, and SPA 3 are summarized in Figure W5. Each SPA has enough capacity to accommodate current max day demand.

**Figure W5: Existing Well Level of Service**

Existing Level of Service for Wells	SPA 1	SPA 2	SPA 3	Total
Average Day Demand (mgd), 2023	7.51	1.93	0.67	10.11
x Peaking Factor <sup>1</sup>	2.00	2.00	2.00	2.00
Max Day Demand (mgd), 2023	15.02	3.86	1.33	20.21
Long-Term Firm Capacity (mgd)	19.56	5.72	2.45	27.73
– Max Day Demand (mgd), 2023	(15.02)	(3.86)	(1.33)	(20.21)
Excess Capacity (mgd)	4.54	1.86	1.12	7.52
÷ Long-Term Firm Capacity (mgd)	19.56	5.72	2.45	27.73
Percent Excess Capacity	23.2%	32.5%	45.7%	27.1%

1. 2022 Water Resource Master Plan

**Other System Components**

SPA 1 is the service area with the most developed water system, while SPA 2 and SPA 3 have smaller systems. Figure W6 shows quantities for other system components of the existing water systems in the three SPAs (line costs per foot generally increase proportionally with the inches of pipe diameter, making inch-feet a reasonable summary unit for comparison). The quantities are then converted into quantities per MGD of well capacity. Arsenic treatment has been omitted from this analysis, because the need for treatment varies by location.

**Figure W6: Existing Level of Service for Other System Components**

Description	Unit	Existing Quantity			Quantity per Well MGD		
		SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
Wells	mgd	19.56	5.72	2.45	1.00	1.00	1.00
Booster Pump Stations	mgd	43.78	21.60	7.92	2.24	3.78	3.23
Storage Tanks	mg	12.87	5.02	1.50	0.66	0.88	0.61
Water Lines	in.-ft (000s)	5,644	1,525	255	288.50	266.75	104.02
Land	acres	31.56	5.05	5.00	1.61	0.88	2.04

Source: Surprise Water Resource Management Department

## PROJECTED DEMAND FOR SERVICES AND COSTS

ARS § 9-463.05(E)(1) requires:

*“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.”*

ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

### Projected Demand

Shown below, Figure W7 includes projected average day demand over the next 10 years. The analysis uses projected average day water demand from the 2022 Water Resource Master Plan. Projected average day demand increases by approximately 7.17 million gallons over the next 10 years.

**Figure W7: Projected Demand**

Year	Average Day Demand (mgd)				Equivalent Demand Units (EDU)			
	SPA 1	SPA 2	SPA 3	Total	SPA 1	SPA 2	SPA 3	Total
Base 2023	7.51	1.93	0.67	10.11	23,469	6,037	2,080	31,586
1 2024	7.88	2.42	0.70	11.00	24,613	7,573	2,185	34,372
2 2025	8.24	2.92	0.73	11.89	25,757	9,110	2,291	37,158
3 2026	8.50	3.41	0.78	12.68	26,550	10,645	2,424	39,619
4 2027	8.75	3.90	0.82	13.47	27,344	12,181	2,556	42,081
5 2028	9.00	4.39	0.86	14.25	28,137	13,716	2,689	44,542
6 2029	9.26	4.88	0.90	15.04	28,931	15,251	2,822	47,004
7 2030	9.51	5.37	0.95	15.83	29,724	16,786	2,955	49,465
8 2031	9.56	5.63	1.12	16.31	29,879	17,604	3,487	50,970
9 2032	9.61	5.89	1.29	16.79	30,034	18,421	4,020	52,474
10 2033	9.66	6.16	1.46	17.27	30,188	19,239	4,552	53,979
10-Yr Increase	2.15	4.22	0.79	7.17	6,719	13,202	2,472	22,393

Shown below, Figure W8 shows the projected 2033 level of service for wells in each SPA. Based on projected max day demand and existing firm capacity, SPA 1 will have 0.24 million gallons of available capacity, SPA 2 will have a deficit of 6.59 million gallons, and SPA 3 will have a deficit of 0.46 million gallons.

**Figure W8: Future Well Level of Service**

Future Level of Service for Wells	SPA 1	SPA 2	SPA 3	Total
Average Day Demand (mgd), 2033	9.66	6.16	1.46	17.27
x Peaking Factor <sup>1</sup>	2.00	2.00	2.00	2.00
Max Day Demand (mgd), 2033	19.32	12.31	2.91	34.55
Long-Term Firm Capacity (mgd)	19.56	5.72	2.45	27.73
– Max Day Demand (mgd), 2033	(19.32)	(12.31)	(2.91)	(34.55)
Excess Capacity (mgd)	0.24	(6.59)	(0.46)	(6.82)
÷ Long-Term Firm Capacity (mgd)	19.56	5.72	2.45	27.73
Percent Excess Capacity	1.3%	-115.3%	-18.9%	-24.6%

1. 2022 Water Resource Master Plan

**SPA 1 – Cost Recovery / Plan-Based**

This analysis uses a hybrid cost recovery and plan-based methodology for SPA 1, because the existing system has some excess capacity available to serve new customers. Existing water facilities in SPA 1 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 1 system value equals \$325,422,008.

**Figure W9: SPA 1 Cost Factors**

SPA 1				
Description	Unit	Existing	Unit Cost	System Value
Wells	each	16.00	\$6,000,000	\$96,000,000
Arsenic Treatment	mgd	20.01	\$2,777,778	\$55,583,333
Booster Pump Stations	mgd	43.78	\$1,049,383	\$45,941,975
Storage Tanks, < 2.5 mg	mg	9.37	\$2,333,333	\$21,863,333
Storage Tanks, 2.5 - < 4.0 mg	mg	3.50	\$2,053,058	\$7,185,703
Storage Tanks, 4.0 - < 7.5 mg	mg	0.00	\$1,586,123	\$0
Water Lines, 10"	linear ft	22,695	\$169	\$3,835,455
Water Lines, 12"	linear ft	217,035	\$202	\$43,841,070
Water Lines, 16"	linear ft	89,911	\$270	\$24,275,970
Water Lines, 20"	linear ft	39,032	\$392	\$15,300,544
Water Lines, 24"	linear ft	14,521	\$416	\$6,040,736
Water Lines, 30"	linear ft	8,178	\$516	\$4,219,848
Land	acres	31.56	\$42,270	\$1,334,041
<b>Total</b>				<b>\$325,422,008</b>

Source: Surprise Water Resource Management Department

**SPA 2 – Plan-Based**

This analysis uses a plan-based methodology for SPA 2, because the future system does not have enough excess capacity available to serve new customers. Existing water facilities in SPA 2 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 2 system value equals \$94,593,464.

**Figure W10: SPA 2 Cost Factors**

SPA 2				
Description	Unit	Existing	Unit Cost	System Value
Wells	each	6.00	\$6,000,000	\$36,000,000
Arsenic Treatment	mgd	8.64	\$2,777,778	\$24,000,000
Booster Pump Stations	mgd	21.60	\$1,049,383	\$22,666,667
Storage Tanks, <2.5 mg	mg	5.02	\$2,333,333	\$11,713,333
Storage Tanks, 2.5 - <4.0 mg	mg	0	\$2,053,058	\$0
Storage Tanks, 4.0 - <7.5 mg	mg	0	\$1,586,123	\$0
Water Lines, 10"	linear ft	2,644	\$169	n/a
Water Lines, 12"	linear ft	38,358	\$202	n/a
Water Lines, 16"	linear ft	63,934	\$270	n/a
Water Lines, 20"	linear ft	0	\$392	n/a
Water Lines, 24"	linear ft	659	\$416	n/a
Water Lines, 30"	linear ft	0	\$516	n/a
Land	acres	5.05	\$42,270	\$213,464
<b>Total</b>				<b>\$94,593,464</b>

Source: Surprise Water Resource Management Department

**SPA 3 – Plan-Based**

This analysis uses a plan-based methodology for SPA 3, because the future system does not have enough excess capacity available to serve new customers. Existing water facilities in SPA 3 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 3 system value equals \$24,022,461.

**Figure W11: SPA 3 Cost Factors**

SPA 3				
Description	Unit	Existing	Unit Cost	System Value
Wells	each	2.00	\$6,000,000	\$12,000,000
Arsenic Treatment	mgd	0.00	\$2,777,778	\$0
Booster Pump Stations	mgd	7.92	\$1,049,383	\$8,311,111
Storage Tanks, < 2.5 mg	mg	1.50	\$2,333,333	\$3,500,000
Storage Tanks, 2.5 - < 4.0 mg	mg	0	\$2,053,058	\$0
Storage Tanks, 4.0 - < 7.5 mg	mg	0	\$1,586,123	\$0
Water Lines, 10"	linear ft	20	\$169	n/a
Water Lines, 12"	linear ft	108	\$202	n/a
Water Lines, 16"	linear ft	9,343	\$270	n/a
Water Lines, 20"	linear ft	0	\$392	n/a
Water Lines, 24"	linear ft	4,080	\$416	n/a
Water Lines, 30"	linear ft	192	\$516	n/a
Land	acres	5.00	\$42,270	\$211,350
<b>Total</b>				<b>\$24,022,461</b>

Source: Surprise Water Resource Management Department

**Cost per Gallon**

The cost per gallon is calculated as system value divided by well capacity. The cost is \$16.63 per gallon in SPA 1, \$16.54 per gallon in SPA 2, and \$9.81 per gallon in SPA 3.

**Figure W12: Cost per Gallon**

Description	System Value			Well Capacity (mgd)			Cost per Gallon		
	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
Wells	\$96,000,000	\$36,000,000	\$12,000,000	19.56	5.72	2.45	\$4.91	\$6.29	\$4.90
Arsenic Treatment	\$55,583,333	\$24,000,000	\$0	19.56	5.72	2.45	\$2.84	\$4.20	\$0.00
Booster Pump Stations	\$45,941,975	\$22,666,667	\$8,311,111	19.56	5.72	2.45	\$2.35	\$3.96	\$3.39
Storage Tanks	\$29,049,036	\$11,713,333	\$3,500,000	19.56	5.72	2.45	\$1.48	\$2.05	\$1.43
Water Lines	\$97,513,623	\$0	\$0	19.56	5.72	2.45	\$4.98	\$0.00	\$0.00
Land	\$1,334,041	\$213,464	\$211,350	19.56	5.72	2.45	\$0.07	\$0.04	\$0.09
<b>Total</b>	<b>\$325,422,008</b>	<b>\$94,593,464</b>	<b>\$24,022,461</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>\$16.63</b>	<b>\$16.54</b>	<b>\$9.81</b>



**SPA 4 – Plan-Based**

This analysis uses a plan-based methodology for SPA 4. Developers will construct WSFs and wells for Marisol Ranch and Sunhaven in SPA 4. The planned facilities will cost \$30,000,000 and provide 3.24 mgd of well capacity. The analysis uses a cost of \$9.26 per gallon (\$30,000,000 cost / 3.24 mgd) for SPA 4.

**Figure W13: SPA 4 Cost Factors**

Description	Cost	Well Capacity (mgd)	Cost per Gallon
Marisol Ranch WSF and Wells	\$15,000,000	1.62	\$9.26
Sunhaven WSF and Wells	\$15,000,000	1.62	\$9.26
<b>Total</b>	<b>\$30,000,000</b>	<b>3.24</b>	<b>\$9.26</b>

Source: Surprise Water Resource Management Department

**Development Fee Report – Plan-Based**

The cost to prepare the Water Facilities IIP and related Development Fee Report totals \$30,000. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections in Figure W7, the cost is \$0.01 per gallon.

**Figure W14: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Water	\$30,000	All Development	100%	Avg Gallons	4,336,702	\$0.01

**WATER FACILITIES DEVELOPMENT FEES**

**Revenue Credit/Offset**

A revenue credit/offset is necessary for development fees, because Surprise’s construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).

**SPA 1**

The cost per service unit is \$16.64 per gallon for water facilities development fees in SPA 1, and Surprise will assess water facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$5,325 is calculated using a cost per service unit of \$16.64 per gallon, multiplied by 320 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$16.64 per gallon, multiplied by 320 average day gallons, multiplied by the associated capacity ratio.

**Figure W15: Water Facilities Development Fees**

Fee Component	Cost per Gallon
Wells	\$4.91
Arsenic Treatment	\$2.84
Booster Pump Stations	\$2.35
Storage Tanks	\$1.48
Water Lines	\$4.98
Land	\$0.07
Development Fee Report	\$0.01
<b>Total</b>	<b>\$16.64</b>

Development Type	Average Day Gallons
Single Family (EDU)	320

Fees per Meter - SPA 1				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$5,325	\$2,985	\$2,340
1.00-inch	1.67	\$8,892	\$4,985	\$3,907
1.50-inch	3.33	\$17,732	\$9,940	\$7,792
2.00-inch	5.33	\$28,381	\$15,910	\$12,471
3.00-inch	10.67	\$56,816	\$31,850	\$24,966
4.00-inch	16.67	\$88,764	\$49,760	\$39,004
6.00-inch	33.33	\$177,476	\$99,490	\$77,986
8.00-inch	53.33	\$283,972	\$159,190	\$124,782

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**SPA 2**

The cost per service unit is \$16.55 per gallon for water facilities development fees in SPA 2, and Surprise will assess water facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$5,296 is calculated using a cost per service unit of \$16.55 per gallon, multiplied by 320 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$16.55 per gallon, multiplied by 320 average day gallons, multiplied by the associated capacity ratio.

**Figure W16: Water Facilities Development Fees**

Fee Component	Cost per Gallon
Wells	\$6.29
Arsenic Treatment	\$4.20
Booster Pump Stations	\$3.96
Storage Tanks	\$2.05
Land	\$0.04
Development Fee Report	\$0.01
<b>Total</b>	<b>\$16.55</b>

Development Type	Average Day Gallons
Single Family (EDU)	320

Fees per Meter - SPA 2				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$5,296	\$2,836	\$2,460
1.00-inch	1.67	\$8,844	\$4,736	\$4,108
1.50-inch	3.33	\$17,636	\$9,444	\$8,192
2.00-inch	5.33	\$28,228	\$15,116	\$13,112
3.00-inch	10.67	\$56,508	\$30,260	\$26,248
4.00-inch	16.67	\$88,284	\$47,276	\$41,008
6.00-inch	33.33	\$176,516	\$94,524	\$81,992
8.00-inch	53.33	\$282,436	\$151,244	\$131,192

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**SPA 3**

The cost per service unit is \$9.82 per gallon for water facilities development fees in SPA 3, and Surprise will assess water facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$3,142 is calculated using a cost per service unit of \$9.82 per gallon, multiplied by 320 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$9.82 per gallon, multiplied by 320 average day gallons, multiplied by the associated capacity ratio.

**Figure W17: Water Facilities Development Fees**

Fee Component	Cost per Gallon
Wells	\$4.90
Arsenic Treatment	\$0.00
Booster Pump Stations	\$3.39
Storage Tanks	\$1.43
Land	\$0.09
Development Fee Report	\$0.01
<b>Total</b>	<b>\$9.82</b>

Development Type	Average Day Gallons
Single Family (EDU)	320

Fees per Meter - SPA 3				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$3,142	\$2,486	\$656
1.00-inch	1.67	\$5,248	\$4,152	\$1,096
1.50-inch	3.33	\$10,464	\$8,278	\$2,186
2.00-inch	5.33	\$16,749	\$13,250	\$3,499
3.00-inch	10.67	\$33,529	\$26,526	\$7,003
4.00-inch	16.67	\$52,384	\$41,442	\$10,942
6.00-inch	33.33	\$104,736	\$82,858	\$21,878
8.00-inch	53.33	\$167,584	\$132,578	\$35,006

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**SPA 4**

The cost per service unit is \$9.27 per gallon for water facilities development fees in SPA 4, and Surprise will assess water facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$2,966 is calculated using a cost per service unit of \$9.27 per gallon, multiplied by 320 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$9.27 per gallon, multiplied by 320 average day gallons, multiplied by the associated capacity ratio.

**Figure W18: Water Facilities Development Fees**

Fee Component	Cost per Gallon
Planned WSFs and Wells	\$9.26
Development Fee Report	\$0.01
<b>Total</b>	<b>\$9.27</b>

Development Type	Average Day Gallons
Single Family (EDU)	320

Fees per Meter - SPA 4				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$2,966	\$0	\$2,966
1.00-inch	1.67	\$4,954	\$0	\$4,954
1.50-inch	3.33	\$9,878	\$0	\$9,878
2.00-inch	5.33	\$15,811	\$0	\$15,811
3.00-inch	10.67	\$31,651	\$0	\$31,651
4.00-inch	16.67	\$49,450	\$0	\$49,450
6.00-inch	33.33	\$98,870	\$0	\$98,870
8.00-inch	53.33	\$158,198	\$0	\$158,198

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**WATER FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains revenue forecasts required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure W19 is based on EDU projections in Figure W7 and the updated water facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 10 years equals \$35,768,588 in SPA 1, \$69,892,646 in SPA 2, and \$7,761,053 in SPA 3. Due to existing development agreements, projected development fee revenue may be offset by development fee credits.

**Figure W19: Water Facilities Development Fees Revenue**

Fee Component	SPA 1	SPA 2	SPA 3
Water Facilities	\$35,758,253	\$69,875,648	\$7,759,705
Development Fee Report	\$10,335	\$16,999	\$1,348
<b>Total</b>	<b>\$35,768,588</b>	<b>\$69,892,646</b>	<b>\$7,761,053</b>

		SPA 1 \$5,325 per EDU	SPA 2 \$5,296 per EDU	SPA 3 \$3,142 per EDU
Year		EDU	EDU	EDU
Base	2023	23,469	6,037	2,080
Year 1	2024	24,613	7,573	2,185
Year 2	2025	25,757	9,110	2,291
Year 3	2026	26,550	10,645	2,424
Year 4	2027	27,344	12,181	2,556
Year 5	2028	28,137	13,716	2,689
Year 6	2029	28,931	15,251	2,822
Year 7	2030	29,724	16,786	2,955
Year 8	2031	29,879	17,604	3,487
Year 9	2032	30,034	18,421	4,020
Year 10	2033	30,188	19,239	4,552
10-Year Increase		6,719	13,202	2,472
<b>Projected Revenue</b>		<b>\$35,768,588</b>	<b>\$69,892,646</b>	<b>\$7,761,053</b>

Projected Fee Revenue	\$113,422,288
Total Expenditures	\$113,422,288

## 10-YEAR CAPITAL PLAN

The figure shown below includes planned water capital expenditures during the next 10 years.

**Figure W20: Water Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	SPA 1 Rancho Gabriela Agriculture Well	2030-2031	\$5,200,000
CIP	Surfacewater Capacity Expansion & Interconnect	2030+	\$8,736,981
CIP	SPA 1 Rancho Gabriela Water Supply Facility Expansion	2026-2028	\$13,750,000
Dev Agreement	Developer Obligation - Marley Park Well #3	2024-2034	\$2,500,000
Dev Agreement	Developer Obligation - Section 15 Arsenic Treatment	2024-2034	\$2,510,434
Dev Agreement	Developer Obligation - Section 15 Water System	2024-2034	\$1,274,840
Dev Agreement	Developer Obligation - Section 15 WSF 2B Expansion	2024-2034	\$1,785,998
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$10,335
Subtotal, SPA 1			\$35,768,588
CIP	Rancho Mercado Well 2	2024	\$4,200,000
CIP	Rancho Mercado Well 3	2026-2028	\$5,200,000
CIP	Rancho Mercado WSF Phase II	2026-2028	\$12,920,956
Dev Agreement	Desert Oasis WSF (Arsenic / Tank capacity)	2024	\$19,270,366
Dev Agreement	Developer Obligation - Asante Arsenic Treatment Facility 3,800 GPM	2024-2034	\$5,676,933
Dev Agreement	Developer Obligation - Asante Wells 1-4, Transmission lines, Tank	2024-2034	\$7,246,996
Dev Agreement	Developer Obligation - Rancho Mercado Regional Improvements	2024-2034	\$14,596,907
Dev Agreement	Developer Obligation - Tierra Verde West Regional Improvements	2024-2034	\$763,489
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$16,999
Subtotal, SPA 2			\$69,892,646
Dev Agreement	Developer Obligation - Surprise Foothills WSF and Wells	2024-2034	\$17,793,543
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$1,348
Subtotal, SPA 3			\$17,794,891
Dev Agreement	Developer Obligation - Marisol Ranch WSF and Wells	2024-2034	\$15,000,000
Dev Agreement	Developer Obligation - Sunhaven WSF and Wells	2024-2034	\$15,000,000
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$1,318
Subtotal, SPA 4			\$30,001,318
Total			\$153,457,443

Source: Surprise Water Resource Management Department

## WATER RESOURCE FACILITIES IIP

ARS § 9-463.05 (T)(7)(a) defines the eligible facilities and assets for the Water Facilities IIP:

*“Water facilities, including the supply, transportation, treatment, purification and distribution of water, and any appurtenances for those facilities.”*

The Water Resource Facilities IIP includes components for acquisition of water resources and the cost of preparing the Water Resource Facilities IIP and related Development Fee Report. The plan-based methodology is used for water resource and the Development Fee Report.

### PROPORTIONATE SHARE

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ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Water Resource Facilities IIP and development fees will allocate the cost of necessary public services between both residential and nonresidential development using annual demand factors.

### SERVICE AREA

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The City of Surprise is an assured water service provider within its water service area, which is shown in Figure WR1. The City is allowed to treat and deliver no more than its total demonstrated 100-year supply. Because this requirement applies to the entire area served by the City water system, a single, citywide service area is appropriate for its Water Resource Facilities Development Fee.

Figure WR1: Water Resource Facilities Development Fee Service Area

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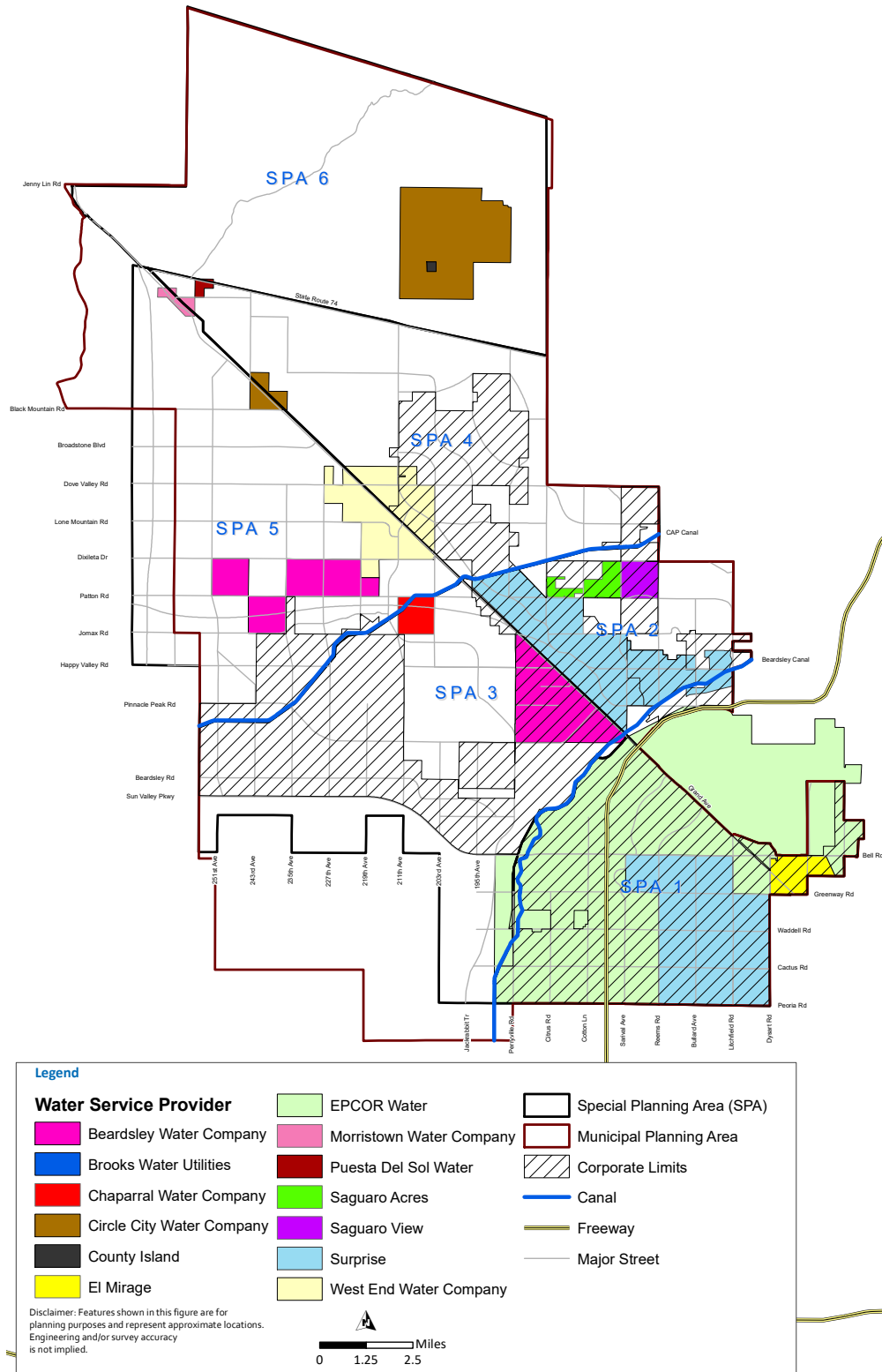


Figure 1.2 Water Service Providers

**RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT**

ARS § 9-463.05(E)(4) 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.”*

Future development places demand on the City’s available water resources. However, some of the water used by new customers is returned to the City in the form of wastewater influent flows to its water reclamation facilities (WRFs). Surprise plans to ultimately reclaim all treated effluent for either direct reuse, for recharge, or for long-term storage credits. Shown below in Figure WR2, the 2022 Water Resource Master Plan indicates 42 percent of water is returned in the form of wastewater influent, with the remainder used for irrigation or other uses. Surprise can reclaim or recharge 90 percent of its wastewater influent, which means 37.8 percent of water use can be reclaimed or recharged (42.0 percent water returned as wastewater influent X 90 percent efficiency factor = 37.8 percent reclaimed or recharged). The remaining 62.2 percent of water use that is not recoverable for reuse or recharge is used to determine the water resource demand of a new customer.

**Figure WR2: Water Recovery Factor**

Water Recovery Factor	
Water Returned as Wastewater Influent	42.0%
x Efficiency Factor (Influent / Effluent Ratio)	90.0%
Water Reclaimed / Recharged	37.8%
Water Not Reclaimed / Recharged	62.2%
Total Water Use	100.0%

Source: 2022 Water Resource Master Plan

To deliver water, Surprise must demonstrate sufficient 100-year renewable supply to accommodate existing demand and 10-year demand. Surprise currently has a demonstrated 100-year supply for current customers, as well as some excess capacity, but will need to dramatically expand its water resource portfolio in the future to accommodate future development. If growth is to pay for its share of water resources, future development will pay a development fee sufficient to acquire their own 100-year supply. However, the adopted Water Acquisition Policy states that “To ensure enough reserves are in place to meet present and future water demands ... the City will maintain a minimum balance ... equal to 15 years or 15 times the City’s service area net demand .”

As shown in Figure WR3, average day water resource demand is 199 gallons (320 average day gallons X 62.2 percent of water not reclaimed or recharged) per equivalent demand unit (EDU), and annual water resource demand is 72,635 gallons (199 average day gallons X 365 days) or 0.2229 acre-feet (72,635 gallons / 325,851 gallons per acre-foot). For a 15-year supply, long-term water resource demand is 3.3435 acre-feet per EDU (0.2229 acre-feet per year X 15 years).



**Figure WR3: Long-Term Water Resource Demand per EDU**

Water Resource Demand per EDU	
Average Day Demand (gallons)	320
x Percent of Water Not Reclaimed / Recharged	62.2%
Average Day Water Resource Demand (gallons)	199
x Days per Year	365
Annual Water Resource Demand (gallons)	72,635
÷ Gallons per Acre-Foot	325,851
Annual Water Resource Demand (acre-feet)	0.2229
x Years	15
Long-Term Water Resource Demand (acre-feet)	3.3435

Source: 2022 Water Resource Master Plan

Water resource development fees are assessed by meter size, and the analysis uses long-term water resource demand from single-family units equal to 3.3435 acre-feet as the demand factor for a 0.75-inch meter. For meters larger than 0.75 inches, long-term water resource demand is calculated by multiplying long-term water resource demand from existing single-family units by the capacity ratio for the corresponding meter size. Figure WR4 displays the demand indicators by meter size.

**Figure WR4: Ratio of Service Unit to Development Unit**

Demand per Unit	
Development Type	Long-Term Demand (AF)
Single Family (EDU)	3.3435

Demand per Meter		
Meter Size	Capacity Ratio <sup>1</sup>	Long-Term Demand (AF)
0.75-inch	1.00	3.3435
1.00-inch	1.67	5.5836
1.50-inch	3.33	11.1339
2.00-inch	5.33	17.8209
3.00-inch	10.67	35.6751
4.00-inch	16.67	55.7361
6.00-inch	33.33	111.4389
8.00-inch	53.33	178.3089

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**ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES**

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.”*

**Existing Demand**

Applying the water resource demand factor of 62.2 percent shown in Figure WR2 to annual water demand from the 2022 Water Resource Master Plan results in existing water resource demand of approximately 7,041 acre-feet per year.

**Figure WR5: Existing Demand**

Year	Annual Water Resource Demand (AFY)			
	SPA 1	SPA 2	SPA 3	Total
Base 2023	5,232	1,346	464	7,041

Source: TischlerBise calculation based on 62.2 percent of annual water demand

**PROJECTED DEMAND FOR SERVICES AND COSTS**

ARS § 9-463.05(E)(1) requires:

*“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.”*

ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

### Projected Demand

Figure WR6 includes projected annual water resource demand over the next 10 years. To project future annual water resource demand, the analysis applies the water resource demand factor of 62.2 percent shown in Figure WR2 to projected annual water demand projections from the 2022 Water Resource Master Plan. Projected demand increases by 4,992 acre-feet over the next 10 years.

**Figure WR6: Projected Demand**

Year	Annual Water Resource Demand (AFY)				Equivalent Demand Units (EDU)			
	SPA 1	SPA 2	SPA 3	Total	SPA 1	SPA 2	SPA 3	Total
Base 2023	5,232	1,346	464	7,041	23,471	6,037	2,080	31,588
1 2024	5,487	1,688	487	7,662	24,615	7,574	2,186	34,375
2 2025	5,742	2,031	511	8,283	25,759	9,111	2,291	37,161
3 2026	5,919	2,373	540	8,832	26,553	10,646	2,424	39,623
4 2027	6,095	2,715	570	9,381	27,346	12,182	2,557	42,084
5 2028	6,272	3,058	599	9,929	28,140	13,717	2,689	44,546
6 2029	6,449	3,400	629	10,478	28,933	15,252	2,822	47,008
7 2030	6,626	3,742	659	11,027	29,727	16,788	2,955	49,470
8 2031	6,661	3,924	777	11,362	29,882	17,605	3,488	50,974
9 2032	6,695	4,106	896	11,698	30,036	18,423	4,020	52,479
10 2033	6,730	4,289	1,015	12,033	30,191	19,240	4,552	53,984
10-Yr Increase	1,498	2,943	551	4,992	6,720	13,203	2,472	22,395

Source: TischlerBise calculation based on 62.2 percent of annual water demand

### Water Resource – Plan-Based

The City of Surprise plans to acquire additional water resources to meet demand from future development. The average cost of recent and potential water resource acquisitions is \$1,091 per acre-foot. The analysis uses this cost as a proxy for future water resource acquisition costs.

**Figure WR7: Water Resource Acquisition Costs**

Description	Cost per Acre-Foot
Extinguishment Credits	\$315
Tribal Lease of LTSC	\$500
CAGR	\$850
Renewable Water Supply Estimate	\$2,700
Average	\$1,091

Source: Surprise Water Resource Management Department

### Development Fee Report – Plan-Based

The cost to prepare the Water Resource Facilities IIP and related Development Fee Report totals \$12,000. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of long-term annual water resource demand, the cost is \$0.28 per acre-foot.

**Figure WR8: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Water Resource	\$12,000	All Development	100%	Acre-Feet	43,325	\$0.28

**WATER RESOURCE FACILITIES DEVELOPMENT FEES**

**Revenue Credit/Offset**

A revenue credit/offset is necessary for development fees, because Surprise’s construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).

**Water Resource Facilities Development Fees**

The cost per service unit is \$1,091.28 per acre-foot for water resource facilities development fees, and Surprise will assess water resource facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$3,649 is calculated using a cost per service unit of \$1,091.28 per acre-foot, multiplied by 3.3435 acre-feet, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$1,091.28 per acre-foot, multiplied by 3.3435 acre-feet, multiplied by the associated capacity ratio.

**Figure WR9: Water Resource Facilities Development Fees**

Fee Component	Cost per AF
Water Resource	\$1,091.00
Development Fee Report	\$0.28
<b>Total</b>	<b>\$1,091.28</b>

Development Type	Long-Term Demand (AF)
Single Family (EDU)	3.3435

Fees per Meter				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$3,649	\$2,279	\$1,370
1.00-inch	1.67	\$6,093	\$3,806	\$2,287
1.50-inch	3.33	\$12,150	\$7,589	\$4,561
2.00-inch	5.33	\$19,448	\$12,147	\$7,301
3.00-inch	10.67	\$38,932	\$24,317	\$14,615
4.00-inch	16.67	\$60,824	\$37,991	\$22,833
6.00-inch	33.33	\$121,611	\$75,959	\$45,652
8.00-inch	53.33	\$194,585	\$121,539	\$73,046

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**WATER RESOURCE FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains revenue forecasts required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure WR10 is based on EDU projections in Figure WR6 and the updated water resource facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 10 years equals \$81,704,610, and projected expenditures equal \$81,704,823.

**Figure WR10: Water Resource Facilities Development Fees Revenue**

Fee Component	Growth Share	Existing Share	Total
Water Resource	\$81,692,823	\$0	\$81,692,823
Development Fee Report	\$12,000	\$0	\$12,000
<b>Total</b>	<b>\$81,704,823</b>	<b>\$0</b>	<b>\$81,704,823</b>

		SPA 1 \$3,649 per EDU	SPA 2 \$3,649 per EDU	SPA 3 \$3,649 per EDU
Year		EDU	EDU	EDU
Base	2023	23,471	6,037	2,080
Year 1	2024	24,615	7,574	2,186
Year 2	2025	25,759	9,111	2,291
Year 3	2026	26,553	10,646	2,424
Year 4	2027	27,346	12,182	2,557
Year 5	2028	28,140	13,717	2,689
Year 6	2029	28,933	15,252	2,822
Year 7	2030	29,727	16,788	2,955
Year 8	2031	29,882	17,605	3,488
Year 9	2032	30,036	18,423	4,020
Year 10	2033	30,191	19,240	4,552
10-Year Increase		6,720	13,203	2,472
Projected Revenue		\$24,517,511	\$48,169,270	\$9,017,829

Projected Fee Revenue	\$81,704,610
Total Expenditures	\$81,704,823



**10-YEAR CAPITAL PLAN**

The figure shown below includes potential water resource capital expenditures during the next 10 years.

**Figure WR11: Water Resource Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	Circle City Water Acquisition	2025-2029	\$15,000,000
CIP	Water Acquisitions	2024-2028	\$66,680,000
Dev Agreement	Developer Obligation - Kamarata Ranch Northern Basin	2024-2034	\$26,368
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$12,000
<b>Total</b>			<b>\$81,718,368</b>

Source: Surprise Water Resource Management Department

## WASTEWATER FACILITIES IIP

ARS § 9-463.05 (T)(7)(b) defines the eligible facilities and assets for the Wastewater Facilities IIP:

*“Wastewater facilities, including collection, interception, transportation, treatment and disposal of wastewater, and any appurtenances for those facilities.”*

The Wastewater Facilities IIP includes components for water reclamation facilities (WRFs), land, wastewater lines (SPA 1 only), reclaimed lines, recharge basins, other wastewater improvements (lift stations, reclaimed booster stations, vadose zone wells, and monitoring wells), and the cost of preparing the Wastewater Facilities IIP and related Development Fee Report. SPA 1 uses a combined cost recovery and plan-based methodology, and the remaining SPA 2, SPA 3, SPA 4, and SPA 5 use a plan-based methodology.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Wastewater Facilities IIP and development fees will allocate the cost of necessary public services between both residential and nonresidential development using max day demand factors.

### SERVICE AREA

As shown in Figure WW1, there are six service areas for the Wastewater Facilities IIP. The City’s Municipal Planning Area (MPA) is divided into six Special Planning Areas (SPAs). The SPAs are separated by major geographic barriers - Grand Avenue/BNSF Railroad line, the Beardsley Canal, the Central Arizona Project (CAP) Canal, and SR 74. The SPA borders form natural boundaries for the wastewater service areas. Surprise will assess wastewater facilities development fees in SPA 1, SPA 2, SPA 3, SPA 4, and SPA 5.

Surprise is the primary service provider for all its Municipal Planning Area (MPA), except for a small area that is served by EPCOR, a private utility. Surprise currently provides wastewater service to most of the developed areas of SPA 1, SPA 2, and SPA 3. Surprise entered into an annexation development agreement with a developer in SPA 2 and SPA 3, and the developer built a water reclamation facility. Based on the terms of the annexation development agreement, parties subject to the agreement will not pay development fees related to wastewater infrastructure. Although most future development within SPA 2 and SPA 3 is a party to the annexation development agreement, the analysis includes a wastewater development fee for future development within SPA 2 and SPA 3 that is not a party to the annexation development agreement.

SPA 4 and SPA 5 will be served by a common water reclamation facility, so the analysis uses the same wastewater development fee for future development in SPA 4 and SPA 5. The analysis does not include a wastewater development fee for SPA 6.

Figure WW1: Wastewater Facilities Development Fee Service Area

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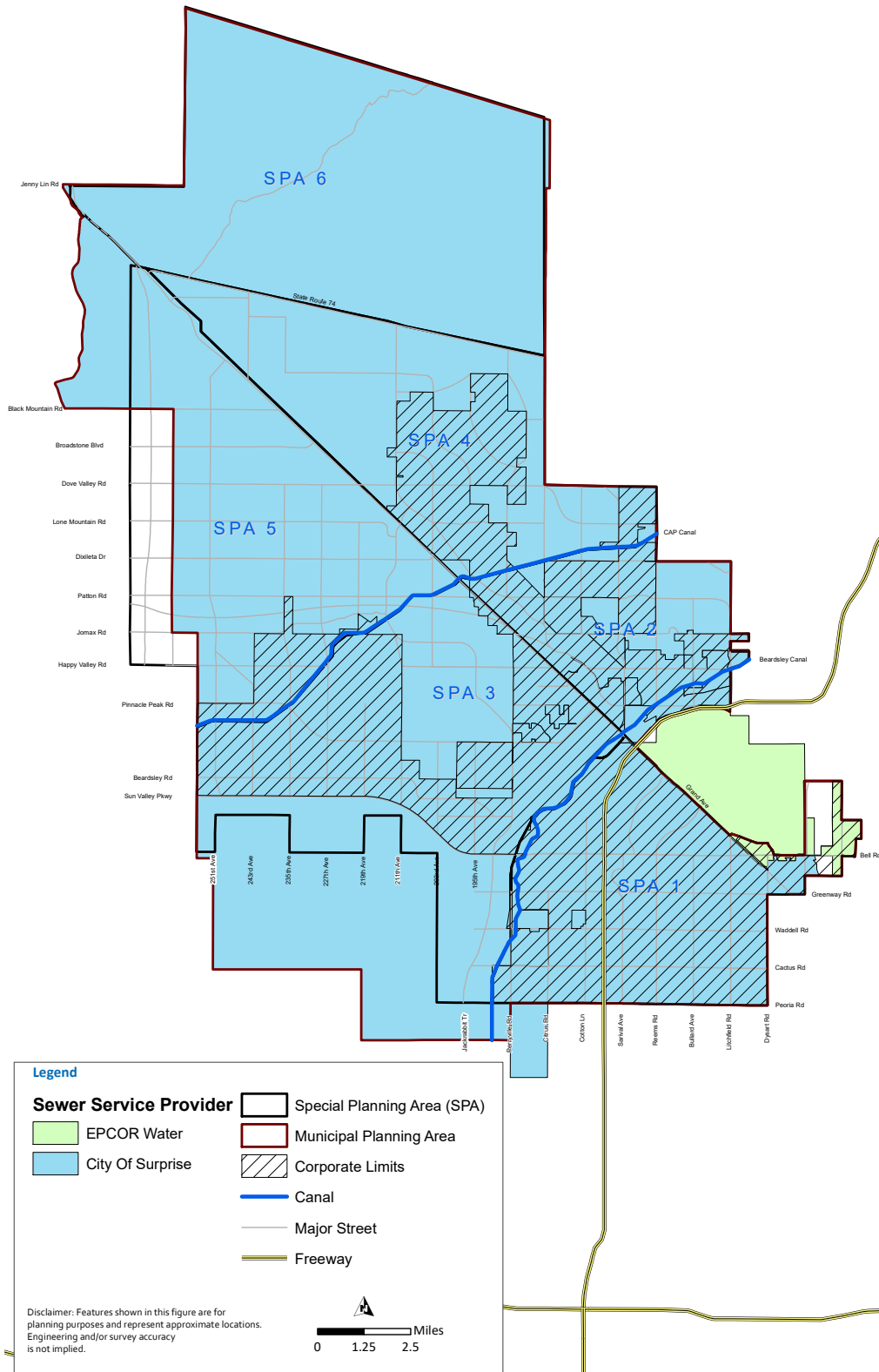


Figure 1.3 Sewer Service Providers

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**RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT**

ARS § 9-463.05(E)(4) 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.”*

To calculate water and wastewater development fees, the demand associated with different types of customers must be expressed in a common unit of measurement called a service unit. The service unit for the City’s water and wastewater fees is an equivalent demand unit (EDU). An EDU is a single-family dwelling unit, or its equivalent in terms of water demand, defined as the potential demand resulting from a 0.75-inch diameter or smaller meter.

The number of wastewater service units associated with meters larger than 0.75 inches is determined by the capacity of the meter relative to the capacity of a 0.75-inch meter. Figure WW2 presents EDU multipliers for various meter sizes based on meter capacities from the American Water Works Association. According to the 2022 Water Resource Master Plan, average day flow from a single-family unit is 210 gallons, so the analysis uses average day flow of 210 gallons per EDU.

**Figure WW2: Ratio of Service Unit to Development Unit**

Demand per Equivalent Demand Unit	
Development Type	Average Day Demand <sup>1</sup>
Single Family (EDU)	210

Demand per Equivalent Demand Unit		
Meter Size	Capacity Ratio <sup>2</sup>	Average Day Demand
0.75-inch	1.00	210
1.00-inch	1.67	351
1.50-inch	3.33	699
2.00-inch	5.33	1,119
3.00-inch	10.67	2,241
4.00-inch	16.67	3,501
6.00-inch	33.33	6,999
8.00-inch	53.33	11,199

1. 2022 Water Resource Master Plan
2. AWWA Manual of Water Supply Practices M-1, 7th Edition

**ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES**

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.”*

**Existing Flow**

Using wastewater flow factors from the 2022 Water Resource Master Plan, average day flow from Surprise wastewater customers in 2023 is approximately 11.83 million gallons. Existing wastewater service units are estimated based on existing wastewater flow and the service unit multipliers described in the previous section of this report. As shown below, the City’s current wastewater customer base amounts to 56,332 service units (EDUs).

**Figure WW3: Existing Flow**

Year	Average Day Flow (mgd)				Service Units (EDUs)			
	SPA 1	SPA 2	SPA 3	Total	SPA 1	SPA 2	SPA 3	Total
Base 2023	10.54	0.77	0.52	11.83	50,201	3,674	2,458	56,332

Level of service (LOS) generally refers to the ratio of capacity to demand. One of the principles of development fee analysis is that future development should not be required to pay for a higher LOS than existing development currently receives. Consequently, it is important to determine the existing LOS.

The capacity of water reclamation facilities (WRFs) is generally reflective of the capacity of the entire wastewater system. However, other components of the system may have more capacity or less capacity than needed for full utilization of WRFs and will be evaluated separately. The capacities of the existing WRFs are summarized in Figure WW4.

**Figure WW4: Existing Water Reclamation Facility Capacity**

Description	Status	Total Capacity (mgd)
<b>SPA 1</b>		
Plant 1	Existing (Inactive)	0.8
Plant 2	Existing (Inactive)	2.7
Plant 3	Existing	4.8
Plant 4	Existing	4.0
Plant 5	Existing	4.0
<b>Subtotal, SPA 1</b>		<b>16.3</b>
<b>SPA 2</b>		
Plant 1	Existing	1.2
Plant 2	Existing	2.0
<b>Subtotal, SPA 2</b>		<b>3.2</b>
<b>SPA 3</b>		
Plant 1	Existing	1.8
<b>Subtotal, SPA 3</b>		<b>1.8</b>
<b>Total</b>		<b>21.3</b>

Source: 2022 Integrated Water Master Plan



The existing levels of service for WRFs in SPA 1, SPA 2, and SPA 3 are summarized in Figure WW5. Each SPA has enough capacity to accommodate current average day flow.

**Figure WW5: Existing WRF Level of Service**

Existing Level of Service for WRFs	SPA 1	SPA 2	SPA 3	Total
Existing Treatment Capacity (mgd)	16.30	3.20	1.80	21.30
- Average Day Influent Flow (mgd), 2023	(10.54)	(0.77)	(0.52)	(11.83)
Available Capacity (mgd)	5.76	2.43	1.28	9.47
Capacity Used, 2023	64.7%	24.1%	28.7%	55.5%

**Other System Components**

SPA 1 is the service area with the most developed wastewater system. Figure WW6 includes quantities for WRF and non-WRF components for SPA 1, SPA 2, and SPA 3. Line costs per foot generally increase proportionally with the inches in diameter of the pipe, making inch-feet a reasonable summary unit for comparison. The component quantities are then converted into quantities per MGD of WRF capacity.

In the existing SPA 2 system, WRF land, wastewater collection lines, and recharge basins are somewhat undersized for full utilization of existing WRF capacity, while reclaimed lines are oversized. In the existing SPA 3 system, reclaimed lines are somewhat undersized for full utilization of existing WRF capacity, while WRF land, wastewater collection lines, and recharge basins are oversized.

**Figure WW6: Existing Level of Service for Other System Components**

Description	Unit	Existing Quantity			Quantity per WRF MGD		
		SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
WRFs	mgd	16.30	3.20	1.80	1.00	1.00	1.00
WRF land	acres	174.45	23.94	140.31	11	7	78
Wastewater Lines	1,000 in.-ft	8,593	1,209	1,182	527	378	657
Reclaimed Lines	1,000 in.-ft	1,808	476	0	111	149	0
Recharge Basins	acres	25.50	1.06	8.30	1.56	0.33	4.61

Source: Surprise Water Resource Management Department

**PROJECTED DEMAND FOR SERVICES AND COSTS**

ARS § 9-463.05(E)(1) requires:

*“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.”*

ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

**Projected Flow**

Shown below, Figure WW7 includes projected average day flow over the next 10 years from the 2022 Water Resource Master Plan.

**Figure WW7: Projected Flow**

Year	Average Day Flow (mgd)				Service Units (EDUs)			
	SPA 1	SPA 2	SPA 3	Total	SPA 1	SPA 2	SPA 3	Total
Base 2023	10.54	0.77	0.52	11.83	50,201	3,674	2,458	56,332
1 2024	10.88	0.97	0.62	12.47	51,827	4,615	2,949	59,391
2 2025	11.23	1.17	0.72	13.11	53,454	5,557	3,440	62,450
3 2026	11.55	1.37	0.79	13.70	55,002	6,502	3,745	65,249
4 2027	11.88	1.56	0.85	14.29	56,551	7,447	4,050	68,047
5 2028	12.20	1.76	0.91	14.88	58,099	8,391	4,356	70,846
6 2029	12.53	1.96	0.98	15.47	59,648	9,336	4,661	73,644
7 2030	12.85	2.16	1.04	16.05	61,196	10,281	4,966	76,443
8 2031	12.96	2.26	1.12	16.35	61,729	10,775	5,352	77,856
9 2032	13.08	2.37	1.21	16.65	62,262	11,269	5,738	79,270
10 2033	13.19	2.47	1.29	16.94	62,796	11,763	6,124	80,683
10-Yr Increase	2.64	1.70	0.77	5.11	12,595	8,089	3,667	24,351

Surprise must begin planning and design of treatment capacity expansion when utilization reaches 80 percent of available capacity and must begin construction when utilization reaches 90 percent of available capacity. Shown below, Figure WW8 shows the projected 2033 level of service for WRFs in each SPA. Based on projected average day flow in 2033 and existing capacity, SPA 1 will exceed 80 percent capacity utilization (the 2022 Water Resource Master Plan identifies buildout demand of 15.8 MGD), SPA 2 will exceed 77 percent capacity utilization (80 percent capacity utilization in 2034), and SPA 3 will exceed 71 percent capacity utilization (80 percent capacity utilization in 2035).

**Figure WW8: Future WRF Level of Service**

Future Level of Service for WRFs	SPA 1	SPA 2	SPA 3	Total
Existing Treatment Capacity (mgd)	16.30	3.20	1.80	21.30
- Average Day Influent Flow (mgd), 2033	(13.19)	(2.47)	(1.29)	(16.94)
Available Capacity (mgd)	3.11	0.73	0.51	4.36
Capacity Used, 2033	80.9%	77.2%	71.4%	79.5%

**SPA 1 – Cost Recovery / Plan-Based**

This analysis uses a hybrid cost recovery and plan-based methodology for SPA 1, because the existing system has some excess capacity available to serve new customers. Existing wastewater facilities in SPA 1 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 1 system value equals \$347,665,492.

**Figure WW9: SPA 1 Cost Factors**

SPA 1				
Description	Unit	Existing	Unit Cost	System Value
WRFs, 13<18 mgd	mgd	16.30	\$10,887,960	\$177,473,748
Lift Stations	mgd	4.70	\$1,116,979	\$5,249,801
WRF Land	acres	174.45	\$42,270	\$7,374,002
Wastewater Lines, 10"	linear ft	111,230	\$135	\$15,016,050
Wastewater Lines, 12"	linear ft	125,705	\$159	\$19,987,095
Wastewater Lines, 15"	linear ft	81,631	\$186	\$15,183,366
Wastewater Lines, 18"	linear ft	45,970	\$223	\$10,251,310
Wastewater Lines, 21"	linear ft	16,195	\$265	\$4,291,675
Wastewater Lines, 24"	linear ft	48,572	\$287	\$13,940,164
Wastewater Lines, 27"	linear ft	23,196	\$314	\$7,283,544
Wastewater Lines, 30"	linear ft	30,656	\$342	\$10,484,352
Wastewater Lines, 36"	linear ft	4,843	\$397	\$1,922,671
Wastewater Lines, 42"	linear ft	10,645	\$452	\$4,811,540
Wastewater Lines, 48"	linear ft	5,138	\$507	\$2,604,966
Reclaimed Lines, 10"	linear ft	550	\$169	\$92,950
Reclaimed Lines, 12"	linear ft	29,050	\$202	\$5,868,100
Reclaimed Lines, 16"	linear ft	21,600	\$270	\$5,832,000
Reclaimed Lines, 20"	linear ft	33,530	\$392	\$13,143,760
Reclaimed Lines, 24"	linear ft	6,180	\$416	\$2,570,880
Reclaimed Lines, 30"	linear ft	9,650	\$516	\$4,979,400
Reclaimed Booster Stations, 1-3	mgd	16.56	\$359,764	\$5,957,692
Vadose Zone Wells	each	20	\$350,000	\$7,000,000
Monitoring Well	each	2	\$495,713	\$991,426
Recharge Basins	acres	25.50	\$210,000	\$5,355,000
<b>Total</b>				<b>\$347,665,492</b>

Source: Surprise Water Resource Management Department

**SPA 2 – Plan-Based**

This analysis uses a plan-based methodology for SPA 2. Surprise entered into an annexation development agreement with a developer in SPA 2, and the developer built a water reclamation facility. Based on the terms of the annexation development agreement, parties subject to the agreement will not pay development fees related to wastewater infrastructure. Although most future development within SPA 2 is a party to the annexation development agreement, the analysis includes a wastewater development fee for future development within SPA 2 that is not a party to the annexation development agreement.

Existing wastewater facilities in SPA 2 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 2 system value equals \$137,112,022.

**Figure WW10: SPA 2 Cost Factors**

SPA 2				
Description	Unit	Existing	Unit Cost	System Value
WRFs, <7 mgd	mgd	3.20	\$39,095,375	\$125,105,200
Lift Stations	mgd	0.00	\$1,116,979	\$0
WRF Land	acres	23.94	\$42,270	\$1,011,944
Wastewater Lines, 10"	linear ft	7,351	\$135	n/a
Wastewater Lines, 12"	linear ft	5,605	\$159	n/a
Wastewater Lines, 15"	linear ft	12,157	\$186	n/a
Wastewater Lines, 18"	linear ft	9,329	\$223	n/a
Wastewater Lines, 21"	linear ft	0	\$265	n/a
Wastewater Lines, 24"	linear ft	11,679	\$287	n/a
Wastewater Lines, 27"	linear ft	0	\$314	n/a
Wastewater Lines, 30"	linear ft	13,921	\$342	n/a
Wastewater Lines, 36"	linear ft	558	\$397	n/a
Wastewater Lines, 42"	linear ft	0	\$452	n/a
Wastewater Lines, 48"	linear ft	0	\$507	n/a
Reclaimed Lines, 10"	linear ft	0	\$169	\$0
Reclaimed Lines, 12"	linear ft	12,813	\$202	\$2,588,246
Reclaimed Lines, 16"	linear ft	20,158	\$270	\$5,442,606
Reclaimed Lines, 20"	linear ft	0	\$392	\$0
Reclaimed Lines, 24"	linear ft	0	\$416	\$0
Reclaimed Lines, 30"	linear ft	0	\$516	\$0
Reclaimed Booster Stations, 1-3	mgd	0.00	\$359,764	\$0
Vadose Zone Wells	each	5	\$350,000	\$1,750,000
Monitoring Well	each	2	\$495,713	\$991,426
Recharge Basins	acres	1.06	\$210,000	\$222,600
<b>Total</b>				<b>\$137,112,022</b>

Source: Surprise Water Resource Management Department

**SPA 3 – Plan-Based**

This analysis uses a plan-based methodology for SPA 3. Surprise entered into an annexation development agreement with a developer in SPA 3, and the developer built a water reclamation facility. Based on the terms of the annexation development agreement, parties subject to the agreement will not pay development fees related to wastewater infrastructure. Although most future development within SPA 3 is a party to the annexation development agreement, the analysis includes a wastewater development fee for future development within SPA 3 that is not a party to the annexation development agreement.

Existing wastewater facilities in SPA 3 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 3 system value equals \$78,045,579.

**Figure WW11: SPA 3 Cost Factors**

SPA 3				
Description	Unit	Existing	Unit Cost	System Value
WRFs, <7 mgd	mgd	1.80	\$39,095,375	\$70,371,675
Lift Stations	mgd	0.00	\$1,116,979	\$0
WRF Land	acres	140.31	\$42,270	\$5,930,904
Wastewater Lines, 10"	linear ft	50	\$135	n/a
Wastewater Lines, 12"	linear ft	4,009	\$159	n/a
Wastewater Lines, 15"	linear ft	8,347	\$186	n/a
Wastewater Lines, 18"	linear ft	0	\$223	n/a
Wastewater Lines, 21"	linear ft	0	\$265	n/a
Wastewater Lines, 24"	linear ft	2,644	\$287	n/a
Wastewater Lines, 27"	linear ft	0	\$314	n/a
Wastewater Lines, 30"	linear ft	15,875	\$342	n/a
Wastewater Lines, 36"	linear ft	12,987	\$397	n/a
Wastewater Lines, 42"	linear ft	23	\$452	n/a
Wastewater Lines, 48"	linear ft	8	\$507	n/a
Reclaimed Lines, 10"	linear ft	0	\$169	\$0
Reclaimed Lines, 12"	linear ft	0	\$202	\$0
Reclaimed Lines, 16"	linear ft	0	\$270	\$0
Reclaimed Lines, 20"	linear ft	0	\$392	\$0
Reclaimed Lines, 24"	linear ft	0	\$416	\$0
Reclaimed Lines, 30"	linear ft	0	\$516	\$0
Reclaimed Booster Stations, 1-3	mgd	0.00	\$359,764	\$0
Vadose Zone Wells	each	0	\$350,000	\$0
Monitoring Well	each	0	\$495,713	\$0
Recharge Basins	acres	8.30	\$210,000	\$1,743,000
<b>Total</b>				<b>\$78,045,579</b>

Source: Surprise Water Resource Management Department



**SPA 4 / SPA 5 – Plan-Based**

This analysis uses a plan-based methodology for SPA 4 and SPA 5. Surprise plans to construct a combined WRF for SPA 4 and SPA 5. The planned facility will cost \$17,500,000 and provide 0.40 mgd of treatment capacity. The analysis uses a cost of \$43.75 per gallon (\$17,500,000 cost / 0.40 mgd) for SPA 4 and SPA 5.

**Figure WW12: SPA 4 / SPA 5 Cost Factors**

Description	Cost	WRF Capacity (mgd)	Cost per Gallon
SPA 4/5 Combined WRF	\$17,500,000	0.40	\$43.75

Source: Surprise Water Resource Management Department

**Cost per Gallon**

The cost per gallon is calculated as system value divided by WRF capacity. The cost is \$21.33 per gallon in SPA 1, \$42.86 per gallon in SPA 2, and \$43.36 per gallon in SPA 3.

**Figure WW13: Cost per Gallon**

Description	System Value			WRF Capacity (mgd)			Cost per Gallon		
	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
WRFs	\$177,473,748	\$125,105,200	\$70,371,675	16.30	3.20	1.80	\$10.89	\$39.10	\$39.10
WRF land	\$7,374,002	\$1,011,944	\$5,930,904	16.30	3.20	1.80	\$0.45	\$0.32	\$3.29
Wastewater Lines	\$105,776,733	\$0	\$0	16.30	3.20	1.80	\$6.49	\$0.00	\$0.00
Reclaimed Lines	\$32,487,090	\$8,030,852	\$0	16.30	3.20	1.80	\$1.99	\$2.51	\$0.00
Recharge Basins	\$5,355,000	\$222,600	\$1,743,000	16.30	3.20	1.80	\$0.33	\$0.07	\$0.97
Other*	\$19,198,919	\$2,741,426	\$0	16.30	3.20	1.80	\$1.18	\$0.86	\$0.00
<b>Total</b>	<b>\$347,665,492</b>	<b>\$137,112,022</b>	<b>\$78,045,579</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>\$21.33</b>	<b>\$42.86</b>	<b>\$43.36</b>

\*Includes lift stations, reclaimed booster stations, and vadose zone/monitoring wells.

Source: WRF capacity used for all components; cost per gallon is system value divided by capacity.

**Development Fee Report – Plan-Based**

The cost to prepare the Wastewater Facilities IIP and related Development Fee Report totals \$30,000. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections in Figure WW7, the cost is \$0.01 per gallon.

**Figure WW14: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Wastewater	\$30,000	All Development	100%	Avg Gallons	3,277,750	\$0.01

**WASTEWATER FACILITIES DEVELOPMENT FEES**

**Revenue Credit/Offset**

A revenue credit/offset is necessary for development fees, because Surprise’s construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).

**SPA 1**

The cost per service unit is \$21.34 per gallon for wastewater facilities development fees in SPA 1, and Surprise will assess wastewater facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$4,481 is calculated using a cost per service unit of \$21.34 per gallon, multiplied by 210 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$21.34 per gallon, multiplied by 210 average day gallons, multiplied by the associated capacity ratio.

**Figure WW15: Wastewater Facilities Development Fees**

Fee Component	Cost per Gallon
WRFs	\$10.89
WRF land	\$0.45
Wastewater Lines	\$6.49
Reclaimed Lines	\$1.99
Recharge Basins	\$0.33
Other	\$1.18
Development Fee Report	\$0.01
<b>Total</b>	<b>\$21.34</b>

Development Type	Average Day Gallons
Single Family (EDU)	210

Fees per Meter - SPA 1				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$4,481	\$2,192	\$2,289
1.00-inch	1.67	\$7,484	\$3,661	\$3,823
1.50-inch	3.33	\$14,923	\$7,299	\$7,624
2.00-inch	5.33	\$23,886	\$11,683	\$12,203
3.00-inch	10.67	\$47,817	\$23,389	\$24,428
4.00-inch	16.67	\$74,705	\$36,541	\$38,164
6.00-inch	33.33	\$149,365	\$73,059	\$76,306
8.00-inch	53.33	\$238,993	\$116,899	\$122,094

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**SPA 2**

The cost per service unit is \$42.87 per gallon for wastewater facilities development fees in SPA 2, and Surprise will assess wastewater facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$9,003 is calculated using a cost per service unit of \$42.87 per gallon, multiplied by 210 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$42.87 per gallon, multiplied by 210 average day gallons, multiplied by the associated capacity ratio.

**Figure WW16: Wastewater Facilities Development Fees**

Fee Component	Cost per Gallon
WRFs	\$39.10
WRF land	\$0.32
Reclaimed Lines	\$2.51
Recharge Basins	\$0.07
Other	\$0.86
Development Fee Report	\$0.01
<b>Total</b>	<b>\$42.87</b>

Development Type	Average Day Gallons
Single Family (EDU)	210

Fees per Meter - SPA 2				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$9,003	\$2,544	\$6,459
1.00-inch	1.67	\$15,035	\$4,248	\$10,787
1.50-inch	3.33	\$29,979	\$8,472	\$21,507
2.00-inch	5.33	\$47,984	\$13,560	\$34,424
3.00-inch	10.67	\$96,059	\$27,144	\$68,915
4.00-inch	16.67	\$150,075	\$42,408	\$107,667
6.00-inch	33.33	\$300,060	\$84,792	\$215,268
8.00-inch	53.33	\$480,114	\$135,672	\$344,442

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**SPA 3**

The cost per service unit is \$43.37 per gallon for wastewater facilities development fees in SPA 3, and Surprise will assess wastewater facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$9,108 is calculated using a cost per service unit of \$43.37 per gallon, multiplied by 210 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$43.37 per gallon, multiplied by 210 average day gallons, multiplied by the associated capacity ratio.

**Figure WW17: Wastewater Facilities Development Fees**

Fee Component	Cost per Gallon
WRFs	\$39.10
WRF land	\$3.29
Reclaimed Lines	\$0.00
Recharge Basins	\$0.97
Other	\$0.00
Development Fee Report	\$0.01
<b>Total</b>	<b>\$43.37</b>

Development Type	Average Day Gallons
Single Family (EDU)	210

Fees per Meter - SPA 3				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$9,108	\$0	\$9,108
1.00-inch	1.67	\$15,210	\$0	\$15,210
1.50-inch	3.33	\$30,329	\$0	\$30,329
2.00-inch	5.33	\$48,544	\$0	\$48,544
3.00-inch	10.67	\$97,179	\$0	\$97,179
4.00-inch	16.67	\$151,825	\$0	\$151,825
6.00-inch	33.33	\$303,560	\$0	\$303,560
8.00-inch	53.33	\$485,714	\$0	\$485,714

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**SPA 4**

The cost per service unit is \$43.76 per gallon for wastewater facilities development fees in SPA 4, and Surprise will assess wastewater facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$9,190 is calculated using a cost per service unit of \$43.76 per gallon, multiplied by 210 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$43.76 per gallon, multiplied by 210 average day gallons, multiplied by the associated capacity ratio.

**Figure WW18: Wastewater Facilities Development Fees**

Fee Component	Cost per Gallon
SPA 4/5 Combined WRF	\$43.75
Development Fee Report	\$0.01
<b>Total</b>	<b>\$43.76</b>

Development Type	Average Day Gallons
Single Family (EDU)	210

Fees per Meter - SPA 4				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$9,190	\$0	\$9,190
1.00-inch	1.67	\$15,347	\$0	\$15,347
1.50-inch	3.33	\$30,601	\$0	\$30,601
2.00-inch	5.33	\$48,981	\$0	\$48,981
3.00-inch	10.67	\$98,053	\$0	\$98,053
4.00-inch	16.67	\$153,191	\$0	\$153,191
6.00-inch	33.33	\$306,289	\$0	\$306,289
8.00-inch	53.33	\$490,081	\$0	\$490,081

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**SPA 5**

The cost per service unit is \$43.76 per gallon for wastewater facilities development fees in SPA 5, and Surprise will assess wastewater facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$9,190 is calculated using a cost per service unit of \$43.76 per gallon, multiplied by 210 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$43.76 per gallon, multiplied by 210 average day gallons, multiplied by the associated capacity ratio.

**Figure WW19: Wastewater Facilities Development Fees**

Fee Component	Cost per Gallon
SPA 4/5 Combined WRF	\$43.75
Development Fee Report	\$0.01
<b>Total</b>	<b>\$43.76</b>

Development Type	Average Day Gallons
Single Family (EDU)	210

Fees per Meter - SPA 5				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$9,190	\$0	\$9,190
1.00-inch	1.67	\$15,347	\$0	\$15,347
1.50-inch	3.33	\$30,601	\$0	\$30,601
2.00-inch	5.33	\$48,981	\$0	\$48,981
3.00-inch	10.67	\$98,053	\$0	\$98,053
4.00-inch	16.67	\$153,191	\$0	\$153,191
6.00-inch	33.33	\$306,289	\$0	\$306,289
8.00-inch	53.33	\$490,081	\$0	\$490,081

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**WASTEWATER FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains revenue forecasts required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure WW20 is based on EDU projections in Figure WW7 and the updated wastewater facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 10 years equals \$56,430,458 in SPA 1, \$72,819,089 in SPA 2, and \$33,391,580 in SPA 3. Actual fee revenue will vary due to existing development agreements.

**Figure WW20: Wastewater Facilities Development Fees Revenue**

Fee Component	SPA 1	SPA 2	SPA 3
Wastewater Facilities	\$56,415,278	\$72,810,021	\$33,387,932
Development Fee Report	\$15,181	\$9,068	\$3,648
<b>Total</b>	<b>\$56,430,458</b>	<b>\$72,819,089</b>	<b>\$33,391,580</b>

		SPA 1 \$4,481 per EDU	SPA 2 \$9,003 per EDU	SPA 3 \$9,108 per EDU
Year		EDU	EDU	EDU
Base	2023	50,201	3,674	2,458
Year 1	2024	51,827	4,615	2,949
Year 2	2025	53,454	5,557	3,440
Year 3	2026	55,002	6,502	3,745
Year 4	2027	56,551	7,447	4,050
Year 5	2028	58,099	8,391	4,356
Year 6	2029	59,648	9,336	4,661
Year 7	2030	61,196	10,281	4,966
Year 8	2031	61,729	10,775	5,352
Year 9	2032	62,262	11,269	5,738
Year 10	2033	62,796	11,763	6,124
10-Year Increase		12,595	8,089	3,667
<b>Projected Revenue</b>		<b>\$56,430,458</b>	<b>\$72,819,089</b>	<b>\$33,391,580</b>

Projected Fee Revenue	\$162,641,127
Total Expenditures	\$162,641,127

## 10-YEAR CAPITAL PLAN

The figure shown below includes planned wastewater capital expenditures during the next 10 years.

**Figure WW21: Wastewater Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
Debt Service	SPA 1 WRF, Series 2018	2024-2033	\$21,490,501
CIP	SPA 1 Collection System Capacity Enhancements	2020-2030	\$6,875,000
CIP	SPA 1 Recharge Expansion	2030+	\$28,049,776
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$15,181
Subtotal, SPA 1			\$56,430,457
CIP	SPA 2 Plant Expansion	2033	\$31,276,300
CIP	SPA 2 Recharge Expansion	2028-2029	\$1,695,300
CIP	SPA 2 WRF Land Purchase	2026	\$300,000
Dev Agreement	Developer Obligation - Marisol Ranch Plant expansion and lift station	2027	\$17,500,000
Dev Agreement	Developer Obligation - Rancho Mercado Regional Improvements	2024-2034	\$4,364,374
Dev Agreement	Developer Obligation - SPA 2 North Expansion	2024-2034	\$22,512,144
Dev Agreement	Developer Obligation - SPA 2 PERC WRF (Asante)	2024-2034	\$9,836,657
Dev Agreement	Developer Obligation - SPA 2 WRF	2024-2034	\$18,350,040
Dev Agreement	Developer Obligation - Tierra Verde West Regional Improvements	2024-2034	\$578,812
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$9,068
Subtotal, SPA 2			\$106,422,695
CIP	SPA 3 Recharge Expansion	2029-2032	\$12,315,928
Dev Agreement	Developer Obligation - SPA 3 PERC WRF	2030+	\$21,072,004
Study Cost	Development Fee Update	2024-2029	\$3,648
Subtotal, SPA 3			\$33,391,580
CIP	SPA 4 Recharge Expansion	2030-2033	\$6,472,600
Dev Agreement	Developer Obligation - SPA 4/SPA 5 Plant	2030+	\$15,638,150
Dev Agreement	Developer Obligation - Sunhaven Lift Station	2027+	\$4,500,000
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$1,121
Subtotal, SPA 4			\$26,611,871
Dev Agreement	Developer Obligation - SPA 4/SPA 5 Plant	2030+	\$15,638,150
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$982
Subtotal, SPA 5			\$15,639,132
Total			\$238,495,736

Source: Surprise Water Resource Management Department

**APPENDIX A: FORECAST OF REVENUES OTHER THAN FEES**

ARS § 9-463.05(E)(7) 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.”*

ARS § 9-463.05(B)(12) states,

*“The municipality shall forecast the contribution to be made in the future in cash or by taxes, fees, assessments or other sources of revenue derived from the property owner towards the capital costs of the necessary public service covered by the development fee and shall include these contributions in determining the extent of the burden imposed by the development. Beginning August 1, 2014, for purposes of calculating the required offset to development fees pursuant to this subsection, if a municipality imposes a construction contracting or similar excise tax rate in excess of the percentage amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications, the entire excess portion of the construction contracting or similar excise tax shall be treated as a contribution to the capital costs of necessary public services provided to development for which development fees are assessed, unless the excess portion was already taken into account for such purpose pursuant to this subsection.”*

**REVENUE PROJECTIONS**

Surprise has a construction sales tax rate of 3.7 percent and the majority of other sales tax rates is 2.2 percent; therefore, the required offset described above is applicable. Surprise plans to increase the retail sales tax rate to 2.7 percent beginning in FY2025, so the required offset beginning in FY2025 is 1.0 percent. Shown in Figure A1, Surprise provided the required forecast of construction sales tax revenue over a period of five years. Based on projections in the FY2024 Budget, the excess portion of 1.5 percent includes \$68,016,900 over the next five years. TischlerBise converts the construction sales tax projections from 1.5 percent to 1.0 percent. The construction sales tax credit of \$50,579,767 over the next five years includes FY2024 revenue equal to 1.5 percent and FY2025-FY2028 revenue equal to 1.0 percent.

**Figure A1: Revenue Projections**

Funding Source	Forecast FY2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Total
Construction Sales Tax - 1.5%	\$15,705,500	\$14,135,000	\$13,428,200	\$13,025,400	\$11,722,800	\$68,016,900
Construction Sales Tax - 1.0%	\$10,470,333	\$9,423,333	\$8,952,133	\$8,683,600	\$7,815,200	\$45,344,600
<b>Construction Sales Tax Credit</b>	<b>\$15,705,500</b>	<b>\$9,423,333</b>	<b>\$8,952,133</b>	<b>\$8,683,600</b>	<b>\$7,815,200</b>	<b>\$50,579,767</b>

Source: City of Surprise, FY2024 Budget for FY24-FY28 (construction sales tax 1.5%); TischlerBise calculation based on 1.0% excess construction sales tax beginning July 1, 2024

As shown in Figure A2, the analysis allocates the excess construction sales tax revenue for the next five years to projected development during the next five years. The credit per service unit shown below is included as a credit in the fire, parks and recreational, and police development fee calculations.

**Figure A2: Excess Construction Sales Tax Credit**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Credit per Service Unit
Fire	\$17,570,649	Residential	75%	Population	44,514	\$296.78
		Nonresidential	25%	Vehicle Trips	16,226	\$268.69
Parks and Recreational	\$27,595,880	Residential	98%	Population	44,514	\$607.54
		Nonresidential	2%	Jobs	7,782	\$70.93
Police	\$5,413,237	Residential	61%	Population	44,514	\$73.68
		Nonresidential	39%	Vehicle Trips	16,226	\$131.48
<b>Total</b>	<b>\$50,579,767</b>					



**APPENDIX B: PROFESSIONAL SERVICES**

As stated in Arizona’s development fee enabling legislation, “a municipality may assess development fees 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 a development fee pursuant to this section, including the relevant portion of the infrastructure improvements plan” (see ARS § 9-463.05.A). Because development fees must be updated at least every five years, the cost of professional services is allocated to the projected increase in service units, over five years (see Figure B1). Qualified professionals must develop the IIP, using generally accepted engineering and planning practices. A qualified professional is defined as “a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person’s license, education or experience”.

**Figure B1: Cost of Professional Services**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Fire	\$16,230	Residential	75%	Population	44,514	\$0.27
		Nonresidential	25%	Vehicle Trips	16,226	\$0.25
Parks and Recreational	\$15,000	Residential	98%	Population	44,514	\$0.33
		Nonresidential	2%	Jobs	7,782	\$0.04
Police	\$16,230	Residential	61%	Population	44,514	\$0.22
		Nonresidential	39%	Vehicle Trips	16,226	\$0.39
Water	\$30,000	All Development	100%	Avg Gallons	4,336,702	\$0.01
Water Resource	\$12,000	All Development	100%	Acre-Feet	43,325	\$0.28
Wastewater	\$30,000	All Development	100%	Avg Gallons	3,277,750	\$0.01
Total	\$119,460					

## APPENDIX C: LAND USE DEFINITIONS

### RESIDENTIAL DEVELOPMENT

As discussed below, residential development categories are based on data from the U.S. Census Bureau, American Community Survey. Development fees will be assessed to all new residential units. One-time development fees are determined by site capacity (i.e., number of residential units).

#### Single Family:

1. Single-family detached is a one-unit structure detached from any other house, that is, with open space on all four sides. Such structures are considered detached even if they have an adjoining shed or garage. A one-family house that contains a business is considered detached if the building has open space on all four sides.
2. Single-family attached (townhouse) is a one-unit structure that has one or more walls extending from ground to roof separating it from adjoining structures. In row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.

#### Multi-Family:

1. Includes units in structures containing two or more housing units, further categorized as units in structures with “2, 3 or 4, 5 to 9, 10 to 19, 20 to 49, and 50 or more apartments.”
2. Includes both occupied and vacant mobile homes, to which no permanent rooms have been added. Mobile homes used only for business purposes or for extra sleeping space and mobile homes for sale on a dealer's lot, at the factory, or in storage are not counted in the housing inventory.
3. Includes any living quarters occupied as a housing unit that does not fit the other categories (e.g., houseboats, railroad cars, campers, and vans). Recreational vehicles, boats, vans, railroad cars, and the like are included only if they are occupied as a current place of residence.

**NONRESIDENTIAL DEVELOPMENT**

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The proposed general nonresidential development categories (defined below) can be used for all new construction. Nonresidential development categories represent general groups of land uses that share similar average weekday vehicle trip generation rates and employment densities (i.e., jobs per thousand square feet of floor area).

**Industrial:** Establishments primarily engaged in the production of goods. By way of example, industrial includes manufacturing plants, utility substations, power generation facilities, and telecommunications buildings.

**Office:** Establishments providing management, administrative, professional, or business services; personal and health care services. By way of example, office includes banks, business offices, medical clinics, and hospitals.

**Public/Institutional:** Public and quasi-public buildings providing educational, social assistance, or religious services. By way of example, institutional includes schools, universities, churches, daycare facilities, and government buildings.

**Retail/Commercial:** Establishments primarily selling merchandise, eating/drinking places, entertainment uses, and lodging. By way of example, commercial includes shopping centers, supermarkets, pharmacies, restaurants, bars, nightclubs, automobile dealerships, movie theaters, and lodging.

**Warehouse:** Establishments primarily engaged in transportation or storage of goods. By way of example, warehouse includes distribution warehouses, trucking companies, and self-storage facilities.

**DRAFT**  
**Land Use Assumptions,  
Infrastructure Improvements Plan,  
and Development Fee Report**

**Prepared for:  
Surprise, Arizona**

**November 13, 2023 February 13, 2024**



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## EXECUTIVE SUMMARY

The City of Surprise, Arizona, contracted with TischlerBise to document land use assumptions, prepare the Infrastructure Improvements Plan (hereinafter referred to as the “IIP”), and update development fees pursuant to Arizona Revised Statutes (“ARS”) § 9-~~436~~463.05 (hereafter referred to as the “Enabling Legislation”). Municipalities in Arizona may assess development fees to offset infrastructure costs to a municipality for necessary public services. The development fees must be based on an Infrastructure Improvements Plan and Land Use Assumptions. The IIP for each type of infrastructure is in the middle section of this document. The proposed development fees are displayed in the Development Fee Report in the next section.

Development fees are one-time payments used to construct system improvements needed to accommodate new development. The fee represents future development’s proportionate share of infrastructure costs. Development fees may be used for infrastructure improvements or debt service for growth related infrastructure. In contrast to general taxes, development fees may not be used for operations, maintenance, replacement, or correcting existing deficiencies. This update of Surprise’s Infrastructure Improvements Plan and associated update to its development fees includes the following necessary public services:

- 1. Fire Facilities
- 2. Parks and Recreational Facilities
- 3. Police Facilities
- ~~Street Facilities~~
- 4. Water Facilities
- 5. Water Resource Facilities
- 6. Wastewater Facilities

This plan includes all necessary elements required to be in full compliance with ~~SB-1525~~the Enabling Legislation.

### ARIZONA DEVELOPMENT FEE ENABLING LEGISLATION

The Enabling Legislation governs how development fees are calculated for municipalities in Arizona.

#### Necessary Public Services

Under the requirements of the Enabling Legislation, development fees may only be used for construction, acquisition or expansion of public facilities that are necessary public services. “Necessary public service” means any of the following categories of facilities that have a life expectancy of three or more years and that are owned and operated on behalf of the municipality: water, wastewater, storm water, library, street, fire, police, and parks and recreational. Additionally, a necessary public service includes any facility that was financed before June 1, 2011, and that meets the following requirements:

1. Development fees were pledged to repay debt service obligations related to the construction of the facility.
- 2. After August 1, 2014, any development fees collected are used solely for the payment of principal and interest on the portion of the bonds, notes, or other debt service obligations issued before June 1, 2011, to finance construction of the facility.

## **Infrastructure Improvements Plan**

Development fees must be calculated pursuant to an IIP. For each necessary public service that is the subject of a development fee, by law, the IIP shall include the following seven elements:

1. A description of the existing necessary public services in the service area and the costs to 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.
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.
3. 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.
4. 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.
5. 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.
6. The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years.
7. 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.

## **Qualified Professionals**

The IIP must be developed by qualified professionals using generally accepted engineering and planning practices. A qualified professional is defined as “a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person’s license, education, or experience.” TischlerBise is a fiscal, economic, and planning consulting firm specializing in the cost of growth services. Our services include development fees, fiscal impact analysis, infrastructure financing analyses, user fee/cost of service studies, capital improvement plans, and fiscal software. TischlerBise has prepared over 800 development fee studies over the past 30 years for local governments across the United States.

## Conceptual Development Fee Calculation

In contrast to project-level improvements, development fees fund growth-related infrastructure that will benefit multiple development projects, or the entire service area (usually referred to as system improvements). The first step is to determine an appropriate demand indicator for the particular type of infrastructure. The demand indicator measures the number of service units for each unit of development. For example, an appropriate indicator of the demand for parks is population growth and the increase in population can be estimated from the average number of persons per housing unit. The second step in the development fee formula is to determine infrastructure improvement units per service unit, typically called level-of-service (LOS) standards. In keeping with the park example, a common LOS standard is improved park acres per thousand people. The third step in the development fee formula is the cost of various infrastructure units. To complete the park example, this part of the formula would establish a cost per acre for land acquisition and/ or park amenities.

## Evaluation of Credits/Offsets

Regardless of the methodology, a consideration of credits/offsets is integral to the development of a legally defensible development fee. There are two types of credits/offsets that should be addressed in development fee studies and ordinances. The first is a revenue credit/offset due to possible double payment situations, which could occur when other revenues may contribute to the capital costs of infrastructure covered by the development fee. This type of credit/offset is integrated into the fee calculation, thus reducing the fee amount. The second is a site-specific credit or developer reimbursement for dedication of land or construction of system improvements. This type of credit is addressed in the administration and implementation of the development fee program. For ease of administration, TischlerBise normally recommends developer reimbursements for system improvements.

## INTRODUCTION TO DEVELOPMENT FEES

---

Development fees are one-time payments used to fund capital improvements necessitated by future development. Development fees have been utilized by local governments in various forms for at least fifty years. Development fees do have limitations and should not be regarded as the total solution for infrastructure financing needs. Rather, they should be considered one component of a comprehensive portfolio to ensure adequate provision of public facilities with the goal of maintaining current levels of service in a community. Any community considering facility fees should note the following limitations:

- 1) Fees can only be used to finance capital infrastructure and cannot be used to finance ongoing operations and / or maintenance and rehabilitation costs.
- 2) Fees cannot be deposited in the General Fund. The funds must be accounted for separately in individual accounts and earmarked for the capital expenses for which they were collected.
- 3) Fees cannot be used to correct existing infrastructure deficiencies unless there is a funding plan in place to correct the deficiency for all current residents and businesses in the community.

## REQUIRED FINDINGS

---

There are three reasonable relationship requirements for development fees that are closely related to “rational nexus” or “reasonable relationship” requirements enunciated by a number of state courts. Although the term “dual rational nexus” is often used to characterize the standard by which courts evaluate the validity of development fees under the U. S. Constitution, we prefer a more rigorous formulation that recognizes three elements: “impact or need,” “benefit,” and “proportionality.” The dual rational nexus test explicitly addresses only the first two, although proportionality is reasonably implied, and was specifically mentioned by the U.S. Supreme Court in the *Dolan* case. The reasonable relationship language of the statute is considered less strict than the rational nexus standard used by many courts. Individual elements of the nexus standard are discussed further in the following paragraphs.

**Demonstrating an Impact.** All future development in a community creates additional demands on some, or all, public facilities provided by local government. If the supply of facilities is not increased to satisfy that additional demand, the quality or availability of public services for the entire community will deteriorate. Development fees may be used to recover the cost of development-related facilities, but only to the extent that the need for facilities is a consequence of development that is subject to the fees. The *Nollan* decision reinforced the principle that development exactions may be used only to mitigate conditions created by the developments upon which they are imposed. That principle clearly applies to development fees. In this study, the impact of development on improvement needs is analyzed in terms of quantifiable relationships between various types of development and the demand for specific facilities, based on applicable level-of-service standards.

**Demonstrating a Benefit.** A sufficient benefit relationship requires that development fee revenues be segregated from other funds and expended only on the facilities for which the fees were charged. Fees must be expended in a timely manner and the facilities funded by the fees must serve the development paying the fees. However, nothing in the U.S. Constitution or the State enabling Act authorizing development fees requires that facilities funded with fee revenues be available *exclusively* to development paying the fees. In other words, existing development may benefit from these improvements as well.

Procedures for the earmarking and expenditure of fee revenues are typically mandated by the State Enabling Legislation, as are procedures to ensure that the fees are expended expeditiously or refunded. All requirements are intended to ensure that developments benefit from the fees they are required to pay. Thus, an adequate showing of benefit must address procedural as well as substantive issues.

**Demonstrating Proportionality.** The requirement that exactions be proportional to the impacts of development was clearly stated by the U.S. Supreme Court in the *Dolan* case (although the relevance of that decision to development fees has been debated) and is logically necessary to establish a proper nexus. Proportionality is established through the procedures used to identify development-related facility costs, and in the methods used to calculate development fees for various types of facilities and categories of development. The demand for facilities is measured in terms of relevant and measurable attributes of development.



## DEVELOPMENT FEE REPORT

Development fees for the necessary public services made necessary by new development must be based on the same level of service (LOS) provided to existing development in the service area. There are three basic methodologies used to calculate development fees. They examine the past, present, and future status of infrastructure. The objective of evaluating these different methodologies is to determine the best measure of the demand created by new development for additional infrastructure capacity. Each methodology has advantages and disadvantages in a particular situation and can be used simultaneously for different cost components.

Reduced to its simplest terms, the process of calculating development fees involves two main steps: (1) determining the cost of development-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of development fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following paragraphs discuss basic methodologies for calculating development fees and how those methodologies can be applied.

- **Cost Recovery** (past improvements) - The rationale for recoupment, often called cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new growth will benefit. This methodology is often used for utility systems that must provide adequate capacity before new development can take place.
- **Incremental Expansion** (concurrent improvements) - The incremental expansion methodology documents current LOS standards for each type of public facility, using both quantitative and qualitative measures. This approach assumes there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. Revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increments to keep pace with development.
- **Plan-Based** (future improvements) - The plan-based methodology allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a long-range facility plan and development potential is identified by a land use plan. There are two basic options for determining the cost per demand unit: (1) total cost of a public facility can be divided by total demand units (average cost), or (2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning timeframe (marginal cost).

**DEVELOPMENT FEE COMPONENTS**

Shown below, Figure 1 summarizes service areas, methodologies, and infrastructure cost components.

**Figure 1: Proposed Development Fee Service Areas, Methodologies, and Cost Components**

Necessary Public Service	Service Area	Cost Recovery	Incremental Expansion	Plan-Based	Cost Allocation
Fire Facilities	Citywide	N/A	Primary Apparatus, Secondary Apparatus	Fire Stations, Fire Facilities, Development Fee Report	Population, Vehicle Trips
Parks and Recreational Facilities	Citywide	N/A	Park Land, Park Amenities, Recreation Facilities	Development Fee Report	Population, Jobs
Police Facilities	Citywide	N/A	Police Facilities Land, Police Vehicles, Police Equipment	Police Facilities, Development Fee Report	Population, Vehicle Trips
Water Facilities	SPA 1	Water Infrastructure	N/A	Water Infrastructure, Development Fee Report	Average Day Gallons
	SPA 2	N/A	N/A	Water Infrastructure, Development Fee Report	Average Day Gallons
	SPA 3	N/A	N/A	Water Infrastructure, Development Fee Report	Average Day Gallons
	SPA 4	N/A	N/A	Water Infrastructure, Development Fee Report	Average Day Gallons
Water Resource Facilities	Citywide	N/A	N/A	Water Resource, Development Fee Report	Acre-Feet
Wastewater Facilities	SPA 1	Wastewater Infrastructure	N/A	Wastewater Infrastructure, Development Fee Report	Average Day Gallons
	SPA 2	N/A	N/A	Wastewater Infrastructure, Development Fee Report	Average Day Gallons
	SPA 3	N/A	N/A	Wastewater Infrastructure, Development Fee Report	Average Day Gallons
	SPA 4	N/A	N/A	Wastewater Infrastructure, Development Fee Report	Average Day Gallons
	SPA 5	N/A	N/A	Wastewater Infrastructure, Development Fee Report	Average Day Gallons

**CURRENT DEVELOPMENT FEES**

Current development fees are assessed per dwelling unit for residential development and per 1,000 square feet of floor area for nonresidential development. Current development fees for water, water resource, and wastewater are assessed by meter size.

**Citywide**

**Figure 2: Current Development Fees by Development Type**

Residential Fees per Unit					
Development Type	Fire	Parks & Recreational	Police	General Government	Total
Single Family	\$789	\$1,060	\$385	\$208	\$2,442
Multi-Family	\$481	\$647	\$235	\$143	\$1,506
Mobile Home	\$442	\$594	\$216	\$132	\$1,384

Nonresidential Fees per 1,000 Square Feet					
Development Type	Fire	Parks & Recreational	Police	General Government	Total
Industrial	\$166	\$32	\$81	\$49	\$328
Warehouse	\$95	\$32	\$46	\$28	\$201
Retail/Commercial	\$876	\$32	\$427	\$261	\$1,596
Office	\$497	\$74	\$243	\$148	\$962
Public/Institutional	\$308	\$85	\$150	\$92	\$635

**SPA 1**

**Figure 3: Current Development Fees by Meter Size**

Fees per Meter - SPA 1				
Meter Size	Water	Water Resource	Wastewater	Current Fees
0.75-inch	\$2,985	\$2,279	\$2,192	\$7,456
1.00-inch	\$4,985	\$3,806	\$3,661	\$12,452
1.50-inch	\$9,940	\$7,589	\$7,299	\$24,828
2.00-inch	\$15,910	\$12,147	\$11,683	\$39,740
3.00-inch	\$31,850	\$24,317	\$23,389	\$79,556
4.00-inch	\$49,760	\$37,991	\$36,541	\$124,292
6.00-inch	\$99,490	\$75,959	\$73,059	\$248,508
8.00-inch	\$159,190	\$121,539	\$116,899	\$397,628

**SPA 2**

**Figure 4: Current Development Fees by Meter Size**

Fees per Meter - SPA 2				
Meter Size	Water	Water Resource	Wastewater	Current Fees
0.75-inch	\$2,836	\$2,279	\$2,544	\$7,659
1.00-inch	\$4,736	\$3,806	\$4,248	\$12,790
1.50-inch	\$9,444	\$7,589	\$8,472	\$25,505
2.00-inch	\$15,116	\$12,147	\$13,560	\$40,823
3.00-inch	\$30,260	\$24,317	\$27,144	\$81,721
4.00-inch	\$47,276	\$37,991	\$42,408	\$127,675
6.00-inch	\$94,524	\$75,959	\$84,792	\$255,275
8.00-inch	\$151,244	\$121,539	\$135,672	\$408,455

**SPA 3**

**Figure 5: Current Development Fees by Meter Size**

Fees per Meter - SPA 3				
Meter Size	Water	Water Resource	Wastewater	Current Fees
0.75-inch	\$2,486	\$2,279	\$0	\$4,765
1.00-inch	\$4,152	\$3,806	\$0	\$7,958
1.50-inch	\$8,278	\$7,589	\$0	\$15,867
2.00-inch	\$13,250	\$12,147	\$0	\$25,397
3.00-inch	\$26,526	\$24,317	\$0	\$50,843
4.00-inch	\$41,442	\$37,991	\$0	\$79,433
6.00-inch	\$82,858	\$75,959	\$0	\$158,817
8.00-inch	\$132,578	\$121,539	\$0	\$254,117

**SPA 4**

**Figure 6: Current Development Fees by Meter Size**

Fees per Meter - SPA 4				
Meter Size	Water	Water Resource	Wastewater	Current Fees
0.75-inch	\$0	\$2,279	\$0	\$2,279
1.00-inch	\$0	\$3,806	\$0	\$3,806
1.50-inch	\$0	\$7,589	\$0	\$7,589
2.00-inch	\$0	\$12,147	\$0	\$12,147
3.00-inch	\$0	\$24,317	\$0	\$24,317
4.00-inch	\$0	\$37,991	\$0	\$37,991
6.00-inch	\$0	\$75,959	\$0	\$75,959
8.00-inch	\$0	\$121,539	\$0	\$121,539

SPA 5

Figure 7: Current Development Fees by Meter Size

Fees per Meter - SPA 5				
Meter Size	Water	Water Resource	Wastewater	Current Fees
0.75-inch	\$0	\$2,279	\$0	\$2,279
1.00-inch	\$0	\$3,806	\$0	\$3,806
1.50-inch	\$0	\$7,589	\$0	\$7,589
2.00-inch	\$0	\$12,147	\$0	\$12,147
3.00-inch	\$0	\$24,317	\$0	\$24,317
4.00-inch	\$0	\$37,991	\$0	\$37,991
6.00-inch	\$0	\$75,959	\$0	\$75,959
8.00-inch	\$0	\$121,539	\$0	\$121,539



## PROPOSED DEVELOPMENT FEES

Proposed development fees will be assessed per dwelling unit for residential development and per 1,000 square feet of floor area for nonresidential development. Proposed development fees for water, water resource, and wastewater will be assessed by meter size.

The proposed fees represent the maximum allowable fees. Surprise may adopt fees that are less than the amounts shown; however, a reduction in development fee revenue will necessitate an increase in other revenues, a decrease in planned capital improvements, and/or a decrease in level-of-service standards. All costs in the Development Fee Report represent current dollars with no assumed inflation over time. If costs change significantly over time, development fees should be recalculated.

Calculations throughout this report are based on an analysis conducted using Excel software. Most results are discussed in the report using two, three, and four decimal places, which represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

### South Street Service Area

**Figure 8: Proposed Development Fees by Development Type**

Residential Fees per Unit					
Development Type	Fire	Parks & Recreational	Police	General Government <sup>1</sup>	Total
Single Family	\$1,737	\$1,800	\$581	\$208	\$4,326
Multi-Family	\$1,064	\$1,102	\$356	\$143	\$2,665
Mobile Home	\$734	\$760	\$245	\$132	\$1,871

Nonresidential Fees per 1,000 Square Feet					
Development Type	Fire	Parks & Recreational	Police	General Government <sup>1</sup>	Total
Industrial	\$394	\$115	\$275	\$49	\$833
Warehouse	\$200	\$34	\$140	\$28	\$402
Retail/Commercial	\$2,381	\$211	\$1,662	\$261	\$4,515
Office	\$1,141	\$324	\$796	\$148	\$2,409
Public/Institutional	\$790	\$203	\$551	\$92	\$1,636

1. Grandfathered fee not calculated in this report

### North Street Service Area

**Figure 9: Proposed Development Fees by Development Type**

### West Street Service Area

**Figure 10: Proposed Development Fees by Development Type**

**Outside Street Service Area**

**Figure 11: Proposed Development Fees by Development Type**

**SPA 1**

**Figure 9: Proposed Development Fees by Meter Size**

Fees per Meter - SPA 1				
Meter Size	Water	Water Resource	Wastewater	Proposed Fees
0.75-inch	\$5,325	\$3,649	\$4,481	\$13,455
1.00-inch	\$8,892	\$6,093	\$7,484	\$22,469
1.50-inch	\$17,732	\$12,150	\$14,923	\$44,805
2.00-inch	\$28,381	\$19,448	\$23,886	\$71,715
3.00-inch	\$56,816	\$38,932	\$47,817	\$143,565
4.00-inch	\$88,764	\$60,824	\$74,705	\$224,293
6.00-inch	\$177,476	\$121,611	\$149,365	\$448,452
8.00-inch	\$283,972	\$194,585	\$238,993	\$717,550

**SPA 2**

**Figure 10: Proposed Development Fees by Meter Size**

Fees per Meter - SPA 2				
Meter Size	Water	Water Resource	Wastewater	Proposed Fees
0.75-inch	\$5,296	\$3,649	\$9,003	\$17,948
1.00-inch	\$8,844	\$6,093	\$15,035	\$29,972
1.50-inch	\$17,636	\$12,150	\$29,979	\$59,765
2.00-inch	\$28,228	\$19,448	\$47,984	\$95,660
3.00-inch	\$56,508	\$38,932	\$96,059	\$191,499
4.00-inch	\$88,284	\$60,824	\$150,075	\$299,183
6.00-inch	\$176,516	\$121,611	\$300,060	\$598,187
8.00-inch	\$282,436	\$194,585	\$480,114	\$957,135

**SPA 3**

**Figure 11: Proposed Development Fees by Meter Size**

Fees per Meter - SPA 3				
Meter Size	Water	Water Resource	Wastewater	Proposed Fees
0.75-inch	\$3,142	\$3,649	\$9,108	\$15,899
1.00-inch	\$5,248	\$6,093	\$15,210	\$26,551
1.50-inch	\$10,464	\$12,150	\$30,329	\$52,943
2.00-inch	\$16,749	\$19,448	\$48,544	\$84,741
3.00-inch	\$33,529	\$38,932	\$97,179	\$169,640
4.00-inch	\$52,384	\$60,824	\$151,825	\$265,033
6.00-inch	\$104,736	\$121,611	\$303,560	\$529,907
8.00-inch	\$167,584	\$194,585	\$485,714	\$847,883

**SPA 4**

**Figure 12: Proposed Development Fees by Meter Size**

Fees per Meter - SPA 4				
Meter Size	Water	Water Resource	Wastewater	Proposed Fees
0.75-inch	\$2,966	\$3,649	\$9,190	\$15,805
1.00-inch	\$4,954	\$6,093	\$15,347	\$26,394
1.50-inch	\$9,878	\$12,150	\$30,601	\$52,629
2.00-inch	\$15,811	\$19,448	\$48,981	\$84,240
3.00-inch	\$31,651	\$38,932	\$98,053	\$168,636
4.00-inch	\$49,450	\$60,824	\$153,191	\$263,465
6.00-inch	\$98,870	\$121,611	\$306,289	\$526,770
8.00-inch	\$158,198	\$194,585	\$490,081	\$842,864

**SPA 5**

**Figure 13: Proposed Development Fees by Meter Size**

Fees per Meter - SPA 5				
Meter Size	Water	Water Resource	Wastewater	Proposed Fees
0.75-inch	-	\$3,649	\$9,190	\$12,839
1.00-inch	-	\$6,093	\$15,347	\$21,440
1.50-inch	-	\$12,150	\$30,601	\$42,751
2.00-inch	-	\$19,448	\$48,981	\$68,429
3.00-inch	-	\$38,932	\$98,053	\$136,985
4.00-inch	-	\$60,824	\$153,191	\$214,015
6.00-inch	-	\$121,611	\$306,289	\$427,900
8.00-inch	-	\$194,585	\$490,081	\$684,666



**DIFFERENCE BETWEEN PROPOSED AND CURRENT DEVELOPMENT FEES**

This section of the report includes the differences between the proposed and current development fees.

**South Street Service Area**

**Figure 14: Difference Between Proposed and Current Development Fees by Development Type**

Residential Fees per Unit					
Development Type	Fire	Parks & Recreational	Police	General Government	Difference
Single Family	\$948	\$740	\$196	\$0	\$1,884
Multi-Family	\$583	\$455	\$121	\$0	\$1,159
Mobile Home	\$292	\$166	\$29	\$0	\$487

Nonresidential Fees per 1,000 Square Feet					
Development Type	Fire	Parks & Recreational	Police	General Government	Difference
Industrial	\$228	\$83	\$194	\$0	\$505
Warehouse	\$105	\$2	\$94	\$0	\$201
Retail/Commercial	\$1,505	\$179	\$1,235	\$0	\$2,919
Office	\$644	\$250	\$553	\$0	\$1,447
Public/Institutional	\$482	\$118	\$401	\$0	\$1,001

**North Street Service Area**

**Figure 18: Difference Between Proposed and Current Development Fees by Development Type**

**West Street Service Area**

**Figure 19: Difference Between Proposed and Current Development Fees by Development Type**

**Outside Street Service Area**

**Figure 20: Difference Between Proposed and Current Development Fees by Development Type**



**SPA 1**

**Figure 15: Difference Between Proposed and Current Development Fees by Meter Size**

Fees per Meter - SPA 1				
Meter Size	Water	Water Resource	Wastewater	Difference
0.75-inch	\$2,340	\$1,370	\$2,289	\$5,999
1.00-inch	\$3,907	\$2,287	\$3,823	\$10,017
1.50-inch	\$7,792	\$4,561	\$7,624	\$19,977
2.00-inch	\$12,471	\$7,301	\$12,203	\$31,975
3.00-inch	\$24,966	\$14,615	\$24,428	\$64,009
4.00-inch	\$39,004	\$22,833	\$38,164	\$100,001
6.00-inch	\$77,986	\$45,652	\$76,306	\$199,944
8.00-inch	\$124,782	\$73,046	\$122,094	\$319,922

**SPA 2**

**Figure 16: Difference Between Proposed and Current Development Fees by Meter Size**

Fees per Meter - SPA 2				
Meter Size	Water	Water Resource	Wastewater	Difference
0.75-inch	\$2,460	\$1,370	\$6,459	\$10,289
1.00-inch	\$4,108	\$2,287	\$10,787	\$17,182
1.50-inch	\$8,192	\$4,561	\$21,507	\$34,260
2.00-inch	\$13,112	\$7,301	\$34,424	\$54,837
3.00-inch	\$26,248	\$14,615	\$68,915	\$109,778
4.00-inch	\$41,008	\$22,833	\$107,667	\$171,508
6.00-inch	\$81,992	\$45,652	\$215,268	\$342,912
8.00-inch	\$131,192	\$73,046	\$344,442	\$548,680

**SPA 3**

**Figure 17: Difference Between Proposed and Current Development Fees by Meter Size**

Fees per Meter - SPA 3				
Meter Size	Water	Water Resource	Wastewater	Difference
0.75-inch	\$656	\$1,370	\$9,108	\$11,134
1.00-inch	\$1,096	\$2,287	\$15,210	\$18,593
1.50-inch	\$2,186	\$4,561	\$30,329	\$37,076
2.00-inch	\$3,499	\$7,301	\$48,544	\$59,344
3.00-inch	\$7,003	\$14,615	\$97,179	\$118,797
4.00-inch	\$10,942	\$22,833	\$151,825	\$185,600
6.00-inch	\$21,878	\$45,652	\$303,560	\$371,090
8.00-inch	\$35,006	\$73,046	\$485,714	\$593,766

**SPA 4**

**Figure 18: Difference Between Proposed and Current Development Fees by Meter Size**

Fees per Meter - SPA 4				
Meter Size	Water	Water Resource	Wastewater	Difference
0.75-inch	\$2,966	\$1,370	\$9,190	\$13,526
1.00-inch	\$4,954	\$2,287	\$15,347	\$22,588
1.50-inch	\$9,878	\$4,561	\$30,601	\$45,040
2.00-inch	\$15,811	\$7,301	\$48,981	\$72,093
3.00-inch	\$31,651	\$14,615	\$98,053	\$144,319
4.00-inch	\$49,450	\$22,833	\$153,191	\$225,474
6.00-inch	\$98,870	\$45,652	\$306,289	\$450,811
8.00-inch	\$158,198	\$73,046	\$490,081	\$721,325

**SPA 5**

**Figure 19: Difference Between Proposed and Current Development Fees by Meter Size**

Fees per Meter - SPA 5				
Meter Size	Water	Water Resource	Wastewater	Difference
0.75-inch	-	\$1,370	\$9,190	\$10,560
1.00-inch	-	\$2,287	\$15,347	\$17,634
1.50-inch	-	\$4,561	\$30,601	\$35,162
2.00-inch	-	\$7,301	\$48,981	\$56,282
3.00-inch	-	\$14,615	\$98,053	\$112,668
4.00-inch	-	\$22,833	\$153,191	\$176,024
6.00-inch	-	\$45,652	\$306,289	\$351,941
8.00-inch	-	\$73,046	\$490,081	\$563,127

## LAND USE ASSUMPTIONS

Arizona’s Development Fee Act requires the preparation of Land Use Assumptions, which are defined in Arizona Revised Statutes § 9-463.05(T)(6) as:

*“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.”*

The estimates and projections of residential and nonresidential development in this Land Use Assumptions document are for all areas within Surprise. The current demographic estimates and future development projections will be used in the Infrastructure Improvements Plan (IIP) and in the calculation of development fees. Current demographic data estimates for 2023 are used in calculating levels of service (LOS) provided to existing development in Surprise. Arizona’s Enabling Legislation requires fees to be updated at least every five years and limits the IIP to a maximum of 10 years.

The Infrastructure Improvements Plan (IIP) and the Development Fee Report include multiple service areas. The Fire Facilities IIP, the Parks and Recreational Facilities IIP, and the Police Facilities IIP use a citywide service area. ~~The service area for the Street Facilities IIP is shown in Figure L1.~~ The service area for the Water Facilities IIP, the Water Resource Facilities IIP, and the Wastewater Facilities IIP is shown in Figure L1.

### SUMMARY OF GROWTH INDICATORS

Key land use assumptions include population, housing units, and employment projections. TischlerBise projects future development using data provided by the Maricopa Association of Governments (MAG). Development projections are summarized in Figure L13 ~~through Figure L23~~. These projections will be used to estimate fee revenue and to indicate the anticipated need for growth-related infrastructure. However, development fee methodologies are designed to reduce sensitivity to development projections in the determination of the proportionate share fee amounts. If actual development occurs at a slower rate than projected, fee revenue will decline, but so will the need for growth-related infrastructure. In contrast, if development occurs at a faster rate than anticipated, fee revenue will increase, but Surprise will also need to accelerate infrastructure improvements to keep pace with the actual rate of development. During the next 10 years, residential development projections indicate a population increase of 83,656 persons in 35,921 housing units, and nonresidential development projections indicate an employment increase of 16,444 jobs in approximately 8,542,000 square feet of floor area.

Figure L1: Street Development Fee Service Area

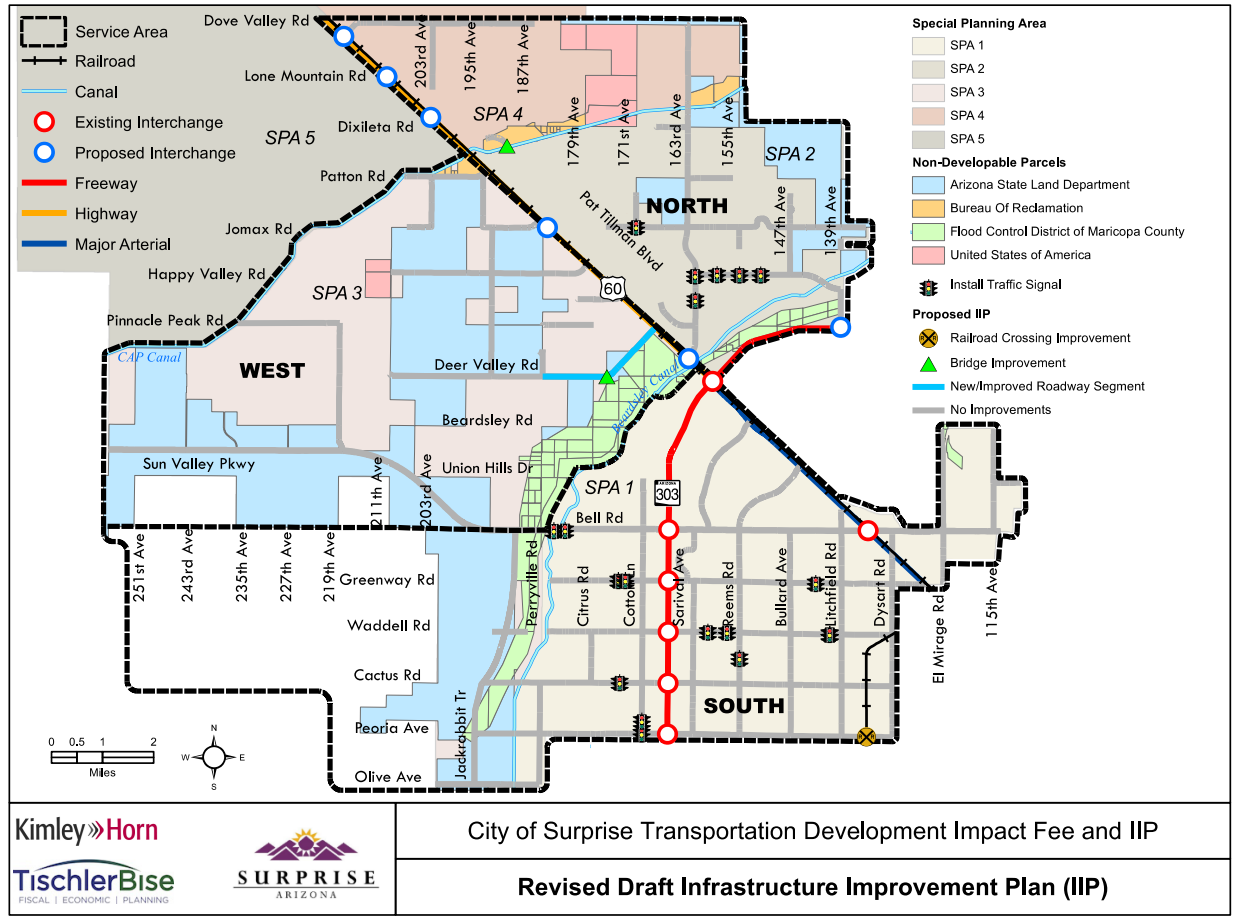


Figure L1: Utility Development Impact Fee Service Area

CH 1 | INTEGRATED WATER MASTER PLAN - WATER RESOURCES UPDATE | CITY OF SURPRISE

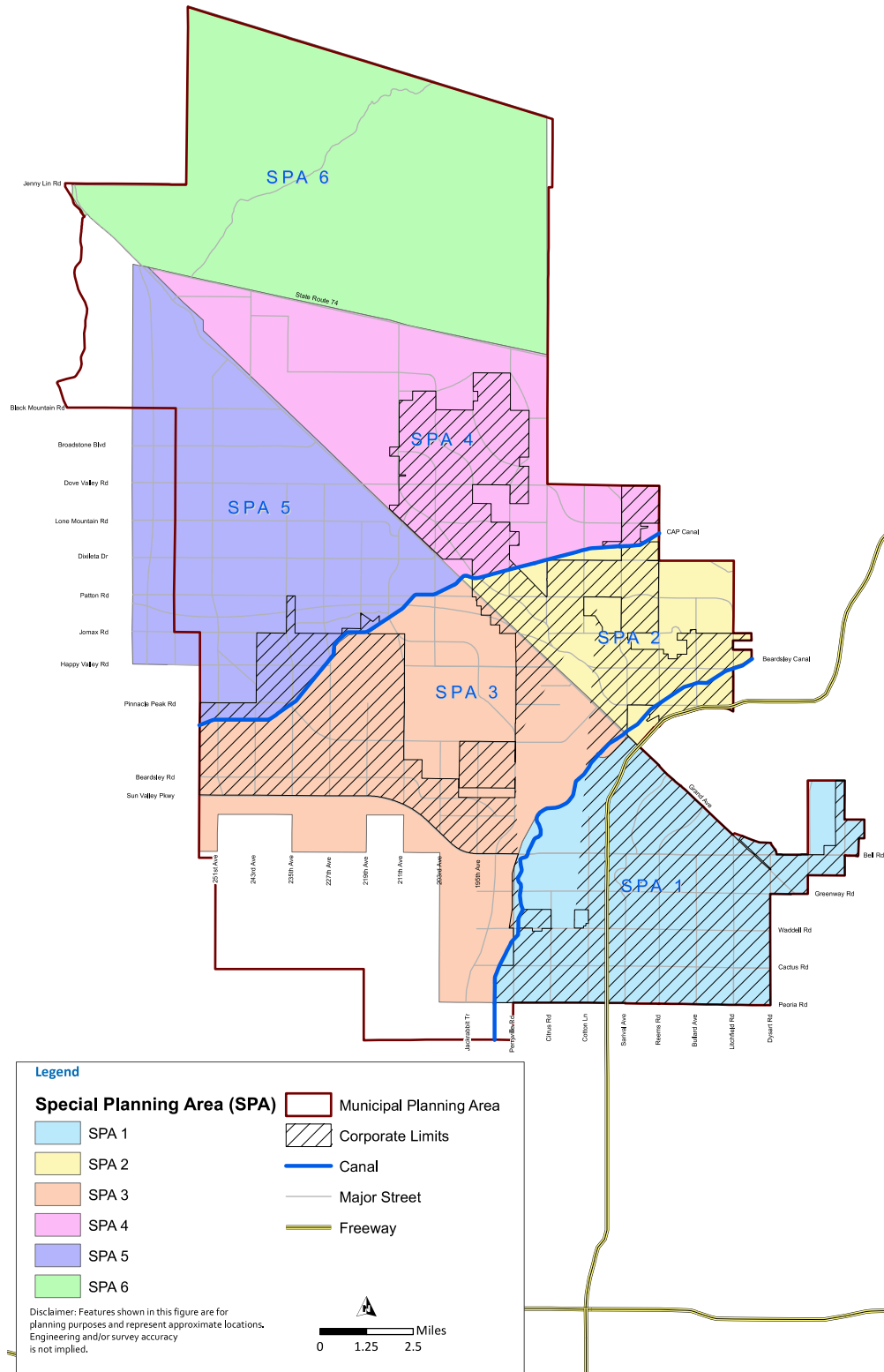


Figure 1.1 Municipal Planning Area



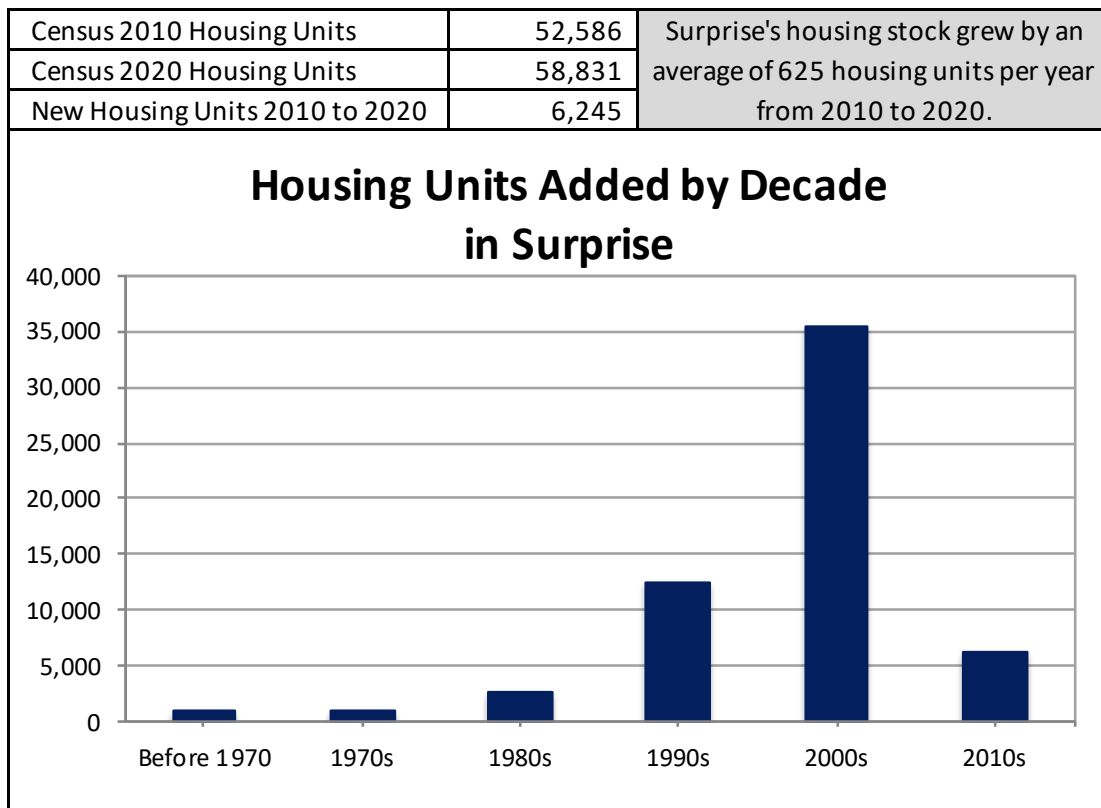
**RESIDENTIAL DEVELOPMENT**

This section details current estimates and future projections of residential development including population and housing units.

**Recent Residential Construction**

Development fees require an analysis of current levels of service. For residential development, current levels of service are determined using estimates of population and housing units. Shown below, Figure L2 indicates the estimated number of housing units added by decade according to data obtained from the U.S. Census Bureau. In the previous decade, Surprise’s housing stock grew by an average of 625 housing units per year.

**Figure L2: Housing Units by Decade**



Source: U.S. Census Bureau, Census 2020 Summary File 1, Census 2010 Summary File 1, 2017-2021 5-Year American Community Survey (for 2000s and earlier, adjusted to yield total units in 2010).

## Occupancy Factors

According to the U.S. Census Bureau, a household is a housing unit occupied by year-round residents. Development fees often use per capita standards and persons per housing unit (PPHU) or persons per household (PPH) to derive proportionate share fee amounts. When fee calculations use PPHU, infrastructure standards are derived using year-round population. When fee calculations use PPH, the development fee methodology assumes a higher percentage of housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. TischlerBise recommends that development fees for residential development use persons per housing unit.

Residential development fees group housing units into three categories. Single-family units include detached and attached units. Multi-family units include duplexes and structures with two or more units on an individual parcel of land. Mobile home units include mobile homes and recreational vehicles. Figure L3 below shows the occupancy estimates for Surprise based on 2017-2021 American Community Survey 5-Year Estimates. Single-family units averaged 2.58 persons per housing unit, multi-family units averaged 1.58 persons per housing unit, and mobile home units averaged 1.09 persons per housing unit. The estimates shown below are used only to calculate occupancy factors and may not match population and housing unit estimates shown throughout this report.

**Figure L3: Occupancy Factors**

Housing Type	Persons	Households	Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix	Vacancy Rate
Single Family <sup>1</sup>	130,567	46,291	2.82	50,626	<b>2.58</b>	86.6%	8.56%
Multi-Family <sup>2</sup>	7,708	4,089	1.89	4,865	<b>1.58</b>	8.3%	15.95%
Mobile Home <sup>3</sup>	3,256	1,825	1.78	2,992	<b>1.09</b>	5.1%	39.00%
Total	141,531	52,205	2.71	58,483	<b>2.42</b>	100.0%	10.73%

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

1. Includes detached and attached (i.e., townhouses) units.
2. Includes dwellings in structures with two or more units.
3. Includes mobile homes and RV units.

## Residential Estimates

According to estimates published by the U.S. Census Bureau, Surprise’s 2020 population included 141,758 persons living in 58,831 housing units. The Maricopa Association of Governments (MAG) released updated socioeconomic projections in June 2023. Using traffic analysis zone (TAZ) data provided by MAG, and occupancy factors shown in Figure L3, existing residential development in 2023 included 172,866 persons living in 73,013 housing units.

**Figure L4: Residential Estimates**

Surprise, Arizona	2020	2023
	Census <sup>1</sup>	Base Year
Population	141,758	172,866
Housing Units	58,831	73,013

1. U.S. Census Bureau, 2020
2. TischlerBise calculation using Maricopa Association of Governments (MAG) housing unit projections and ACS occupancy factors.

## Residential Projections

Population and housing unit projections illustrate the possible future pace of service demands, revenues, and expenditures. To the extent these factors change, the projected need for infrastructure will also change. If development occurs at a faster rate than projected, the demand for infrastructure will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will decrease at a corresponding rate. For this study, the analysis assumes the occupancy factors shown in Figure L3 will remain constant throughout the 10-year projection period.

### Citywide Projections

TischlerBise projects residential development using housing unit data provided by the Maricopa Association of Governments (MAG) and data provided by Community Development Department staff (multi-family development in SPA 1 and SPA 2 only). To project housing units from 2023 to 2030, TischlerBise applies a straight-line projection from MAG 2020 housing unit estimates to MAG 2030 housing unit projections. To project housing units from 2030 to 2033, TischlerBise applies a straight-line projection from MAG 2030 housing unit projections to MAG 2040 housing unit projections. For multi-family development in SPA 1 and SPA 2, the analysis uses data provided by Community Development Department staff (instead of MAG data) that reflects multi-family development currently in the development pipeline. Based on these assumptions, 10-year projections include an increase of 35,921 housing units.

To convert housing units to population, the analysis multiplies occupancy factors shown in Figure L3 to the housing unit projections shown below. For example, the 10-year increase of 27,023 single-family units multiplied by 2.58 persons per housing unit equals 69,718 persons in new single-family units. Based on these assumptions, the 10-year projections include an increase of 83,656 persons.

**Figure L5: Residential Projections**

Surprise, Arizona	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Population</b>												
Single-Family	153,323	160,839	168,354	175,870	183,386	190,901	198,417	205,932	211,636	217,339	223,042	69,718
Multi-Family	16,194	17,552	18,910	20,268	21,626	22,984	24,342	25,700	27,087	28,474	29,862	13,667
Mobile Home	3,349	3,378	3,407	3,436	3,465	3,494	3,523	3,552	3,575	3,597	3,619	270
<b>Total</b>	<b>172,866</b>	<b>181,769</b>	<b>190,671</b>	<b>199,574</b>	<b>208,477</b>	<b>217,380</b>	<b>226,282</b>	<b>235,185</b>	<b>242,297</b>	<b>249,410</b>	<b>256,522</b>	<b>83,656</b>
<b>Housing Units</b>												
Single-Family	59,934	62,847	65,760	68,673	71,586	74,499	77,412	80,325	82,536	84,746	86,957	27,023
Multi-Family	9,973	10,833	11,692	12,552	13,411	14,271	15,130	15,990	16,868	17,746	18,624	8,650
Mobile Home	3,106	3,133	3,159	3,186	3,213	3,239	3,266	3,293	3,313	3,333	3,354	248
<b>Total</b>	<b>73,013</b>	<b>76,813</b>	<b>80,612</b>	<b>84,411</b>	<b>88,210</b>	<b>92,010</b>	<b>95,809</b>	<b>99,608</b>	<b>102,717</b>	<b>105,825</b>	<b>108,934</b>	<b>35,921</b>

Street Service Area Projections

The following figures include residential development projections associated with the street development fee service area. TischlerBise projects future residential development for each subarea using the same methodology as the citywide development projections.

Figure L7: Residential Projections—Street Development Fee Service Area (North)

Street Development Fee Service Area - North	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Population</b>												
Single-Family	16,684	20,247	23,809	27,371	30,934	34,496	38,058	41,620	44,651	47,681	50,711	34,027
Multi-Family	819	1,225	1,632	2,038	2,444	2,850	3,256	3,662	4,067	4,472	4,878	4,058
Mobile Home	191	205	219	232	246	260	274	288	299	311	323	132
<b>Total</b>	<b>17,695</b>	<b>21,677</b>	<b>25,659</b>	<b>29,641</b>	<b>33,623</b>	<b>37,606</b>	<b>41,588</b>	<b>45,570</b>	<b>49,017</b>	<b>52,465</b>	<b>55,912</b>	<b>38,217</b>
<b>Housing Units</b>												
Single-Family	6,489	7,870	9,250	10,631	12,012	13,393	14,773	16,154	17,329	18,503	19,678	13,189
Multi-Family	295	552	809	1,066	1,323	1,580	1,837	2,094	2,350	2,607	2,863	2,569
Mobile Home	177	189	202	215	227	240	253	265	276	287	298	121
<b>Total</b>	<b>6,960</b>	<b>8,611</b>	<b>10,261</b>	<b>11,911</b>	<b>13,562</b>	<b>15,212</b>	<b>16,863</b>	<b>18,513</b>	<b>19,955</b>	<b>21,397</b>	<b>22,838</b>	<b>15,878</b>

Figure L8: Residential Projections—Street Development Fee Service Area (South)

**DRAFT Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report**

Surprise, Arizona

Street Development Fee Service Area - South	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Population</b>												
Single-Family	127,038	128,587	130,137	131,686	133,235	134,785	136,334	137,883	138,432	138,980	139,528	12,490
Multi-Family	15,171	16,102	17,033	17,964	18,895	19,827	20,758	21,689	22,620	23,551	24,482	9,311
Mobile Home	3,070	3,076	3,082	3,088	3,094	3,100	3,106	3,112	3,114	3,116	3,119	48
<b>Total</b>	<b>145,279</b>	<b>147,766</b>	<b>150,252</b>	<b>152,739</b>	<b>155,225</b>	<b>157,711</b>	<b>160,198</b>	<b>162,684</b>	<b>164,166</b>	<b>165,647</b>	<b>167,129</b>	<b>21,849</b>
<b>Housing Units</b>												
Single-Family	49,777	50,378	50,978	51,579	52,179	52,780	53,380	53,981	54,193	54,406	54,618	4,841
Multi-Family	9,639	10,229	10,818	11,407	11,996	12,586	13,175	13,764	14,354	14,943	15,532	5,893
Mobile Home	2,852	2,857	2,863	2,868	2,874	2,879	2,885	2,890	2,892	2,894	2,896	44
<b>Total</b>	<b>62,268</b>	<b>63,464</b>	<b>64,659</b>	<b>65,854</b>	<b>67,050</b>	<b>68,245</b>	<b>69,440</b>	<b>70,636</b>	<b>71,439</b>	<b>72,243</b>	<b>73,047</b>	<b>10,779</b>

Figure L9: Residential Projections—Street Development Fee Service Area (West)

Street Development Fee Service Area - West	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Population</b>												
Single-Family	9,601	12,005	14,409	16,813	19,217	21,621	24,025	26,429	28,553	30,678	32,802	23,201
Multi-Family	204	224	245	266	287	308	329	349	400	451	502	298
Mobile Home	88	97	106	115	125	134	143	153	161	169	177	90
<b>Total</b>	<b>9,892</b>	<b>12,326</b>	<b>14,760</b>	<b>17,194</b>	<b>19,628</b>	<b>22,063</b>	<b>24,497</b>	<b>26,931</b>	<b>29,114</b>	<b>31,298</b>	<b>33,482</b>	<b>23,590</b>
<b>Housing Units</b>												
Single-Family	3,668	4,600	5,532	6,463	7,395	8,327	9,259	10,190	11,014	11,837	12,661	8,993
Multi-Family	40	53	66	79	92	106	119	132	164	196	228	189
Mobile Home	77	86	94	103	111	120	129	137	145	152	160	82
<b>Total</b>	<b>3,785</b>	<b>4,738</b>	<b>5,692</b>	<b>6,645</b>	<b>7,599</b>	<b>8,552</b>	<b>9,506</b>	<b>10,459</b>	<b>11,323</b>	<b>12,186</b>	<b>13,049</b>	<b>9,264</b>



**NONRESIDENTIAL DEVELOPMENT**

This section details current estimates and future projections of nonresidential development including jobs and nonresidential floor area.

**Nonresidential Demand Factors**

TischlerBise uses the term jobs to refer to employment by place of work. In Figure L6, gray shading indicates the nonresidential development prototypes used to derive employment densities. For nonresidential development, TischlerBise uses data published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021). The prototype for industrial development is Industrial Park (ITE 130) with 864 square feet of floor area per employee. For warehouse development, the proxy is Warehousing (ITE 150) with 2,953 square feet of floor area per employee. Public/institutional development uses Nursing Home (ITE 620) with 490 square feet of floor area per employee. For office development, the proxy is General Office (ITE 710) with 307 square feet of floor area per employee. The prototype for retail/commercial development is Shopping Center (ITE 820) with 471 square feet of floor area per employee.

**Figure L6: Nonresidential Demand Units**

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit <sup>1</sup>	Wkdy Trip Ends Per Employee <sup>1</sup>	Employees per Dmd Unit	Square Feet Per Employee
110	Light Industrial	1,000 Sq Ft	4.87	3.10	1.57	637
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	4.75	2.51	1.89	528
150	Warehousing	1,000 Sq Ft	1.71	5.05	0.34	2,953
310	Hotel	room	7.99	14.34	0.56	na
520	Elementary School	student	2.27	22.50	0.10	na
525	High School	student	1.94	21.95	0.09	na
540	Community College	student	1.15	14.61	0.08	na
565	Day Care	student	4.09	21.38	0.19	na
610	Hospital	1,000 Sq Ft	10.77	3.77	2.86	350
620	Nursing Home	1,000 Sq Ft	6.75	3.31	2.04	490
710	General Office (avg size)	1,000 Sq Ft	10.84	3.33	3.26	307
720	Medical-Dental Office	1,000 Sq Ft	36.00	8.71	4.13	242
730	Government Office	1,000 Sq Ft	22.59	7.45	3.03	330
750	Office Park	1,000 Sq Ft	11.07	3.54	3.13	320
760	Research & Dev Center	1,000 Sq Ft	11.08	3.37	3.29	304
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	37.01	17.42	2.12	471

1. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

### Nonresidential Estimates

The Maricopa Association of Governments (MAG) released updated socioeconomic projections in June 2023. According to MAG estimates, site-based employment included 22,366 jobs in 2020. According to data provided by the Maricopa County Tax Assessor, nonresidential development included 20,327,059 square feet of floor area in 2020. To estimate employment in 2023, TischlerBise applied a straight-line projection from MAG 2020 employment estimates to MAG 2030 employment projections. To estimate nonresidential floor area in 2023, TischlerBise used a combination of recently completed projects and ITE employment density factors. For 2023, projected nonresidential development includes 27,035 jobs and 25,386,225 square feet of nonresidential floor area.

**Figure L7: Nonresidential Estimates**

Industry Type	2020 Jobs <sup>1</sup>	Percent of Total Jobs	2020 Estimated Floor Area <sup>2</sup>
Industrial	1,864	8%	822,847
Warehouse	389	2%	4,423,342
Retail/Commercial	11,555	52%	6,670,736
Office	5,739	26%	2,056,628
Public/Institutional	2,819	13%	6,353,506
<b>Total</b>	<b>22,366</b>	<b>100%</b>	<b>20,327,059</b>

1. Socioeconomic Projections (June 2023), Maricopa Association of Governments (MAG).
2. Maricopa County Tax Assessor, 2020.

Industry Type	2023 Jobs <sup>1</sup>	Percent of Total Jobs	2023 Estimated Floor Area <sup>1</sup>
Industrial	2,603	10%	2,097,956
Warehouse	542	2%	5,332,128
Retail/Commercial	12,309	46%	7,380,433
Office	7,920	29%	3,396,615
Public/Institutional	3,661	14%	7,179,094
<b>Total</b>	<b>27,035</b>	<b>100%</b>	<b>25,386,225</b>

1. TischlerBise estimate.

## Nonresidential Projections

Employment and floor area projections are used to illustrate the possible future pace of service demands, revenues, and expenditures. To the extent these factors change, the projected need for infrastructure will also change. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease.

### Citywide Projections

TischlerBise projects nonresidential development using employment data, by development type, provided by the Maricopa Association of Governments (MAG). To project employment from 2023 to 2030, TischlerBise applies a straight-line projection from MAG 2020 employment estimates to MAG 2030 employment projections. To project employment from 2030 to 2033, TischlerBise applies a straight-line projection from MAG 2030 employment projections to MAG 2040 employment projections. Based on these assumptions, 10-year projections include an increase of 16,444 jobs citywide. To convert employment to nonresidential floor area, the analysis multiplies nonresidential demand factors shown in Figure L6 by the employment projections shown below. For example, the 10-year increase of 2,245 industrial jobs multiplied by 864 square feet per industrial job equals approximately 1,938,000 square feet of additional industrial development. Based on these assumptions, 10-year projections include an increase of approximately 8,542,000 square feet of nonresidential floor area citywide.

**Figure L8: Nonresidential Projections**

Surprise, Arizona	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Employment</b>												
Industrial	2,603	2,849	3,095	3,341	3,587	3,833	4,079	4,326	4,500	4,673	4,847	2,245
Warehouse	542	594	645	696	748	799	850	901	938	974	1,010	468
Retail/Commercial	12,309	12,560	12,812	13,063	13,314	13,565	13,817	14,068	14,541	15,014	15,486	3,178
Office	7,920	8,647	9,374	10,101	10,828	11,555	12,282	13,009	13,950	14,890	15,831	7,911
Public/Institutional	3,661	3,941	4,222	4,503	4,783	5,064	5,344	5,625	5,852	6,078	6,305	2,644
<b>Total</b>	<b>27,035</b>	<b>28,591</b>	<b>30,148</b>	<b>31,704</b>	<b>33,260</b>	<b>34,816</b>	<b>36,373</b>	<b>37,929</b>	<b>39,779</b>	<b>41,629</b>	<b>43,479</b>	<b>16,444</b>
<b>Nonres. Sq Ft (x1,000)</b>												
Industrial	2,098	2,310	2,523	2,736	2,948	3,161	3,373	3,586	3,736	3,886	4,036	1,938
Warehouse	5,332	5,484	5,635	5,787	5,938	6,089	6,241	6,392	6,499	6,606	6,714	1,381
Retail/Commercial	7,380	7,499	7,617	7,735	7,854	7,972	8,090	8,208	8,431	8,653	8,876	1,496
Office	3,397	3,620	3,843	4,067	4,290	4,513	4,737	4,960	5,249	5,538	5,827	2,430
Public/Institutional	7,179	7,317	7,454	7,592	7,729	7,867	8,005	8,142	8,253	8,364	8,475	1,296
<b>Total</b>	<b>25,386</b>	<b>26,229</b>	<b>27,073</b>	<b>27,916</b>	<b>28,759</b>	<b>29,602</b>	<b>30,445</b>	<b>31,289</b>	<b>32,168</b>	<b>33,048</b>	<b>33,928</b>	<b>8,542</b>

**Street Service Area Projections**

The following figures include nonresidential development projections associated with the street development fee service area. TischlerBise projects future nonresidential development for each subarea using the same methodology as the citywide development projections.

**Figure L13: Nonresidential Projections – Street Development Fee Service Area (North)**

Street Development Fee Service Area - North	2023 Base	2024 1	2025 2	2026 3	2027 4	2028 5	2029 6	2030 7	2031 8	2032 9	2033 10	10-Year Increase
<b>Employment</b>												
Industrial	42	54	67	80	93	105	118	131	142	153	164	122
Warehouse	9	11	14	17	19	22	25	27	30	32	34	25
Retail/Commercial	174	227	280	333	386	440	493	546	735	923	1,112	939
Office	287	368	449	529	610	691	772	853	1,232	1,611	1,990	1,703
Public/Institutional	440	526	612	698	784	871	957	1,043	1,154	1,264	1,375	935
<b>Total</b>	<b>950</b>	<b>1,186</b>	<b>1,422</b>	<b>1,657</b>	<b>1,893</b>	<b>2,129</b>	<b>2,364</b>	<b>2,600</b>	<b>3,292</b>	<b>3,983</b>	<b>4,675</b>	<b>3,724</b>
<b>Nonres. Sq Ft (x1,000)</b>												
Industrial	66	77	88	99	110	121	132	143	153	162	172	106
Warehouse	47	55	63	71	78	86	94	102	109	116	122	75
Retail/Commercial	181	206	231	256	281	306	331	356	445	534	622	442
Office	149	174	199	224	249	273	298	323	439	556	672	523
Public/Institutional	617	659	701	743	786	828	870	913	967	1,021	1,075	459
<b>Total</b>	<b>1,060</b>	<b>1,171</b>	<b>1,282</b>	<b>1,393</b>	<b>1,504</b>	<b>1,615</b>	<b>1,726</b>	<b>1,837</b>	<b>2,112</b>	<b>2,388</b>	<b>2,664</b>	<b>1,604</b>

**Figure L14: Nonresidential Projections – Street Development Fee Service Area (South)**

Street Development Fee Service Area - South	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Employment</b>												
Industrial	2,516	2,749	2,982	3,215	3,448	3,681	3,914	4,147	4,301	4,456	4,610	2,094
Warehouse	524	573	621	670	719	767	816	864	896	929	961	436
Retail/Commercial	12,040	12,223	12,406	12,589	12,772	12,956	13,139	13,322	13,491	13,660	13,830	1,790
Office	7,347	7,914	8,482	9,049	9,617	10,184	10,752	11,319	11,763	12,207	12,650	5,304
Public/Institutional	2,906	2,999	3,093	3,186	3,280	3,373	3,467	3,560	3,585	3,609	3,634	728
<b>Total</b>	<b>25,332</b>	<b>26,458</b>	<b>27,584</b>	<b>28,709</b>	<b>29,835</b>	<b>30,961</b>	<b>32,086</b>	<b>33,212</b>	<b>34,036</b>	<b>34,860</b>	<b>35,685</b>	<b>10,353</b>
<b>Nonres. Sq Ft (x1,000)</b>												
Industrial	2,030	2,231	2,432	2,633	2,834	3,036	3,237	3,438	3,571	3,705	3,838	1,808
Warehouse	5,281	5,424	5,568	5,711	5,855	5,998	6,141	6,285	6,380	6,475	6,570	1,289
Retail/Commercial	7,128	7,214	7,300	7,386	7,473	7,559	7,645	7,731	7,811	7,891	7,970	843
Office	3,103	3,277	3,451	3,626	3,800	3,974	4,149	4,323	4,459	4,596	4,732	1,629
Public/Institutional	6,246	6,292	6,337	6,383	6,429	6,475	6,521	6,567	6,579	6,591	6,603	357
<b>Total</b>	<b>23,787</b>	<b>24,438</b>	<b>25,089</b>	<b>25,740</b>	<b>26,391</b>	<b>27,042</b>	<b>27,693</b>	<b>28,344</b>	<b>28,800</b>	<b>29,257</b>	<b>29,713</b>	<b>5,926</b>



**Figure L15: Nonresidential Projections – Street Development Fee Service Area (West)**

Street Development Fee Service Area - West	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Employment</b>												
Industrial	45	46	46	46	47	47	48	48	56	65	73	28
Warehouse	9	9	10	10	10	10	10	10	12	14	15	6
Retail/Commercial	96	111	126	140	155	170	185	200	315	430	545	449
Office	287	365	444	523	601	680	758	837	955	1,073	1,190	904
Public/Institutional	316	417	518	618	719	820	921	1,022	1,113	1,205	1,296	981
<b>Total</b>	<b>753</b>	<b>948</b>	<b>1,143</b>	<b>1,337</b>	<b>1,532</b>	<b>1,727</b>	<b>1,922</b>	<b>2,117</b>	<b>2,451</b>	<b>2,786</b>	<b>3,120</b>	<b>2,367</b>
<b>Nonres. Sq Ft (x1,000)</b>												
Industrial	2	3	3	3	4	4	4	5	12	19	27	24
Warehouse	4	4	4	5	5	5	6	6	11	16	21	17
Retail/Commercial	72	79	86	93	100	107	114	121	175	229	283	211
Office	145	169	193	217	241	266	290	314	350	386	422	278
Public/Institutional	317	366	416	465	515	564	614	663	708	753	797	481
<b>Total</b>	<b>540</b>	<b>621</b>	<b>702</b>	<b>783</b>	<b>865</b>	<b>946</b>	<b>1,027</b>	<b>1,108</b>	<b>1,256</b>	<b>1,404</b>	<b>1,551</b>	<b>1,011</b>

## AVERAGE WEEKDAY VEHICLE TRIPS

Surprise will use average weekday vehicle trips (AWVT) for fire facilities fees and police facilities fees. Components used to determine AWVT include average weekday vehicle trip generation rates, adjustments for commuting patterns, and adjustments for pass-by trips.

### Residential Trip Generation Rates

For residential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021). For single-family development, the proxy is Single Family Detached Housing (ITE 210), and this type of development generates 9.43 average weekday vehicle trip ends per unit. For multi-family development, the proxy is Multifamily Housing Low-Rise (ITE 220), and this type of development generates 6.74 average weekday vehicle trip ends per unit. For mobile home development, the proxy is Mobile Home Park (ITE 240), and this type of development generates 7.12 average weekday vehicle trip ends per unit.

### Nonresidential Trip Generation Rates

For nonresidential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021). The prototype for industrial development is Industrial Park (ITE 130) which generates 3.37 average weekday vehicle trip ends per 1,000 square feet of floor area. For warehouse development, the proxy is Warehousing (ITE 150), and it generates 1.71 average weekday vehicle trip ends per 1,000 square feet of floor area. Public/institutional development uses Nursing Home (ITE 620) and generates 6.75 average weekday vehicle trip ends per 1,000 square feet of floor area. For office development, the proxy is General Office (ITE 710), and it generates 10.84 average weekday vehicle trip ends per 1,000 square feet of floor area. The prototype for retail/commercial development is Shopping Center (ITE 820) which generates 37.01 average weekday vehicle trips per 1,000 square feet of floor area.

**Figure L9: Average Weekday Vehicle Trip Ends by Land Use**

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit <sup>1</sup>	Wkdy Trip Ends Per Employee <sup>1</sup>	Employees per Dmd Unit	Square Feet Per Employee
110	Light Industrial	1,000 Sq Ft	4.87	3.10	1.57	637
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	4.75	2.51	1.89	528
150	Warehousing	1,000 Sq Ft	1.71	5.05	0.34	2,953
310	Hotel	room	7.99	14.34	0.56	na
565	Day Care	student	4.09	21.38	0.19	na
610	Hospital	1,000 Sq Ft	10.77	3.77	2.86	350
620	Nursing Home	1,000 Sq Ft	6.75	3.31	2.04	490
710	General Office (avg size)	1,000 Sq Ft	10.84	3.33	3.26	307
720	Medical-Dental Office	1,000 Sq Ft	36.00	8.71	4.13	242
730	Government Office	1,000 Sq Ft	22.59	7.45	3.03	330
750	Office Park	1,000 Sq Ft	11.07	3.54	3.13	320
760	Research & Dev Center	1,000 Sq Ft	11.08	3.37	3.29	304
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	37.01	17.42	2.12	471

1. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

## Trip Rate Adjustments

To calculate vehicle trips, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the trip adjustment factor is 50 percent.

### Commuter Trip Adjustment

Residential development has a larger trip adjustment factor of 64 percent to account for commuters leaving Surprise for work. According to the 2009 National Household Travel Survey (see Table 30) weekday work trips are typically 31 percent of production trips (i.e., all out-bound trips, which are 50 percent of all trip ends). As shown in Figure L10, the U.S. Census Bureau’s OnTheMap web application indicates 90 percent of resident workers traveled outside of Surprise for work in 2019. In combination, these factors ( $0.31 \times 0.50 \times 0.90 = 0.14$ ) support the additional 14 percent allocation of trips to residential development.

**Figure L10: Commuter Trip Adjustment**

Trip Adjustment Factor for Commuters	
Employed Residents	55,711
Residents Living and Working in Surprise	5,624
Residents Commuting Outside Surprise for Work	50,087
Percent Commuting out of Surprise	90%
Additional Production Trips <sup>1</sup>	14%
Residential Trip Adjustment Factor	64%

Source: U.S. Census Bureau, OnTheMap Application (version 6.8.1) and LEHD Origin-Destination Employment Statistics, 2019.

1. According to the National Household Travel Survey (2009)\*, published in December 2011 (see Table 30), home-based work trips are typically 30.99 percent of “production” trips, in other words, out-bound trips (which are 50 percent of all trip ends). Also, LED OnTheMap data from 2019 indicate that 90 percent of Surprise's workers travel outside the city for work. In combination, these factors ( $0.3099 \times 0.50 \times 0.90 = 0.139$ ) account for 14 percent of additional production trips. The total adjustment factor for residential includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (14 percent of production trips) for a total of 64 percent.

\*<http://nhts.ornl.gov/publications.shtml> ; Summary of Travel Trends - Table "Daily Travel Statistics by Weekday vs. Weekend"

### Adjustment for Primary Trips

For retail/commercial and office development, the primary trip factor is less than 100 percent because these types of development attract vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For retail/commercial development, ITE data indicate 45 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 55 percent of attraction trips have the retail/commercial site as their primary destination. Because attraction trips are half of all trips, the retail/commercial trip adjustment factor is 55 percent multiplied by 50 percent, or approximately 28 percent of the trip ends. For office development, 90 percent of attraction trips are assumed to be primary trips based on detailed studies conducted as part of Tindale-Oliver 2016 Hillsborough County Mobility Fee Study. Because attraction trips are half of all trips, the office trip adjustment factor is 90 percent multiplied by 50 percent, or 45 percent of the trip ends.

### Average Weekday Vehicle Trip Estimate

Shown below in Figure L11, multiplying average weekday vehicle trip ends and trip adjustment factors (discussed on the previous page) by Surprise’s existing development units provides the average weekday vehicle trips generated by existing development. As shown below, Surprise’s existing citywide development generates 542,897 vehicle trips on an average weekday.

**Figure L11: Average Weekday Vehicle Trips by Land Use**

Development Type	Development Unit	ITE Code	Avg Wkday VTE	Trip Adjustment	2023 Dev Units	2023 Veh Trips
Single Family	HU	210	9.43	64%	59,934	361,715
Multi-Family	HU	220	6.74	64%	9,973	43,021
Mobile Home	HU	240	7.12	64%	3,106	14,153
Industrial	KSF	130	3.37	50%	2,098	3,535
Warehouse	KSF	150	1.71	50%	5,332	4,559
Retail/Commercial	KSF	820	37.01	28%	7,380	75,116
Office	KSF	710	10.84	45%	3,397	16,569
Public/Institutional	KSF	620	6.75	50%	7,179	24,229
<b>Total</b>						<b>542,897</b>

### Average Weekday Vehicle Trip Projections

Shown below, Figure L12 includes a projection of citywide vehicle trips. TischlerBise uses the nonresidential projections shown below for the fire and police service areas.

**Figure L12: Average Weekday Vehicle Trip Projections**

Surprise, Arizona		Base	1	2	3	4	5	6	7	8	9	10	10-Year Increase
		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Development	Single Family Units	59,934	62,847	65,760	68,673	71,586	74,499	77,412	80,325	82,536	84,746	86,957	27,023
	Multi-Family Units	9,973	10,833	11,692	12,552	13,411	14,271	15,130	15,990	16,868	17,746	18,624	8,650
	Mobile Home Units	3,106	3,133	3,159	3,186	3,213	3,239	3,266	3,293	3,313	3,333	3,354	248
	Industrial KSF	2,098	2,310	2,523	2,736	2,948	3,161	3,373	3,586	3,736	3,886	4,036	1,938
	Warehouse KSF	5,332	5,484	5,635	5,787	5,938	6,089	6,241	6,392	6,499	6,606	6,714	1,381
	Retail/Commercial KSF	7,380	7,499	7,617	7,735	7,854	7,972	8,090	8,208	8,431	8,653	8,876	1,496
	Office KSF	3,397	3,620	3,843	4,067	4,290	4,513	4,737	4,960	5,249	5,538	5,827	2,430
	Public/Institutional KSF	7,179	7,317	7,454	7,592	7,729	7,867	8,005	8,142	8,253	8,364	8,475	1,296
Average Weekday Vehicle Trips	Single-Family Trips	361,715	379,295	396,876	414,457	432,037	449,618	467,199	484,779	498,120	511,461	524,802	163,087
	Multi-Family Trips	43,021	46,729	50,436	54,144	57,851	61,559	65,266	68,974	72,761	76,548	80,335	37,314
	Mobile Home Trips	14,153	14,274	14,396	14,518	14,640	14,761	14,883	15,005	15,097	15,190	15,282	1,130
	Residential Trips	418,888	440,298	461,708	483,118	504,528	525,938	547,348	568,758	585,978	603,199	620,419	201,531
	Industrial Trips	3,535	3,893	4,251	4,609	4,967	5,326	5,684	6,042	6,295	6,548	6,801	3,266
	Warehouse Trips	4,559	4,688	4,818	4,947	5,077	5,206	5,336	5,465	5,557	5,649	5,740	1,181
	Retail/Commercial Trips	75,116	76,320	77,524	78,728	79,932	81,135	82,339	83,543	85,808	88,073	90,338	15,222
	Office Trips	16,569	17,658	18,748	19,837	20,926	22,016	23,105	24,195	25,604	27,013	28,423	11,854
	Public/Institutional Trips	24,229	24,694	25,158	25,623	26,087	26,551	27,016	27,480	27,855	28,230	28,605	4,375
	Nonresidential Trips	124,008	127,254	130,499	133,744	136,989	140,235	143,480	146,725	151,119	155,513	159,906	35,898
<b>Total Vehicle Trips</b>		<b>542,897</b>	<b>567,552</b>	<b>592,207</b>	<b>616,862</b>	<b>641,517</b>	<b>666,173</b>	<b>690,828</b>	<b>715,483</b>	<b>737,097</b>	<b>758,711</b>	<b>780,325</b>	<b>237,429</b>



**DEVELOPMENT PROJECTIONS**

**Citywide Projections**

Provided below is a summary of development projections used in the Development Fee Report. Base year estimates for 2023 are used in the fee calculations. Development projections are used to illustrate a possible future pace of demand for service units and cash flows resulting from revenues and expenditures associated with those demands.

**Figure L13: Development Projections**

Surprise, Arizona	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year
	Base	1	2	3	4	5	6	7	8	9	10	Increase
<b>Population</b>												
Single-Family	153,323	160,839	168,354	175,870	183,386	190,901	198,417	205,932	211,636	217,339	223,042	69,718
Multi-Family	16,194	17,552	18,910	20,268	21,626	22,984	24,342	25,700	27,087	28,474	29,862	13,667
Mobile Home	3,349	3,378	3,407	3,436	3,465	3,494	3,523	3,552	3,575	3,597	3,619	270
<b>Total</b>	<b>172,866</b>	<b>181,769</b>	<b>190,671</b>	<b>199,574</b>	<b>208,477</b>	<b>217,380</b>	<b>226,282</b>	<b>235,185</b>	<b>242,297</b>	<b>249,410</b>	<b>256,522</b>	<b>83,656</b>
<b>Housing Units</b>												
Single-Family	59,934	62,847	65,760	68,673	71,586	74,499	77,412	80,325	82,536	84,746	86,957	27,023
Multi-Family	9,973	10,833	11,692	12,552	13,411	14,271	15,130	15,990	16,868	17,746	18,624	8,650
Mobile Home	3,106	3,133	3,159	3,186	3,213	3,239	3,266	3,293	3,313	3,333	3,354	248
<b>Total</b>	<b>73,013</b>	<b>76,813</b>	<b>80,612</b>	<b>84,411</b>	<b>88,210</b>	<b>92,010</b>	<b>95,809</b>	<b>99,608</b>	<b>102,717</b>	<b>105,825</b>	<b>108,934</b>	<b>35,921</b>
<b>Employment</b>												
Industrial	2,603	2,849	3,095	3,341	3,587	3,833	4,079	4,326	4,500	4,673	4,847	2,245
Warehouse	542	594	645	696	748	799	850	901	938	974	1,010	468
Retail/Commercial	12,309	12,560	12,812	13,063	13,314	13,565	13,817	14,068	14,541	15,014	15,486	3,178
Office	7,920	8,647	9,374	10,101	10,828	11,555	12,282	13,009	13,950	14,890	15,831	7,911
Public/Institutional	3,661	3,941	4,222	4,503	4,783	5,064	5,344	5,625	5,852	6,078	6,305	2,644
<b>Total</b>	<b>27,035</b>	<b>28,591</b>	<b>30,148</b>	<b>31,704</b>	<b>33,260</b>	<b>34,816</b>	<b>36,373</b>	<b>37,929</b>	<b>39,779</b>	<b>41,629</b>	<b>43,479</b>	<b>16,444</b>
<b>Nonres. Sq Ft (x1,000)</b>												
Industrial	2,098	2,310	2,523	2,736	2,948	3,161	3,373	3,586	3,736	3,886	4,036	1,938
Warehouse	5,332	5,484	5,635	5,787	5,938	6,089	6,241	6,392	6,499	6,606	6,714	1,381
Retail/Commercial	7,380	7,499	7,617	7,735	7,854	7,972	8,090	8,208	8,431	8,653	8,876	1,496
Office	3,397	3,620	3,843	4,067	4,290	4,513	4,737	4,960	5,249	5,538	5,827	2,430
Public/Institutional	7,179	7,317	7,454	7,592	7,729	7,867	8,005	8,142	8,253	8,364	8,475	1,296
<b>Total</b>	<b>25,386</b>	<b>26,229</b>	<b>27,073</b>	<b>27,916</b>	<b>28,759</b>	<b>29,602</b>	<b>30,445</b>	<b>31,289</b>	<b>32,168</b>	<b>33,048</b>	<b>33,928</b>	<b>8,542</b>

**Street Service Area Projections**

TischlerBise uses these projections as the basis for the street facilities development fees.

**Figure L21: Development Projections – Street Development Fee Service Area (North)**

Street Development Fee Service Area - North	2023 Base	2024 1	2025 2	2026 3	2027 4	2028 5	2029 6	2030 7	2031 8	2032 9	2033 10	10-Year Increase
<b>Population</b>												
Single-Family	16,684	20,247	23,809	27,371	30,934	34,496	38,058	41,620	44,651	47,681	50,711	34,027
Multi-Family	819	1,225	1,632	2,038	2,444	2,850	3,256	3,662	4,067	4,472	4,878	4,058
Mobile Home	191	205	219	232	246	260	274	288	299	311	323	132
<b>Total</b>	<b>17,695</b>	<b>21,677</b>	<b>25,659</b>	<b>29,641</b>	<b>33,623</b>	<b>37,606</b>	<b>41,588</b>	<b>45,570</b>	<b>49,017</b>	<b>52,465</b>	<b>55,912</b>	<b>38,217</b>
<b>Housing Units</b>												
Single-Family	6,489	7,870	9,250	10,631	12,012	13,393	14,773	16,154	17,329	18,503	19,678	13,189
Multi-Family	295	552	809	1,066	1,323	1,580	1,837	2,094	2,350	2,607	2,863	2,569
Mobile Home	177	189	202	215	227	240	253	265	276	287	298	121
<b>Total</b>	<b>6,960</b>	<b>8,611</b>	<b>10,261</b>	<b>11,911</b>	<b>13,562</b>	<b>15,212</b>	<b>16,863</b>	<b>18,513</b>	<b>19,955</b>	<b>21,397</b>	<b>22,838</b>	<b>15,878</b>
<b>Employment</b>												
Industrial	42	54	67	80	93	105	118	131	142	153	164	122
Warehouse	9	11	14	17	19	22	25	27	30	32	34	25
Retail/Commercial	174	227	280	333	386	440	493	546	735	923	1,112	939
Office	287	368	449	529	610	691	772	853	1,232	1,611	1,990	1,703
Public/Institutional	440	526	612	698	784	871	957	1,043	1,154	1,264	1,375	935
<b>Total</b>	<b>950</b>	<b>1,186</b>	<b>1,422</b>	<b>1,657</b>	<b>1,893</b>	<b>2,129</b>	<b>2,364</b>	<b>2,600</b>	<b>3,292</b>	<b>3,983</b>	<b>4,675</b>	<b>3,724</b>
<b>Nonres. Sq Ft (x1,000)</b>												
Industrial	66	77	88	99	110	121	132	143	153	162	172	106
Warehouse	47	55	63	71	78	86	94	102	109	116	122	75
Retail/Commercial	181	206	231	256	281	306	331	356	445	534	622	442
Office	149	174	199	224	249	273	298	323	439	556	672	523
Public/Institutional	617	659	701	743	786	828	870	913	967	1,021	1,075	459
<b>Total</b>	<b>1,060</b>	<b>1,171</b>	<b>1,282</b>	<b>1,393</b>	<b>1,504</b>	<b>1,615</b>	<b>1,726</b>	<b>1,837</b>	<b>2,112</b>	<b>2,388</b>	<b>2,664</b>	<b>1,604</b>

**Figure L22: Development Projections – Street Development Fee Service Area (South)**

Street Development Fee Service Area - South	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Population</b>												
Single-Family	127,038	128,587	130,137	131,686	133,235	134,785	136,334	137,883	138,432	138,980	139,528	12,490
Multi-Family	15,171	16,102	17,033	17,964	18,895	19,827	20,758	21,689	22,620	23,551	24,482	9,311
Mobile Home	3,070	3,076	3,082	3,088	3,094	3,100	3,106	3,112	3,114	3,116	3,119	48
<b>Total</b>	<b>145,279</b>	<b>147,766</b>	<b>150,252</b>	<b>152,739</b>	<b>155,225</b>	<b>157,711</b>	<b>160,198</b>	<b>162,684</b>	<b>164,166</b>	<b>165,647</b>	<b>167,129</b>	<b>21,849</b>
<b>Housing Units</b>												
Single-Family	49,777	50,378	50,978	51,579	52,179	52,780	53,380	53,981	54,193	54,406	54,618	4,841
Multi-Family	9,639	10,229	10,818	11,407	11,996	12,586	13,175	13,764	14,354	14,943	15,532	5,893
Mobile Home	2,852	2,857	2,863	2,868	2,874	2,879	2,885	2,890	2,892	2,894	2,896	44
<b>Total</b>	<b>62,268</b>	<b>63,464</b>	<b>64,659</b>	<b>65,854</b>	<b>67,050</b>	<b>68,245</b>	<b>69,440</b>	<b>70,636</b>	<b>71,439</b>	<b>72,243</b>	<b>73,047</b>	<b>10,779</b>
<b>Employment</b>												
Industrial	2,516	2,749	2,982	3,215	3,448	3,681	3,914	4,147	4,301	4,456	4,610	2,094
Warehouse	524	573	621	670	719	767	816	864	896	929	961	436
Retail/Commercial	12,040	12,223	12,406	12,589	12,772	12,956	13,139	13,322	13,491	13,660	13,830	1,790
Office	7,347	7,914	8,482	9,049	9,617	10,184	10,752	11,319	11,763	12,207	12,650	5,304
Public/Institutional	2,906	2,999	3,093	3,186	3,280	3,373	3,467	3,560	3,585	3,609	3,634	728
<b>Total</b>	<b>25,332</b>	<b>26,458</b>	<b>27,584</b>	<b>28,709</b>	<b>29,835</b>	<b>30,961</b>	<b>32,086</b>	<b>33,212</b>	<b>34,036</b>	<b>34,860</b>	<b>35,685</b>	<b>10,353</b>
<b>Nonres. Sq Ft (x1,000)</b>												
Industrial	2,030	2,231	2,432	2,633	2,834	3,036	3,237	3,438	3,571	3,705	3,838	1,808
Warehouse	5,281	5,424	5,568	5,711	5,855	5,998	6,141	6,285	6,380	6,475	6,570	1,289
Retail/Commercial	7,128	7,214	7,300	7,386	7,473	7,559	7,645	7,731	7,811	7,891	7,970	843
Office	3,103	3,277	3,451	3,626	3,800	3,974	4,149	4,323	4,459	4,596	4,732	1,629
Public/Institutional	6,246	6,292	6,337	6,383	6,429	6,475	6,521	6,567	6,579	6,591	6,603	357
<b>Total</b>	<b>23,787</b>	<b>24,438</b>	<b>25,089</b>	<b>25,740</b>	<b>26,391</b>	<b>27,042</b>	<b>27,693</b>	<b>28,344</b>	<b>28,800</b>	<b>29,257</b>	<b>29,713</b>	<b>5,926</b>

**Figure L23: Development Projections – Street Development Fee Service Area (West)**

Street Development Fee Service Area - West	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
	Base	1	2	3	4	5	6	7	8	9	10	
<b>Population</b>												
Single-Family	9,601	12,005	14,409	16,813	19,217	21,621	24,025	26,429	28,553	30,678	32,802	23,201
Multi-Family	204	224	245	266	287	308	329	349	400	451	502	298
Mobile Home	88	97	106	115	125	134	143	153	161	169	177	90
<b>Total</b>	<b>9,892</b>	<b>12,326</b>	<b>14,760</b>	<b>17,194</b>	<b>19,628</b>	<b>22,063</b>	<b>24,497</b>	<b>26,931</b>	<b>29,114</b>	<b>31,298</b>	<b>33,482</b>	<b>23,590</b>
<b>Housing Units</b>												
Single-Family	3,668	4,600	5,532	6,463	7,395	8,327	9,259	10,190	11,014	11,837	12,661	8,993
Multi-Family	40	53	66	79	92	106	119	132	164	196	228	189
Mobile Home	77	86	94	103	111	120	129	137	145	152	160	82
<b>Total</b>	<b>3,785</b>	<b>4,738</b>	<b>5,692</b>	<b>6,645</b>	<b>7,599</b>	<b>8,552</b>	<b>9,506</b>	<b>10,459</b>	<b>11,323</b>	<b>12,186</b>	<b>13,049</b>	<b>9,264</b>
<b>Employment</b>												
Industrial	45	46	46	46	47	47	48	48	56	65	73	28
Warehouse	9	9	10	10	10	10	10	10	12	14	15	6
Retail/Commercial	96	111	126	140	155	170	185	200	315	430	545	449
Office	287	365	444	523	601	680	758	837	955	1,073	1,190	904
Public/Institutional	316	417	518	618	719	820	921	1,022	1,113	1,205	1,296	981
<b>Total</b>	<b>753</b>	<b>948</b>	<b>1,143</b>	<b>1,337</b>	<b>1,532</b>	<b>1,727</b>	<b>1,922</b>	<b>2,117</b>	<b>2,451</b>	<b>2,786</b>	<b>3,120</b>	<b>2,367</b>
<b>Nonres. Sq Ft (x1,000)</b>												
Industrial	2	3	3	3	4	4	4	5	12	19	27	24
Warehouse	4	4	4	5	5	5	6	6	11	16	21	17
Retail/Commercial	72	79	86	93	100	107	114	121	175	229	283	211
Office	145	169	193	217	241	266	290	314	350	386	422	278
Public/Institutional	317	366	416	465	515	564	614	663	708	753	797	481
<b>Total</b>	<b>540</b>	<b>621</b>	<b>702</b>	<b>783</b>	<b>865</b>	<b>946</b>	<b>1,027</b>	<b>1,108</b>	<b>1,256</b>	<b>1,404</b>	<b>1,551</b>	<b>1,011</b>

## FIRE FACILITIES

ARS § 9-463.05 (T)(7)(f) defines the eligible facilities and assets for the Fire Facilities IIP:

*“Fire and police facilities, including all appurtenances, equipment and vehicles. Fire and police facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the municipality, vehicles and equipment used to provide administrative services, helicopters or airplanes or a facility that is used for training firefighters or officers from more than one station or substation.”*

The Fire Facilities IIP includes components for fire stations, fire facilities, primary apparatus, support apparatus, and the cost of preparing the Fire Facilities IIP and related development fee report. The plan-based methodology is used for fire stations, fire facilities, and the development fee report. The incremental expansion methodology is used for primary apparatus and support apparatus.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Fire Facilities IIP and development fees will allocate the cost of fire services between residential and nonresidential based on fire calls for service. Based on call data for FY2020 – FY2022, residential development generates approximately 75 percent of fire calls for service and nonresidential development accounts for the remaining 25 percent.

**Figure F1: Proportionate Share**

Description	FY 2020	FY 2021	FY 2022	Total
Residential	10,082	11,784	12,369	34,235
Nonresidential	3,684	3,424	4,190	11,298
Total	13,766	15,208	16,559	45,533

Description	FY 2020	FY 2021	FY 2022	Total
Residential	73%	77%	75%	75%
Nonresidential	27%	23%	25%	25%
Total	100%	100%	100%	100%

Source: Surprise Fire Department

The proportionate share of costs attributable to residential development will be allocated to population and then converted to an appropriate amount by type of housing unit. Since nonresidential calls for service were unavailable by specific nonresidential use, TischlerBise recommends using vehicle trips as the nonresidential demand indicator for fire services. Trip generation rates are highest for retail/commercial development and lowest for industrial development. Office and public/institutional trip generation rates fall between the other two categories. This ranking of trip generation rates is consistent with the relative demand for fire services from nonresidential development.

### SERVICE AREA

Surprise’s Fire Department strives to provide a uniform response time within the city limits; therefore, there is a single service area for the Fire Facilities IIP.

## RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

ARS § 9-463.05(E)(4) 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 F2 displays the demand indicators for residential and nonresidential land uses. For residential development, the table displays the number of persons per housing unit. For nonresidential development, the table displays the number of average weekday vehicle trips per thousand square feet of floor area.

**Figure F2: Ratio of Service Unit to Development Unit**

Residential Development	
Development Type	Persons per Housing Unit <sup>1</sup>
Single-Family	2.58
Multi-Family	1.58
Mobile Home	1.09

Nonresidential Development			
Development Type	AWVTE per 1,000 Sq Ft <sup>1</sup>	Trip Rate Adjustment	AWVT per 1,000 Sq Ft <sup>1</sup>
Industrial	3.37	50%	1.69
Warehouse	1.71	50%	0.86
Retail/Commercial	37.01	28%	10.18
Office	10.84	45%	4.88
Public/Institutional	6.75	50%	3.38

1. See Land Use Assumptions

## ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES

ARS § 9-463.05(E)(1) requires:

*“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.”*

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.”*



**Fire Stations – Plan-Based**

Surprise currently provides 109,621 square feet of fire stations to existing development, and Surprise plans to construct additional fire stations to serve future development.

**Figure F3: Existing Fire Stations**

Description	Square Feet
Fire Station 301	15,531
Fire Station 302	7,000
Fire Station 303	13,632
Fire Station 304	20,824
Fire Station 305	16,472
Fire Station 306	10,145
Fire Station 307	10,145
Fire Station 308	15,872
<b>Total</b>	<b>109,621</b>

Source: Surprise Fire Department

Surprise plans to use future development fee revenue to repay the outstanding obligation related to Fire Station 303. The total obligation for Fire Station 303 is \$94,005, and the outstanding obligation is \$3,788. Based on a cost of approximately \$7 per square foot (\$94,005 total obligation / 13,632 total square feet), the proportionate share of Fire Station 303 related to the outstanding obligation is 549 square feet (\$3,788 outstanding obligation / \$7 per square foot).

**Figure F4: Fire Station 303 Obligation**

Fire Station 303	Square Feet	Obligation <sup>1</sup>	Cost per Sq Ft
Outstanding Obligation	549	\$3,788	\$7
Retired Obligation	13,083	\$90,217	\$7
<b>Total</b>	<b>13,632</b>	<b>\$94,005</b>	<b>\$7</b>

Source: Surprise Fire Department

1. Surprise Finance Department

As shown below in Figure F5, Surprise plans to repay outstanding obligations related to Fire Station 303 and to construct 54,000 square feet of fire stations during the next 10 years. The total cost is \$70,503,788, and the associated floor area is 54,549 square feet. Based on these projects, the analysis uses a cost of \$1,292 per square foot for fire stations (\$70,503,788 total cost / 54,549 total square feet).

**Figure F5: Fire Station Cost Factors**

Description	Square Feet	Cost	Cost per Sq Ft
Fire Station 303	549	\$3,788	\$7
Future Fire Station	16,000	\$18,000,000	\$1,125
Future Fire Station	16,000	\$21,000,000	\$1,313
Future Fire Station	22,000	\$31,500,000	\$1,432
<b>Total</b>	<b>54,549</b>	<b>\$70,503,788</b>	<b>\$1,292</b>

Source: Surprise Fire Department

Surprise plans to provide 163,621 square feet of fire stations to all development in 2033. To allocate the proportionate share of demand for fire stations to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure F1. The planned level of service for residential development is 0.4796 square feet per person (163,621 total square feet X 75 percent residential share / 256,522 persons). The planned nonresidential level of service is 0.2539 square feet per vehicle trip (163,621 total square feet X 25 percent nonresidential share / 159,926 vehicle trips).

Based on the outstanding obligations for Fire Station 303 and the construction cost estimates for future fire stations shown in Figure F5, the analysis uses a cost of \$1,292 per square foot (\$70,503,788 total cost / 54,549 total square feet). For fire stations, the cost is \$619.85 per person (0.4796 square feet per person X \$1,292 per square foot) and \$328.15 per vehicle trip (0.2539 square feet per vehicle trip X \$1,292 per square foot).

**Figure F6: Planned Level of Service**

Cost Factors	
Cost per Square Foot	\$1,292

Level-of-Service (LOS) Standards	
Existing Square Feet <sup>1</sup>	109,072
Cost Recovery Square Feet <sup>2</sup>	549
Planned Square Feet	54,000
Total Square Feet	163,621
Residential	
Residential Share	75%
2033 Population	256,522
Square Feet per Person	0.4796
<b>Cost per Person</b>	<b>\$619.85</b>
Nonresidential	
Nonresidential Share	25%
2033 Vehicle Trips	159,906
Square Feet per Vehicle Trip	0.2539
<b>Cost per Vehicle Trip</b>	<b>\$328.15</b>

Source: Surprise Fire Department

1. Excludes share related to outstanding obligations
2. Fire Station 303 share of outstanding obligations

### Fire Facilities – Plan-Based

Surprise currently provides 25,000 square feet of fire facilities to existing development, and Surprise plans to construct additional fire facilities to serve future development.

**Figure F7: Existing Fire Facilities**

Description	Square Feet
Public Safety Building (share)	10,000
Evidence & Readiness Center	15,000
<b>Total</b>	<b>25,000</b>

Source: Surprise Fire Department

Surprise plans to use future development fee revenue to repay the outstanding obligation related to the Public Safety Building. The total obligation is \$1,563,515, and the outstanding obligation is \$63,023. Based on a cost of approximately \$156 per square foot ( $\$1,563,515$  total obligation / 10,000 total square feet), the proportionate share of the Public Safety Building related to the outstanding obligation is 403 square feet ( $\$63,023$  outstanding obligation / \$156 per square foot).

**Figure F8: Public Safety Building Obligation**

Public Safety Building	Square Feet	Obligation <sup>1</sup>	Cost per Sq Ft
Outstanding Obligation	403	\$63,023	\$156
Retired Obligation	9,597	\$1,500,492	\$156
<b>Total</b>	<b>10,000</b>	<b>\$1,563,515</b>	<b>\$156</b>

Source: Surprise Fire Department

1. Surprise Finance Department

As shown below in Figure F9, Surprise plans to repay outstanding obligations related to the Public Safety Building and to construct a Public Safety Administration and Operations facility during the next 10 years. The planned Public Safety Administration and Operations facility is 90,000 square feet, and it will replace the existing Public Safety Building for a net increase of 80,000 square feet (90,000 planned square feet – 10,000 existing square feet). The total cost of planned fire facilities is \$100,063,023, and the associated floor area is 90,403 square feet. Based on these projects, the analysis uses a cost of \$1,107 per square foot for fire facilities ( $\$100,063,023$  total cost / 90,403 total square feet). The planned Public Safety Administration and Operations facility will serve all development in Surprise through 2043.

**Figure F9: Fire Facilities Cost Factors**

Description	Square Feet	Cost	Cost per Sq Ft
Public Safety Building	403	\$63,023	\$156
Public Safety Admin & Ops	90,000	\$100,000,000	\$1,111
<b>Total</b>	<b>90,403</b>	<b>\$100,063,023</b>	<b>\$1,107</b>

Source: Surprise Fire Department

Surprise plans to provide 105,000 square feet of fire facilities to serve all development in 2043. To allocate the proportionate share of demand for fire facilities to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure F1. The planned level of service for residential development is 0.2499 square feet per person (105,000 total square feet X 75 percent residential share / 315,975 persons). The planned nonresidential level of service is 0.1278 square feet per vehicle trip (105,000 total square feet X 25 percent nonresidential share / 203,844 vehicle trips).

Based on the outstanding obligations for the Public Safety Building and the construction cost estimate for the future Public Safety Administration and Operations facility shown in Figure F9, the analysis uses a cost of \$1,107 per square foot (\$100,063,023 total cost / 90,403 total square feet). For fire facilities, the cost is \$276.55 per person (0.2499 square feet per person X \$1,107 per square foot) and \$141.47 per vehicle trip (0.1278 square feet per vehicle trip X \$1,107 per square foot).

**Figure F10: Planned Level of Service**

Cost Factors	
Cost per Square Foot	\$1,107

Level-of-Service (LOS) Standards	
Existing Square Feet <sup>1</sup>	24,597
Cost Recovery Square Feet <sup>2</sup>	403
Planned Square Feet	90,000
Replacement Square Feet <sup>3</sup>	(10,000)
Total Square Feet	105,000
Residential	
Residential Share	75%
2043 Population	315,975
Square Feet per Person	0.2499
<b>Cost per Person</b>	<b>\$276.55</b>
Nonresidential	
Nonresidential Share	25%
2043 Vehicle Trips	203,844
Square Feet per Vehicle Trip	0.1278
<b>Cost per Vehicle Trip</b>	<b>\$141.47</b>

Source: Surprise Fire Department

1. Excludes share related to outstanding obligations
2. Public Safety Building share of outstanding obligations
3. The Public Safety Administration and Operations facility will replace the existing Public Safety Building

**Primary Apparatus – Incremental Expansion**

Surprise currently serves existing development with 12 primary apparatus, and Surprise plans to acquire additional primary apparatus to serve future development. To allocate the proportionate share of demand for primary apparatus to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure F1. The existing level of service for residential development is 0.00005 units per person (12 units X 75 percent residential share / 172,866 persons). The nonresidential level of service is 0.00002 units per vehicle trip (12 units X 25 percent nonresidential share / 124,008 vehicle trips).

Based on the replacement cost of the existing primary apparatus fleet, the analysis uses \$1,408,333 per unit (\$16,900,000 total cost / 12 units) as a proxy for future primary apparatus costs. For primary apparatus, the cost is \$73.51 per person (0.00005 units per person X \$1,408,333 per unit) and \$33.82 per vehicle trip (0.00002 units per vehicle trip X \$1,408,333 per unit).

**Figure F11: Existing Level of Service**

Description	Units	Unit Cost	Total Cost
Engine	11	\$1,300,000	\$14,300,000
Ladder Truck	1	\$2,600,000	\$2,600,000
<b>Total</b>	<b>12</b>	<b>\$1,408,333</b>	<b>\$16,900,000</b>

Cost Factors	
Weighted Average per Unit	\$1,408,333

Level-of-Service (LOS) Standards	
Existing Units	12
Residential	
Residential Share	75%
2023 Population	172,866
Units per Person	0.00005
<b>Cost per Person</b>	<b>\$73.51</b>
Nonresidential	
Nonresidential Share	25%
2023 Vehicle Trips	124,008
Units per Vehicle Trip	0.00002
<b>Cost per Vehicle Trip</b>	<b>\$33.82</b>

Source: Surprise Fire Department

**Support Apparatus – Incremental Expansion**

Surprise currently serves existing development with 10 support apparatus, and Surprise plans to acquire additional support apparatus to serve future development. To allocate the proportionate share of demand for support apparatus to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure F1. The existing level of service for residential development is 0.00004 units per person (10 units X 75 percent residential share / 172,866 persons). The nonresidential level of service is 0.00002 units per vehicle trip (10 units X 25 percent nonresidential share / 124,008 vehicle trips).

Based on the replacement cost of the existing support apparatus fleet, the analysis uses \$419,000,394,000 per unit (\$4,190,000,394,000 total cost / 10 units) as a proxy for future support apparatus costs. For support apparatus, the cost is \$18,2217.14 per person (0.00004 units per person X \$419,000,394,000 per unit) and \$8,387.88 per vehicle trip (0.00002 units per vehicle trip X \$419,000,394,000 per unit).

**Figure F12: Existing Level of Service**

Description	Units	Unit Cost	Total Cost
Brush Truck	2	\$450,000	\$900,000
Tanker	1	\$350,000	\$350,000
Ambulance	5	\$500,000	\$2,500,000
BC Response Vehicle	2	\$95,000	\$190,000
<b>Total</b>	<b>10</b>	<b>\$394,000</b>	<b>\$3,940,000</b>

Cost Factors	
Weighted Average per Unit	\$394,000

Level-of-Service (LOS) Standards	
Existing Units	10
Residential	
Residential Share	75%
2023 Population	172,866
Units per Person	0.00004
<b>Cost per Person</b>	<b>\$17.14</b>
Nonresidential	
Nonresidential Share	25%
2023 Vehicle Trips	124,008
Units per Vehicle Trip	0.00002
<b>Cost per Vehicle Trip</b>	<b>\$7.88</b>

Source: Surprise Fire Department



**Development Fee Report – Plan-Based**

The cost to prepare the Fire Facilities IIP and related development fee report totals \$16,230. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of future development from the *Land Use Assumptions* document, the cost is \$0.27 per person and \$0.25 per vehicle trip.

**Figure F13: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Fire	\$16,230	Residential	75%	Population	44,514	\$0.27
		Nonresidential	25%	Vehicle Trips	16,226	\$0.25

**Bond Credit**

Shown below, Surprise will issue \$100.0 million in G.O. bonds to construct transportation and public safety projects, and public safety projects will account for \$34.0 million of bond funding. To prevent future development from paying for future improvements through development fees and through future bond payments, the development fee study includes a credit for future bond payments. As shown in Figure F14, the analysis allocates public safety costs 50.2 percent to fire and 49.8 percent to police.

**Figure F14: Bond Allocation**

Series 2024 / 2027 Bond Use	Cost	Share
Transportation	\$66,000,000	66%
Public Safety	\$34,000,000	34%
Total	\$100,000,000	100%

Public Safety Use	Cost	Fire Share	Police Share
Fire Station	\$15,300,000	\$15,300,000	\$0
Police Substation	\$15,200,000	\$0	\$15,200,000
Land for Public Safety Facilities	\$3,500,000	\$1,755,738	\$1,744,262
Total	\$34,000,000	\$17,055,738	\$16,944,262
Share	100.0%	50.2%	49.8%

Source: Surprise Finance Department

To allocate the proportionate share of bond costs to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure F1. The analysis divides annual principal payments by population for residential development and by vehicle trips for nonresidential development. To calculate the bond credit, the analysis calculates the net present value of future principal payments. The proposed fire development fees include a credit of \$17.39 per person and \$8.95 per vehicle trip.

**Figure F15: Fire Bond Credit**

Fire Share of Series 2024 and Series 2027 Bonds							
Fiscal Year	Annual Principal Payment	Residential Share	Population	Principal per Person	Nonresidential Share	Vehicle Trips	Principal per Veh Trip
2024	\$0	\$0	181,769	\$0.00	\$0	127,254	\$0.00
2025	\$0	\$0	190,671	\$0.00	\$0	130,499	\$0.00
2026	\$5,117	\$3,847	199,574	\$0.02	\$1,270	133,744	\$0.01
2027	\$63,106	\$47,448	208,477	\$0.23	\$15,658	136,989	\$0.11
2028	\$53,726	\$40,395	217,380	\$0.19	\$13,331	140,235	\$0.10
2029	\$186,760	\$140,420	226,282	\$0.62	\$46,340	143,480	\$0.32
2030	\$214,902	\$161,579	235,185	\$0.69	\$53,323	146,725	\$0.36
2031	\$243,897	\$183,379	242,297	\$0.76	\$60,518	151,119	\$0.40
2032	\$274,597	\$206,462	249,410	\$0.83	\$68,135	155,513	\$0.44
2033	\$305,298	\$229,545	256,522	\$0.89	\$75,753	159,906	\$0.47
2034	\$338,556	\$254,551	262,467	\$0.97	\$84,005	164,300	\$0.51
2035	\$375,226	\$282,122	268,413	\$1.05	\$93,104	168,694	\$0.55
2036	\$412,749	\$310,334	274,358	\$1.13	\$102,414	173,088	\$0.59
2037	\$451,977	\$339,829	280,303	\$1.21	\$112,148	177,482	\$0.63
2038	\$493,764	\$371,247	286,249	\$1.30	\$122,516	181,875	\$0.67
2039	\$772,625	\$580,915	292,194	\$1.99	\$191,710	186,269	\$1.03
2040	\$809,295	\$608,486	298,139	\$2.04	\$200,808	190,663	\$1.05
2041	\$846,817	\$636,699	304,085	\$2.09	\$210,119	195,057	\$1.08
2042	\$886,898	\$666,834	310,030	\$2.15	\$220,064	199,450	\$1.10
2043	\$927,832	\$697,611	315,975	\$2.21	\$230,221	203,844	\$1.13
2044	\$971,324	\$730,312	321,921	\$2.27	\$241,012	208,238	\$1.16
2045	\$897,985	\$675,170	327,866	\$2.06	\$222,815	212,632	\$1.05
2046	\$938,066	\$705,305	333,811	\$2.11	\$232,760	217,025	\$1.07
2047	\$980,705	\$737,365	339,757	\$2.17	\$243,340	221,419	\$1.10
2048	\$1,024,197	\$770,065	345,702	\$2.23	\$254,132	225,813	\$1.13
2049	\$1,070,248	\$804,689	351,647	\$2.29	\$265,558	230,207	\$1.15
2050	\$1,118,856	\$841,237	357,593	\$2.35	\$277,619	234,601	\$1.18
2051	\$1,169,171	\$879,067	363,538	\$2.42	\$290,104	238,994	\$1.21
2052	\$1,222,044	\$918,821	369,483	\$2.49	\$303,223	243,388	\$1.25
<b>Total</b>	<b>\$17,055,738</b>	<b>\$12,823,736</b>		<b>\$17.39</b>	<b>\$4,232,002</b>		<b>\$8.95</b>

## PROJECTED DEMAND FOR SERVICES AND COSTS

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ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

As shown in the *Land Use Assumptions* document, Surprise’s population is expected to increase by 83,656 persons and nonresidential vehicle trips are expected to increase by 35,898 trips over the next 10 years. To reach the planned level of service, Surprise will need to construct 54,000 square feet of fire stations and 90,000 square feet of fire facilities over the next 10 years. To maintain the existing level of service, Surprise will need to expand the apparatus fleet by approximately five primary units and approximately four support units over the next 10 years. The following pages include a more detailed projection of demand for services and costs for the Fire Facilities IIP.

**Fire Stations – Plan-Based**

Surprise will use development fees to repay obligations associated with Fire Station 303 and to construct additional fire stations over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 40,120 square feet of planned fire facilities (83,656 additional persons X 0.4796 square feet per person). With projected nonresidential growth of 35,898 vehicle trips, future nonresidential development demands approximately 9,114 square feet of planned fire facilities (35,898 additional vehicle trips X 0.2539 square feet per vehicle trip). Future development demands 49,234 square feet of fire facilities at a cost of \$63,633,980 (49,233.8 square feet X \$1,292 per square foot). The remaining cost of \$6,869,808 represents existing development’s share of planned fire stations (\$70,503,788 total fire stations cost - \$63,633,980 growth cost).

**Figure F16: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Fire Stations	0.4796 Square Feet	per Person	\$1,292
	0.2539 Square Feet	per Vehicle Trip	

Demand for Fire Stations					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2023	172,866	124,008	82,902.5	31,484.7	114,387.2
2024	181,769	127,254	87,172.1	32,308.6	119,480.7
2025	190,671	130,499	91,441.6	33,132.6	124,574.2
2026	199,574	133,744	95,711.1	33,956.5	129,667.7
2027	208,477	136,989	99,980.7	34,780.5	134,761.1
2028	217,380	140,235	104,250.2	35,604.4	139,854.6
2029	226,282	143,480	108,519.8	36,428.3	144,948.1
2030	235,185	146,725	112,789.3	37,252.3	150,041.6
2031	242,297	151,119	116,200.2	38,367.8	154,568.1
2032	249,410	155,513	119,611.2	39,483.4	159,094.5
2033	256,522	159,906	123,022.1	40,598.9	163,621.0
10-Yr Increase	83,656	35,898	40,119.6	9,114.2	49,233.8

Growth-Related Expenditures	\$51,853,982	\$11,779,998	\$63,633,980
Non-Growth Expenditures	\$1,155,861	\$5,713,947	\$6,869,808
Total Expenditures	\$53,009,843	\$17,493,945	\$70,503,788

**Fire Facilities – Plan-Based**

Surprise will use development fees to repay obligations associated with the Public Safety Building and to construct the Public Safety Administration and Operations facility within the next 10 years. Based on a 20-year projected population increase of 143,109 persons, future residential development demands approximately 35,756 square feet of planned fire facilities (143,109 additional persons X 0.2499 square feet per person). With a 20-year projected increase of 79,836 vehicle trips, future nonresidential development demands approximately 10,204 square feet of planned fire facilities (79,836 additional vehicle trips X 0.1278 square feet per vehicle trip). Future development demands approximately 45,960 square feet of fire facilities at a cost of \$50,870,851 (45,959.8 square feet X \$1,107 per square foot). The remaining cost of \$49,192,172 represents existing development’s share of planned fire facilities (\$100,063,023 total fire facilities cost - \$50,870,851 growth cost).

**Figure F17: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Fire Facilities	0.2499 Square Feet	per Person	\$1,107
	0.1278 Square Feet	per Vehicle Trip	

Demand for Fire Facilities					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2023	172,866	124,008	43,190.6	15,849.6	59,040.2
2024	181,769	127,254	45,415.0	16,264.3	61,679.3
2025	190,671	130,499	47,639.3	16,679.1	64,318.4
2026	199,574	133,744	49,863.7	17,093.9	66,957.6
2027	208,477	136,989	52,088.0	17,508.7	69,596.7
2028	217,380	140,235	54,312.4	17,923.4	72,235.8
2029	226,282	143,480	56,536.7	18,338.2	74,875.0
2030	235,185	146,725	58,761.1	18,753.0	77,514.1
2031	242,297	151,119	60,538.1	19,314.6	79,852.7
2032	249,410	155,513	62,315.1	19,876.1	82,191.3
2033	256,522	159,906	64,092.2	20,437.7	84,529.9
2038	286,249	181,875	71,519.4	23,245.6	94,764.9
2043	315,975	203,844	78,946.6	26,053.4	105,000.0
20-Yr Increase	143,109	79,836	35,756.0	10,203.8	45,959.8

Growth-Related Expenditures	\$39,576,667	\$11,294,183	\$50,870,851
Non-Growth Expenditures	\$35,657,945	\$13,534,228	\$49,192,172
Total Expenditures	\$75,234,612	\$24,828,411	\$100,063,023

**Primary Apparatus – Incremental Expansion**

Surprise plans to maintain its level of service for primary apparatus over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately four primary apparatus (83,656 additional persons X 0.00005 units per person). With projected nonresidential growth of 35,898 vehicle trips, future nonresidential development demands approximately one primary apparatus (35,898 additional vehicle trips X 0.00002 units per vehicle trip). Future development demands approximately five primary apparatus at a cost of \$7,363,111 (5.2 units X \$1,408,333 per unit). Surprise may use development fees to expand its primary apparatus fleet.

**Figure F18: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Primary Apparatus	0.00005 Units	per Person	\$1,408,333
	0.00002 Units	per Vehicle Trip	

Demand for Primary Apparatus					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2023	172,866	124,008	9.0	3.0	12.0
2024	181,769	127,254	9.5	3.1	12.5
2025	190,671	130,499	10.0	3.1	13.1
2026	199,574	133,744	10.4	3.2	13.6
2027	208,477	136,989	10.9	3.3	14.2
2028	217,380	140,235	11.3	3.4	14.7
2029	226,282	143,480	11.8	3.4	15.3
2030	235,185	146,725	12.3	3.5	15.8
2031	242,297	151,119	12.6	3.6	16.3
2032	249,410	155,513	13.0	3.7	16.8
2033	256,522	159,906	13.4	3.8	17.2
10-Yr Increase	83,656	35,898	4.4	0.9	5.2

Growth-Related Expenditures	\$6,149,213	\$1,213,898	\$7,363,111
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### Support Apparatus – Incremental Expansion

Surprise plans to maintain its level of service for support apparatus over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately four support apparatus (83,656 additional persons X 0.00004 units per person). With projected nonresidential growth of 35,898 vehicle trips, future nonresidential development demands approximately one support apparatus (35,898 additional vehicle trips X 0.00002 units per vehicle trip). Future development demands approximately four support apparatus at a cost of \$1,825,529,716,607 (4.4 units X \$419,000,394,000 per unit). Surprise may use development fees to expand its support apparatus fleet.

**Figure F19: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Support Apparatus	0.00004 Units	per Person	\$394,000
	0.00002 Units	per Vehicle Trip	

Demand for Support Apparatus					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2023	172,866	124,008	7.5	2.5	10.0
2024	181,769	127,254	7.9	2.5	10.5
2025	190,671	130,499	8.3	2.6	10.9
2026	199,574	133,744	8.7	2.7	11.4
2027	208,477	136,989	9.1	2.7	11.8
2028	217,380	140,235	9.5	2.8	12.3
2029	226,282	143,480	9.8	2.9	12.7
2030	235,185	146,725	10.2	2.9	13.2
2031	242,297	151,119	10.5	3.0	13.6
2032	249,410	155,513	10.8	3.1	14.0
2033	256,522	159,906	11.2	3.2	14.4
10-Yr Increase	83,656	35,898	3.6	0.7	4.4

Growth-Related Expenditures	\$1,433,604	\$283,003	\$1,716,607
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### FIRE FACILITIES DEVELOPMENT FEES

#### Revenue Credit/Offset

A revenue credit/offset is necessary for development fees, because Surprise’s construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).

## Fire Facilities Development Fees

Infrastructure components and cost factors for fire facilities are summarized in the upper portion of Figure F20. The cost per service unit for fire facilities is ~~\$870.85~~673.15 per person and ~~\$405.65~~233.93 per vehicle trip.

Fire facilities development fees for residential development are assessed according to the number of persons per housing unit. The fee of ~~\$2,247,173~~ for a single-family unit is calculated using a cost per service unit of ~~\$870.85~~673.15 per person multiplied by a demand unit of 2.58 persons per housing unit.

Nonresidential development fees are calculated using vehicle trips as the service unit. The fee of ~~\$684,394~~ per 1,000 square feet of industrial development is derived from a cost per service unit of ~~\$405.65~~233.93 per vehicle trip multiplied by a demand unit of 1.69 vehicle trips per 1,000 square feet.

**Figure F20: Fire Facilities Development Fees**

Fee Component	Cost per Person	Cost per Trip
Fire Stations	\$619.85	\$328.15
Fire Facilities	\$276.55	\$141.47
Primary Apparatus	\$73.51	\$33.82
Support Apparatus	\$17.14	\$7.88
Development Fee Report	\$0.27	\$0.25
Bond Credit	(\$17.39)	(\$8.95)
Subtotal	\$969.93	\$502.62
Excess Construction Sales Tax	(\$296.78)	(\$268.69)
Total	\$673.15	\$233.93

Residential Fees per Unit				
Development Type	Persons per Housing Unit <sup>1</sup>	Proposed Fees	Current Fees	Difference
Single-Family	2.58	\$1,737	\$789	\$948
Multi-Family	1.58	\$1,064	\$481	\$583
Mobile Home	1.09	\$734	\$442	\$292

Nonresidential Fees per 1,000 Square Feet				
Development Type	AWVT per 1,000 Sq Ft <sup>1</sup>	Proposed Fees	Current Fees	Difference
Industrial	1.69	\$394	\$166	\$228
Warehouse	0.86	\$200	\$95	\$105
Retail/Commercial	10.18	\$2,381	\$876	\$1,505
Office	4.88	\$1,141	\$497	\$644
Public/Institutional	3.38	\$790	\$308	\$482

1. See Land Use Assumptions

**FIRE FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains the forecast of revenues required by Arizona’s enabling legislation (ARS § 9-463.05(E)(7)). In accordance with state law, this report includes an IIP for fire facilities needed to accommodate future development. Projected fee revenue shown in Figure F21 is based on the development projections in the *Land Use Assumptions* document and the updated fire facilities development fees. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue over the next 20 years equals \$116,746,533 and total projected expenditures equal \$172,812,463. The remaining balance represents existing development’s share of planned costs for fire stations and fire facilities.

**Figure F21: Fire Facilities Development Fee Revenue**

Fee Component	Growth Share		Existing Share	Total
	Years 1-10	Years 11-20		
Fire Stations	\$63,633,980	\$0	\$6,869,808	\$70,503,788
Fire Facilities	\$28,213,394	\$22,657,457	\$49,192,172	\$100,063,023
Primary Apparatus	\$7,363,111	\$0	\$0	\$7,363,111
Support Apparatus	\$1,716,607	\$0	\$0	\$1,716,607
Development Fee Report	\$16,230	\$0	\$0	\$16,230
Bond Credit	(\$1,776,069)	\$0	\$0	(\$1,776,069)
Excess Constr. Sales Tax	(\$17,570,649)	\$0	\$0	(\$17,570,649)
<b>Total</b>	<b>\$81,596,604</b>	<b>\$22,657,457</b>	<b>\$56,061,981</b>	<b>\$160,316,042</b>

Year	Single Family	Multi-Family	Mobile Home	Industrial	Warehouse	Ret/Comm	Office	Public/Inst
	\$1,737 per unit	\$1,064 per unit	\$734 per unit	\$394 per 1,000 sq ft	\$200 per 1,000 sq ft	\$2,381 per 1,000 sq ft	\$1,141 per 1,000 sq ft	\$790 per 1,000 sq ft
Year	Hsg Unit	Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF	KSF
Base 2023	59,934	9,973	3,106	2,098	5,332	7,380	3,397	7,179
Year 1 2024	62,847	10,833	3,133	2,310	5,484	7,499	3,620	7,317
Year 2 2025	65,760	11,692	3,159	2,523	5,635	7,617	3,843	7,454
Year 3 2026	68,673	12,552	3,186	2,736	5,787	7,735	4,067	7,592
Year 4 2027	71,586	13,411	3,213	2,948	5,938	7,854	4,290	7,729
Year 5 2028	74,499	14,271	3,239	3,161	6,089	7,972	4,513	7,867
Year 6 2029	77,412	15,130	3,266	3,373	6,241	8,090	4,737	8,005
Year 7 2030	80,325	15,990	3,293	3,586	6,392	8,208	4,960	8,142
Year 8 2031	82,536	16,868	3,313	3,736	6,499	8,431	5,249	8,253
Year 9 2032	84,746	17,746	3,333	3,886	6,606	8,653	5,538	8,364
Year 10 2033	86,957	18,624	3,354	4,036	6,714	8,876	5,827	8,475
10-Year Increase	27,023	8,650	248	1,938	1,381	1,496	2,430	1,296
Projected Revenue	\$56,461,798	\$11,239,514	\$214,302	\$1,159,872	\$419,535	\$6,031,172	\$4,492,657	\$1,574,723

Projected Fee Revenue (Years 1-10)	\$81,593,573
Projected Fee Revenue (Years 11-20)	\$22,657,659
<b>Total Expenditures</b>	<b>\$160,316,042</b>

**10-YEAR CAPITAL PLAN**

The figure shown below includes potential fire capital expenditures during the next 10 years. The list of potential capital expenditures is representational of future growth-related fire capital expenditures.

**Figure F22: Fire Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	Ambulance (x2)	2024	\$1,100,000
CIP	Fire Station	2024	\$18,000,000
CIP	Fire Station	2026-2028	\$21,000,000
CIP	Fire Station	2030+	\$31,500,000
CIP	Ladder Truck	2028	\$2,508,000
CIP	Public Safety Admin & Ops	2030+	\$100,000,000
Debt Service	Fire Station 303	2024	\$3,788
Debt Service	Public Safety Building (share)	2024	\$63,023
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$16,230
<b>Total</b>			<b>\$174,191,041</b>

## PARKS AND RECREATIONAL FACILITIES IIP

ARS § 9-463.05 (T)(7)(g) defines the facilities and assets that can be included in the Parks and Recreational Facilities IIP:

*“Neighborhood parks and recreational facilities on real property up to thirty acres in area, or parks and recreational facilities larger than thirty acres if the facilities provide a direct benefit to the development. Park and recreational facilities do not include 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.”*

The Parks and Recreational Facilities IIP includes components for park land, park amenities, recreation facilities, ~~pools,~~ and the cost of preparing the Parks and Recreational Facilities IIP and related Development Fee Report. The incremental expansion methodology is used for park land, park amenities, ~~and~~ recreation facilities, ~~and pools.~~ The plan-based methodology is used for the Development Fee Report.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Parks and Recreational Facilities IIP and development fees allocate the cost of necessary public services between residential and nonresidential based on functional population. The Arizona Office of Economic Opportunity estimates Surprise’s 2019 population equal to 136,194 persons. Based on 2019 estimates from the U.S. Census Bureau’s OnTheMap web application, 16,952 inflow commuters traveled to Surprise for work in 2019. The proportionate share is based on cumulative impact hours per year with a resident potentially impacting parks and recreational facilities 8,760 hours per year and an inflow commuter potentially impacting parks and recreational facilities 1,600 hours per year. For parks and recreational facilities, residential development generates 98 percent of demand and nonresidential development generates the remaining two percent of demand.

**Figure PR1: Proportionate Share**

Development Type	Service Unit	Impact Days per Year	Total Impact Hours per Year	Proportionate Share
Residential	136,194 residents	8,760 hours	1,193,059,440	98%
Nonresidential	16,952 inflow commuters	1,600 hours	27,123,200	2%
Total			1,220,182,640	100%

Residential Impact: 8,760 hours per year (24 hours per day X 365 days per year)

Nonresidential Impact: 1,600 hours per year (8 hours per day X 4 days per week X 50 weeks per year)

### SERVICE AREA

Surprise provides access to parks and recreational facilities throughout the city; therefore, there is a single service area for the Parks and Recreational Facilities IIP.

## RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

ARS § 9-463.05(E)(4) 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 PR2 displays the demand indicators for residential and nonresidential land uses. For residential development, the table displays the number of persons per housing unit. For nonresidential development, the table displays the number of jobs per thousand square feet of floor area.

**Figure PR2: Ratio of Service Unit to Development Unit**

Residential Development	
Development Type	Persons per Housing Unit <sup>1</sup>
Single-Family	2.58
Multi-Family	1.58
Mobile Home	1.09

Nonresidential Development	
Development Type	Jobs per 1,000 Sq Ft <sup>1</sup>
Industrial	1.16
Warehouse	0.34
Retail/Commercial	2.12
Office	3.26
Public/Institutional	2.04

1. See Land Use Assumptions

## ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES

ARS § 9-463.05(E)(1) requires:

*“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.”*

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.”*



### Park Land – Incremental Expansion

Surprise currently provides ~~386.15~~357.30 acres of park land and plans to acquire and develop additional park land to serve future development. Surprise Recreation Campus includes the Spring Training Campus, and this analysis excludes the portion of the park that includes the Spring Training Campus. The analysis includes 306.55 acres of eligible park land.

**Figure PR3: Existing Park Land**

Description	Total Acres	Eligible Acres
Bicentennial Park / Lizard Run	17.94	17.94
DreamCatcher Park	4.14	4.14
Gaines Park (North and South)	4.20	4.20
Heritage (Marley) Park North	12.01	12.01
Heritage (Marley) Park South	15.61	15.61
Section 10 / Pocket Park	1.02	1.02
Mark Coronado Park	7.55	7.55
Sierra Montana Park	9.42	9.42
Surprise Community Park <sup>1</sup>	30.80	30.80
Dick McComb Park East	21.94	21.94
Dick McComb Park West	30.00	30.00
Johnson Townhome Park	0.60	0.60
Surprise Tennis / Racquet Complex	22.76	22.76
Veramonte Park	8.58	8.58
Youth Baseball Complex	4.60	4.60
Asante Community Park	53.80	53.80
Stonebrook Park	3.19	3.19
3 Star Park	0.94	0.94
The Fields at Countryside	12.20	12.20
Surprise Recreation Campus <sup>2</sup>	96.00	45.25
<b>Total</b>	<b>357.30</b>	<b>306.55</b>

1. Excludes library and aquatics center
2. Eligible Acres: Excludes Spring Training Campus

To allocate the proportionate share of demand for park land to residential and nonresidential development, this analysis uses the proportionate share shown in Figure PR1. The existing level of service for residential development is 0.00174 acres per person (306.55 eligible acres X 98 percent residential share / 172,866 persons). For nonresidential development, the existing level of service is 0.00023 acres per job (306.55 eligible acres X two percent nonresidential share / 27,035 jobs).

Based on estimates provided by the Surprise Finance-Parks and Recreation Department, the cost to acquire park land is \$180,000 per acre and the cost of site development is \$459,000 per acre. The analysis uses a total cost of \$639,000 per acre. For park land, the cost is ~~\$312.821,110.50~~ per person (0.00174 acres per person X ~~\$180,000~~\$639,000 per acre) and ~~\$40.82144.91~~ per job (0.00023 acres per job X ~~\$180,000~~\$639,000 per acre).

**Figure PR4: Existing Level of Service**

Cost Factors	
Land Acquisition (per acre)	\$180,000
Site Development <sup>1</sup> (per acre)	\$459,000
Total (per acre)	\$639,000

Level-of-Service (LOS) Standards	
Eligible Acres	306.55
Residential	
Residential Share	98%
2023 Population	172,866
Eligible Acres per Person	0.00174
<b>Cost per Person</b>	<b>\$1,110.50</b>
Nonresidential	
Nonresidential Share	2%
2023 Jobs	27,035
Eligible Acres per Job	0.00023
<b>Cost per Job</b>	<b>\$144.91</b>

Source: Surprise Parks and Recreation Department

1. Includes drainage, earthwork, landscaping, water, sewer, electricity, paving, signage, etc.

**Park Amenities – Incremental Expansion**

Surprise currently provides 179.5 park amenities in its existing parks and plans to construct additional park amenities to serve future development. Based on costs provided by Surprise’s Parks and Recreation Department to construct recent park amenities, the total cost of existing park amenities is \$65,563,295.

**Figure PR5: Existing Park Amenities**

Description	Units	Unit Cost	Total Cost
Baseball Field, Lighted	4.0	\$777,793	\$3,111,171
Baseball/Softball Field, Not Lighted	2.0	\$340,613	\$681,226
Softball Field, Adult, Lighted	10.0	\$775,057	\$7,750,570
Multi-Purpose Field, Not Lighted	7.5	\$112,860	\$846,450
Multi-Purpose Field, Lighted	14.0	\$776,862	\$10,876,069
Soccer Field, Lighted	2.0	\$1,558,162	\$3,116,324
Basketball Court, Lighted	5.5	\$223,020	\$1,226,610
Basketball Court, Not Lighted	3.5	\$113,280	\$396,480
Tennis Court, Lighted	25.0	\$152,100	\$3,802,500
Pickleball Court	16.0	\$105,565	\$1,689,045
Sand Volleyball Court	7.0	\$83,333	\$583,333
Single Picnic Ramada (12' x 12')	22.0	\$56,250	\$1,237,500
Double Picnic Ramada (12' x 24')	11.0	\$93,750	\$1,031,250
Pavillion (24' x 24')	1.0	\$259,600	\$259,600
Playground, Small (40' x 50')	8.0	\$534,000	\$4,272,000
Playground, Large (80' x 100')	6.0	\$704,000	\$4,224,000
Dog Park	2.0	\$702,000	\$1,404,000
Restroom	12.0	\$534,404	\$6,412,852
Restroom / Concession Facilities	3.0	\$787,500	\$2,362,500
Splash Pad	3.0	\$800,000	\$2,400,000
Skate Park at Dick McComb Park	1.0	\$750,000	\$750,000
Paved Parking Lot	13.0	\$521,380	\$6,777,936
Lizard Run Pedestrian Bridge	1.0	\$351,878	\$351,878
<b>Total</b>	<b>179.5</b>	<b>\$365,255</b>	<b>\$65,563,295</b>

Source: Surprise Parks and Recreation Department

To allocate the proportionate share of demand for park amenities to residential and nonresidential development, this analysis uses the proportionate share shown in Figure PR1. The existing level of service for residential development is 0.00102 units per person (179.5 units X 98 percent residential share / 172,866 persons). For nonresidential development, the existing level of service is 0.00013 units per job (179.5 units X two percent nonresidential share / 27,035 jobs).

Based on the total cost of existing park amenities, the weighted average cost for existing park amenities is \$365,255 per unit (\$65,563,295 total cost / 179.5 units). For park amenities, the cost is \$371.69 per person (0.00102 units per person X \$365,255 per unit) and \$48.50 per job (0.00013 units per job X \$365,255 per unit).

**Figure PR6: Existing Level of Service**

Cost Factors	
Weighted Average per Unit	\$365,255

Level-of-Service (LOS) Standards	
Existing Units	179.5
Residential	
Residential Share	98%
2023 Population	172,866
Units per Person	0.00102
<b>Cost per Person</b>	<b>\$371.69</b>
Nonresidential	
Nonresidential Share	2%
2023 Jobs	27,035
Units per Job	0.00013
<b>Cost per Job</b>	<b>\$48.50</b>

Source: Surprise Parks and Recreation Department

**Recreation Facilities – Incremental Expansion**

Surprise currently provides 43,400 square feet of recreation facilities and plans to construct additional recreation facilities to serve future development. The Enabling Legislation limits recreation facilities to “three thousand square feet that provide a direct benefit to development.” To comply with the Enabling Legislation, Surprise will use 12,000 square feet in the level-of-service standards.

To allocate the proportionate share of demand for recreation facilities to residential and nonresidential development, this analysis uses proportionate share shown in Figure PR1. The level of service for residential development is 0.0680 eligible square feet per person (12,000 eligible square feet X 98 percent residential share / 172,866 persons). The nonresidential level of service is 0.0089 eligible square feet per job (12,000 eligible square feet X two percent nonresidential share / 27,035 jobs).

Surprise provided a construction cost of \$600 per square foot. For recreation facilities, the cost is \$40.82 per person (0.0680 eligible square feet per person X \$600 per square foot) and \$5.33 per job (0.0089 eligible square feet per job X \$600 per square foot).

**Figure PR7: Existing Level of Service**

Description	Total Square Feet	Eligible Square Feet
Villanueva Gym	10,100	3,000
Tennis and Racquet Complex	9,300	3,000
Countryside Recreation Center	14,000	3,000
Sierra Montana Recreation Center	10,000	3,000
<b>Total</b>	<b>43,400</b>	<b>12,000</b>

Cost Factors	
Cost per Square Foot	\$600

Level-of-Service (LOS) Standards	
Eligible Square Feet	12,000
Residential	
Residential Share	98%
2023 Population	172,866
Eligible Square Feet per Person	0.0680
<b>Cost per Person</b>	<b>\$40.82</b>
Nonresidential	
Nonresidential Share	2%
2023 Jobs	27,035
Eligible Square Feet per Job	0.0089
<b>Cost per Job</b>	<b>\$5.33</b>

Source: Surprise Parks and Recreation Department

### Pools – Incremental Expansion

Surprise currently provides existing development with two pools and plans to construct an additional pool to serve future development. The legislation for Senate Bill 1525 prohibits aquatic centers but allows swimming pools, however no definition is provided in the Enabling Legislation. The City of Chandler’s System Development Fee Update (2018) references the Arizona League of Cities and Towns proposed definition of an aquatic center to provide clarification:-

*“An aquatic center is a facility designed to host non-recreational competitive functions generally occurring within water; including, not limited to, water polo games, swimming meets, and diving events. Such facility may be indoors, outdoors, or any combination thereof, and includes all necessary supporting amenities, including but not limited to, locker rooms, offices, snack bars, bleacher seating, and shade structures.”*

The pool will be designed and built in alignment with the Arizona League of Cities and Towns language. As a necessary function of the pool, the construction of a new building could be needed that may include changing rooms, restrooms, storage for pool equipment and chemicals, concession area, parking, etc.

#### Figure PR8: Existing Pools

Description	Units
Hollyhock Pool	1
Surprise Aquatic Center	1
Total	2

Source: Surprise Parks and Recreation Department



To allocate the proportionate share of demand for pools to residential and nonresidential development, this analysis uses the proportionate share shown in Figure PR1. The existing level of service for residential development is 0.000011 units per person (two units X 98 percent residential share / 172,866 persons). For nonresidential development, the existing level of service is 0.000001 units per job (two units X two percent nonresidential share / 27,035 jobs).

Based on costs provided by Surprise’s Parks and Recreation Department, the cost to construct a pool is \$33,000,000. For pools, the cost is \$374.16 per person (0.000011 units per person X \$33,000,000 per unit) and \$48.83 per job (0.000001 units per job X \$33,000,000 per unit).

**Figure PR9: Existing Level of Service**

Cost Factors	
New Community Pool	\$33,000,000

Level-of-Service (LOS) Standards	
Existing Pools	2
Residential	
Residential Share	98%
2023 Population	172,866
Pools per Person	0.000011
<b>Cost per Person</b>	<b>\$374.16</b>
Nonresidential	
Nonresidential Share	2%
2023 Jobs	27,035
Pools per Job	0.000001
<b>Cost per Job</b>	<b>\$48.83</b>

Source: Surprise Parks and Recreation Department

**Development Fee Report – Plan-Based**

The cost to prepare the Parks and Recreational Facilities IIP and development fees totals \$15,000. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new development from the *Land Use Assumptions* document, the cost is \$0.33 per person and \$0.04 per job.

**Figure PR8: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Parks and Recreational	\$15,000	Residential	98%	Population	44,514	\$0.33
		Nonresidential	2%	Jobs	7,782	\$0.04

**PROJECTED DEMAND FOR SERVICES AND COSTS**

ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

As shown in the *Land Use Assumptions* document, Surprise’s population is projected to increase by 83,656 persons and employment is expected to increase by 16,444 jobs over the next 10 years. To maintain the existing levels of service, Surprise will need to acquire and develop approximately 149 acres of park land, construct approximately 87 park amenities, and construct approximately 5,800 square feet of recreation facilities, ~~and construct approximately one pool~~ over the next 10 years. The following pages include a more detailed projection of demand for services and costs for the Parks and Recreational Facilities IIP.

**Park Land – Incremental Expansion**

Surprise plans to maintain its existing level of service for park land over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 145.4 acres of park land (83,656 additional persons X 0.00174 eligible acres per person). With projected employment growth of 16,444 jobs, future nonresidential development demands approximately 3.7 acres of park land (16,444 additional jobs X 0.00023 eligible acres per job). Future development demands 149.11 additional acres of park land at a cost of ~~\$26,840,352~~**\$95,283,250** (149.11 acres X ~~\$180,000~~**\$639,000** per acre). Surprise may use development fees to acquire and develop additional park land.

**Figure PR9: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Acre
Park Land	0.00174 Eligible Acres	per Person	\$639,000
	0.00023 Eligible Acres	per Job	

Demand for Park Land					
Year	Population	Jobs	Eligible Acres		
			Residential	Nonresidential	Total
2023	172,866	27,035	300.42	6.13	306.55
2024	181,769	28,591	315.89	6.48	322.37
2025	190,671	30,148	331.36	6.84	338.20
2026	199,574	31,704	346.83	7.19	354.02
2027	208,477	33,260	362.31	7.54	369.85
2028	217,380	34,816	377.78	7.90	385.67
2029	226,282	36,373	393.25	8.25	401.50
2030	235,185	37,929	408.72	8.60	417.32
2031	242,297	39,779	421.08	9.02	430.10
2032	249,410	41,629	433.44	9.44	442.88
2033	256,522	43,479	445.80	9.86	455.66
10-Yr Increase	83,656	16,444	145.38	3.73	149.11

Growth-Related Expenditures	\$92,900,286	\$2,382,964	\$95,283,250
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**Park Amenities – Incremental Expansion**

Surprise plans to maintain its existing level of service for park amenities over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 85.1 park amenities (83,656 additional persons X 0.00102 amenities per person). With projected employment growth of 16,444 jobs, future nonresidential development demands approximately 2.2 park amenities (16,444 additional jobs X 0.00013 amenities per job). Future development demands 87.3 additional park amenities at a cost of \$31,891,515 (87.3 amenities X \$365,255 per amenity). Surprise may use development fees to construct additional park amenities.

**Figure PR10: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Park Amenities	0.00102 Units	per Person	\$365,255
	0.00013 Units	per Job	

Demand for Park Amenities					
Year	Population	Jobs	Units		
			Residential	Nonresidential	Total
2023	172,866	27,035	175.9	3.6	179.5
2024	181,769	28,591	185.0	3.8	188.8
2025	190,671	30,148	194.0	4.0	198.0
2026	199,574	31,704	203.1	4.2	207.3
2027	208,477	33,260	212.1	4.4	216.6
2028	217,380	34,816	221.2	4.6	225.8
2029	226,282	36,373	230.3	4.8	235.1
2030	235,185	37,929	239.3	5.0	244.4
2031	242,297	39,779	246.6	5.3	251.8
2032	249,410	41,629	253.8	5.5	259.3
2033	256,522	43,479	261.0	5.8	266.8
10-Yr Increase	83,656	16,444	85.1	2.2	87.3

Growth-Related Expenditures	\$31,093,932	\$797,583	\$31,891,515
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**Recreation Facilities – Incremental Expansion**

Surprise plans to maintain its eligible level of service for recreation over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 5,691 square feet of recreation facilities (83,656 additional persons X 0.0680 eligible square feet per person). With projected employment growth of 16,444 jobs, future nonresidential development demands approximately 146 square feet of recreation facilities (16,444 additional jobs X 0.0089 eligible square feet per job). Future development demands approximately 5,837.1 square feet of recreation facilities at a cost of \$3,502,248 (5,837.1 square feet X \$600 per square foot). Surprise may use development fees to construct additional recreation facilities.

**Figure PR11: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Recreation Facilities	0.0680 Eligible Sq Ft	per Person	\$600
	0.0089 Eligible Sq Ft	per Job	

Demand for Recreation Facilities					
Year	Population	Jobs	Eligible Square Feet		
			Residential	Nonresidential	Total
2023	172,866	27,035	11,760.0	240.0	12,000.0
2024	181,769	28,591	12,365.6	253.8	12,619.5
2025	190,671	30,148	12,971.3	267.6	13,238.9
2026	199,574	31,704	13,576.9	281.4	13,858.4
2027	208,477	33,260	14,182.6	295.3	14,477.9
2028	217,380	34,816	14,788.2	309.1	15,097.3
2029	226,282	36,373	15,393.9	322.9	15,716.8
2030	235,185	37,929	15,999.5	336.7	16,336.3
2031	242,297	39,779	16,483.4	353.1	16,836.5
2032	249,410	41,629	16,967.2	369.6	17,336.8
2033	256,522	43,479	17,451.1	386.0	17,837.1
10-Yr Increase	83,656	16,444	5,691.1	146.0	5,837.1

<b>Growth-Related Expenditures</b>	<b>\$3,414,659</b>	<b>\$87,589</b>	<b>\$3,502,248</b>
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**Pools – Incremental Expansion**

Surprise plans to maintain its existing level of service for pools over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 0.95 pools (83,656 additional persons X 0.000011 pools per person). With projected employment growth of 16,444 jobs, future nonresidential development demands approximately 0.02 pools (16,444 additional jobs X 0.000001 pools per job). Future development demands 0.97 pools at a cost of \$32,103,939 (0.97 pools X \$33,000,000 per pool). Surprise may use development fees to construct additional pools.

**Figure PR14: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Pools	0.000011 Pools	per Person	\$33,000,000
	0.000001 Pools	per Job	

Demand for Pools					
Year	Population	Jobs	Pools		
			Residential	Nonresidential	Total
2023	172,866	27,035	1.96	0.04	2.00
2024	181,769	28,591	2.06	0.04	2.10
2025	190,671	30,148	2.16	0.04	2.21
2026	199,574	31,704	2.26	0.05	2.31
2027	208,477	33,260	2.36	0.05	2.41
2028	217,380	34,816	2.46	0.05	2.52
2029	226,282	36,373	2.57	0.05	2.62
2030	235,185	37,929	2.67	0.06	2.72
2031	242,297	39,779	2.75	0.06	2.81
2032	249,410	41,629	2.83	0.06	2.89
2033	256,522	43,479	2.91	0.06	2.97
10-Yr Increase	83,656	16,444	0.95	0.02	0.97

Growth-Related Expenditures	\$31,301,043	\$802,896	\$32,103,939
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## PARKS AND RECREATIONAL FACILITIES DEVELOPMENT FEES

### Revenue Credit/Offset

A revenue credit/offset is necessary for development fees, because Surprise's construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

The analysis also includes a site development credit of \$218.13 per person and \$28.46 per job. This credit reduces site development costs included with park land.

### Parks and Recreational Facilities Development Fees

Infrastructure components and cost factors for parks and recreational facilities are summarized in the upper portion of Figure PR12. The cost per service unit is ~~\$929.34~~697.67 per person and ~~\$123.62~~99.39 per job.

Parks and recreational facilities fees for residential development are assessed according to the number of persons per housing unit. The fee of ~~\$2,398,180~~ for a single-family unit is calculated using a cost per service unit of ~~\$929.34~~697.67 per person multiplied by a demand unit of 2.58 persons per housing unit.

Nonresidential development fees are calculated using jobs as the service unit. The fee of ~~\$143,115~~ per 1,000 square feet of industrial development is derived from a cost per service unit of ~~\$123.62~~99.39 per job multiplied by a demand unit of 1.16 jobs per 1,000 square feet.

**Figure PR12: Parks and Recreational Facilities Development Fees**

Fee Component	Cost per Person	Cost per Job
Park Land	\$1,110.50	\$144.91
Park Amenities	\$371.69	\$48.50
Recreation Facilities	\$40.82	\$5.33
Development Fee Report	\$0.33	\$0.04
Subtotal	\$1,523.34	\$198.78
Excess Construction Sales Tax	(\$607.54)	(\$70.93)
Site Development Cost Credit	(\$218.13)	(\$28.46)
Total	\$697.67	\$99.39

Residential Fees per Unit						
Development Type	Persons per Housing Unit <sup>1</sup>	Proposed Fees	Adopted Fees <sup>2</sup>	Difference from Adopted	Current Fees	Difference from Current
Single-Family	2.58	\$1,800	\$1,845	(\$45)	\$1,060	\$740
Multi-Family	1.58	\$1,102	\$1,227	(\$125)	\$647	\$455
Mobile Home	1.09	\$760	\$1,289	(\$529)	\$594	\$166

Nonresidential Fees per 1,000 Square Feet						
Development Type	Jobs per 1,000 Sq Ft <sup>1</sup>	Proposed Fees	Adopted Fees <sup>2</sup>	Difference from Adopted	Current Fees	Difference from Current
Industrial	1.16	\$115	\$32	\$83	\$32	\$83
Warehouse	0.34	\$34	\$32	\$2	\$32	\$2
Retail/Commercial	2.12	\$211	\$32	\$179	\$32	\$179
Office	3.26	\$324	\$74	\$250	\$74	\$250
Public/Institutional	2.04	\$203	\$85	\$118	\$85	\$118

1. See Park Land Use Assumptions

2. Adopted fees for residential development include a grandfathered park fee that has been retired

**PARKS AND RECREATIONAL FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)). In accordance with state law, this report includes an IIP for parks and recreational facilities needed to accommodate new development. Projected fee revenue shown in Figure PR13 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for parks and recreational facilities shown in Figure PR12. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue equals ~~\$86,609,301~~\$84,380,104, and projected expenditures equal ~~\$86,609,339~~\$84,380,663.

**Figure PR13: Parks and Recreational Facilities Development Fee Revenue**

Fee Component	Growth Share	Existing Share	Total
Park Land	\$95,283,250	\$0	\$95,283,250
Park Amenities	\$31,891,515	\$0	\$31,891,515
Recreation Facilities	\$3,502,248	\$0	\$3,502,248
Development Fee Report	\$15,000	\$0	\$15,000
Excess Constr. Sales Tax	(\$27,595,880)	\$0	(\$27,595,880)
Site Dev. Cost Credit	(\$18,715,470)	\$0	(\$18,715,470)
<b>Total</b>	<b>\$84,380,663</b>	<b>\$0</b>	<b>\$84,380,663</b>

Year	Hsg Unit	Single Family	Multi-Family	Mobile Home	Industrial	Warehouse	Ret/Comm	Office	Public/Inst
		\$1,800 per unit	\$1,102 per unit	\$760 per unit	\$115 per 1,000 sq ft	\$34 per 1,000 sq ft	\$211 per 1,000 sq ft	\$324 per 1,000 sq ft	\$203 per 1,000 sq ft
		Hsg Unit	Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF	KSF
Base 2023	59,934	9,973	3,106	2,098	5,332	7,380	3,397	7,179	
Year 1 2024	62,847	10,833	3,133	2,310	5,484	7,499	3,620	7,317	
Year 2 2025	65,760	11,692	3,159	2,523	5,635	7,617	3,843	7,454	
Year 3 2026	68,673	12,552	3,186	2,736	5,787	7,735	4,067	7,592	
Year 4 2027	71,586	13,411	3,213	2,948	5,938	7,854	4,290	7,729	
Year 5 2028	74,499	14,271	3,239	3,161	6,089	7,972	4,513	7,867	
Year 6 2029	77,412	15,130	3,266	3,373	6,241	8,090	4,737	8,005	
Year 7 2030	80,325	15,990	3,293	3,586	6,392	8,208	4,960	8,142	
Year 8 2031	82,536	16,868	3,313	3,736	6,499	8,431	5,249	8,253	
Year 9 2032	84,746	17,746	3,333	3,886	6,606	8,653	5,538	8,364	
Year 10 2033	86,957	18,624	3,354	4,036	6,714	8,876	5,827	8,475	
10-Year Increase	27,023	8,650	248	1,938	1,381	1,496	2,430	1,296	
Projected Revenue	\$68,156,825	\$13,710,899	\$264,149	\$294,926	\$61,470	\$451,981	\$1,089,288	\$350,565	

Projected Fee Revenue	\$84,380,104
Total Expenditures	\$84,380,663

**10-YEAR CAPITAL PLAN**

The figure shown below includes potential parks and recreational capital expenditures during the next 10 years. The list of potential capital expenditures is representational of future growth-related parks and recreational capital expenditures.

**Figure PR14: Parks and Recreational Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	City Park Improvements	2025-2028	\$6,500,000
CIP	McMicken Park - Design	2025	\$2,700,000
CIP	New Park - Perryville & Cactus	2024	\$8,836,800
CIP	Park West Surprise (SPA 1)	2028-2032	\$15,000,000
CIP	Park North Surprise (SPA 2)	2028-2032	\$25,000,000
CIP	Park Northwest Surprise (SPA 3)	2028-2032	\$15,000,000
CIP	Trails	2028-2032	\$10,000,000
Dev Agreement	Developer Obligation - Asante Park	2024-2034	\$3,688,893
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$15,000
<b>Total</b>			<b>\$86,740,693</b>

Source: Surprise Parks and Recreation Department

## POLICE FACILITIES IIP

ARS § 9-463.05 (T)(7)(f) defines the eligible facilities and assets for the Police Facilities IIP:

*“Fire and police facilities, including all appurtenances, equipment and vehicles. Fire and police facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the municipality, vehicles and equipment used to provide administrative services, helicopters or airplanes or a facility that is used for training firefighters or officers from more than one station or substation.”*

The Police Facilities IIP includes components for police facilities, police facilities land, police vehicles, police equipment, and the cost of preparing the Police Facilities IIP and related Development Fee Report. The incremental expansion methodology, based on the current level of service, is used for police facilities land, police vehicles, and police equipment. The plan-based methodology is used for police facilities and the Development Fee Report.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Police Facilities IIP and development fees will allocate the cost of police infrastructure between residential and nonresidential using calls for service. Based on FY2020-FY2022 call data provided by the Surprise Police Department, residential development accounts for approximately 61 percent of demand and nonresidential development accounts for the remaining 39 percent of demand.

**Figure P1: Proportionate Share**

Description	FY 2020	FY 2021	FY 2022	Total
Residential	30,742	29,529	29,151	89,422
Nonresidential	20,089	19,238	18,838	58,165
Total	50,831	48,767	47,989	147,587

Description	FY 2020	FY 2021	FY 2022	Total
Residential	60%	61%	61%	61%
Nonresidential	40%	39%	39%	39%
Total	100%	100%	100%	100%

Source: Surprise Police Department

The proportionate share of costs attributable to residential development will be allocated to population and then converted to an appropriate amount by type of housing unit. Since nonresidential calls for service were unavailable by specific nonresidential use, TischlerBise recommends using vehicle trips as the nonresidential demand indicator for police services. Trip generation rates are highest for retail/commercial development and lowest for industrial development. Office and public/institutional trip generation rates fall between the other two categories. This ranking of trip generation rates is consistent with the relative demand for police services from nonresidential development.

**SERVICE AREA**

Surprise’s Police Department strives to provide a uniform response time within the city limits; therefore, there is a single service area for the Police Facilities IIP.

**RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT**

ARS § 9-463.05(E)(4) 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 P2 displays the demand indicators for residential and nonresidential land uses. For residential development, the table displays the persons per housing unit. For nonresidential development, the table displays the number of average weekday vehicle trips generated per thousand square feet of floor area.

**Figure P2: Ratio of Service Unit to Development Unit**

Residential Development	
Development Type	Persons per Housing Unit <sup>1</sup>
Single-Family	2.58
Multi-Family	1.58
Mobile Home	1.09

Nonresidential Development			
Development Type	AWVTE per 1,000 Sq Ft <sup>1</sup>	Trip Rate Adjustment	AWVT per 1,000 Sq Ft <sup>1</sup>
Industrial	3.37	50%	1.69
Warehouse	1.71	50%	0.86
Retail/Commercial	37.01	28%	10.18
Office	10.84	45%	4.88
Public/Institutional	6.75	50%	3.38

1. See Land Use Assumptions

**ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES**

ARS § 9-463.05(E)(1) requires:

*“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.”*

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.”*



**Police Facilities – Plan-Based**

Surprise currently provides 70,844 square feet of police facilities to existing development, and Surprise plans to construct additional police facilities to serve future development.

**Figure P3: Existing Police Facilities**

Description	Square Feet	Acres
Public Safety Building (share)	42,500	7.82
Evidence & Readiness Center	27,944	4.54
Techcelerator Police Storage	400	0.00
<b>Total</b>	<b>70,844</b>	<b>12.36</b>

Source: Surprise Police Department

Surprise plans to use future development fee revenue to repay the outstanding obligation related to the Public Safety Building. The total obligation is \$2,786,022, and the outstanding obligation is \$135,214. Based on a cost of approximately \$65 per square foot (\$2,768,022 total obligation / 42,500 total square feet), the proportionate share of the Public Safety Building related to the outstanding obligation is 2,076 square feet (\$135,214 outstanding obligation / \$65 per square foot).

**Figure P4: Public Safety Building Obligation**

Public Safety Building	Square Feet	Obligation <sup>1</sup>	Cost per Sq Ft
Outstanding Debt	2,076	\$135,214	\$65
Retired Debt	40,424	\$2,632,808	\$65
<b>Total</b>	<b>42,500</b>	<b>\$2,768,022</b>	<b>\$65</b>

Source: Surprise Police Department

1. Surprise Finance Department

As shown below in Figure P5, Surprise plans to repay outstanding obligations related to the Public Safety Building and to construct 60,000 square feet of police facilities during the next 10 years. The total cost is \$48,135,214, and the associated floor area is 62,076 square feet. Based on these projects, the analysis uses a cost of \$775 per square foot for police facilities (\$48,135,214 total cost / 62,076 total square feet). The planned police facilities will serve all development in Surprise through 2038.

**Figure P5: Police Facilities Cost Factors**

Description	Square Feet	Cost	Cost per Sq Ft
Public Safety Building (share)	2,076	\$135,214	\$65
Future Police Substation	30,000	\$22,000,000	\$733
Future Police Substation	30,000	\$26,000,000	\$867
<b>Total</b>	<b>62,076</b>	<b>\$48,135,214</b>	<b>\$775</b>

Source: Surprise Police Department

Surprise plans to provide 130,844 square feet of police facilities to all development in 2038. To allocate the proportionate share of demand for police facilities to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure P1. The planned level of service for residential development is 0.2770 square feet per person (130,844 total square feet X 61 percent residential share / 286,249 persons). The planned nonresidential level of service is 0.2835 square feet per vehicle trip (130,844 total square feet X 39 percent nonresidential share / 181,875 vehicle trips).

Based on the outstanding obligations for the Public Safety Building and the construction cost estimates for future police facilities shown in Figure P5, the analysis uses a cost of \$775 per square foot (\$48,135,214 total cost / 62,076 total square feet). For police facilities, the cost is \$214.76 per person (0.2770 square feet per person X \$775 per square foot) and \$219.85 per vehicle trip (0.2835 square feet per vehicle trip X \$775 per square foot).

**Figure P6: Planned Level of Service**

Cost Factors	
Cost per Square Foot	\$775

Level-of-Service (LOS) Standards	
Existing Square Feet <sup>1</sup>	68,768
Cost Recovery Square Feet <sup>2</sup>	2,076
Planned Square Feet	60,000
Total Square Feet	130,844
Residential	
Residential Share	61%
2038 Population	286,249
Square Feet per Person	0.2770
<b>Cost per Person</b>	<b>\$214.76</b>
Nonresidential	
Nonresidential Share	39%
2038 Vehicle Trips	181,875
Square Feet per Vehicle Trip	0.2835
<b>Cost per Vehicle Trip</b>	<b>\$219.85</b>

Source: Surprise Police Department

1. Excludes share related to outstanding obligations
2. Public Safety Building share of outstanding obligations

### Police Facilities Land – Incremental Expansion

Surprise police facilities currently occupy 12.36 acres of land, and Surprise plans to acquire additional land for police facilities to serve future development. To allocate the proportionate share of demand for land to residential and nonresidential development, this analysis uses calls for service outlined in Figure P1. The existing level of service for residential development is 0.00004 acres per person (12.36 acres X 61 percent residential share / 172,866 persons). The nonresidential level of service is 0.00004 acres per vehicle trip (12.36 acres X 39 percent nonresidential share / 124,008 vehicle trips).

Based on the weighted average cost of potential land acquisitions provided by the Surprise Police Department, the land acquisition cost is \$162,000 per acre (\$810,000 total cost / 5.0 acres). For police facilities land, the cost is \$7.02 per person (0.00004 acres per person X \$162,000 per acre) and \$6.36 per vehicle trip (0.00004 acres per vehicle trip X \$162,000 per acre).

**Figure P7: Existing Level of Service**

Cost Factors	
Cost per Acre	\$162,000

Level-of-Service (LOS) Standards	
Existing Acres	12.36
Residential	
Residential Share	61%
2023 Population	172,866
Acres per Person	0.00004
Cost per Person	\$7.02
Nonresidential	
Nonresidential Share	39%
2023 Vehicle Trips	124,008
Acres per Vehicle Trip	0.00004
Cost per Vehicle Trip	\$6.36

Source: Surprise Police Department

Description	Acres	Cost	Cost per Acre
Land - Police Facilities	3.00	\$500,000	\$166,667
Land - Police Facilities	2.00	\$310,000	\$155,000
<b>Total</b>	<b>5.00</b>	<b>\$810,000</b>	<b>\$162,000</b>

Source: Surprise Police Department

### Police Vehicles - Incremental Expansion

Surprise has 142-141 police vehicles in its existing fleet with a total cost of \$13,274,50012,274,500, and Surprise plans to acquire additional police vehicles to serve future development. The weighted average cost of the existing fleet is \$93,48287,053 per unit (\$13,274,50012,274,500 total cost / 142-141 units).

**Figure P8: Existing Police Vehicles**

Description	Units	Unit Cost	Total Cost
Patrol Vehicle - Marked	66	\$89,000	\$5,874,000
Police Heavy Van	1	\$225,000	\$225,000
CID and Unmarked Vehicles	27	\$66,500	\$1,795,500
MCC	1	\$1,000,000	\$1,000,000
Motorcycle	9	\$39,000	\$351,000
BearCat	1	\$450,000	\$450,000
Side by Side	2	\$25,000	\$50,000
Side by Side (Ranger)	1	\$20,000	\$20,000
Motorcycle - Unmarked	3	\$60,000	\$180,000
K9	5	\$90,000	\$450,000
Animal Control	3	\$75,000	\$225,000
CP Vehicle	5	\$89,000	\$445,000
Patrol Lieutenant Vehicle	6	\$75,000	\$450,000
ASD Commander & LT	2	\$66,500	\$133,000
POD Commander	2	\$66,500	\$133,000
Property & Evidence vans	2	\$72,000	\$144,000
TSD Commander & LT	2	\$66,500	\$133,000
Property & Evidence Van	2	\$72,000	\$144,000
Crime Scene Van	1	\$72,000	\$72,000
<b>Total</b>	<b>141</b>	<b>\$87,053</b>	<b>\$12,274,500</b>

Source: Surprise Police Department

To allocate the proportionate share of demand for police vehicles to residential and nonresidential development, this analysis uses calls for service outlined in Figure P1. The existing level of service for residential development is 0.0005 units per person (~~142-141~~ vehicles X 61 percent residential share / 172,866 persons). The nonresidential level of service is ~~0.0005~~0.0004 units per vehicle trip (~~142-141~~ vehicles X 39 percent nonresidential share / 124,008 vehicle trips).

Based on the total cost of existing police vehicles, the weighted average cost for a new police vehicle is ~~\$93,482,870.53~~ per vehicle (~~\$13,274,500~~12,274,500 total cost / ~~142-141~~ units). For police vehicles, the cost is ~~\$46.53~~43.02 per person (0.0005 units per person X ~~\$93,482,870.53~~ per vehicle) and ~~\$42.19~~39.01 per vehicle trip (~~0.0005~~0.0004 units per vehicle trip X ~~\$93,482,870.53~~ per vehicle).

**Figure P9: Existing Level of Service**

Cost Factors	
Weighted Average per Unit	\$87,053

Level-of-Service (LOS) Standards	
Existing Units	141
Residential	
Residential Share	61%
2023 Population	172,866
Units per Person	0.0005
Cost per Person	\$43.02
Nonresidential	
Nonresidential Share	39%
2023 Vehicle Trips	124,008
Units per Vehicle Trip	0.0004
Cost per Vehicle Trip	\$39.01

Source: Surprise Police Department

**Police Equipment – Incremental Expansion**

Surprise has 1,324 units of police equipment with a total cost of \$13,614,115, and Surprise plans to acquire additional units to serve future development. To allocate the proportionate share of demand for police equipment to residential and nonresidential development, this analysis uses calls for service outlined in Figure P1. The existing level of service for residential development is 0.0046 units per person (1,324 units X 61 percent residential share / 172,866 persons). The nonresidential level of service is 0.0042 units per vehicle trip (1,324 units X 39 percent nonresidential share / 124,008 vehicle trips).

Based on the total cost of existing police equipment, the weighted average cost for a new unit is \$10,823 per unit (\$13,614,115 total cost / 1,324 units). For police equipment, the cost is \$47.72 per person (0.0046 units per person X \$10,283 per unit) and \$43.27 per vehicle trip (0.0042 units per vehicle trip X \$10,283 per unit).

**Figure P10: Existing Level of Service**

Cost Factors	
Existing Equipment (Units)	1,324
Existing Equipment (Cost)	\$13,614,115
Weighted Average per Unit	\$10,283

Level-of-Service (LOS) Standards	
Existing Units	1,324
Residential	
Residential Share	61%
2023 Population	172,866
Units per Person	0.0046
Cost per Person	\$47.72
Nonresidential	
Nonresidential Share	39%
2023 Vehicle Trips	124,008
Units per Vehicle Trip	0.0042
Cost per Vehicle Trip	\$43.27

Source: Surprise Police Department



### Development Fee Report – Plan-Based

The cost to prepare the Police Facilities IIP and related Development Fee Report totals \$16,230. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from the *Land Use Assumptions* document, the cost is \$0.22 per person and \$0.39 per vehicle trip.

**Figure P11: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Police	\$16,230	Residential	61%	Population	44,514	\$0.22
		Nonresidential	39%	Vehicle Trips	16,226	\$0.39

### Bond Credit

Shown below, Surprise will issue \$100.0 million in G.O. bonds to construct transportation and public safety projects, and public safety projects will account for \$34.0 million of bond funding. To prevent future development from paying for future improvements through development fees and through future bond payments, the development fee study includes a credit for future bond payments. As shown in Figure P12, the analysis allocates public safety costs 50.2 percent to fire and 49.8 percent to police.

**Figure P12: Bond Allocation**

Series 2024 / 2027 Bond Use	Cost	Share
Transportation	\$66,000,000	66%
Public Safety	\$34,000,000	34%
Total	\$100,000,000	100%

Public Safety Use	Cost	Fire Share	Police Share
Fire Station	\$15,300,000	\$15,300,000	\$0
Police Substation	\$15,200,000	\$0	\$15,200,000
Land for Public Safety Facilities	\$3,500,000	\$1,755,738	\$1,744,262
Total	\$34,000,000	\$17,055,738	\$16,944,262
Share	100.0%	50.2%	49.8%

Source: Surprise Finance Department

To allocate the proportionate share of bond costs to residential and nonresidential development, this analysis uses proportionate share factors shown in Figure P1. The analysis divides annual principal payments by population for residential development and by vehicle trips for nonresidential development. To calculate the bond credit, the analysis calculates the net present value of future principal payments. The proposed police development fees include a credit of \$13.92 per person and \$14.12 per vehicle trip.

**Figure P13: Police Bond Credit**

Police Share of Series 2024 and Series 2027 Bonds							
Fiscal Year	Annual Principal Payment	Residential Share	Population	Principal per Person	Nonresidential Share	Vehicle Trips	Principal per Veh Trip
2024	\$0	\$0	181,769	\$0.00	\$0	127,254	\$0.00
2025	\$0	\$0	190,671	\$0.00	\$0	130,499	\$0.00
2026	\$5,083	\$3,080	199,574	\$0.02	\$2,003	133,744	\$0.01
2027	\$62,694	\$37,986	208,477	\$0.18	\$24,708	136,989	\$0.18
2028	\$53,374	\$32,339	217,380	\$0.15	\$21,035	140,235	\$0.15
2029	\$185,540	\$112,417	226,282	\$0.50	\$73,122	143,480	\$0.51
2030	\$213,498	\$129,357	235,185	\$0.55	\$84,141	146,725	\$0.57
2031	\$242,303	\$146,810	242,297	\$0.61	\$95,493	151,119	\$0.63
2032	\$272,803	\$165,289	249,410	\$0.66	\$107,513	155,513	\$0.69
2033	\$303,302	\$183,769	256,522	\$0.72	\$119,533	159,906	\$0.75
2034	\$336,344	\$203,788	262,467	\$0.78	\$132,555	164,300	\$0.81
2035	\$372,774	\$225,861	268,413	\$0.84	\$146,913	168,694	\$0.87
2036	\$410,051	\$248,447	274,358	\$0.91	\$161,604	173,088	\$0.93
2037	\$449,023	\$272,060	280,303	\$0.97	\$176,963	177,482	\$1.00
2038	\$490,536	\$297,213	286,249	\$1.04	\$193,324	181,875	\$1.06
2039	\$767,575	\$465,069	292,194	\$1.59	\$302,506	186,269	\$1.62
2040	\$804,005	\$487,142	298,139	\$1.63	\$316,864	190,663	\$1.66
2041	\$841,283	\$509,728	304,085	\$1.68	\$331,555	195,057	\$1.70
2042	\$881,102	\$533,854	310,030	\$1.72	\$347,248	199,450	\$1.74
2043	\$921,768	\$558,493	315,975	\$1.77	\$363,275	203,844	\$1.78
2044	\$964,976	\$584,673	321,921	\$1.82	\$380,303	208,238	\$1.83
2045	\$892,115	\$540,527	327,866	\$1.65	\$351,589	212,632	\$1.65
2046	\$931,934	\$564,653	333,811	\$1.69	\$367,281	217,025	\$1.69
2047	\$974,295	\$590,319	339,757	\$1.74	\$383,976	221,419	\$1.73
2048	\$1,017,503	\$616,498	345,702	\$1.78	\$401,005	225,813	\$1.78
2049	\$1,063,252	\$644,218	351,647	\$1.83	\$419,035	230,207	\$1.82
2050	\$1,111,544	\$673,477	357,593	\$1.88	\$438,067	234,601	\$1.87
2051	\$1,161,529	\$703,763	363,538	\$1.94	\$457,766	238,994	\$1.92
2052	\$1,214,056	\$735,589	369,483	\$1.99	\$478,468	243,388	\$1.97
<b>Total</b>	<b>\$16,944,262</b>	<b>\$10,266,418</b>		<b>\$13.92</b>	<b>\$6,677,844</b>		<b>\$14.12</b>

## PROJECTED DEMAND FOR SERVICES AND COSTS

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ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

As shown in the *Land Use Assumptions* document, Surprise’s population is expected to increase by 83,656 persons and nonresidential vehicle trips are expected to increase by 35,898 vehicle trips over the next 10 years. To reach the planned level of service, Surprise will construct 60,000 square feet of police facilities over the next 10 years. To maintain the existing levels of service, Surprise will need to acquire approximately five acres of land, ~~58~~57 police vehicles, and 539 units of police equipment over the next 10 years. The following pages include a more detailed projection of demand for services and costs for the Police Facilities IIP.

**Police Facilities – Plan-Based**

Surprise will use development fees to repay obligations associated with the Public Safety Building and to construct police facilities within the next 10 years. Based on a 15-year projected population increase of 113,383 persons, future residential development demands approximately 31,402 square feet of planned police facilities (113,383 additional persons X 0.2770 square feet per person). With a 15-year projected increase of 57,867 vehicle trips, future nonresidential development demands approximately 16,407 square feet of planned police facilities (57,867 additional vehicle trips X 0.2835 square feet per vehicle trip). Future development demands approximately 47,809 square feet of police facilities at a cost of \$37,071,899 (47,808.6 square feet X \$775 per square foot). The remaining cost of \$11,063,315 represents existing development’s share of planned police facilities (\$48,135,214 total police facilities cost - \$37,071,899 growth cost).

**Figure P14: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Police Facilities	0.2770 Square Feet	per Person	\$775
	0.2835 Square Feet	per Vehicle Trip	

Demand for Police Facilities					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2023	172,866	124,008	47,875.8	35,159.7	83,035.4
2024	181,769	127,254	50,341.4	36,079.8	86,421.2
2025	190,671	130,499	52,807.1	36,999.9	89,807.0
2026	199,574	133,744	55,272.7	37,920.0	93,192.7
2027	208,477	136,989	57,738.3	38,840.1	96,578.5
2028	217,380	140,235	60,204.0	39,760.2	99,964.2
2029	226,282	143,480	62,669.6	40,680.3	103,350.0
2030	235,185	146,725	65,135.3	41,600.5	106,735.7
2031	242,297	151,119	67,105.1	42,846.2	109,951.3
2032	249,410	155,513	69,074.9	44,092.0	113,166.8
2033	256,522	159,906	71,044.6	45,337.7	116,382.4
2034	262,467	164,300	72,691.2	46,583.5	119,274.7
2035	268,413	168,694	74,337.8	47,829.2	122,167.0
2036	274,358	173,088	75,984.4	49,075.0	125,059.3
2037	280,303	177,482	77,630.9	50,320.7	127,951.7
2038	286,249	181,875	79,277.5	51,566.5	130,844.0
15-Yr Increase	113,383	57,867	31,401.7	16,406.8	47,808.6

Growth-Related Expenditures	\$24,349,663	\$12,722,236	\$37,071,899
Non-Growth Expenditures	\$4,815,149	\$6,248,166	\$11,063,315
Total Expenditures	\$29,164,812	\$18,970,402	\$48,135,214

**Police Facilities Land – Incremental Expansion**

Surprise plans to maintain its existing level of service for police facilities land over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands an additional 3.62 acres of land (83,656 additional persons X 0.00004 acres per person). With a 10-year projected increase of 35,898 vehicle trips, future nonresidential development demands an additional 1.41 acres of land (35,898 additional vehicle trips X 0.00004 acres per vehicle trip). Future development demands 5.04 acres of land at a cost of \$815,678 (5.04 acres X \$162,000 per acre). Surprise may use development fees to acquire additional land for police facilities.

**Figure P15: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Acre
Police Facilities Land	0.00004 Acres	per Person	\$162,000
	0.00004 Acres	per Vehicle Trip	

Demand for Police Facilities Land					
Year	Population	Vehicle Trips	Acres		
			Residential	Nonresidential	Total
2023	172,866	124,008	7.49	4.87	12.36
2024	181,769	127,254	7.88	5.00	12.88
2025	190,671	130,499	8.26	5.13	13.39
2026	199,574	133,744	8.65	5.25	13.90
2027	208,477	136,989	9.03	5.38	14.41
2028	217,380	140,235	9.42	5.51	14.93
2029	226,282	143,480	9.80	5.64	15.44
2030	235,185	146,725	10.19	5.76	15.95
2031	242,297	151,119	10.50	5.94	16.44
2032	249,410	155,513	10.81	6.11	16.92
2033	256,522	159,906	11.11	6.28	17.40
10-Yr Increase	83,656	35,898	3.62	1.41	5.04

<b>Growth-Related Expenditures</b>	<b>\$587,204</b>	<b>\$228,474</b>	<b>\$815,678</b>
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**Police Vehicles – Incremental Expansion**

Surprise plans to maintain its existing level of service for police vehicles over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately ~~42-41~~ police vehicles (83,656 additional persons X 0.0005 vehicles per person). With a 10-year projected increase of 35,898 vehicle trips, future nonresidential development demands approximately 16 police vehicles (35,898 additional vehicle trips X ~~0.0005~~0.0004 vehicles per vehicle trip). Future development demands approximately ~~58-57~~ police vehicles at a cost of ~~\$5,406,712~~\$4,999,412 (~~57.857.4~~ units X ~~\$93,482,87,053~~ per vehicle). Surprise may use development fees to expand its police vehicle fleet.

**Figure P16: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Police Vehicles	0.0005 Units	per Person	\$87,053
	0.0004 Units	per Vehicle Trip	

Demand for Police Vehicles					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2023	172,866	124,008	85.4	55.6	141.0
2024	181,769	127,254	89.8	57.0	146.9
2025	190,671	130,499	94.2	58.5	152.7
2026	199,574	133,744	98.6	59.9	158.6
2027	208,477	136,989	103.0	61.4	164.4
2028	217,380	140,235	107.4	62.8	170.3
2029	226,282	143,480	111.8	64.3	176.1
2030	235,185	146,725	116.2	65.7	182.0
2031	242,297	151,119	119.7	67.7	187.5
2032	249,410	155,513	123.3	69.7	192.9
2033	256,522	159,906	126.8	71.7	198.4
10-Yr Increase	83,656	35,898	41.3	16.1	57.4

Growth-Related Expenditures	\$3,599,058	\$1,400,353	\$4,999,412
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### Police Equipment – Incremental Expansion

Surprise plans to maintain its existing level of service for police equipment over the next 10 years. Based on a projected population increase of 83,656 persons, future residential development demands approximately 388 units of police equipment (83,656 additional persons X 0.0046 units per person). With a 10-year projected increase of 35,898 vehicle trips, future nonresidential development demands approximately 151 units of police equipment (35,898 additional vehicle trips X 0.0042 units per vehicle trip). Future development demands approximately 539 units of equipment at a cost of \$5,545,038 (539.3 units X \$10,283 per unit). Surprise may use development fees to acquire additional police equipment.

**Figure P17: Projected Demand**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Police Equipment	0.0046 Units	per Person	\$10,283
	0.0042 Units	per Vehicle Trip	

Demand for Police Equipment					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2023	172,866	124,008	802.2	521.8	1,324.0
2024	181,769	127,254	843.5	535.5	1,379.0
2025	190,671	130,499	884.8	549.1	1,433.9
2026	199,574	133,744	926.1	562.8	1,488.9
2027	208,477	136,989	967.5	576.4	1,543.9
2028	217,380	140,235	1,008.8	590.1	1,598.8
2029	226,282	143,480	1,050.1	603.7	1,653.8
2030	235,185	146,725	1,091.4	617.4	1,708.8
2031	242,297	151,119	1,124.4	635.9	1,760.3
2032	249,410	155,513	1,157.4	654.4	1,811.8
2033	256,522	159,906	1,190.4	672.8	1,863.3
10-Yr Increase	83,656	35,898	388.2	151.1	539.3

Growth-Related Expenditures	\$3,991,853	\$1,553,185	\$5,545,038
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## POLICE FACILITIES DEVELOPMENT FEES

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### Revenue Credit/Offset

A revenue credit/offset is necessary for development fees, because Surprise's construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

### Police Facilities Development Fees

Infrastructure components and cost factors for police facilities are summarized in the upper portion of Figure P18. The cost per service unit for police facilities is \$285.94225.14 per person and \$257.98163.28 per vehicle trip.

Police facilities development fees for residential development are assessed according to the number of persons per housing unit. The fee of \$738-581 for single-family unit is calculated using a cost per service unit of \$285.94225.14 per person multiplied by a demand unit of 2.58 persons per housing unit.

Nonresidential development fees are calculated using vehicle trips as the service unit. The fee of \$435-275 per 1,000 square feet of industrial development is derived from a cost per service unit of \$257.98163.28 per vehicle trip multiplied by a demand unit of 1.69 vehicle trips per 1,000 square feet.

**Figure P18: Police Facilities Development Fees**

Fee Component	Cost per Person	Cost per Trip
Police Facilities	\$214.76	\$219.85
Police Facilities Land	\$7.02	\$6.36
Police Vehicles	\$43.02	\$39.01
Police Equipment	\$47.72	\$43.27
Development Fee Report	\$0.22	\$0.39
Bond Credit	(\$13.92)	(\$14.12)
<b>Subtotal</b>	<b>\$298.82</b>	<b>\$294.76</b>
Excess Construction Sales Tax	(\$73.68)	(\$131.48)
<b>Total</b>	<b>\$225.14</b>	<b>\$163.28</b>

Residential Fees per Unit				
Development Type	Persons per Housing Unit <sup>1</sup>	Proposed Fees	Current Fees	Difference
Single-Family	2.58	\$581	\$385	\$196
Multi-Family	1.58	\$356	\$235	\$121
Mobile Home	1.09	\$245	\$216	\$29

Nonresidential Fees per 1,000 Square Feet				
Development Type	AWVT per 1,000 Sq Ft <sup>1</sup>	Proposed Fees	Current Fees	Difference
Industrial	1.69	\$275	\$81	\$194
Warehouse	0.86	\$140	\$46	\$94
Retail/Commercial	10.18	\$1,662	\$427	\$1,235
Office	4.88	\$796	\$243	\$553
Public/Institutional	3.38	\$551	\$150	\$401

1. See Land Use Assumptions

**POLICE FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains revenue forecasts required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure P19 is based on the development projections in the *Land Use Assumptions* document and the updated police facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 15 years equals \$46,628,741-41,363,153, and projected expenditures equal \$57,692,190-52,426,959. The remaining balance represents existing development’s share of planned costs for police facilities.

**Figure P19: Police Facilities Development Fee Revenue**

Fee Component	Growth Share		Existing Share	Total
	Years 1-10	Years 11-15		
Police Facilities	\$25,857,996	\$11,213,903	\$11,063,315	\$48,135,214
Police Facilities Land	\$815,678	\$0	\$0	\$815,678
Police Vehicles	\$4,999,412	\$0	\$0	\$4,999,412
Police Equipment	\$5,545,038	\$0	\$0	\$5,545,038
Development Fee Report	\$16,230	\$0	\$0	\$16,230
Bond Credit	(\$1,671,375)	\$0	\$0	(\$1,671,375)
Excess Constr. Sales Tax	(\$5,413,237)	\$0	\$0	(\$5,413,237)
<b>Total</b>	<b>\$30,149,742</b>	<b>\$11,213,903</b>	<b>\$11,063,315</b>	<b>\$52,426,959</b>

Year	Single Family	Multi-Family	Mobile Home	Industrial	Warehouse	Ret/Comm	Office	Public/Inst
	\$581 per unit	\$356 per unit	\$245 per unit	\$275 per 1,000 sq ft	\$140 per 1,000 sq ft	\$1,662 per 1,000 sq ft	\$796 per 1,000 sq ft	\$551 per 1,000 sq ft
	Hsg Unit	Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF	KSF
Base 2023	59,934	9,973	3,106	2,098	5,332	7,380	3,397	7,179
Year 1 2024	62,847	10,833	3,133	2,310	5,484	7,499	3,620	7,317
Year 2 2025	65,760	11,692	3,159	2,523	5,635	7,617	3,843	7,454
Year 3 2026	68,673	12,552	3,186	2,736	5,787	7,735	4,067	7,592
Year 4 2027	71,586	13,411	3,213	2,948	5,938	7,854	4,290	7,729
Year 5 2028	74,499	14,271	3,239	3,161	6,089	7,972	4,513	7,867
Year 6 2029	77,412	15,130	3,266	3,373	6,241	8,090	4,737	8,005
Year 7 2030	80,325	15,990	3,293	3,586	6,392	8,208	4,960	8,142
Year 8 2031	82,536	16,868	3,313	3,736	6,499	8,431	5,249	8,253
Year 9 2032	84,746	17,746	3,333	3,886	6,606	8,653	5,538	8,364
Year 10 2033	86,957	18,624	3,354	4,036	6,714	8,876	5,827	8,475
10-Year Increase	27,023	8,650	248	1,938	1,381	1,496	2,430	1,296
Projected Revenue	\$18,057,460	\$3,582,173	\$69,984	\$726,562	\$262,800	\$3,691,780	\$2,775,273	\$983,188

Projected Fee Revenue (Years 1-10)	\$30,149,220
Projected Fee Revenue (Years 11-15)	\$11,213,933
<b>Total Expenditures</b>	<b>\$52,426,959</b>

**10-YEAR CAPITAL PLAN**

The figure shown below includes potential police capital expenditures during the next 10 years. The list of potential capital expenditures is representational of future growth-related police capital expenditures.

**Figure P20: Police Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	Armored Surveillance Van	2024	\$200,000
CIP	Patrol Take Home Vehicles	2024	\$2,931,200
CIP	Police Substation	2025	\$24,121,799
CIP	Police Substation	2026-2028	\$28,850,000
Debt Service	Public Safety Building (share)	2024	\$135,214
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$16,230
<b>Total</b>			<b>\$56,254,443</b>

## STREET FACILITIES IIP

ARS § 9-463.05 (T)(7)(e) defines the eligible facilities and assets for the Street Facilities IIP:

*“Street facilities located in the service area, including arterial or collector streets or roads that have been designated on an officially adopted plan of the municipality, traffic signals and rights-of-way and improvements thereon.”*

The Street Facilities IIP includes components for major roadway improvements and the cost of preparing the Street Facilities IIP and related Development Fee Report. The plan-based methodology is used for major roadway improvements and the Development Fee Report.

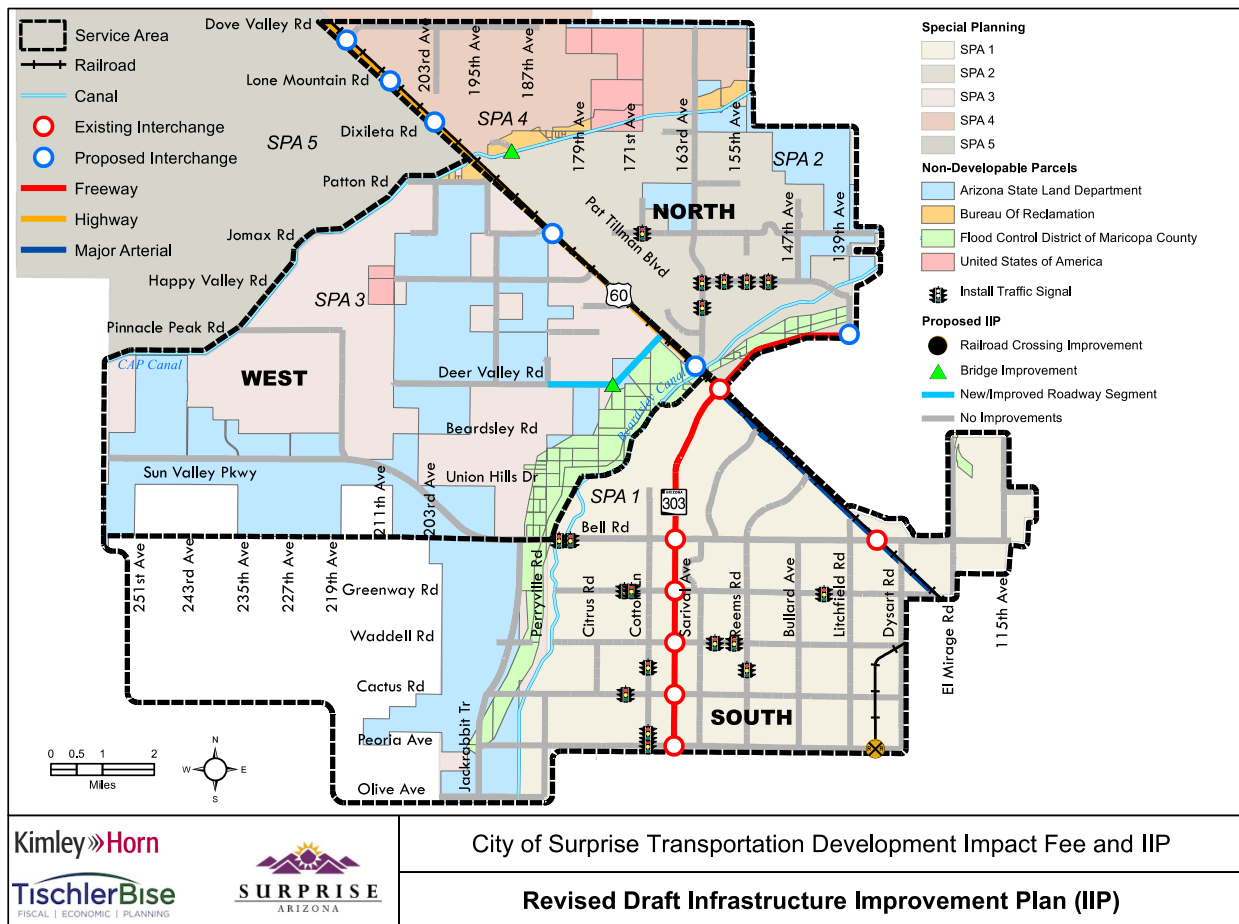
### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Street Facilities IIP and development fees will allocate the cost of necessary public services between residential and nonresidential based on trip-generation rates, trip-adjustment factors, and trip-lengths.

### SERVICE AREA

As shown in Figure S1, there are three service areas for the Street Facilities IIP: south, north, and west.

**Figure S1: Street Development Impact Fee Service Area**



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SURPRISE  
 ARIZONA

City of Surprise Transportation Development Impact Fee and IIP

Revised Draft Infrastructure Improvement Plan (IIP)



## **RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT**

ARS § 9-463.05(E)(4) 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.”*

Surprise will use an equivalent demand unit (EDU), based on vehicle miles traveled (VMT), as the demand unit for street facilities fees. Components used to determine VMT include average weekday vehicle trip generation rates, adjustments for commuting patterns and pass-by trips, and trip length weighting factors.

### **Residential Trip Generation Rates**

For residential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021). For single-family development, the proxy is Single Family Detached Housing (ITE 210), and this type of development generates 9.43 average weekday vehicle trip ends per unit. For multi-family development, the proxy is Multifamily Housing Low-Rise (ITE 220), and this type of development generates 6.74 average weekday vehicle trip ends per unit. For mobile home development, the proxy is Mobile Home Park (ITE 240), and this type of development generates 7.12 average weekday vehicle trip ends per unit.

### **Nonresidential Trip Generation Rates**

For nonresidential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021). The prototype for industrial development is Industrial Park (ITE 130) which generates 3.37 average weekday vehicle trip ends per 1,000 square feet of floor area. For warehouse development, the prototype is Warehousing (ITE 150), and it generates 1.71 average weekday vehicle trip ends per 1,000 square feet of floor area. The prototype for retail / commercial development is Shopping Center (ITE 820) which generates 37.01 average weekday vehicle trips per 1,000 square feet of floor area. For office development, the prototype is General Office (ITE 710), and it generates 10.84 average weekday vehicle trip ends per 1,000 square feet of floor area. The prototype for public / institutional development is Nursing Home (ITE 620), and it generates 6.75 average weekday vehicle trip ends per 1,000 square feet of floor area.

### **Trip Rate Adjustments**

To calculate street facilities fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50 percent. As discussed further in this section, the development fee methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

**Commuter Trip Adjustment**

Residential development has a larger trip adjustment factor of 64 percent to account for commuters leaving Surprise for work. According to the 2009 National Household Travel Survey (see Table 30) weekday work trips are typically 31 percent of production trips (i.e., all out-bound trips, which are 50 percent of all trip ends). As shown in Figure S2, the U.S. Census Bureau’s OnTheMap web application indicates 90 percent of resident workers traveled outside of Surprise for work in 2019. In combination, these factors ( $0.31 \times 0.50 \times 0.90 = 0.14$ ) support the additional 14 percent allocation of trips to residential development.

**Figure S2: Commuter Trip Adjustment**

Trip Adjustment Factor for Commuters	
Employed Residents	55,711
Residents Living and Working in Surprise	5,624
Residents Commuting Outside Surprise for Work	50,087
Percent Commuting out of Surprise	90%
Additional Production Trips <sup>1</sup>	14%
Residential Trip Adjustment Factor	64%

Source: U.S. Census Bureau, OnTheMap Application (version 6.8.1) and LEHD Origin-Destination Employment Statistics, 2019.

1. According to the National Household Travel Survey (2009)\*, published in December 2011 (see Table 30), home-based work trips are typically 30.99 percent of “production” trips, in other words, out-bound trips (which are 50 percent of all trip ends). Also, LED OnTheMap data from 2019 indicate that 90 percent of Surprise’s workers travel outside the city for work. In combination, these factors ( $0.3099 \times 0.50 \times 0.90 = 0.139$ ) account for 14 percent of additional production trips. The total adjustment factor for residential includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (14 percent of production trips) for a total of 64 percent.

\*<http://nhts.ornl.gov/publications.shtml> ; Summary of Travel Trends - Table "Daily Travel Statistics by Weekday vs. Weekend"

**Adjustment for Pass-By Trips**

Primary trips are defined as trips that are not pass-by trips. 100 percent of residential, industrial, warehouse, and public / institutional trips are assumed to be primary trips. For retail / commercial development and office development, the trip adjustment factor is less than 50 percent because these types of development attract vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For the average shopping center, ITE data indicate 45 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 55 percent of attraction trips have the retail / commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 55 percent multiplied by 50 percent, or approximately 28 percent of the trip ends. For office development, data published by Tindale-Oliver in the 2016 Hillsborough County Mobility Fee Study indicate 10 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 90 percent of attraction trips have the office site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 90 percent multiplied by 50 percent, or approximately 45 percent of the trip ends.

### Trip Length Weighting Factor

The development fee methodology includes a percentage adjustment, or weighting factor, to account for trip length variation by type of land use. As documented in Table 6a, Table 6b, and Table 6c of the 2017 National Household Travel Survey, the average trip length for all purposes equals 10.50 miles. Vehicle trips from residential development are approximately 117 percent of the average trip length. The residential trip length adjustment factor includes data on home-based work trips, social, and recreational purposes. Conversely, shopping trips associated with retail / commercial development are roughly 75 percent of the average trip length while other nonresidential development typically accounts for trips that are 73 percent of the average for all trips.

### Equivalent Demand Units

The Street Facilities IIP and development fees use an equivalent demand unit (EDU) to compare demand between land uses. An EDU represents demand generated by an average single family unit, and the EDUs shown below represent demand generated per development unit for each land use. The development unit for residential development is a dwelling unit, and the development unit for nonresidential development is 1,000 square feet of floor area (KSF). This analysis uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021).

**Figure S3: Ratio of Service Unit to Development Unit**

Land Use <sup>1</sup>	Development Unit <sup>2</sup>	Trip Generation Calculations					Traffic Impact Calculations			EDU <sup>7</sup> Factor
		Total Daily Trip Rate (veh/day)	% Primary Trips <sup>3</sup>	Trip End Split <sup>4</sup>	Combined Trip Adj. Factor	Adjusted Daily Trip Rate (veh/day)	Average Trip Length Weighting Factor <sup>5</sup>	Average Trip Length (miles) <sup>5</sup>	Daily Travel Demand (VMT) <sup>6</sup>	
Single-Family Detached (ITE LUC 210)	DWU	9.43	100%	64%	64%	6.04	117%	12.30	74.23	<b>1.00</b>
Multi-Family (ITE LUC 220)	DWU	6.74	100%	64%	64%	4.31	117%	12.30	53.06	<b>0.71</b>
Mobile Home (ITE LUC 240)	DWU	7.12	100%	64%	64%	4.56	117%	12.30	56.05	<b>0.76</b>
Industrial (ITE LUC 130)	KSF	3.37	100%	50%	50%	1.69	73%	7.70	12.97	<b>0.17</b>
Warehouse (ITE LUC 150)	KSF	1.71	100%	50%	50%	0.86	73%	7.70	6.58	<b>0.09</b>
Retail/Commercial (ITE LUC 820)	KSF	37.01	55%	50%	28%	10.18	75%	7.90	80.40	<b>1.08</b>
Office (ITE LUC 710)	KSF	10.84	90%	50%	45%	4.88	73%	7.70	37.56	<b>0.51</b>
Public/Institutional (ITE LUC 620)	KSF	6.75	100%	50%	50%	3.38	73%	7.70	25.99	<b>0.35</b>

1. ITE LUC stands for Institute of Transportation Engineers (ITE) *Trip Generation*, 11th Ed. Land Use Code (LUC). ITE is the source of the unadjusted trip generation rates used in this study.
2. Units of measure used for trip generation and impact fee calculations include "DWU" (Residential Dwelling Unit) and "KSF" (1,000 square feet).
3. % Primary Trips refers to the portion of trips that are not pass-by trips. 100% of residential, industrial, warehouse, and public/institutional trips are assumed to be primary trips. 55% of retail/commercial trips are assumed to be primary trips based on ITE Trip Generation Handbook, 3rd Ed. data indicating 45% pass-by traffic trips are typical during the PM peak hour. 90% of office trips are assumed to be primary trips based on detailed studies conducted as part of Tindale-Oliver 2016 Hillsborough County Mobility Fee Study.
4. Trip End is a term used to recognize that a single trip made from one land use to another is considered both an inbound trip generated by (i.e. attracted to) the land use defining the trip's termination point, and an outbound trip generated (i.e. produced) by the trip's origination point. These two trip ends only impact the travel route between them one time. To avoid double counting, it is necessary to discount those outbound/production trips that terminate internal to the service area. Production trips that terminate outside the service area should not be discounted, as they will not have been also recognized as an inbound trip for other development internal to the service area. Residential land uses account for >50% of trip ends because in Surprise, 90% of residents travel outside Surprise for work per the U.S. Census 2017 OnTheMap Inflow/Outflow Report. Work trips account for 31% of outbound trips per Table 30 in the FHWA 2017 National Household Travel Survey. Multiplying those two numbers by the 50% of trips that are outbound and then adding them to the 50% of trips that are inbound results in a total trip end split of 64% for residential land uses.
5. Average trip length value of 10.5 and trip length weighting factors were derived from Table 6b of the FHWA 2017 National Household Travel Survey.
6. VMT stands for vehicle miles traveled. One vehicle using one mile of road to complete a trip is equal to one vehicle-mile of demand.
7. EDU = Equivalent Demand Unit; the number of single-family residential DWU trips it would take to cause the same travel demand impact of a single development unit of any other type.

**PROJECTED DEMAND FOR SERVICES AND COSTS**

ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

The estimates and projections outlined in this section represent the EDUs used in the development of the Street Facilities IIP. To calculate EDUs, the analysis applies the EDU factors shown in Figure S3 to the development projections outlined in the *Land Use Assumptions* document.

**Equivalent Demand Units**

**South Service Area**

Existing development in the south service area represents 71,074 EDUs in the 2023 base year. Over the next 10 years, projected growth generates an additional 11,348 EDUs. In 2043, the anticipated ultimate buildout of the road network, projected development equals 86,959 EDUs.

**Figure S4: Projected Equivalent Demand Units – South Service Area**

South Equivalent Demand Units (EDU)				
Land Use	Existing (2023)	Growth (2023-2033)	Total (2033)	Ultimate (2043)
Single-Family Residential	49,777	4,841	54,618	56,743
Multi-Family Residential	6,844	4,184	11,028	11,514
Mobile Home	2,167	34	2,201	2,216
Industrial	345	307	652	879
Warehouse	475	116	591	677
Retail/Commercial	7,698	910	8,608	9,468
Office	1,582	831	2,413	3,109
Public/Institutional	2,186	125	2,311	2,353
<b>Total, South</b>	<b>71,074</b>	<b>11,348</b>	<b>82,422</b>	<b>86,959</b>

**North Service Area**

Existing development in the north service area represents 7,334 EDUs in the 2023 base year. Over the next 10 years, projected growth generates an additional 16,035 EDUs. In 2043, the anticipated ultimate buildout of the road network, projected development equals 37,233 EDUs.

**Figure S5: Projected Equivalent Demand Units – North Service Area**

North Equivalent Demand Units (EDU)				
Land Use	Existing (2023)	Growth (2023-2033)	Total (2033)	Ultimate (2043)
Single-Family Residential	6,489	13,189	19,678	31,423
Multi-Family Residential	209	1,824	2,033	2,307
Mobile Home	134	92	226	308
Industrial	11	18	29	45
Warehouse	4	7	11	17
Retail/Commercial	195	477	672	1,631
Office	76	267	343	936
Public/Institutional	216	161	377	566
<b>Total, North</b>	<b>7,334</b>	<b>16,035</b>	<b>23,369</b>	<b>37,233</b>

**West Service Area**

Existing development in the west service area represents 4,018 EDUs in the 2023 base year. Over the next 10 years, projected growth generates an additional 9,734 EDUs. In 2043, the anticipated ultimate buildout of the road network, projected development equals 23,215 EDUs.

**Figure S6: Projected Equivalent Demand Units – West Service Area**

West Equivalent Demand Units (EDU)				
Land Use	Existing (2023)	Growth (2023-2033)	Total (2033)	Ultimate (2043)
Single-Family Residential	3,668	8,993	12,661	20,896
Multi-Family Residential	28	134	162	390
Mobile Home	59	63	122	179
Industrial	0	4	4	17
Warehouse	0	2	2	7
Retail/Commercial	78	228	306	890
Office	74	142	216	400
Public/Institutional	111	168	279	436
<b>Total, West</b>	<b>4,018</b>	<b>9,734</b>	<b>13,752</b>	<b>23,215</b>

### Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The analysis uses an equity calculation to ensure the level of service used to calculate development fees does not exceed the existing level of service. This involves comparing the proportional relationship between the existing, growth (10-year), and ultimate roadway capacities to the existing, growth (10-year), and ultimate EDUs. If the growth share of EDUs divided by the growth share of capacity equals a ratio of one, future development will pay its proportionate share of planned major roadway improvements. If the ratio is less than one, development fees must be adjusted to ensure future development does not pay more than its proportionate share of planned major roadway improvements. If the ratio is greater than one, additional major roadway improvements may be added to the Street Facilities IIP.

### South Service Area

As shown below, the City of Surprise can construct up to 498,358 vehicle miles of capacity in the south service area without exceeding the 10-year share of EDUs. The Street Facilities IIP for the south service area will not exceed this amount.

**Figure S7: Projected Demand and LOS C Capacity – South Service Area**

South	LOS C Capacity (vehicle-miles)	LOS C Capacity % of Ultimate (2043)	EDUs	EDUs % of Ultimate (2043)	EDU % / Capacity % Ratio
Existing (2023) Major Roadways	1,908,248	50.0%	71,074	81.7%	1.64
10-Year IIP (2023-2033) Major Roadways	498,358	13.0%	11,348	13.0%	1.00
Ultimate (2043) Major Roadways	3,818,888	100.0%	86,959	100.0%	1.00

### North Service Area

The City of Surprise can construct up to 1,340,856 vehicle miles of capacity in the north service area without exceeding the 10-year share of EDUs. The Street Facilities IIP for the north service area will not exceed this amount.

**Figure S8: Projected Demand and LOS C Capacity – North Service Area**

North	LOS C Capacity (vehicle-miles)	LOS C Capacity % of Ultimate (2043)	EDUs	EDUs % of Ultimate (2043)	EDU % / Capacity % Ratio
Existing (2023) Major Roadways	272,739	8.8%	7,334	19.7%	2.25
10-Year IIP (2023-2033) Major Roadways	1,340,856	43.1%	16,035	43.1%	1.00
Ultimate (2043) Major Roadways	3,113,446	100.0%	37,233	100.0%	1.00



**West Service Area**

As shown below, the City of Surprise can construct up to 1,264,331 vehicle miles of capacity in the west service area without exceeding the 10-year share of EDUs. The Street Facilities IIP for the west service area will not exceed this amount.

**Figure S9: Projected Demand and LOS C Capacity – West Service Area**

West	LOS C Capacity (vehicle-miles)	LOS C Capacity % of Ultimate (2043)	EDUs	EDUs % of Ultimate (2043)	EDU % / Capacity % Ratio
Existing (2023) Major Roadways	412,441	13.7%	4,018	17.3%	1.27
10-Year IIP (2023-2033) Major Roadways	1,264,331	41.9%	9,734	41.9%	1.00
Ultimate (2043) Major Roadways	3,015,353	100.0%	23,215	100.0%	1.00

**Equity Evaluation**

Once the City of Surprise determined the improvements to include in the Street Facilities IIP, the next step was to perform an equity check to confirm that the capacity added by the improvements was proportional to EDU growth. Figure S10 compares the maximum allowable IIP capacity increase to the Street Facilities IIP capacity increase. With the increase in capacity from the Street Facilities IIP being less than the maximum allowable IIP capacity, there is no need to adjust the Street Facilities IIP for excess capacity. Appendix F includes a detailed list of planned major roadway improvements, by service area, included in the Streets Facilities IIP.

**Figure S10: Capacity Comparison**

Service Area	Maximum Allowable IIP Increase in Vehicle-Miles of LOS C Capacity	IIP Segments Increase in Vehicle-Miles of LOS C Capacity
South	498,358	6,341
North	1,340,856	11,455
West	1,264,331	94,699
Total	3,103,545	112,494

Note: Priority increases in capacity exclude improvements that do not increase the number of through lanes

**ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES**

ARS § 9-463.05(E)(1) requires:

*“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.”*

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.”*

**Roadway Capacity**

The City of Surprise General Plan 2035 outlines vehicle capacity by functional classification and identifies LOS C as the desired level of service for its road network. The Street Facilities IIP uses LOS C for roadways with medians and applies a five-percent reduction to LOS C for roadways with a two-way left-turn lane.

**Figure S11: Roadway Capacity**

Roadway Type	# of Travel Lanes	LOS A	LOS B	LOS C	LOS C w/ TWLTL*	LOS D	LOS E
Freeways	4	47,940	55,930	63,920	-	71,910	79,900
	6	73,980	86,310	98,640	-	110,970	123,300
	8	100,080	116,760	133,440	-	150,120	166,800
	10	126,180	147,210	168,240	-	189,270	210,300
Limited Access Parkway	4	29,280	34,160	39,040	-	43,920	48,800
	6	43,740	51,030	58,320	-	65,610	72,900
Major Arterial	8	57,960	67,620	77,280	-	86,940	96,600
	5	30,480	35,560	40,640	38,610	45,720	50,800
Minor Arterial	6	36,480	42,560	48,640	46,210	54,720	60,800
	3	12,960	15,120	17,280	16,420	19,440	21,600
Major Collector	4	21,540	25,130	28,720	27,280	32,310	35,900
	2	5,100	5,950	6,800	6,460	7,650	8,500
	3	8,520	9,940	11,360	10,790	12,780	14,200
Minor Collector	4	10,560	12,320	14,080	13,380	15,840	17,600
	2	3,360	3,920	4,480	-	5,040	5,600
Local Street	2	1,200	1,400	1,600	-	1,800	2,000

\*Capacity reduction of 5% assumed for Major Collectors, Minor Arterials, and Major Arterials if road has two-way left-turn lane (TWLTL) instead of median per City of Surprise General Plan 2035, desired LOS level is LOS C

**Major Roadway Network**

Shown below in Figure S12, Kimley-Horn provided an inventory of existing and planned major roadway segments. The existing major roadway network consists of 134.78 centerline miles and 2,593,428 vehicle miles of capacity (VMC). The ultimate major roadway network will include 248.75 centerline miles and 9,947,687 VMC. See Appendix E for a detailed inventory.

**Figure S12: Major Roadway Network**

Service Area	Existing Major Street Network Centerline Length (miles)	Ultimate Major Street Network Centerline Length (miles)	Existing Vehicle-Miles of LOS C Capacity	Ultimate Vehicle-Miles of LOS C Capacity
South	79.64	95.37	1,908,248	3,818,888
North	25.82	79.79	272,739	3,113,446
West	29.32	73.59	412,441	3,015,353
<b>Total</b>	<b>134.78</b>	<b>248.75</b>	<b>2,593,428</b>	<b>9,947,687</b>

**Major Roadway Construction Costs**

Shown below, Figure S13 includes typical major roadway construction costs used in the Street Facilities IIP for one mile of minor arterial, major arterial, and parkway. State statutes regarding development fees indicate costs must be related to improvements needed to accommodate growth. For street facilities development fees, agencies typically interpret this to mean that any items related to increasing roadway capacity can be included. Items not related to roadway capacity, such as sidewalks, streetlights, storm drains, and contractor mobilization are usually excluded. Since right-of-way is often dedicated by developers, right-of-way costs are excluded from the development fee calculations. Figure S13 shows the proposed bid items, quantities, and unit costs for one mile of minor arterial (four lanes), major arterial (six lanes), and parkway (six lanes) included in the development fee calculations.

Some roadway segments have additional constraints or improvement needs beyond the typical major roadway sections. For example, relocating a large power pole or well, or constructing a large box culvert, increases the cost of an improvement project. These costs could be present on some of the roadway segments included in the Street Facilities IIP and will be added on top of the typical costs on a segment-by-segment basis depending on the needs of each segment. Appendix D includes a detailed breakdown of unit costs used in the Street Facilities IIP.

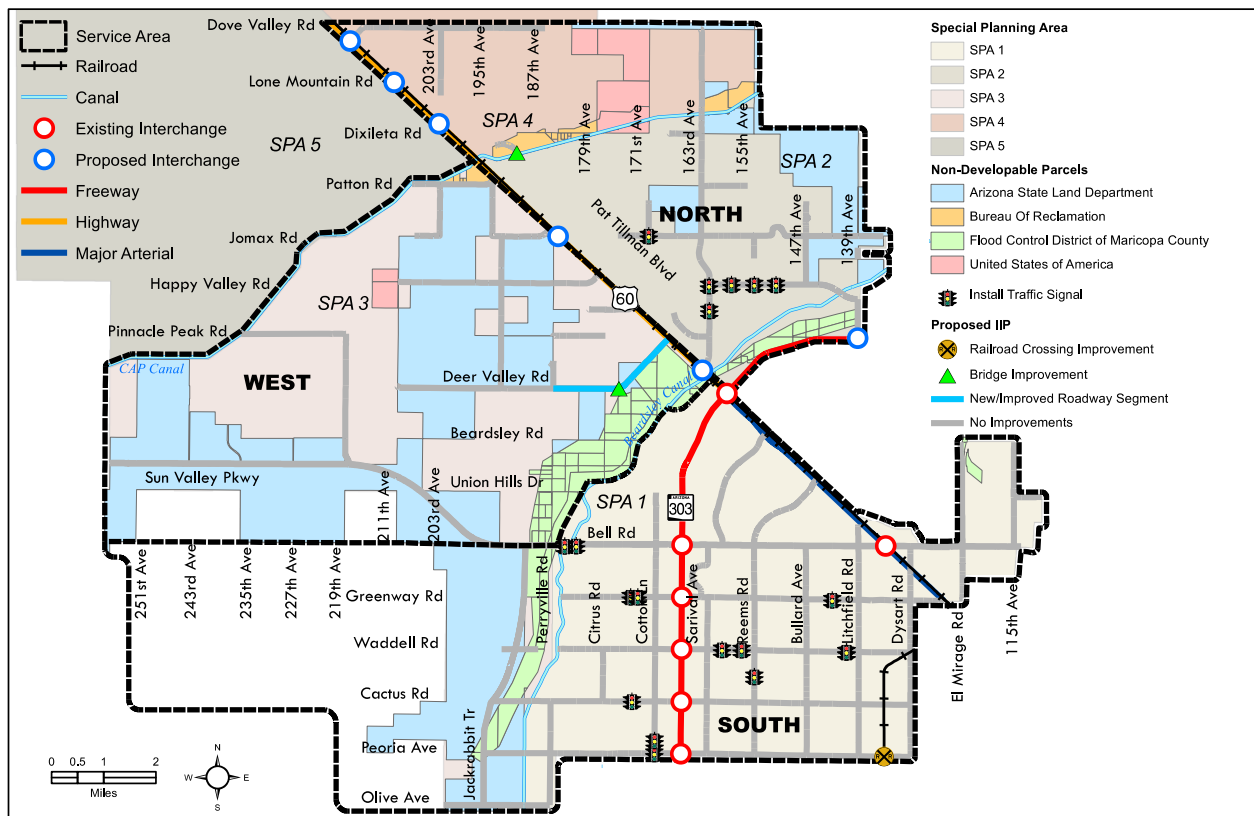
**Figure S13: Roadway Construction Costs**

Cross-Section Type		Capacity (veh/day)	Total Roadway Construction Cost (per mile)	IIP Costs Only Roadway Construction Cost (per mile)
Number of Lanes	Functional Classification			
4	Minor Arterial	28,720	\$20,553,361	\$7,129,093
6	Major Arterial	48,640	\$23,837,737	\$8,607,195
6	Parkway	58,320	\$30,995,772	\$10,345,954

### Major Roadway Improvements – Plan-Based

The map in Figure S14 shows the planned major roadway improvements included in the Street Facilities IIP. The street facilities development fees use a plan-based methodology to allocate costs related to major roadway improvements to future development during the next 10 years. City staff identified major roadway improvements within the city limits that provide a regional benefit and were unlikely to be constructed by a developer through the City's half-street improvement requirements (e.g., canal and drainageway bridges, and at-grade railroad crossings). City staff also identified traffic signals needed to serve future development within the next 10 years. The traffic signal component of the street facilities development fees will replace the existing in-lieu fee for traffic signals. The Street Facilities IIP also includes improvements to the north half of Deer Valley Road between US 60 and 187<sup>th</sup> Avenue. Appendix F includes a detailed list of planned major roadway improvements, by service area, included in the Streets Facilities IIP.

**Figure S14: Planned Major Roadway Improvements**



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City of Surprise Transportation Development Impact Fee and IIP

Revised Draft Infrastructure Improvement Plan (IIP)

The following figure provides the total construction cost of planned major roadway improvements included in the Street Facilities IIP. The costs shown in Figure S15 are based on the construction costs detailed in Appendix D and the planned improvements identified in Figure S14. Detailed descriptions and cost estimates for each major roadway improvement included in the Street Facilities IIP can be found in Appendix F.

**Figure S15: Planned Major Roadway Improvements Costs**

Street Segment			South IIP Scope of Improvements	Preliminary Estimate of IIP Roadway Construction Cost
Description	From	To		
Peoria Ave	Railroad Crossing	Railroad Crossing	widen at-grade railroad crossing to 4 lanes	\$5,086,552
Traffic Signals*			install traffic signals at 12 locations	\$11,007,000
<b>Total, South</b>				<b>\$16,093,552</b>

\*See Appendix F for more detail

Street Segment			North IIP Scope of Improvements	Preliminary Estimate of IIP Roadway Construction Cost
Description	From	To		
Pat Tillman Blvd	CAP Canal	CAP Canal	6-lane bridge over CAP Canal	\$6,309,904
Traffic Signals*			install traffic signals at 6 locations	\$5,504,000
<b>Total, North</b>				<b>\$11,813,904</b>

\*See Appendix F for more detail

Street Segment			West IIP Scope of Improvements	Preliminary Estimate of IIP Roadway Construction Cost
Description	From	To		
Deer Valley Rd	US 60 / Grand Ave	178th Ave	construct north half-street improvements (3 westbound lanes) with 4 culvert extensions	\$6,750,796
Deer Valley Rd	178th Ave	187th Ave	construct north half-street improvements (3 westbound lanes) with 3-lane bridge over wash and 1 culvert extension	\$17,985,943
<b>Total, West</b>				<b>\$24,736,739</b>

**Development Fee Report – Plan-Based**

The cost to prepare the Street Facilities IIP and related Development Fee Report totals \$228,950. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from the *Land Use Assumptions* document, the cost is \$11.79 per EDU.

**Figure S16: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share	Service Unit	5-Year Change	Cost per Service Unit
Street	\$228,950	All Development <u>100%</u>	EDU	<u>19,417</u>	\$11.79

## STREET FACILITIES DEVELOPMENT FEES

### Revenue Credit/Offset

A revenue credit/offset is necessary for development fees, because Surprise's construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

### South Service Area

Infrastructure components and cost factors for street facilities in the south service area are summarized in the upper portion of Figure S17. The cost per service unit for street facilities is \$1,208.30 per EDU.

Street facilities development fees for residential development are assessed according to the number of EDUs per housing unit. The fee of \$1,208 for a single-family unit is calculated using a cost per service unit of \$1,208.30 per EDU multiplied by a demand unit of 1.00 EDU per housing unit.

Street facilities development fees for nonresidential development are assessed according to the number of EDUs per 1,000 square feet. The fee of \$205 per 1,000 square feet of industrial development is derived from a cost per service unit of \$1,208.30 per EDU multiplied by a demand unit of 0.17 EDUs per 1,000 square feet.

**Figure S17: Street Facilities Development Fees**

Fee Component	Cost per EDU
Major Roadway Improvements	\$1,418.18
Development Fee Report	\$11.79
Excess Construction Sales Tax	(\$221.67)
Total	\$1,208.30

Residential Fees per Unit				
Development Type	EDU per Unit <sup>1</sup>	Proposed Fees	Current Fees	Difference
Single-Family	1.00	\$1,208	\$0	\$1,208
Multi-Family	0.71	\$858	\$0	\$858
Mobile Home	0.76	\$918	\$0	\$918

Nonresidential Fees per 1,000 Square Feet				
Development Type	EDU per 1,000 Sq Ft <sup>1</sup>	Proposed Fees	Current Fees	Difference
Industrial	0.17	\$205	\$0	\$205
Warehouse	0.09	\$109	\$0	\$109
Retail/Commercial	1.08	\$1,305	\$0	\$1,305
Office	0.51	\$616	\$0	\$616
Public/Institutional	0.35	\$423	\$0	\$423

1. See Land Use Assumptions



**North Service Area**

Infrastructure components and cost factors for street facilities in the north service area are summarized in the upper portion of Figure S18. The cost per service unit for street facilities is \$526.88 per EDU.

Street facilities development fees for residential development are assessed according to the number of EDUs per housing unit. The fee of \$527 for a single-family unit is calculated using a cost per service unit of \$526.88 per EDU multiplied by a demand unit of 1.00 EDU per housing unit.

Street facilities development fees for nonresidential development are assessed according to the number of EDUs per 1,000 square feet. The fee of \$90 per 1,000 square feet of industrial development is derived from a cost per service unit of \$526.88 per EDU multiplied by a demand unit of 0.17 EDUs per 1,000 square feet.

**Figure S18: Street Facilities Development Fees**

Fee Component	Cost per EDU
Major Roadway Improvements	\$736.76
Development Fee Report	\$11.79
Excess Construction Sales Tax	(\$221.67)
<b>Total</b>	<b>\$526.88</b>

Residential Fees per Unit				
Development Type	EDU per Unit <sup>1</sup>	Proposed Fees	Current Fees	Difference
Single-Family	1.00	\$527	\$0	\$527
Multi-Family	0.71	\$374	\$0	\$374
Mobile Home	0.76	\$400	\$0	\$400

Nonresidential Fees per 1,000 Square Feet				
Development Type	EDU per 1,000 Sq Ft <sup>1</sup>	Proposed Fees	Current Fees	Difference
Industrial	0.17	\$90	\$0	\$90
Warehouse	0.09	\$47	\$0	\$47
Retail/Commercial	1.08	\$569	\$0	\$569
Office	0.51	\$269	\$0	\$269
Public/Institutional	0.35	\$184	\$0	\$184

1. See Land Use Assumptions

**West Service Area**

Infrastructure components and cost factors for street facilities in the west service area are summarized in the upper portion of Figure S19. The cost per service unit for street facilities is \$2,331.39 per EDU.

Street facilities development fees for residential development are assessed according to the number of EDUs per housing unit. The fee of \$2,331 for a single-family unit is calculated using a cost per service unit of \$2,331.39 per EDU multiplied by a demand unit of 1.00 EDU per housing unit.

Street facilities development fees for nonresidential development are assessed according to the number of EDUs per 1,000 square feet. The fee of \$396 per 1,000 square feet of industrial development is derived from a cost per service unit of \$2,331.39 per EDU multiplied by a demand unit of 0.17 EDUs per 1,000 square feet.

**Figure S19: Street Facilities Development Fees**

Fee Component	Cost per EDU
Major Roadway Improvements	\$2,541.27
Development Fee Report	\$11.79
Excess Construction Sales Tax	(\$221.67)
<b>Total</b>	<b>\$2,331.39</b>

Residential Fees per Unit				
Development Type	EDU per Unit <sup>1</sup>	Proposed Fees	Current Fees	Difference
Single-Family	1.00	\$2,331	\$0	\$2,331
Multi-Family	0.71	\$1,655	\$0	\$1,655
Mobile Home	0.76	\$1,772	\$0	\$1,772

Nonresidential Fees per 1,000 Square Feet				
Development Type	EDU per 1,000 Sq Ft <sup>1</sup>	Proposed Fees	Current Fees	Difference
Industrial	0.17	\$396	\$0	\$396
Warehouse	0.09	\$210	\$0	\$210
Retail/Commercial	1.08	\$2,518	\$0	\$2,518
Office	0.51	\$1,189	\$0	\$1,189
Public/Institutional	0.35	\$816	\$0	\$816

1. See Land Use Assumptions

**STREET FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains revenue forecasts required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).

**South Service Area**

Projected fee revenue shown in Figure S20 is based on the development projections in the *Land Use Assumptions* document and the updated street facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 10 years equals \$14,762,275, and projected expenditures equal \$14,762,278.

**Figure S20: Street Facilities Development Fee Revenue**

Fee Component	Growth Share	Existing Share	Total
Major Roadway Improvements	\$16,093,552	\$0	\$16,093,552
Development Fee Report	\$74,792	\$0	\$74,792
Excess Construction Sales Tax	(\$1,406,065)		(\$1,406,065)
<b>Total</b>	<b>\$14,762,278</b>	<b>\$0</b>	<b>\$14,762,278</b>

Year	Single Family	Multi-Family	Mobile Home	Industrial	Warehouse	Ret/Comm	Office	Public/Inst
	\$1,208 per unit	\$858 per unit	\$918 per unit	\$205 per 1,000 sq ft	\$109 per 1,000 sq ft	\$1,305 per 1,000 sq ft	\$616 per 1,000 sq ft	\$423 per 1,000 sq ft
	Hsg Unit	Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF	KSF
Base 2023	49,777	9,639	2,852	2,030	5,281	7,128	3,103	6,246
Year 1 2024	50,378	10,229	2,857	2,231	5,424	7,214	3,277	6,292
Year 2 2025	50,978	10,818	2,863	2,432	5,568	7,300	3,451	6,337
Year 3 2026	51,579	11,407	2,868	2,633	5,711	7,386	3,626	6,383
Year 4 2027	52,179	11,996	2,874	2,834	5,855	7,473	3,800	6,429
Year 5 2028	52,780	12,586	2,879	3,036	5,998	7,559	3,974	6,475
Year 6 2029	53,380	13,175	2,885	3,237	6,141	7,645	4,149	6,521
Year 7 2030	53,981	13,764	2,890	3,438	6,285	7,731	4,323	6,567
Year 8 2031	54,193	14,354	2,892	3,571	6,380	7,811	4,459	6,579
Year 9 2032	54,406	14,943	2,894	3,705	6,475	7,891	4,596	6,591
Year 10 2033	54,618	15,532	2,896	3,838	6,570	7,970	4,732	6,603
10-Year Increase	4,841	5,893	44	1,808	1,289	843	1,629	357
Projected Revenue	\$6,235,364	\$5,494,636	\$43,014	\$400,086	\$150,960	\$1,192,710	\$1,085,150	\$160,356

Projected Fee Revenue	\$14,762,275
Total Expenditures	\$14,762,278

**North Service Area**

Projected fee revenue shown in Figure S21 is based on the development projections in the *Land Use Assumptions* document and the updated street facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 10 years equals \$10,102,293, and projected expenditures equal \$10,103,586.

**Figure S21: Street Facilities Development Fee Revenue**

Fee Component	Growth Share	Existing Share	Total
Major Roadway Improvements	\$11,813,904	\$0	\$11,813,904
Development Fee Report	\$96,087	\$0	\$96,087
Excess Construction Sales Tax	(\$1,806,405)		(\$1,806,405)
<b>Total</b>	<b>\$10,103,586</b>	<b>\$0</b>	<b>\$10,103,586</b>

		Single Family \$527 per unit	Multi-Family \$374 per unit	Mobile Home \$400 per unit	Industrial \$90 per 1,000 sq ft	Warehouse \$47 per 1,000 sq ft	Ret/Comm \$569 per 1,000 sq ft	Office \$269 per 1,000 sq ft	Public/Inst \$184 per 1,000 sq ft
Year		Hsg Unit	Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF	KSF
Base	2023	6,489	295	177	66	47	181	149	617
Year 1	2024	7,870	552	189	77	55	206	174	659
Year 2	2025	9,250	809	202	88	63	231	199	701
Year 3	2026	10,631	1,066	215	99	71	256	224	743
Year 4	2027	12,012	1,323	227	110	78	281	249	786
Year 5	2028	13,393	1,580	240	121	86	306	273	828
Year 6	2029	14,773	1,837	253	132	94	331	298	870
Year 7	2030	16,154	2,094	265	143	102	356	323	913
Year 8	2031	17,329	2,350	276	153	109	445	439	967
Year 9	2032	18,503	2,607	287	162	116	534	556	1,021
Year 10	2033	19,678	2,863	298	172	122	622	672	1,075
10-Year Increase		13,189	2,569	121	106	75	442	523	459
Projected Revenue		\$8,267,995	\$1,152,110	\$57,643	\$11,256	\$4,232	\$323,111	\$183,215	\$102,731

Projected Fee Revenue	\$10,102,293
Total Expenditures	\$10,103,586

**West Service Area**

Projected fee revenue shown in Figure S22 is based on the development projections in the *Land Use Assumptions* document and the updated street facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 10 years equals \$23,699,389, and projected expenditures equal \$23,703,076.

**Figure S22: Street Facilities Development Fee Revenue**

Fee Component	Growth Share	Existing Share	Total
Major Roadway Improvements	\$24,736,739	\$0	\$24,736,739
Development Fee Report	\$58,072	\$0	\$58,072
Excess Construction Sales Tax	(\$1,091,735)		(\$1,091,735)
<b>Total</b>	<b>\$23,703,076</b>	<b>\$0</b>	<b>\$23,703,076</b>

		Single Family \$2,331 per unit	Multi-Family \$1,655 per unit	Mobile Home \$1,772 per unit	Industrial \$396 per 1,000 sq ft	Warehouse \$210 per 1,000 sq ft	Ret/Comm \$2,518 per 1,000 sq ft	Office \$1,189 per 1,000 sq ft	Public/Inst \$816 per 1,000 sq ft
Year		Hsg Unit	Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF	KSF
Base	2023	3,668	40	77	2	4	72	145	317
Year 1	2024	4,600	53	86	3	4	79	169	366
Year 2	2025	5,532	66	94	3	4	86	193	416
Year 3	2026	6,463	79	103	3	5	93	217	465
Year 4	2027	7,395	92	111	4	5	100	241	515
Year 5	2028	8,327	106	120	4	5	107	266	564
Year 6	2029	9,259	119	129	4	6	114	290	614
Year 7	2030	10,190	132	137	5	6	121	314	663
Year 8	2031	11,014	164	145	12	11	175	350	708
Year 9	2032	11,837	196	152	19	16	229	386	753
Year 10	2033	12,661	228	160	27	21	283	422	797
10-Year Increase		8,993	189	82	24	17	211	278	481
Projected Revenue		\$21,875,405	\$330,788	\$151,555	\$10,305	\$3,864	\$571,156	\$346,837	\$409,479

Projected Fee Revenue	\$23,699,389
Total Expenditures	\$23,703,076

**10-YEAR CAPITAL PLAN**

The figure shown below includes planned street capital expenditures during the next 10 years.

**Figure S23: Street Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	Peoria Ave: Solar Canyon Way to 136th Ave (RR Crossing)	2024-2033	\$5,086,552
CIP	Cactus Road at Magnolia Drive	2024-2033	\$917,250
CIP	Greenway Road at 175th Avenue	2024-2033	\$917,250
CIP	Greenway Road at Verde Vista Drive	2024-2033	\$917,250
CIP	Sweetwater Avenue at Cotton Lane	2024-2033	\$917,250
CIP	Greenway Road at Civic Center Road	2024-2033	\$917,250
CIP	Peoria Avenue at Cotton Lane	2024-2033	\$917,250
CIP	Sweetwater Avenue at Reems Road	2024-2033	\$917,250
CIP	Waddell Road at 157th Avenue	2024-2033	\$917,250
CIP	Waddell Road at Legacy Park Way	2024-2033	\$917,250
CIP	Bell Road at 183rd Avenue	2024-2033	\$917,250
CIP	Bell Road at Bell Point Boulevard	2024-2033	\$917,250
CIP	Cotton Lane at 1/4 mile north of Peoria Ave	2024-2033	\$917,250
Study Cost	Development Fee Update	2024-2029	\$74,792
Subtotal, South			\$16,168,344
CIP	Pat Tillman Blvd: Asante Blvd to CAP Canal (Bridge)	2024-2033	\$3,154,952
CIP	Pat Tillman Blvd: CAP Canal to Dove Valley Rd (Bridge)	2024-2033	\$3,154,952
CIP	151st Avenue at Happy Valley Road	2024-2033	\$917,333
CIP	155th Avenue at Happy Valley Road	2024-2033	\$917,333
CIP	159th Avenue at Happy Valley Road	2024-2033	\$917,333
CIP	163rd Avenue at Asante Boulevard	2024-2033	\$917,333
CIP	163rd Avenue at Happy Valley Road	2024-2033	\$917,333
CIP	171st Avenue at Jomax Road	2024-2033	\$917,333
Study Cost	Development Fee Update	2024-2029	\$96,087
Subtotal, North			\$11,909,991
CIP	Deer Valley Rd: US 60/Grand Ave to 178th Ave	2024-2033	\$6,750,796
CIP	Deer Valley Rd: 178th Ave to 195th Ave	2024-2033	\$17,985,943
Study Cost	Development Fee Update	2024-2029	\$58,072
Subtotal, West			\$24,794,811
Total			\$52,873,145



## WATER FACILITIES IIP

ARS § 9-463.05 (T)(7)(a) defines the eligible facilities and assets for the Water Facilities IIP:

*“Water facilities, including the supply, transportation, treatment, purification and distribution of water, and any appurtenances for those facilities.”*

The Water Facilities IIP includes components for wells, arsenic treatment, booster pump stations, storage tanks, water lines (SPA 1 only), land, and the cost of preparing the Water Facilities IIP and related Development Fee Report. SPA 1 uses a combined cost recovery and plan-based methodology. SPA 2 and SPA 3 use a plan-based methodology.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Water Facilities IIP and development fees will allocate the cost of necessary public services between both residential and nonresidential development using max day demand factors.

### SERVICE AREA

As shown in Figure W1, the City’s Municipal Planning Area (MPA) is divided into six Special Planning Areas (SPAs). The SPAs are separated by major geographic barriers - Grand Avenue/BNSF Railroad line, the Beardsley Canal, the Central Arizona Project (CAP) Canal, and SR 74. The SPA borders form natural boundaries for the water service areas. Surprise will assess water facilities development fees in SPA 1, SPA 2, SPA 3, and SPA 4.

The City’s existing water facilities consist of three separate systems located in SPA 1, SPA 2, and SPA 3 with limited potential for interconnection. The existing service areas are acceptable for these facilities as they are defined as the incorporated area, or City utility service area, and may be expanded in the future within the respective SPAs. The water system relies on groundwater, which is pumped to the surface by wells. The wells are connected by transmission lines that convey the water to a water supply facility (WSF), where the water is treated, stored in tanks, and pumped into a system of pressurized distribution lines. The WSFs are interconnected within SPAs where practical to provide emergency backup. It is reasonable to use the SPAs as water service areas.

The City is not the only water provider in its planning area. In addition to individual developments that use on-site wells and do not connect to the City’s distribution system, there are also several private water providers.

Figure W1: Water Facilities Development Fee Service Area

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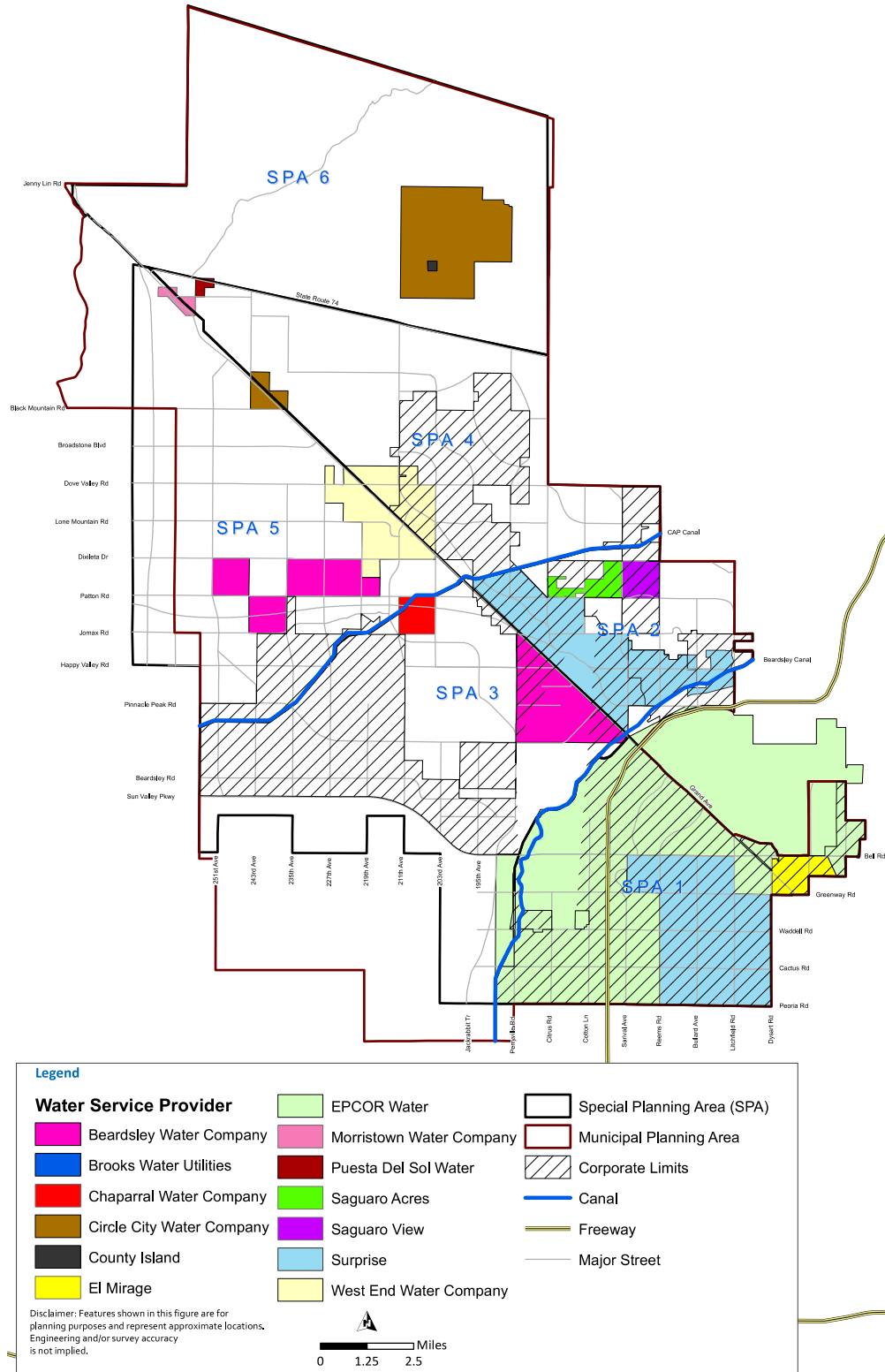


Figure 1.2 Water Service Providers

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**RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT**

ARS § 9-463.05(E)(4) 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.”*

To calculate water and wastewater development fees, the demand associated with different types of customers must be expressed in a common unit of measurement called a service unit. The service unit for the City’s water and wastewater fees is an equivalent demand unit (EDU). An EDU is a single-family dwelling unit, or its equivalent in terms of water demand, defined as the potential demand resulting from a 0.75-inch diameter or smaller meter. According to the 2022 Water Resource Master Plan, average day demand from a single-family unit is 320 gallons. The analysis uses average day demand of 320 gallons per EDU.

The number of water service units associated with meters larger than 0.75 inches is determined by the capacity of the water meter relative to the capacity of a 0.75-inch meter. Figure W2 presents EDU multipliers for various meter sizes based on meter capacities from the American Water Works Association.

**Figure W2: Ratio of Service Unit to Development Unit**

Demand per Equivalent Demand Unit	
Development Type	Average Day Demand <sup>1</sup>
Single Family (EDU)	320

Demand per Equivalent Demand Unit		
Meter Size	Capacity Ratio <sup>2</sup>	Average Day Demand
0.75-inch	1.00	320
1.00-inch	1.67	534
1.50-inch	3.33	1,066
2.00-inch	5.33	1,706
3.00-inch	10.67	3,414
4.00-inch	16.67	5,334
6.00-inch	33.33	10,666
8.00-inch	53.33	17,066

1. 2022 Water Resource Master Plan
2. AWWA Manual of Water Supply Practices M-1, 7th Edition

**ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES**

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.”*

**Existing Demand**

Using water demand factors from the 2022 Water Resource Master Plan, average day demand from Surprise water customers in 2023 is approximately 10.11 million gallons.

**Figure W3: Existing Demand**

Year	Average Day Demand (mgd)				Equivalent Demand Units (EDU)			
	SPA 1	SPA 2	SPA 3	Total	SPA 1	SPA 2	SPA 3	Total
Base 2023	7.51	1.93	0.67	10.11	23,469	6,037	2,080	31,586

Level of service (LOS) generally refers to the ratio of capacity to demand. One of the principles of development fee analysis is that future development should not be required to pay for a higher LOS than existing development currently receives. Consequently, it is important to determine the existing LOS.

For water facilities, the capacity of water production facilities is generally used as reflective of the capacity of the entire water system. However, some components of the system may have more capacity or less capacity than needed for full utilization of production facilities. The existing water system consists of wells, water supply facilities (WSFs) consisting of booster pump stations, storage tanks, and water treatment facilities serving a group of wells, transmission lines from wells to WSFs, distribution lines from WSFs to customers, and land for wells and WSFs.

**Wells**

Existing well production capacity is summarized in Figure W4. Total capacity of individual wells is shown in acre-feet per year (ac-ft/yr) and millions of gallons per day (MGD). The City’s design criteria indicate the capacity of a system of wells should be measured in terms of firm capacity (total capacity less the capacity of the largest well) to account for the eventuality that a well may be out of service. Firm capacity is determined at the level of the group of wells served by a water supply facility. Existing well firm capacity is 19.56 million gallons for SPA 1, 5.72 million gallons for SPA 2, and 2.45 million gallons for SPA 3.

**Figure W4: Existing Well Firm Capacity**

Description	Max Permitted Volume		Firm Capacity
	(ac-ft/yr)	(mgd)	
<b>SPA 1</b>			
Mountain Vista Ranch Water Supply Facility			
Mountain Vista Ranch 1	4,032	3.60	n/a
Mountain Vista Ranch 2	2,178	1.94	1.94
<b>Subtotal, Mountain Vista Ranch WSF</b>	<b>6,210</b>	<b>5.54</b>	<b>1.94</b>
Ashton Ranch Water Supply Facility			
Ashton Ranch 1	3,064	2.74	2.74
Orchards	4,816	4.30	n/a
Surprise Center	1,460	1.30	1.30
Royal Ranch	1,872	1.67	1.67
Sierra Verde	2,100	1.88	1.88
<b>Subtotal, Ashton Ranch WSF</b>	<b>13,312</b>	<b>11.89</b>	<b>7.59</b>
Roseview Water Supply Facility			
Roseview	839	0.75	n/a
Litchfield Manor	710	0.63	0.63
<b>Subtotal, Roseview WSF</b>	<b>1,549</b>	<b>1.38</b>	<b>0.63</b>
Rancho Gabriela Water Supply Facility			
Rancho Gabriela 1	1,290	1.15	1.15
Rancho Gabriela 2	971	0.87	0.87
Surprise Pointe	1,210	1.08	1.08
Summit	2,903	2.59	2.59
Marley Park 1	4,032	3.60	n/a
Marley Park 2	928	0.83	0.83
Marley Park 3	3,226	2.88	2.88
<b>Subtotal, Rancho Gabriela WSF</b>	<b>14,560</b>	<b>13.00</b>	<b>9.40</b>
<b>Subtotal, SPA 1</b>	<b>35,631</b>	<b>31.81</b>	<b>19.56</b>
<b>SPA 2</b>			
Desert Oasis Water Supply Facility			
Desert Oasis 1	1,258	1.12	1.12
Desert Oasis 2	1,291	1.15	1.15
Asante 1	1,935	1.73	n/a
Asante 4	1,435	1.28	1.28
<b>Subtotal, Desert Oasis WSF</b>	<b>5,919</b>	<b>5.28</b>	<b>3.56</b>
Rancho Mercado Water Supply Facility			
Rancho Mercado 1	2,421	2.16	2.16
Rancho Mercado 2	2,421	2.16	n/a
<b>Subtotal, Rancho Mercado WSF</b>	<b>4,842</b>	<b>4.32</b>	<b>2.16</b>
<b>Subtotal, SPA 2</b>	<b>10,761</b>	<b>9.61</b>	<b>5.72</b>
<b>SPA 3</b>			
West Deer Valley Water Supply Facility			
Buena Vista 1	2,870	2.56	n/a
Buena Vista 2	2,742	2.45	2.45
<b>Subtotal, West Deer Valley WSF</b>	<b>5,612</b>	<b>5.01</b>	<b>2.45</b>
<b>Subtotal, SPA 3</b>	<b>5,612</b>	<b>5.01</b>	<b>2.45</b>
<b>Total</b>	<b>52,004</b>	<b>46.43</b>	<b>27.73</b>

Source: 2022 Water Resource Master Plan, Table 4.1

Firm capacity deals with the reliability of the well system to produce water. That capacity must be adequate to accommodate periods of peak water demand. The City’s water design criteria require firm capacity be adequate to accommodate max day demand (two times average day demand). The existing levels of service for wells in SPA 1, SPA 2, and SPA 3 are summarized in Figure W5. Each SPA has enough capacity to accommodate current max day demand.

**Figure W5: Existing Well Level of Service**

Existing Level of Service for Wells	SPA 1	SPA 2	SPA 3	Total
Average Day Demand (mgd), 2023	7.51	1.93	0.67	10.11
x Peaking Factor <sup>1</sup>	2.00	2.00	2.00	2.00
Max Day Demand (mgd), 2023	15.02	3.86	1.33	20.21
Long-Term Firm Capacity (mgd)	19.56	5.72	2.45	27.73
– Max Day Demand (mgd), 2023	(15.02)	(3.86)	(1.33)	(20.21)
Excess Capacity (mgd)	4.54	1.86	1.12	7.52
÷ Long-Term Firm Capacity (mgd)	19.56	5.72	2.45	27.73
Percent Excess Capacity	23.2%	32.5%	45.7%	27.1%

1. 2022 Water Resource Master Plan

### Other System Components

SPA 1 is the service area with the most developed water system, while SPA 2 and SPA 3 have smaller systems. Figure W6 shows quantities for other system components of the existing water systems in the three SPAs (line costs per foot generally increase proportionally with the inches of pipe diameter, making inch-feet a reasonable summary unit for comparison). The quantities are then converted into quantities per MGD of well capacity. Arsenic treatment has been omitted from this analysis, because the need for treatment varies by location.

**Figure W6: Existing Level of Service for Other System Components**

Description	Unit	Existing Quantity			Quantity per Well MGD		
		SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
Wells	mgd	19.56	5.72	2.45	1.00	1.00	1.00
Booster Pump Stations	mgd	43.78	21.60	7.92	2.24	3.78	3.23
Storage Tanks	mg	12.87	5.02	1.50	0.66	0.88	0.61
Water Lines	in.-ft (000s)	5,644	1,525	255	288.50	266.75	104.02
Land	acres	31.56	5.05	5.00	1.61	0.88	2.04

Source: Surprise Water Resource Management Department

Description	Unit	Existing Quantity			Quantity per Well MGD		
		SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
Wells	mgd	19.56	5.72	2.45	1.00	1.00	1.00
Booster Pump Stations	mgd	43.78	21.60	4.87	2.24	3.78	1.99
Storage Tanks	mg	12.87	5.02	1.50	0.66	0.88	0.61
Water Lines	in.-ft (000s)	5,644	1,525	255	288.50	266.75	104.02
Land	acres	31.56	5.05	5.00	1.61	0.88	2.04



**PROJECTED DEMAND FOR SERVICES AND COSTS**

ARS § 9-463.05(E)(1) requires:

*“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.”*

ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

**Projected Demand**

Shown below, Figure W7 includes projected average day demand over the next 10 years. The analysis uses projected average day water demand from the 2022 Water Resource Master Plan. Projected average day demand increases by approximately 7.17 million gallons over the next 10 years.

**Figure W7: Projected Demand**

Year	Average Day Demand (mgd)				Equivalent Demand Units (EDU)			
	SPA 1	SPA 2	SPA 3	Total	SPA 1	SPA 2	SPA 3	Total
Base 2023	7.51	1.93	0.67	10.11	23,469	6,037	2,080	31,586
1 2024	7.88	2.42	0.70	11.00	24,613	7,573	2,185	34,372
2 2025	8.24	2.92	0.73	11.89	25,757	9,110	2,291	37,158
3 2026	8.50	3.41	0.78	12.68	26,550	10,645	2,424	39,619
4 2027	8.75	3.90	0.82	13.47	27,344	12,181	2,556	42,081
5 2028	9.00	4.39	0.86	14.25	28,137	13,716	2,689	44,542
6 2029	9.26	4.88	0.90	15.04	28,931	15,251	2,822	47,004
7 2030	9.51	5.37	0.95	15.83	29,724	16,786	2,955	49,465
8 2031	9.56	5.63	1.12	16.31	29,879	17,604	3,487	50,970
9 2032	9.61	5.89	1.29	16.79	30,034	18,421	4,020	52,474
10 2033	9.66	6.16	1.46	17.27	30,188	19,239	4,552	53,979
10-Yr Increase	2.15	4.22	0.79	7.17	6,719	13,202	2,472	22,393

Shown below, Figure W8 shows the projected 2033 level of service for wells in each SPA. Based on projected max day demand and existing firm capacity, SPA 1 will have 0.24 million gallons of available capacity, SPA 2 will have a deficit of 6.59 million gallons, and SPA 3 will have a deficit of 0.46 million gallons.

**Figure W8: Future Well Level of Service**

Future Level of Service for Wells	SPA 1	SPA 2	SPA 3	Total
Average Day Demand (mgd), 2033	9.66	6.16	1.46	17.27
x Peaking Factor <sup>1</sup>	2.00	2.00	2.00	2.00
Max Day Demand (mgd), 2033	19.32	12.31	2.91	34.55
Long-Term Firm Capacity (mgd)	19.56	5.72	2.45	27.73
– Max Day Demand (mgd), 2033	(19.32)	(12.31)	(2.91)	(34.55)
Excess Capacity (mgd)	0.24	(6.59)	(0.46)	(6.82)
÷ Long-Term Firm Capacity (mgd)	19.56	5.72	2.45	27.73
Percent Excess Capacity	1.3%	-115.3%	-18.9%	-24.6%

1. 2022 Water Resource Master Plan

### SPA 1 – Cost Recovery / Plan-Based

This analysis uses a hybrid cost recovery and plan-based methodology for SPA 1, because the existing system has some excess capacity available to serve new customers. Existing water facilities in SPA 1 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 1 system value equals \$325,422,008.

**Figure W9: SPA 1 Cost Factors**

SPA 1				
Description	Unit	Existing	Unit Cost	System Value
Wells	each	16.00	\$6,000,000	\$96,000,000
Arsenic Treatment	mgd	20.01	\$2,777,778	\$55,583,333
Booster Pump Stations	mgd	43.78	\$1,049,383	\$45,941,975
Storage Tanks, < 2.5 mg	mg	9.37	\$2,333,333	\$21,863,333
Storage Tanks, 2.5 - < 4.0 mg	mg	3.50	\$2,053,058	\$7,185,703
Storage Tanks, 4.0 - < 7.5 mg	mg	0.00	\$1,586,123	\$0
Water Lines, 10"	linear ft	22,695	\$169	\$3,835,455
Water Lines, 12"	linear ft	217,035	\$202	\$43,841,070
Water Lines, 16"	linear ft	89,911	\$270	\$24,275,970
Water Lines, 20"	linear ft	39,032	\$392	\$15,300,544
Water Lines, 24"	linear ft	14,521	\$416	\$6,040,736
Water Lines, 30"	linear ft	8,178	\$516	\$4,219,848
Land	acres	31.56	\$42,270	\$1,334,041
<b>Total</b>				<b>\$325,422,008</b>

Source: Surprise Water Resource Management Department

**SPA 2 – Plan-Based**

This analysis uses a plan-based methodology for SPA 2, because the future system does not have enough excess capacity available to serve new customers. Existing water facilities in SPA 2 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 2 system value equals \$120,324,94094,593,464.

**Figure W10: SPA 2 Cost Factors**

SPA 2				
Description	Unit	Existing	Unit Cost	System Value
Wells	each	6.00	\$6,000,000	\$36,000,000
Arsenic Treatment	mgd	8.64	\$2,777,778	\$24,000,000
Booster Pump Stations	mgd	21.60	\$1,049,383	\$22,666,667
Storage Tanks, < 2.5 mg	mg	5.02	\$2,333,333	\$11,713,333
Storage Tanks, 2.5 - < 4.0 mg	mg	0	\$2,053,058	\$0
Storage Tanks, 4.0 - < 7.5 mg	mg	0	\$1,586,123	\$0
Water Lines, 10"	linear ft	2,644	\$169	n/a
Water Lines, 12"	linear ft	38,358	\$202	n/a
Water Lines, 16"	linear ft	63,934	\$270	n/a
Water Lines, 20"	linear ft	0	\$392	n/a
Water Lines, 24"	linear ft	659	\$416	n/a
Water Lines, 30"	linear ft	0	\$516	n/a
Land	acres	5.05	\$42,270	\$213,464
<b>Total</b>				<b>\$94,593,464</b>

Source: Surprise Water Resource Management Department

SPA 2				
Description	Unit	Existing	Unit Cost	System Value
Wells	each	6.00	\$6,000,000	\$36,000,000
Arsenic Treatment	mgd	8.64	\$2,777,778	\$24,000,000
Booster Pump Stations	mgd	21.60	\$1,049,383	\$22,666,667
Storage Tanks, < 2.5 mg	mg	5.02	\$2,333,333	\$11,713,333
Storage Tanks, 2.5 - < 4.0 mg	mg	0	\$2,053,058	\$0
Storage Tanks, 4.0 - < 7.5 mg	mg	0	\$1,586,123	\$0
Water Lines, 10"	linear ft	2,644	\$169	\$446,836
Water Lines, 12"	linear ft	38,358	\$202	\$7,748,316
Water Lines, 16"	linear ft	63,934	\$270	\$17,262,180
Water Lines, 20"	linear ft	0	\$392	\$0
Water Lines, 24"	linear ft	659	\$416	\$274,144
Water Lines, 30"	linear ft	0	\$516	\$0
Land	acres	5.05	\$42,270	\$213,464
<b>Total</b>				<b>\$120,324,940</b>

Source: Surprise Water Resource Management Department

**SPA 3 – Plan-Based**

This analysis uses a plan-based methodology for SPA 3, because the future system does not have enough excess capacity available to serve new customers. Existing water facilities in SPA 3 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 3 system value equals ~~\$25,166,002~~\$24,022,461.

**Figure W11: SPA 3 Cost Factors**

SPA 3				
Description	Unit	Existing	Unit Cost	System Value
Wells	each	2.00	\$6,000,000	\$12,000,000
Arsenic Treatment	mgd	0.00	\$2,777,778	\$0
Booster Pump Stations	mgd	7.92	\$1,049,383	\$8,311,111
Storage Tanks, < 2.5 mg	mg	1.50	\$2,333,333	\$3,500,000
Storage Tanks, 2.5 - < 4.0 mg	mg	0	\$2,053,058	\$0
Storage Tanks, 4.0 - < 7.5 mg	mg	0	\$1,586,123	\$0
Water Lines, 10"	linear ft	20	\$169	n/a
Water Lines, 12"	linear ft	108	\$202	n/a
Water Lines, 16"	linear ft	9,343	\$270	n/a
Water Lines, 20"	linear ft	0	\$392	n/a
Water Lines, 24"	linear ft	4,080	\$416	n/a
Water Lines, 30"	linear ft	192	\$516	n/a
Land	acres	5.00	\$42,270	\$211,350
<b>Total</b>				<b>\$24,022,461</b>

Source: Surprise Water Resource Management Department

SPA 3				
Description	Unit	Existing	Unit Cost	System Value
Wells	each	2.00	\$6,000,000	\$12,000,000
Arsenic Treatment	mgd	0.00	\$2,777,778	\$0
Booster Pump Stations	mgd	4.87	\$1,049,383	\$5,110,494
Storage Tanks, < 2.5 mg	mg	1.50	\$2,333,333	\$3,500,000
Storage Tanks, 2.5 - < 4.0 mg	mg	0	\$2,053,058	\$0
Storage Tanks, 4.0 - < 7.5 mg	mg	0	\$1,586,123	\$0
Water Lines, 10"	linear ft	20	\$169	\$3,380
Water Lines, 12"	linear ft	108	\$202	\$21,816
Water Lines, 16"	linear ft	9,343	\$270	\$2,522,610
Water Lines, 20"	linear ft	0	\$392	\$0
Water Lines, 24"	linear ft	4,080	\$416	\$1,697,280
Water Lines, 30"	linear ft	192	\$516	\$99,072
Land	acres	5.00	\$42,270	\$211,350
<b>Total</b>				<b>\$25,166,002</b>

Source: Surprise Water Resource Management Department

### Cost per Gallon

The cost per gallon is calculated as system value divided by well capacity. The cost is \$16.63 per gallon in SPA 1, ~~\$21.04~~16.54 per gallon in SPA 2, and ~~\$10.28~~9.81 per gallon in SPA 3.

**Figure W12: Cost per Gallon**

Description	System Value			Well Capacity (mgd)			Cost per Gallon		
	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
Wells	\$96,000,000	\$36,000,000	\$12,000,000	19.56	5.72	2.45	\$4.91	\$6.29	\$4.90
Arsenic Treatment	\$55,583,333	\$24,000,000	\$0	19.56	5.72	2.45	\$2.84	\$4.20	\$0.00
Booster Pump Stations	\$45,941,975	\$22,666,667	\$8,311,111	19.56	5.72	2.45	\$2.35	\$3.96	\$3.39
Storage Tanks	\$29,049,036	\$11,713,333	\$3,500,000	19.56	5.72	2.45	\$1.48	\$2.05	\$1.43
Water Lines	\$97,513,623	\$0	\$0	19.56	5.72	2.45	\$4.98	\$0.00	\$0.00
Land	\$1,334,041	\$213,464	\$211,350	19.56	5.72	2.45	\$0.07	\$0.04	\$0.09
<b>Total</b>	<b>\$325,422,008</b>	<b>\$94,593,464</b>	<b>\$24,022,461</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>\$16.63</b>	<b>\$16.54</b>	<b>\$9.81</b>

Description	System Value			Well Capacity (mgd)			Cost per Gallon		
	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
Wells	\$96,000,000	\$36,000,000	\$12,000,000	19.56	5.72	2.45	\$4.91	\$6.29	\$4.90
Arsenic Treatment	\$55,583,333	\$24,000,000	\$0	19.56	5.72	2.45	\$2.84	\$4.20	\$0.00
Booster Pump Stations	\$45,941,975	\$22,666,667	\$5,110,494	19.56	5.72	2.45	\$2.35	\$3.96	\$2.09
Storage Tanks	\$29,049,036	\$11,713,333	\$3,500,000	19.56	5.72	2.45	\$1.48	\$2.05	\$1.43
Water Lines	\$97,513,623	\$25,731,476	\$4,344,158	19.56	5.72	2.45	\$4.98	\$4.50	\$1.77
Land	\$1,334,041	\$213,464	\$211,350	19.56	5.72	2.45	\$0.07	\$0.04	\$0.09
<b>Total</b>	<b>\$325,422,008</b>	<b>\$120,324,940</b>	<b>\$25,166,002</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>\$16.63</b>	<b>\$21.04</b>	<b>\$10.28</b>

**SPA 4 – Plan-Based**

This analysis uses a plan-based methodology for SPA 4. Developers will construct WSFs and wells for Marisol Ranch and Sunhaven in SPA 4. The planned facilities will cost \$30,000,000 and provide 3.24 mgd of well capacity. The analysis uses a cost of \$9.26 per gallon (\$30,000,000 cost / 3.24 mgd) for SPA 4.

**Figure W13: SPA 4 Cost Factors**

Description	Cost	Well Capacity (mgd)	Cost per Gallon
Marisol Ranch WSF and Wells	\$15,000,000	1.62	\$9.26
Sunhaven WSF and Wells	\$15,000,000	1.62	\$9.26
<b>Total</b>	<b>\$30,000,000</b>	<b>3.24</b>	<b>\$9.26</b>

Source: Surprise Water Resource Management Department

**Development Fee Report – Plan-Based**

The cost to prepare the Water Facilities IIP and related Development Fee Report totals \$30,000. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections in Figure W7, the cost is \$0.01 per gallon.

**Figure W14: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Water	\$30,000	All Development	100%	Avg Gallons	4,336,702	\$0.01

**WATER FACILITIES DEVELOPMENT FEES**

**Revenue Credit/Offset**

A revenue credit/offset is necessary for development fees, because Surprise’s construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).



**SPA 1**

The cost per service unit is \$~~13.41~~16.64 per gallon for water facilities development fees in SPA 1, and Surprise will assess water facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$~~4,291~~5,325 is calculated using a cost per service unit of \$~~13.41~~16.64 per gallon, multiplied by 320 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$~~13.41~~16.64 per gallon, multiplied by 320 average day gallons, multiplied by the associated capacity ratio.

**Figure W15: Water Facilities Development Fees**

Fee Component	Cost per Gallon
Wells	\$4.91
Arsenic Treatment	\$2.84
Booster Pump Stations	\$2.35
Storage Tanks	\$1.48
Water Lines	\$4.98
Land	\$0.07
Development Fee Report	\$0.01
<b>Total</b>	<b>\$16.64</b>

Development Type	Average Day Gallons
Single Family (EDU)	320

Fees per Meter - SPA 1				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$5,325	\$2,985	\$2,340
1.00-inch	1.67	\$8,892	\$4,985	\$3,907
1.50-inch	3.33	\$17,732	\$9,940	\$7,792
2.00-inch	5.33	\$28,381	\$15,910	\$12,471
3.00-inch	10.67	\$56,816	\$31,850	\$24,966
4.00-inch	16.67	\$88,764	\$49,760	\$39,004
6.00-inch	33.33	\$177,476	\$99,490	\$77,986
8.00-inch	53.33	\$283,972	\$159,190	\$124,782

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**SPA 2**

The cost per service unit is \$~~17.82~~16.55 per gallon for water facilities development fees in SPA 2, and Surprise will assess water facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$~~5,702~~5,296 is calculated using a cost per service unit of \$~~17.82~~16.55 per gallon, multiplied by 320 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$~~17.82~~16.55 per gallon, multiplied by 320 average day gallons, multiplied by the associated capacity ratio.

**Figure W16: Water Facilities Development Fees**

Fee Component	Cost per Gallon
Wells	\$6.29
Arsenic Treatment	\$4.20
Booster Pump Stations	\$3.96
Storage Tanks	\$2.05
Land	\$0.04
Development Fee Report	\$0.01
<b>Total</b>	<b>\$16.55</b>

Development Type	Average Day Gallons
Single Family (EDU)	320

Fees per Meter - SPA 2				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$5,296	\$2,836	\$2,460
1.00-inch	1.67	\$8,844	\$4,736	\$4,108
1.50-inch	3.33	\$17,636	\$9,444	\$8,192
2.00-inch	5.33	\$28,228	\$15,116	\$13,112
3.00-inch	10.67	\$56,508	\$30,260	\$26,248
4.00-inch	16.67	\$88,284	\$47,276	\$41,008
6.00-inch	33.33	\$176,516	\$94,524	\$81,992
8.00-inch	53.33	\$282,436	\$151,244	\$131,192

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**SPA 3**

The cost per service unit is ~~\$7,069.82~~ per gallon for water facilities development fees in SPA 3, and Surprise will assess water facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of ~~\$2,2593,142~~ is calculated using a cost per service unit of ~~\$7,069.82~~ per gallon, multiplied by 320 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of ~~\$7,069.82~~ per gallon, multiplied by 320 average day gallons, multiplied by the associated capacity ratio.

**Figure W17: Water Facilities Development Fees**

Fee Component	Cost per Gallon
Wells	\$4.90
Arsenic Treatment	\$0.00
Booster Pump Stations	\$3.39
Storage Tanks	\$1.43
Land	\$0.09
Development Fee Report	\$0.01
<b>Total</b>	<b>\$9.82</b>

Development Type	Average Day Gallons
Single Family (EDU)	320

Fees per Meter - SPA 3				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$3,142	\$2,486	\$656
1.00-inch	1.67	\$5,248	\$4,152	\$1,096
1.50-inch	3.33	\$10,464	\$8,278	\$2,186
2.00-inch	5.33	\$16,749	\$13,250	\$3,499
3.00-inch	10.67	\$33,529	\$26,526	\$7,003
4.00-inch	16.67	\$52,384	\$41,442	\$10,942
6.00-inch	33.33	\$104,736	\$82,858	\$21,878
8.00-inch	53.33	\$167,584	\$132,578	\$35,006

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**SPA 4**

The cost per service unit is \$~~6,049.27~~ per gallon for water facilities development fees in SPA 4, and Surprise will assess water facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$~~1,9332,966~~ is calculated using a cost per service unit of \$~~6,049.27~~ per gallon, multiplied by 320 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$~~6,049.27~~ per gallon, multiplied by 320 average day gallons, multiplied by the associated capacity ratio.

**Figure W18: Water Facilities Development Fees**

Fee Component	Cost per Gallon
Planned WSFs and Wells	\$9.26
Development Fee Report	\$0.01
Total	\$9.27

Development Type	Average Day Gallons
Single Family (EDU)	320

Fees per Meter - SPA 4				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$2,966	\$0	\$2,966
1.00-inch	1.67	\$4,954	\$0	\$4,954
1.50-inch	3.33	\$9,878	\$0	\$9,878
2.00-inch	5.33	\$15,811	\$0	\$15,811
3.00-inch	10.67	\$31,651	\$0	\$31,651
4.00-inch	16.67	\$49,450	\$0	\$49,450
6.00-inch	33.33	\$98,870	\$0	\$98,870
8.00-inch	53.33	\$158,198	\$0	\$158,198

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**WATER FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains revenue forecasts required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure W19 is based on EDU projections in Figure W7 and the updated water facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 10 years equals **\$30,943,093,35,768,588** in SPA 1, **\$80,966,520,69,892,646** in SPA 2, and **\$7,503,248,7,761,053** in SPA 3. Due to existing development agreements, projected development fee revenue may be offset by development fee credits.

**Figure W19: Water Facilities Development Fees Revenue**

Fee Component	SPA 1	SPA 2	SPA 3
Water Facilities	\$35,758,253	\$69,875,648	\$7,759,705
Development Fee Report	\$10,335	\$16,999	\$1,348
<b>Total</b>	<b>\$35,768,588</b>	<b>\$69,892,646</b>	<b>\$7,761,053</b>

		SPA 1 \$5,325 per EDU	SPA 2 \$5,296 per EDU	SPA 3 \$3,142 per EDU
Year		EDU	EDU	EDU
Base	2023	23,469	6,037	2,080
Year 1	2024	24,613	7,573	2,185
Year 2	2025	25,757	9,110	2,291
Year 3	2026	26,550	10,645	2,424
Year 4	2027	27,344	12,181	2,556
Year 5	2028	28,137	13,716	2,689
Year 6	2029	28,931	15,251	2,822
Year 7	2030	29,724	16,786	2,955
Year 8	2031	29,879	17,604	3,487
Year 9	2032	30,034	18,421	4,020
Year 10	2033	30,188	19,239	4,552
10-Year Increase		6,719	13,202	2,472
Projected Revenue		\$35,768,588	\$69,892,646	\$7,761,053

Projected Fee Revenue	\$113,422,288
Total Expenditures	\$113,422,288

**10-YEAR CAPITAL PLAN**

The figure shown below includes planned water capital expenditures during the next 10 years.

**Figure W2019: Water Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	SPA 1 Rancho Gabriela Agriculture Well	2030-2031	\$5,200,000
CIP	Surfacewater Capacity Expansion & Interconnect	2030+	\$8,736,981
CIP	SPA 1 Rancho Gabriela Water Supply Facility Expansion	2026-2028	\$13,750,000
Dev Agreement	Developer Obligation - Marley Park Well #3	2024-2034	\$2,500,000
Dev Agreement	Developer Obligation - Section 15 Arsenic Treatment	2024-2034	\$2,510,434
Dev Agreement	Developer Obligation - Section 15 Water System	2024-2034	\$1,274,840
Dev Agreement	Developer Obligation - Section 15 WSF 2B Expansion	2024-2034	\$1,785,998
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$10,335
Subtotal, SPA 1			\$35,768,588
CIP	Rancho Mercado Well 2	2024	\$4,200,000
CIP	Rancho Mercado Well 3	2026-2028	\$5,200,000
CIP	Rancho Mercado WSF Phase II	2026-2028	\$12,920,956
Dev Agreement	Desert Oasis WSF (Arsenic / Tank capacity)	2024	\$19,270,366
Dev Agreement	Developer Obligation - Asante Arsenic Treatment Facility 3,800 GPM	2024-2034	\$5,676,933
Dev Agreement	Developer Obligation - Asante Wells 1-4, Transmission lines, Tank	2024-2034	\$7,246,996
Dev Agreement	Developer Obligation - Rancho Mercado Regional Improvements	2024-2034	\$14,596,907
Dev Agreement	Developer Obligation - Tierra Verde West Regional Improvements	2024-2034	\$763,489
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$16,999
Subtotal, SPA 2			\$69,892,646
Dev Agreement	Developer Obligation - Surprise Foothills WSF and Wells	2024-2034	\$17,793,543
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$1,348
Subtotal, SPA 3			\$17,794,891
Dev Agreement	Developer Obligation - Marisol Ranch WSF and Wells	2024-2034	\$15,000,000
Dev Agreement	Developer Obligation - Sunhaven WSF and Wells	2024-2034	\$15,000,000
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$1,318
Subtotal, SPA 4			\$30,001,318
Total			\$153,457,443

Source: Surprise Water Resource Management Department



## WATER RESOURCE FACILITIES IIP

ARS § 9-463.05 (T)(7)(a) defines the eligible facilities and assets for the Water Facilities IIP:

*“Water facilities, including the supply, transportation, treatment, purification and distribution of water, and any appurtenances for those facilities.”*

The Water Resource Facilities IIP includes components for acquisition of water resources and the cost of preparing the Water Resource Facilities IIP and related Development Fee Report. The plan-based methodology is used for water resource and the Development Fee Report.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Water Resource Facilities IIP and development fees will allocate the cost of necessary public services between both residential and nonresidential development using annual demand factors.

### SERVICE AREA

The City of Surprise is an assured water service provider within its water service area, which is shown in Figure WR1. The City is allowed to treat and deliver no more than its total demonstrated 100-year supply. Because this requirement applies to the entire area served by the City water system, a single, citywide service area is appropriate for its Water Resource Facilities Development Fee.

Figure WR1: Water Resource Facilities Development Fee Service Area

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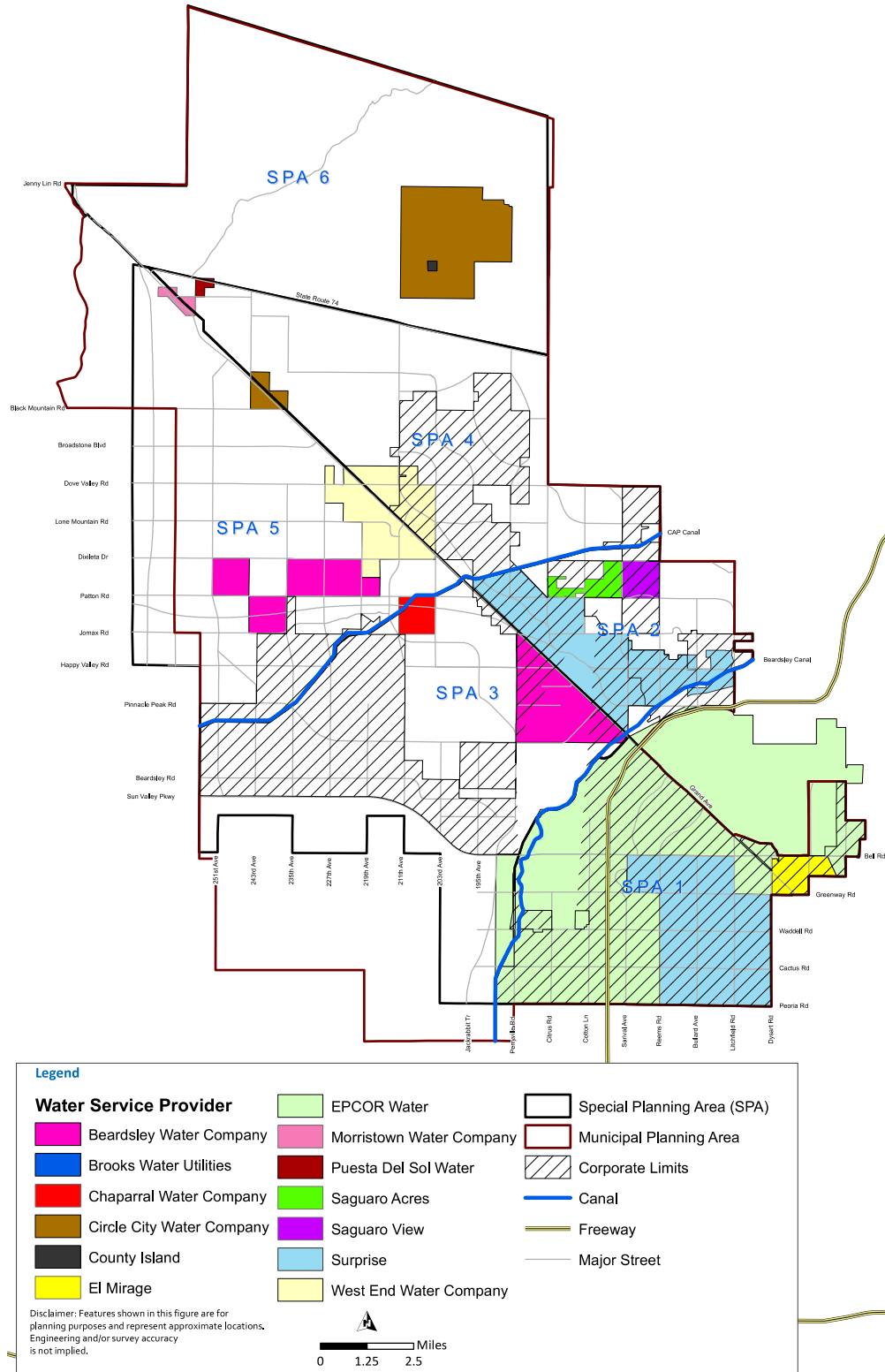


Figure 1.2 Water Service Providers

**RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT**

ARS § 9-463.05(E)(4) 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.”*

Future development places demand on the City’s available water resources. However, some of the water used by new customers is returned to the City in the form of wastewater influent flows to its water reclamation facilities (WRFs). Surprise plans to ultimately reclaim all treated effluent for either direct reuse, for recharge, or for long-term storage credits. Shown below in Figure WR2, the 2022 Water Resource Master Plan indicates 42 percent of water is returned in the form of wastewater influent, with the remainder used for irrigation or other uses. Surprise can reclaim or recharge 90 percent of its wastewater influent, which means 37.8 percent of water use can be reclaimed or recharged (42.0 percent water returned as wastewater influent X 90 percent efficiency factor = 37.8 percent reclaimed or recharged). The remaining 62.2 percent of water use that is not recoverable for reuse or recharge is used to determine the water resource demand of a new customer.

**Figure WR2: Water Recovery Factor**

Water Recovery Factor	
Water Returned as Wastewater Influent	42.0%
x Efficiency Factor (Influent / Effluent Ratio)	90.0%
Water Reclaimed / Recharged	37.8%
Water Not Reclaimed / Recharged	62.2%
Total Water Use	100.0%

Source: 2022 Water Resource Master Plan

To deliver water, Surprise must demonstrate sufficient 100-year renewable supply to accommodate existing demand and 10-year demand. Surprise currently has a demonstrated 100-year supply for current customers, as well as some excess capacity, but will need to dramatically expand its water resource portfolio in the future to accommodate future development. If growth is to pay for its share of water resources, future development will pay a development fee sufficient to acquire their own 100-year supply. However, the adopted Water Acquisition Policy states that “To ensure enough reserves are in place to meet present and future water demands ... the City will maintain a minimum balance ... equal to 15 years or 15 times the City’s service area net demand .”

As shown in Figure WR3, average day water resource demand is 199 gallons (320 average day gallons X 62.2 percent of water not reclaimed or recharged) per equivalent demand unit (EDU), and annual water resource demand is 72,635 gallons (199 average day gallons X 365 days) or 0.2229 acre-feet (72,635 gallons / 325,851 gallons per acre-foot). For a 15-year supply, long-term water resource demand is 3.3435 acre-feet per EDU (0.2229 acre-feet per year X 15 years).

**Figure WR3: Long-Term Water Resource Demand per EDU**

Water Resource Demand per EDU	
Average Day Demand (gallons)	320
x Percent of Water Not Reclaimed / Recharged	62.2%
Average Day Water Resource Demand (gallons)	199
x Days per Year	365
Annual Water Resource Demand (gallons)	72,635
÷ Gallons per Acre-Foot	325,851
Annual Water Resource Demand (acre-feet)	0.2229
x Years	15
Long-Term Water Resource Demand (acre-feet)	3.3435

Source: 2022 Water Resource Master Plan

Water resource development fees are assessed by meter size, and the analysis uses long-term water resource demand from single-family units equal to 3.3435 acre-feet as the demand factor for a 0.75-inch meter. For meters larger than 0.75 inches, long-term water resource demand is calculated by multiplying long-term water resource demand from existing single-family units by the capacity ratio for the corresponding meter size. Figure WR4 displays the demand indicators by meter size.

**Figure WR4: Ratio of Service Unit to Development Unit**

Demand per Unit	
Development Type	Long-Term Demand (AF)
Single Family (EDU)	3.3435

Demand per Meter		
Meter Size	Capacity Ratio <sup>1</sup>	Long-Term Demand (AF)
0.75-inch	1.00	3.3435
1.00-inch	1.67	5.5836
1.50-inch	3.33	11.1339
2.00-inch	5.33	17.8209
3.00-inch	10.67	35.6751
4.00-inch	16.67	55.7361
6.00-inch	33.33	111.4389
8.00-inch	53.33	178.3089

1. AWWA Manual of Water Supply Practices M-1, 7th Edition

### ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES

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.”*

### Existing Demand

Applying the water resource demand factor of 62.2 percent shown in Figure WR2 to annual water demand from the 2022 Water Resource Master Plan results in existing water resource demand of approximately 7,041 acre-feet per year.

**Figure WR5: Existing Demand**

Year	Annual Water Resource Demand (AFY)			
	SPA 1	SPA 2	SPA 3	Total
Base 2023	5,232	1,346	464	7,041

Source: TischlerBise calculation based on 62.2 percent of annual water demand

### PROJECTED DEMAND FOR SERVICES AND COSTS

ARS § 9-463.05(E)(1) requires:

*“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.”*

ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

## Projected Demand

Figure WR6 includes projected annual water resource demand over the next 10 years. To project future annual water resource demand, the analysis applies the water resource demand factor of 62.2 percent shown in Figure WR2 to projected annual water demand projections from the 2022 Water Resource Master Plan. Projected demand increases by 4,992 acre-feet over the next 10 years.

**Figure WR6: Projected Demand**

Year	Annual Water Resource Demand (AFY)				Equivalent Demand Units (EDU)			
	SPA 1	SPA 2	SPA 3	Total	SPA 1	SPA 2	SPA 3	Total
Base 2023	5,232	1,346	464	7,041	23,471	6,037	2,080	31,588
1 2024	5,487	1,688	487	7,662	24,615	7,574	2,186	34,375
2 2025	5,742	2,031	511	8,283	25,759	9,111	2,291	37,161
3 2026	5,919	2,373	540	8,832	26,553	10,646	2,424	39,623
4 2027	6,095	2,715	570	9,381	27,346	12,182	2,557	42,084
5 2028	6,272	3,058	599	9,929	28,140	13,717	2,689	44,546
6 2029	6,449	3,400	629	10,478	28,933	15,252	2,822	47,008
7 2030	6,626	3,742	659	11,027	29,727	16,788	2,955	49,470
8 2031	6,661	3,924	777	11,362	29,882	17,605	3,488	50,974
9 2032	6,695	4,106	896	11,698	30,036	18,423	4,020	52,479
10 2033	6,730	4,289	1,015	12,033	30,191	19,240	4,552	53,984
10-Yr Increase	1,498	2,943	551	4,992	6,720	13,203	2,472	22,395

Source: TischlerBise calculation based on 62.2 percent of annual water demand

## Water Resource – Plan-Based

The City of Surprise plans to acquire additional water resources to meet demand from future development. The average cost of recent and potential water resource acquisitions is \$1,091 per acre-foot. The analysis uses this cost as a proxy for future water resource acquisition costs.

**Figure WR7: Water Resource Acquisition Costs**

Description	Cost per Acre-Foot
Extinguishment Credits	\$315
Tribal Lease of LTSC	\$500
CAGR	\$850
Renewable Water Supply Estimate	\$2,700
Average	\$1,091

Source: Surprise Water Resource Management Department

Description	Cost per Acre-Foot
Extinguishment Credits	\$315
Tribal Lease of LTSC	\$500
CAGR	\$850
Bartlett Dam Estimate	\$2,700
Average	\$1,091

Source: Surprise Water Resource Management Department



**Development Fee Report – Plan-Based**

The cost to prepare the Water Resource Facilities IIP and related Development Fee Report totals \$12,000. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of long-term annual water resource demand, the cost is \$0.28 per acre-foot.

**Figure WR8: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Water Resource	\$12,000	All Development	100%	Acre-Feet	43,325	\$0.28

## WATER RESOURCE FACILITIES DEVELOPMENT FEES

### Revenue Credit/Offset

A revenue credit/offset is necessary for development fees, because Surprise’s construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).

### Water Resource Facilities Development Fees

The cost per service unit is \$861.441,091.28 per acre-foot for water resource facilities development fees, and Surprise will assess water resource facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$2,8803,649 is calculated using a cost per service unit of \$861.441,091.28 per acre-foot, multiplied by 3.3435 acre-feet, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$861.441,091.28 per acre-foot, multiplied by 3.3435 acre-feet, multiplied by the associated capacity ratio.

**Figure WR9: Water Resource Facilities Development Fees**

Fee Component	Cost per AF
Water Resource	\$1,091.00
Development Fee Report	\$0.28
Total	\$1,091.28

Development Type	Long-Term Demand (AF)
Single Family (EDU)	3.3435

Fees per Meter				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$3,649	\$2,279	\$1,370
1.00-inch	1.67	\$6,093	\$3,806	\$2,287
1.50-inch	3.33	\$12,150	\$7,589	\$4,561
2.00-inch	5.33	\$19,448	\$12,147	\$7,301
3.00-inch	10.67	\$38,932	\$24,317	\$14,615
4.00-inch	16.67	\$60,824	\$37,991	\$22,833
6.00-inch	33.33	\$121,611	\$75,959	\$45,652
8.00-inch	53.33	\$194,585	\$121,539	\$73,046

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**WATER RESOURCE FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains revenue forecasts required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure WR10 is based on EDU projections in Figure WR6 and the updated water resource facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 10 years equals ~~\$71,746,841~~\$81,704,610, and projected expenditures equal ~~\$71,747,432~~\$81,704,823.

**Figure WR10: Water Resource Facilities Development Fees Revenue**

Fee Component	Growth Share	Existing Share	Total
Water Resource	\$81,692,823	\$0	\$81,692,823
Development Fee Report	\$12,000	\$0	\$12,000
<b>Total</b>	<b>\$81,704,823</b>	<b>\$0</b>	<b>\$81,704,823</b>

		SPA 1 \$3,649 per EDU	SPA 2 \$3,649 per EDU	SPA 3 \$3,649 per EDU
Year		EDU	EDU	EDU
Base	2023	23,471	6,037	2,080
Year 1	2024	24,615	7,574	2,186
Year 2	2025	25,759	9,111	2,291
Year 3	2026	26,553	10,646	2,424
Year 4	2027	27,346	12,182	2,557
Year 5	2028	28,140	13,717	2,689
Year 6	2029	28,933	15,252	2,822
Year 7	2030	29,727	16,788	2,955
Year 8	2031	29,882	17,605	3,488
Year 9	2032	30,036	18,423	4,020
Year 10	2033	30,191	19,240	4,552
10-Year Increase		6,720	13,203	2,472
Projected Revenue		\$24,517,511	\$48,169,270	\$9,017,829

Projected Fee Revenue	\$81,704,610
Total Expenditures	\$81,704,823

**10-YEAR CAPITAL PLAN**

The figure shown below includes potential water resource capital expenditures during the next 10 years.

**Figure WR11: Water Resource Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
CIP	Circle City Water Acquisition	2025-2029	\$15,000,000
CIP	Water Acquisitions	2024-2028	\$66,680,000
Dev Agreement	Developer Obligation - Kamarata Ranch Northern Basin	2024-2034	\$26,368
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$12,000
<b>Total</b>			<b>\$81,718,368</b>

Source: Surprise Water Resource Management Department

Project Type	Description	Fiscal Year	Cost
CIP	Water Acquisitions	2024-2028	\$28,000,000
CIP	Circle City Water Acquisition (legal)	2024	\$575,000
CIP	Circle City Water Acquisition	2025-2029	\$15,000,000
Study Cost	Development Fee Update	2024-2029	\$12,000
<b>Total</b>			<b>\$43,587,000</b>

## WASTEWATER FACILITIES IIP

ARS § 9-463.05 (T)(7)(b) defines the eligible facilities and assets for the Wastewater Facilities IIP:

*“Wastewater facilities, including collection, interception, transportation, treatment and disposal of wastewater, and any appurtenances for those facilities.”*

The Wastewater Facilities IIP includes components for water reclamation facilities (WRFs), land, wastewater lines (SPA 1 only), reclaimed lines, recharge basins, other wastewater improvements (lift stations, reclaimed booster stations, vadose zone wells, and monitoring wells), and the cost of preparing the Wastewater Facilities IIP and related Development Fee Report. SPA 1 uses a combined cost recovery and plan-based methodology, and the remaining SPA 2, SPA 3, SPA 4, and SPA 5 use a plan-based methodology.

### PROPORTIONATE SHARE

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Wastewater Facilities IIP and development fees will allocate the cost of necessary public services between both residential and nonresidential development using max day demand factors.

### SERVICE AREA

As shown in Figure WW1, there are six service areas for the Wastewater Facilities IIP. The City’s Municipal Planning Area (MPA) is divided into six Special Planning Areas (SPAs). The SPAs are separated by major geographic barriers - Grand Avenue/BNSF Railroad line, the Beardsley Canal, the Central Arizona Project (CAP) Canal, and SR 74. The SPA borders form natural boundaries for the wastewater service areas. Surprise will assess wastewater facilities development fees in SPA 1, SPA 2, SPA 3, SPA 4, and SPA 5.

Surprise is the primary service provider for all its Municipal Planning Area (MPA), except for a small area that is served by EPCOR, a private utility. Surprise currently provides wastewater service to most of the developed areas of SPA 1, SPA 2, and SPA 3. Surprise entered into an annexation development agreement with a developer in SPA 2 and SPA 3, and the developer built a water reclamation facility. Based on the terms of the annexation development agreement, parties subject to the agreement will not pay development fees related to wastewater infrastructure. Although most future development within SPA 2 and SPA 3 is a party to the annexation development agreement, the analysis includes a wastewater development fee for future development within SPA 2 and SPA 3 that is not a party to the annexation development agreement.

SPA 4 and SPA 5 will be served by a common water reclamation facility, so the analysis uses the same wastewater development fee for future development in SPA 4 and SPA 5. The analysis does not include a wastewater development fee for SPA 6.

Figure WW1: Wastewater Facilities Development Fee Service Area

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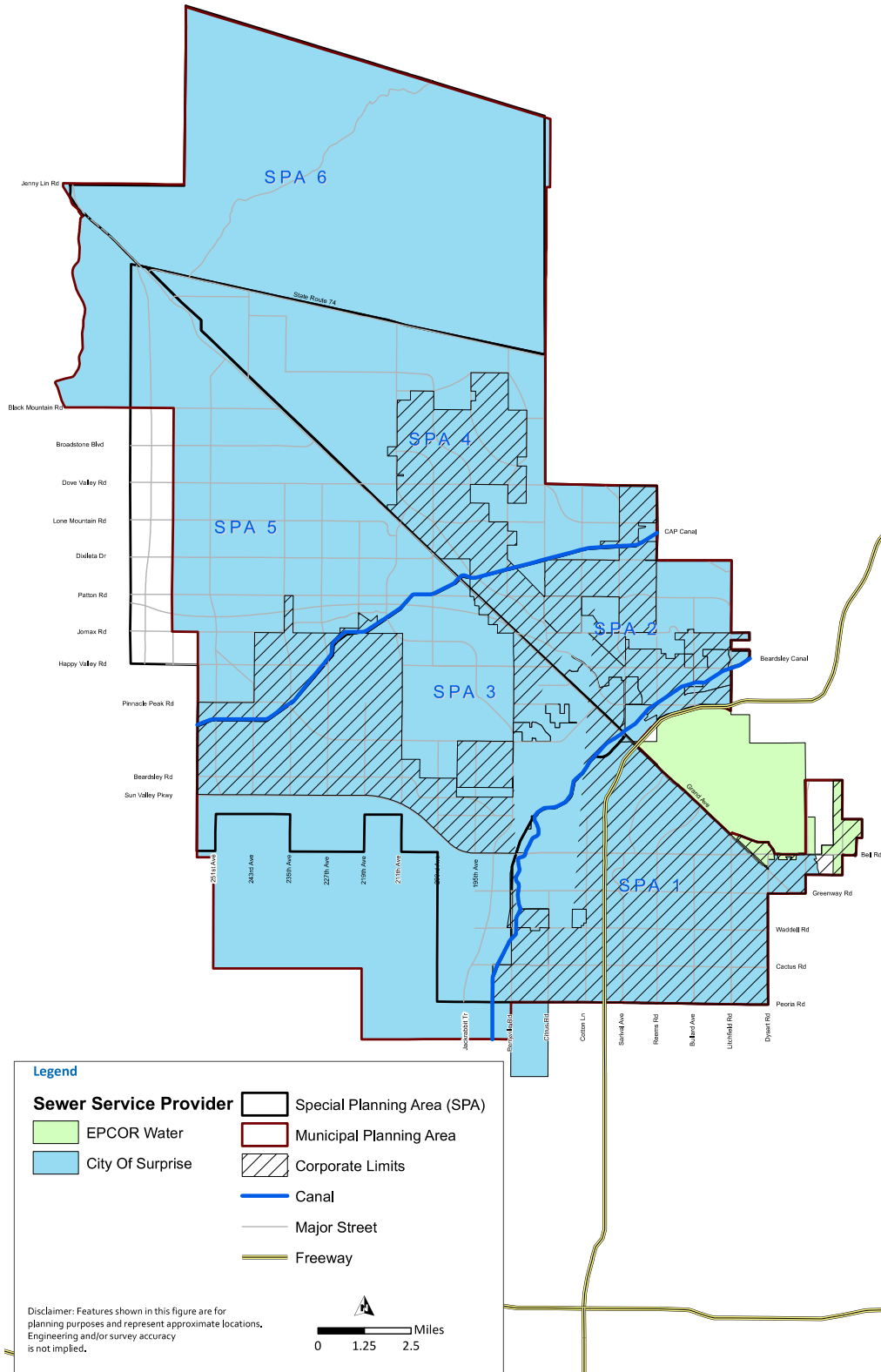


Figure 1.3 Sewer Service Providers

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## RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

ARS § 9-463.05(E)(4) 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.”*

To calculate water and wastewater development fees, the demand associated with different types of customers must be expressed in a common unit of measurement called a service unit. The service unit for the City’s water and wastewater fees is an equivalent demand unit (EDU). An EDU is a single-family dwelling unit, or its equivalent in terms of water demand, defined as the potential demand resulting from a 0.75-inch diameter or smaller meter.

The number of wastewater service units associated with meters larger than 0.75 inches is determined by the capacity of the meter relative to the capacity of a 0.75-inch meter. Figure WW2 presents EDU multipliers for various meter sizes based on meter capacities from the American Water Works Association. According to the 2022 Water Resource Master Plan, average day flow from a single-family unit is 210 gallons, so the analysis uses average day flow of 210 gallons per EDU.

**Figure WW2: Ratio of Service Unit to Development Unit**

Demand per Equivalent Demand Unit	
Development Type	Average Day Demand <sup>1</sup>
Single Family (EDU)	210

Demand per Equivalent Demand Unit		
Meter Size	Capacity Ratio <sup>2</sup>	Average Day Demand
0.75-inch	1.00	210
1.00-inch	1.67	351
1.50-inch	3.33	699
2.00-inch	5.33	1,119
3.00-inch	10.67	2,241
4.00-inch	16.67	3,501
6.00-inch	33.33	6,999
8.00-inch	53.33	11,199

1. 2022 Water Resource Master Plan
2. AWWA Manual of Water Supply Practices M-1, 7th Edition

## ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES

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.”*

### Existing Flow

Using wastewater flow factors from the 2022 Water Resource Master Plan, average day flow from Surprise wastewater customers in 2023 is approximately 11.83 million gallons. Existing wastewater service units are estimated based on existing wastewater flow and the service unit multipliers described in the previous section of this report. As shown below, the City’s current wastewater customer base amounts to 56,332 service units (EDUs).

**Figure WW3: Existing Flow**

Year	Average Day Flow (mgd)				Service Units (EDUs)			
	SPA 1	SPA 2	SPA 3	Total	SPA 1	SPA 2	SPA 3	Total
Base 2023	10.54	0.77	0.52	11.83	50,201	3,674	2,458	56,332

Level of service (LOS) generally refers to the ratio of capacity to demand. One of the principles of development fee analysis is that future development should not be required to pay for a higher LOS than existing development currently receives. Consequently, it is important to determine the existing LOS.

The capacity of water reclamation facilities (WRFs) is generally reflective of the capacity of the entire wastewater system. However, other components of the system may have more capacity or less capacity than needed for full utilization of WRFs and will be evaluated separately. The capacities of the existing WRFs are summarized in Figure WW4.

**Figure WW4: Existing Water Reclamation Facility Capacity**

Description	Status	Total Capacity (mgd)
<b>SPA 1</b>		
Plant 1	Existing (Inactive)	0.8
Plant 2	Existing (Inactive)	2.7
Plant 3	Existing	4.8
Plant 4	Existing	4.0
Plant 5	Existing	4.0
<b>Subtotal, SPA 1</b>		<b>16.3</b>
<b>SPA 2</b>		
Plant 1	Existing	1.2
Plant 2	Existing	2.0
<b>Subtotal, SPA 2</b>		<b>3.2</b>
<b>SPA 3</b>		
Plant 1	Existing	1.8
<b>Subtotal, SPA 3</b>		<b>1.8</b>
<b>Total</b>		<b>21.3</b>

Source: 2022 Integrated Water Master Plan

The existing levels of service for WRFs in SPA 1, SPA 2, and SPA 3 are summarized in Figure WW5. Each SPA has enough capacity to accommodate current average day flow.

**Figure WW5: Existing WRF Level of Service**

Existing Level of Service for WRFs	SPA 1	SPA 2	SPA 3	Total
Existing Treatment Capacity (mgd)	16.30	3.20	1.80	21.30
- Average Day Influent Flow (mgd), 2023	(10.54)	(0.77)	(0.52)	(11.83)
Available Capacity (mgd)	5.76	2.43	1.28	9.47
Capacity Used, 2023	64.7%	24.1%	28.7%	55.5%

**Other System Components**

SPA 1 is the service area with the most developed wastewater system. Figure WW6 includes quantities for WRF and non-WRF components for SPA 1, SPA 2, and SPA 3. Line costs per foot generally increase proportionally with the inches in diameter of the pipe, making inch-feet a reasonable summary unit for comparison. The component quantities are then converted into quantities per MGD of WRF capacity.

In the existing SPA 2 system, WRF land, wastewater collection lines, and recharge basins are somewhat undersized for full utilization of existing WRF capacity, while reclaimed lines are oversized. In the existing SPA 3 system, reclaimed lines are somewhat undersized for full utilization of existing WRF capacity, while WRF land, wastewater collection lines, and recharge basins are oversized.

**Figure WW6: Existing Level of Service for Other System Components**

Description	Unit	Existing Quantity			Quantity per WRF MGD		
		SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
WRFs	mgd	16.30	3.20	1.80	1.00	1.00	1.00
WRF land	acres	174.45	23.94	140.31	11	7	78
Wastewater Lines	1,000 in.-ft	8,593	1,209	1,182	527	378	657
Reclaimed Lines	1,000 in.-ft	1,808	476	0	111	149	0
Recharge Basins	acres	25.50	1.06	8.30	1.56	0.33	4.61

Source: Surprise Water Resource Management Department

**PROJECTED DEMAND FOR SERVICES AND COSTS**

ARS § 9-463.05(E)(1) requires:

*“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.”*

ARS § 9-463.05(E)(5) 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.”*

ARS § 9-463.05(E)(6) requires:

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

**Projected Flow**

Shown below, Figure WW7 includes projected average day flow over the next 10 years from the 2022 Water Resource Master Plan.

**Figure WW7: Projected Flow**

Year	Average Day Flow (mgd)				Service Units (EDUs)			
	SPA 1	SPA 2	SPA 3	Total	SPA 1	SPA 2	SPA 3	Total
Base 2023	10.54	0.77	0.52	11.83	50,201	3,674	2,458	56,332
1 2024	10.88	0.97	0.62	12.47	51,827	4,615	2,949	59,391
2 2025	11.23	1.17	0.72	13.11	53,454	5,557	3,440	62,450
3 2026	11.55	1.37	0.79	13.70	55,002	6,502	3,745	65,249
4 2027	11.88	1.56	0.85	14.29	56,551	7,447	4,050	68,047
5 2028	12.20	1.76	0.91	14.88	58,099	8,391	4,356	70,846
6 2029	12.53	1.96	0.98	15.47	59,648	9,336	4,661	73,644
7 2030	12.85	2.16	1.04	16.05	61,196	10,281	4,966	76,443
8 2031	12.96	2.26	1.12	16.35	61,729	10,775	5,352	77,856
9 2032	13.08	2.37	1.21	16.65	62,262	11,269	5,738	79,270
10 2033	13.19	2.47	1.29	16.94	62,796	11,763	6,124	80,683
10-Yr Increase	2.64	1.70	0.77	5.11	12,595	8,089	3,667	24,351

Surprise must begin planning and design of treatment capacity expansion when utilization reaches 80 percent of available capacity and must begin construction when utilization reaches 90 percent of available capacity. Shown below, Figure WW8 shows the projected 2033 level of service for WRFs in each SPA. Based on projected average day flow in 2033 and existing capacity, SPA 1 will exceed 80 percent capacity utilization (the 2022 Water Resource Master Plan identifies buildout demand of 15.8 MGD), SPA 2 will exceed 77 percent capacity utilization (80 percent capacity utilization in 2034), and SPA 3 will exceed 71 percent capacity utilization (80 percent capacity utilization in 2035).

**Figure WW8: Future WRF Level of Service**

Future Level of Service for WRFs	SPA 1	SPA 2	SPA 3	Total
Existing Treatment Capacity (mgd)	16.30	3.20	1.80	21.30
- Average Day Influent Flow (mgd), 2033	(13.19)	(2.47)	(1.29)	(16.94)
Available Capacity (mgd)	3.11	0.73	0.51	4.36
Capacity Used, 2033	80.9%	77.2%	71.4%	79.5%

**SPA 1 – Cost Recovery / Plan-Based**

This analysis uses a hybrid cost recovery and plan-based methodology for SPA 1, because the existing system has some excess capacity available to serve new customers. Existing wastewater facilities in SPA 1 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 1 system value equals \$347,665,492.

**Figure WW9: SPA 1 Cost Factors**

SPA 1				
Description	Unit	Existing	Unit Cost	System Value
WRFs, 13<18 mgd	mgd	16.30	\$10,887,960	\$177,473,748
Lift Stations	mgd	4.70	\$1,116,979	\$5,249,801
WRF Land	acres	174.45	\$42,270	\$7,374,002
Wastewater Lines, 10"	linear ft	111,230	\$135	\$15,016,050
Wastewater Lines, 12"	linear ft	125,705	\$159	\$19,987,095
Wastewater Lines, 15"	linear ft	81,631	\$186	\$15,183,366
Wastewater Lines, 18"	linear ft	45,970	\$223	\$10,251,310
Wastewater Lines, 21"	linear ft	16,195	\$265	\$4,291,675
Wastewater Lines, 24"	linear ft	48,572	\$287	\$13,940,164
Wastewater Lines, 27"	linear ft	23,196	\$314	\$7,283,544
Wastewater Lines, 30"	linear ft	30,656	\$342	\$10,484,352
Wastewater Lines, 36"	linear ft	4,843	\$397	\$1,922,671
Wastewater Lines, 42"	linear ft	10,645	\$452	\$4,811,540
Wastewater Lines, 48"	linear ft	5,138	\$507	\$2,604,966
Reclaimed Lines, 10"	linear ft	550	\$169	\$92,950
Reclaimed Lines, 12"	linear ft	29,050	\$202	\$5,868,100
Reclaimed Lines, 16"	linear ft	21,600	\$270	\$5,832,000
Reclaimed Lines, 20"	linear ft	33,530	\$392	\$13,143,760
Reclaimed Lines, 24"	linear ft	6,180	\$416	\$2,570,880
Reclaimed Lines, 30"	linear ft	9,650	\$516	\$4,979,400
Reclaimed Booster Stations, 1-3	mgd	16.56	\$359,764	\$5,957,692
Vadose Zone Wells	each	20	\$350,000	\$7,000,000
Monitoring Well	each	2	\$495,713	\$991,426
Recharge Basins	acres	25.50	\$210,000	\$5,355,000
<b>Total</b>				<b>\$347,665,492</b>

Source: Surprise Water Resource Management Department

## **SPA 2 – Plan-Based**

This analysis uses a plan-based methodology for SPA 2. Surprise entered into an annexation development agreement with a developer in SPA 2, and the developer built a water reclamation facility. Based on the terms of the annexation development agreement, parties subject to the agreement will not pay development fees related to wastewater infrastructure. Although most future development within SPA 2 is a party to the annexation development agreement, the analysis includes a wastewater development fee for future development within SPA 2 that is not a party to the annexation development agreement.

Existing wastewater facilities in SPA 2 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 2 system value equals \$~~151,671,552~~137,112,022.



**Figure WW10: SPA 2 Cost Factors**

**DRAFT Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report**  
*Surprise, Arizona*

SPA 2				
Description	Unit	Existing	Unit Cost	System Value
WRFs, <7 mgd	mgd	3.20	\$39,095,375	\$125,105,200
Lift Stations	mgd	0.00	\$1,116,979	\$0
WRF Land	acres	23.94	\$42,270	\$1,011,944
Wastewater Lines, 10"	linear ft	7,351	\$135	n/a
Wastewater Lines, 12"	linear ft	5,605	\$159	n/a
Wastewater Lines, 15"	linear ft	12,157	\$186	n/a
Wastewater Lines, 18"	linear ft	9,329	\$223	n/a
Wastewater Lines, 21"	linear ft	0	\$265	n/a
Wastewater Lines, 24"	linear ft	11,679	\$287	n/a
Wastewater Lines, 27"	linear ft	0	\$314	n/a
Wastewater Lines, 30"	linear ft	13,921	\$342	n/a
Wastewater Lines, 36"	linear ft	558	\$397	n/a
Wastewater Lines, 42"	linear ft	0	\$452	n/a
Wastewater Lines, 48"	linear ft	0	\$507	n/a
Reclaimed Lines, 10"	linear ft	0	\$169	\$0
Reclaimed Lines, 12"	linear ft	12,813	\$202	\$2,588,246
Reclaimed Lines, 16"	linear ft	20,158	\$270	\$5,442,606
Reclaimed Lines, 20"	linear ft	0	\$392	\$0
Reclaimed Lines, 24"	linear ft	0	\$416	\$0
Reclaimed Lines, 30"	linear ft	0	\$516	\$0
Reclaimed Booster Stations, 1-3	mgd	0.00	\$359,764	\$0
Vadose Zone Wells	each	5	\$350,000	\$1,750,000
Monitoring Well	each	2	\$495,713	\$991,426
Recharge Basins	acres	1.06	\$210,000	\$222,600
<b>Total</b>				<b>\$137,112,022</b>

Source: Surprise Water Resource Management Department

SPA 2				
Description	Unit	Existing	Unit Cost	System Value
WRFs, <7 mgd	mgd	3.20	\$39,095,375	\$125,105,200
Lift Stations	mgd	0.00	\$1,116,979	\$0
WRF Land	acres	23.94	\$42,270	\$1,011,944
Wastewater Lines, 10"	linear ft	7,351	\$135	\$992,385
Wastewater Lines, 12"	linear ft	5,605	\$159	\$891,195
Wastewater Lines, 15"	linear ft	12,157	\$186	\$2,261,202
Wastewater Lines, 18"	linear ft	9,329	\$223	\$2,080,367
Wastewater Lines, 21"	linear ft	0	\$265	\$0
Wastewater Lines, 24"	linear ft	11,679	\$287	\$3,351,873
Wastewater Lines, 27"	linear ft	0	\$314	\$0
Wastewater Lines, 30"	linear ft	13,921	\$342	\$4,760,982
Wastewater Lines, 36"	linear ft	558	\$397	\$221,526
Wastewater Lines, 42"	linear ft	0	\$452	\$0
Wastewater Lines, 48"	linear ft	0	\$507	\$0
Reclaimed Lines, 10"	linear ft	0	\$169	\$0
Reclaimed Lines, 12"	linear ft	12,813	\$202	\$2,588,246
Reclaimed Lines, 16"	linear ft	20,158	\$270	\$5,442,606
Reclaimed Lines, 20"	linear ft	0	\$392	\$0
Reclaimed Lines, 24"	linear ft	0	\$416	\$0
Reclaimed Lines, 30"	linear ft	0	\$516	\$0
Reclaimed Booster Stations, 1-3	mgd	0.00	\$359,764	\$0
Vadose Zone Wells	each	5	\$350,000	\$1,750,000
Monitoring Well	each	2	\$495,713	\$991,426
Recharge Basins	acres	1.06	\$210,000	\$222,600
<b>Total</b>				<b>\$151,671,552</b>

Source: Surprise Water Resource Management Department

### **SPA 3 – Plan-Based**

This analysis uses a plan-based methodology for SPA 3. Surprise entered into an annexation development agreement with a developer in SPA 3, and the developer built a water reclamation facility. Based on the terms of the annexation development agreement, parties subject to the agreement will not pay development fees related to wastewater infrastructure. Although most future development within SPA 3 is a party to the annexation development agreement, the analysis includes a wastewater development fee for future development within SPA 3 that is not a party to the annexation development agreement.

Existing wastewater facilities in SPA 3 are summarized below. Unit costs for the system components are based on a combination of estimates in the City’s 2009 Water Master Plan, recent construction costs, and planned construction costs. Current system value is the product of existing quantity times the unit cost. The SPA 3 system value equals \$~~91,600,604~~78,045,579.

**Figure WW11: SPA 3 Cost Factors**

**DRAFT Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report**  
*Surprise, Arizona*

SPA 3				
Description	Unit	Existing	Unit Cost	System Value
WRFs, <7 mgd	mgd	1.80	\$39,095,375	\$70,371,675
Lift Stations	mgd	0.00	\$1,116,979	\$0
WRF Land	acres	140.31	\$42,270	\$5,930,904
Wastewater Lines, 10"	linear ft	50	\$135	n/a
Wastewater Lines, 12"	linear ft	4,009	\$159	n/a
Wastewater Lines, 15"	linear ft	8,347	\$186	n/a
Wastewater Lines, 18"	linear ft	0	\$223	n/a
Wastewater Lines, 21"	linear ft	0	\$265	n/a
Wastewater Lines, 24"	linear ft	2,644	\$287	n/a
Wastewater Lines, 27"	linear ft	0	\$314	n/a
Wastewater Lines, 30"	linear ft	15,875	\$342	n/a
Wastewater Lines, 36"	linear ft	12,987	\$397	n/a
Wastewater Lines, 42"	linear ft	23	\$452	n/a
Wastewater Lines, 48"	linear ft	8	\$507	n/a
Reclaimed Lines, 10"	linear ft	0	\$169	\$0
Reclaimed Lines, 12"	linear ft	0	\$202	\$0
Reclaimed Lines, 16"	linear ft	0	\$270	\$0
Reclaimed Lines, 20"	linear ft	0	\$392	\$0
Reclaimed Lines, 24"	linear ft	0	\$416	\$0
Reclaimed Lines, 30"	linear ft	0	\$516	\$0
Reclaimed Booster Stations, 1-3	mgd	0.00	\$359,764	\$0
Vadose Zone Wells	each	0	\$350,000	\$0
Monitoring Well	each	0	\$495,713	\$0
Recharge Basins	acres	8.30	\$210,000	\$1,743,000
<b>Total</b>				<b>\$78,045,579</b>

Source: Surprise Water Resource Management Department



SPA 3				
Description	Unit	Existing	Unit Cost	System Value
WRFs, <7 mgd	mgd	1.80	\$39,095,375	\$70,371,675
Lift Stations	mgd	0.00	\$1,116,979	\$0
WRF Land	acres	140.31	\$42,270	\$5,930,904
Wastewater Lines, 10"	linear ft	50	\$135	\$6,683
Wastewater Lines, 12"	linear ft	4,009	\$159	\$637,431
Wastewater Lines, 15"	linear ft	8,347	\$186	\$1,552,542
Wastewater Lines, 18"	linear ft	0	\$223	\$0
Wastewater Lines, 21"	linear ft	0	\$265	\$0
Wastewater Lines, 24"	linear ft	2,644	\$287	\$758,828
Wastewater Lines, 27"	linear ft	0	\$314	\$0
Wastewater Lines, 30"	linear ft	15,875	\$342	\$5,429,250
Wastewater Lines, 36"	linear ft	12,987	\$397	\$5,155,839
Wastewater Lines, 42"	linear ft	23	\$452	\$10,396
Wastewater Lines, 48"	linear ft	8	\$507	\$4,056
Reclaimed Lines, 10"	linear ft	0	\$169	\$0
Reclaimed Lines, 12"	linear ft	0	\$202	\$0
Reclaimed Lines, 16"	linear ft	0	\$270	\$0
Reclaimed Lines, 20"	linear ft	0	\$392	\$0
Reclaimed Lines, 24"	linear ft	0	\$416	\$0
Reclaimed Lines, 30"	linear ft	0	\$516	\$0
Reclaimed Booster Stations, 1-3	mgd	0.00	\$359,764	\$0
Vadose Zone Wells	each	0	\$350,000	\$0
Monitoring Well	each	0	\$495,713	\$0
Recharge Basins	acres	8.30	\$210,000	\$1,743,000
<b>Total</b>				<b>\$91,600,604</b>

Source: Surprise Water Resource Management Department

### SPA 4 / SPA 5 – Plan-Based

This analysis uses a plan-based methodology for SPA 4 and SPA 5. Surprise plans to construct a combined WRF for SPA 4 and SPA 5. The planned facility will cost \$17,500,000 and provide 0.40 mgd of treatment capacity. The analysis uses a cost of \$43.75 per gallon (\$17,500,000 cost / 0.40 mgd) for SPA 4 and SPA 5.

**Figure WW12: SPA 4 / SPA 5 Cost Factors**

Description	Cost	WRF Capacity (mgd)	Cost per Gallon
SPA 4/5 Combined WRF	\$17,500,000	0.40	\$43.75

Source: Surprise Water Resource Management Department

### Cost per Gallon

The cost per gallon is calculated as system value divided by WRF capacity. The cost is \$21.33 per gallon in SPA 1, ~~\$47.41~~\$42.86 per gallon in SPA 2, and ~~\$50.89~~\$43.36 per gallon in SPA 3.

**Figure WW13: Cost per Gallon**

Description	System Value			WRF Capacity (mgd)			Cost per Gallon		
	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
WRFs	\$177,473,748	\$125,105,200	\$70,371,675	16.30	3.20	1.80	\$10.89	\$39.10	\$39.10
WRF land	\$7,374,002	\$1,011,944	\$5,930,904	16.30	3.20	1.80	\$0.45	\$0.32	\$3.29
Wastewater Lines	\$105,776,733	\$0	\$0	16.30	3.20	1.80	\$6.49	\$0.00	\$0.00
Reclaimed Lines	\$32,487,090	\$8,030,852	\$0	16.30	3.20	1.80	\$1.99	\$2.51	\$0.00
Recharge Basins	\$5,355,000	\$222,600	\$1,743,000	16.30	3.20	1.80	\$0.33	\$0.07	\$0.97
Other*	\$19,198,919	\$2,741,426	\$0	16.30	3.20	1.80	\$1.18	\$0.86	\$0.00
<b>Total</b>	<b>\$347,665,492</b>	<b>\$137,112,022</b>	<b>\$78,045,579</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>\$21.33</b>	<b>\$42.86</b>	<b>\$43.36</b>

\*Includes lift stations, reclaimed booster stations, and vadose zone/monitoring wells.

Source: WRF capacity used for all components; cost per gallon is system value divided by capacity.

Description	System Value			WRF Capacity (mgd)			Cost per Gallon		
	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3	SPA 1	SPA 2	SPA 3
WRFs	\$177,473,748	\$125,105,200	\$70,371,675	16.30	3.20	1.80	\$10.89	\$39.10	\$39.10
WRF land	\$7,374,002	\$1,011,944	\$5,930,904	16.30	3.20	1.80	\$0.45	\$0.32	\$3.29
Wastewater Lines	\$105,776,733	\$14,559,530	\$13,555,025	16.30	3.20	1.80	\$6.49	\$4.55	\$7.53
Reclaimed Lines	\$32,487,090	\$8,030,852	\$0	16.30	3.20	1.80	\$1.99	\$2.51	\$0.00
Recharge Basins	\$5,355,000	\$222,600	\$1,743,000	16.30	3.20	1.80	\$0.33	\$0.07	\$0.97
Other*	\$19,198,919	\$2,741,426	\$0	16.30	3.20	1.80	\$1.18	\$0.86	\$0.00
<b>Total</b>	<b>\$347,665,492</b>	<b>\$151,671,552</b>	<b>\$91,600,604</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>\$21.33</b>	<b>\$47.41</b>	<b>\$50.89</b>

\*Includes lift stations, reclaimed booster stations, and vadose zone/monitoring wells.

Source: WRF capacity used for all components; cost per gallon is system value divided by capacity.

### Development Fee Report – Plan-Based

The cost to prepare the Wastewater Facilities IIP and related Development Fee Report totals \$30,000. Surprise plans to update its report every five years. Based on this cost, proportionate share, and five-year projections in Figure WW7, the cost is \$0.01 per gallon.

**Figure WW14: IIP and Development Fee Report**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Wastewater	\$30,000	All Development	100%	Avg Gallons	3,277,750	\$0.01

**WASTEWATER FACILITIES DEVELOPMENT FEES**

**Revenue Credit/Offset**

A revenue credit/offset is necessary for development fees, because Surprise’s construction transaction privilege tax rate exceeds the amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications. Surprise allocates the construction privilege tax credit to fire, parks and recreational, and police development fees. Appendix A contains the forecast of revenues required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)).

**SPA 1**

The cost per service unit is \$14,3721.34 per gallon for wastewater facilities development fees in SPA 1, and Surprise will assess wastewater facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$3,0184,481 is calculated using a cost per service unit of \$14,3721.34 per gallon, multiplied by 210 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$14,3721.34 per gallon, multiplied by 210 average day gallons, multiplied by the associated capacity ratio.

**Figure WW15: Wastewater Facilities Development Fees**

Fee Component	Cost per Gallon
WRFs	\$10.89
WRF land	\$0.45
Wastewater Lines	\$6.49
Reclaimed Lines	\$1.99
Recharge Basins	\$0.33
Other	\$1.18
Development Fee Report	\$0.01
<b>Total</b>	<b>\$21.34</b>

Development Type	Average Day Gallons
Single Family (EDU)	210

Fees per Meter - SPA 1				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$4,481	\$2,192	\$2,289
1.00-inch	1.67	\$7,484	\$3,661	\$3,823
1.50-inch	3.33	\$14,923	\$7,299	\$7,624
2.00-inch	5.33	\$23,886	\$11,683	\$12,203
3.00-inch	10.67	\$47,817	\$23,389	\$24,428
4.00-inch	16.67	\$74,705	\$36,541	\$38,164
6.00-inch	33.33	\$149,365	\$73,059	\$76,306
8.00-inch	53.33	\$238,993	\$116,899	\$122,094

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**SPA 2**

The cost per service unit is ~~\$40.45~~\$42.87 per gallon for wastewater facilities development fees in SPA 2, and Surprise will assess wastewater facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of ~~\$8,495,003~~ is calculated using a cost per service unit of ~~\$40.45~~\$42.87 per gallon, multiplied by 210 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of ~~\$40.45~~\$42.87 per gallon, multiplied by 210 average day gallons, multiplied by the associated capacity ratio.

**Figure WW16: Wastewater Facilities Development Fees**

Fee Component	Cost per Gallon
WRFs	\$39.10
WRF land	\$0.32
Reclaimed Lines	\$2.51
Recharge Basins	\$0.07
Other	\$0.86
Development Fee Report	\$0.01
<b>Total</b>	<b>\$42.87</b>

Development Type	Average Day Gallons
Single Family (EDU)	210

Fees per Meter - SPA 2				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$9,003	\$2,544	\$6,459
1.00-inch	1.67	\$15,035	\$4,248	\$10,787
1.50-inch	3.33	\$29,979	\$8,472	\$21,507
2.00-inch	5.33	\$47,984	\$13,560	\$34,424
3.00-inch	10.67	\$96,059	\$27,144	\$68,915
4.00-inch	16.67	\$150,075	\$42,408	\$107,667
6.00-inch	33.33	\$300,060	\$84,792	\$215,268
8.00-inch	53.33	\$480,114	\$135,672	\$344,442

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**SPA 3**

The cost per service unit is ~~\$43.93~~\$43.37 per gallon for wastewater facilities development fees in SPA 3, and Surprise will assess wastewater facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of ~~\$9,225~~\$9,108 is calculated using a cost per service unit of ~~\$43.93~~\$43.37 per gallon, multiplied by 210 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of ~~\$43.93~~\$43.37 per gallon, multiplied by 210 average day gallons, multiplied by the associated capacity ratio.

**Figure WW17: Wastewater Facilities Development Fees**

Fee Component	Cost per Gallon
WRFs	\$39.10
WRF land	\$3.29
Reclaimed Lines	\$0.00
Recharge Basins	\$0.97
Other	\$0.00
Development Fee Report	\$0.01
<b>Total</b>	<b>\$43.37</b>

Development Type	Average Day Gallons
Single Family (EDU)	210

Fees per Meter - SPA 3				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$9,108	\$0	\$9,108
1.00-inch	1.67	\$15,210	\$0	\$15,210
1.50-inch	3.33	\$30,329	\$0	\$30,329
2.00-inch	5.33	\$48,544	\$0	\$48,544
3.00-inch	10.67	\$97,179	\$0	\$97,179
4.00-inch	16.67	\$151,825	\$0	\$151,825
6.00-inch	33.33	\$303,560	\$0	\$303,560
8.00-inch	53.33	\$485,714	\$0	\$485,714

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**SPA 4**

The cost per service unit is \$~~36.79~~43.76 per gallon for wastewater facilities development fees in SPA 4, and Surprise will assess wastewater facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of \$~~7,726~~9,190 is calculated using a cost per service unit of \$~~36.79~~43.76 per gallon, multiplied by 210 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of \$~~36.79~~43.76 per gallon, multiplied by 210 average day gallons, multiplied by the associated capacity ratio.

**Figure WW18: Wastewater Facilities Development Fees**

Fee Component	Cost per Gallon
SPA 4/5 Combined WRF	\$43.75
Development Fee Report	\$0.01
<b>Total</b>	<b>\$43.76</b>

Development Type	Average Day Gallons
Single Family (EDU)	210

Fees per Meter - SPA 4				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$9,190	\$0	\$9,190
1.00-inch	1.67	\$15,347	\$0	\$15,347
1.50-inch	3.33	\$30,601	\$0	\$30,601
2.00-inch	5.33	\$48,981	\$0	\$48,981
3.00-inch	10.67	\$98,053	\$0	\$98,053
4.00-inch	16.67	\$153,191	\$0	\$153,191
6.00-inch	33.33	\$306,289	\$0	\$306,289
8.00-inch	53.33	\$490,081	\$0	\$490,081

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**SPA 5**

The cost per service unit is ~~\$36.79~~\$43.76 per gallon for wastewater facilities development fees in SPA 5, and Surprise will assess wastewater facilities development fees by meter size. The base 0.75-inch meter is equivalent to a single-family unit, and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7<sup>th</sup> Edition*.

The 0.75-inch fee (single-family fee) of ~~\$7,726~~\$9,190 is calculated using a cost per service unit of ~~\$36.79~~\$43.76 per gallon, multiplied by 210 average day gallons, multiplied by a capacity ratio of 1.00. For meters larger than 0.75 inches, the fee is calculated using a cost per service unit of ~~\$36.79~~\$43.76 per gallon, multiplied by 210 average day gallons, multiplied by the associated capacity ratio.

**Figure WW19: Wastewater Facilities Development Fees**

Fee Component	Cost per Gallon
SPA 4/5 Combined WRF	\$43.75
Development Fee Report	\$0.01
Total	\$43.76

Development Type	Average Day Gallons
Single Family (EDU)	210

Fees per Meter - SPA 5				
Meter Size	Capacity Ratio <sup>1</sup>	Proposed Fees	Current Fees	Difference
0.75-inch	1.00	\$9,190	\$0	\$9,190
1.00-inch	1.67	\$15,347	\$0	\$15,347
1.50-inch	3.33	\$30,601	\$0	\$30,601
2.00-inch	5.33	\$48,981	\$0	\$48,981
3.00-inch	10.67	\$98,053	\$0	\$98,053
4.00-inch	16.67	\$153,191	\$0	\$153,191
6.00-inch	33.33	\$306,289	\$0	\$306,289
8.00-inch	53.33	\$490,081	\$0	\$490,081

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**WASTEWATER FACILITIES DEVELOPMENT FEE REVENUE**

Appendix A contains revenue forecasts required by Arizona’s Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure WW20 is based on EDU projections in Figure WW7 and the updated wastewater facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Projected development fee revenue over the next 10 years equals \$44,869,96256,430,458 in SPA 1, \$73,643,14172,819,089 in SPA 2, and \$36,411,70333,391,580 in SPA 3. Actual fee revenue will vary due to existing development agreements.

**Figure WW20: Wastewater Facilities Development Fees Revenue**

Fee Component	SPA 1	SPA 2	SPA 3
Wastewater Facilities	\$56,415,278	\$72,810,021	\$33,387,932
Development Fee Report	\$15,181	\$9,068	\$3,648
<b>Total</b>	<b>\$56,430,458</b>	<b>\$72,819,089</b>	<b>\$33,391,580</b>

		SPA 1 \$4,481 per EDU	SPA 2 \$9,003 per EDU	SPA 3 \$9,108 per EDU
Year		EDU	EDU	EDU
Base	2023	50,201	3,674	2,458
Year 1	2024	51,827	4,615	2,949
Year 2	2025	53,454	5,557	3,440
Year 3	2026	55,002	6,502	3,745
Year 4	2027	56,551	7,447	4,050
Year 5	2028	58,099	8,391	4,356
Year 6	2029	59,648	9,336	4,661
Year 7	2030	61,196	10,281	4,966
Year 8	2031	61,729	10,775	5,352
Year 9	2032	62,262	11,269	5,738
Year 10	2033	62,796	11,763	6,124
10-Year Increase		12,595	8,089	3,667
<b>Projected Revenue</b>		<b>\$56,430,458</b>	<b>\$72,819,089</b>	<b>\$33,391,580</b>

Projected Fee Revenue	\$162,641,127
Total Expenditures	\$162,641,127

**10-YEAR CAPITAL PLAN**

The figure shown below includes planned wastewater capital expenditures during the next 10 years.

**Figure WW21: Wastewater Facilities Capital Plan**

Project Type	Description	Fiscal Year	Cost
Debt Service	SPA 1 WRF, Series 2018	2024-2033	\$21,490,501
CIP	SPA 1 Collection System Capacity Enhancements	2020-2030	\$6,875,000
CIP	SPA 1 Recharge Expansion	2030+	\$28,049,776
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$15,181
Subtotal, SPA 1			\$56,430,457
CIP	SPA 2 Plant Expansion	2033	\$31,276,300
CIP	SPA 2 Recharge Expansion	2028-2029	\$1,695,300
CIP	SPA 2 WRF Land Purchase	2026	\$300,000
Dev Agreement	Developer Obligation - Marisol Ranch Plant expansion and lift station	2027	\$17,500,000
Dev Agreement	Developer Obligation - Rancho Mercado Regional Improvements	2024-2034	\$4,364,374
Dev Agreement	Developer Obligation - SPA 2 North Expansion	2024-2034	\$22,512,144
Dev Agreement	Developer Obligation - SPA 2 PERC WRF (Asante)	2024-2034	\$9,836,657
Dev Agreement	Developer Obligation - SPA 2 WRF	2024-2034	\$18,350,040
Dev Agreement	Developer Obligation - Tierra Verde West Regional Improvements	2024-2034	\$578,812
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$9,068
Subtotal, SPA 2			\$106,422,695
CIP	SPA 3 Recharge Expansion	2029-2032	\$12,315,928
Dev Agreement	Developer Obligation - SPA 3 PERC WRF	2030+	\$21,072,004
Study Cost	Development Fee Update	2024-2029	\$3,648
Subtotal, SPA 3			\$33,391,580
CIP	SPA 4 Recharge Expansion	2030-2033	\$6,472,600
Dev Agreement	Developer Obligation - SPA 4/SPA 5 Plant	2030+	\$15,638,150
Dev Agreement	Developer Obligation - Sunhaven Lift Station	2027+	\$4,500,000
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$1,121
Subtotal, SPA 4			\$26,611,871
Dev Agreement	Developer Obligation - SPA 4/SPA 5 Plant	2030+	\$15,638,150
Study/Audit Cost	Development Fee Update/Biennial DIF Audits	2024-2029	\$982
Subtotal, SPA 5			\$15,639,132
Total			\$238,495,736

Source: Surprise Water Resource Management Department

Project Type	Description	Fiscal Year	Cost
Debt Service	SPA 1 WRF, Series 2018	2024-2033	\$21,490,501
Study Cost	Development Fee Update	2024-2029	\$15,181
Subtotal, SPA 1			\$21,505,681
CIP	SPA 2 Plant Expansion	2033	\$31,276,300
CIP	SPA 2 WRF Land Purchase	2026	\$300,000
CIP	SPA 2 Recharge Expansion	2028-2029	\$5,870,900
Dev Agreement	Plant 1 and 2 Developer Obligations	2024-2033	\$26,620,391
Study Cost	Development Fee Update	2024-2029	\$9,068
Subtotal, SPA 2			\$64,076,659
CIP	SPA 3 Recharge Expansion	2029-2030	\$10,633,000
CIP	SPA 3 Plant Expansion	2030+	\$31,276,300
Study Cost	Development Fee Update	2024-2029	\$3,648
Subtotal, SPA 3			\$41,912,948
Dev Agreement	Marisol Ranch WRF Expansion and Lift Station	2027	\$17,500,000
Dev Agreement	Sunhaven Lift Station	2027	\$4,500,000
Dev Agreement	SPA 4/SPA 5 Plant	2030+	\$15,638,150
Study Cost	Development Fee Update	2024-2029	\$1,121
Subtotal, SPA 4			\$37,639,271
Dev Agreement	SPA 4/SPA 5 Plant	2030+	\$15,638,150
Study Cost	Development Fee Update	2024-2029	\$982
Subtotal, SPA 5			\$15,639,132
Total			\$180,773,692

## APPENDIX A: FORECAST OF REVENUES OTHER THAN FEES

ARS § 9-463.05(E)(7) 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.”*

ARS § 9-463.05(B)(12) states,

*“The municipality shall forecast the contribution to be made in the future in cash or by taxes, fees, assessments or other sources of revenue derived from the property owner towards the capital costs of the necessary public service covered by the development fee and shall include these contributions in determining the extent of the burden imposed by the development. Beginning August 1, 2014, for purposes of calculating the required offset to development fees pursuant to this subsection, if a municipality imposes a construction contracting or similar excise tax rate in excess of the percentage amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications, the entire excess portion of the construction contracting or similar excise tax shall be treated as a contribution to the capital costs of necessary public services provided to development for which development fees are assessed, unless the excess portion was already taken into account for such purpose pursuant to this subsection.”*

### REVENUE PROJECTIONS

Surprise has a construction sales tax rate of 3.7 percent and the majority of other sales tax rates is 2.2 percent; therefore, the required offset described above is applicable. Surprise plans to increase the retail sales tax rate to 2.7 percent beginning in FY2025, so the required offset beginning in FY2025 is 1.0 percent. Shown in Figure A1, Surprise provided the required forecast of construction sales tax revenue over a period of five years. Based on projections in the FY2024 Budget, the excess portion of 1.5 percent includes \$68,016,900 over the next five years. TischlerBise converts the construction sales tax projections from 1.5 percent to 1.0 percent. The construction sales tax credit of \$50,579,767 over the next five years includes FY2024 revenue equal to 1.5 percent and FY2025-FY2028 revenue equal to 1.0 percent.

**Figure A1: Revenue Projections**

Funding Source	Forecast FY2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Total
Construction Sales Tax - 1.5%	\$15,705,500	\$14,135,000	\$13,428,200	\$13,025,400	\$11,722,800	\$68,016,900
Construction Sales Tax - 1.0%	\$10,470,333	\$9,423,333	\$8,952,133	\$8,683,600	\$7,815,200	\$45,344,600
<b>Construction Sales Tax Credit</b>	<b>\$15,705,500</b>	<b>\$9,423,333</b>	<b>\$8,952,133</b>	<b>\$8,683,600</b>	<b>\$7,815,200</b>	<b>\$50,579,767</b>

Source: City of Surprise, FY2024 Budget for FY24-FY28 (construction sales tax 1.5%); TischlerBise calculation based on 1.0% excess construction sales tax beginning July 1, 2024

Funding Source	Forecast FY2024	Forecast FY2025	Forecast FY2026	Forecast FY2027	Forecast FY2028	Total (5 Years)
Construction Sales Tax - 1.5%	\$15,705,500	\$14,135,000	\$13,428,200	\$13,025,400	\$11,722,800	\$68,016,900
Construction Sales Tax - 2.2%	\$23,034,700	\$20,731,200	\$19,694,700	\$19,103,800	\$18,721,800	\$101,286,200
<b>Total, Construction Sales Tax</b>	<b>\$38,740,200</b>	<b>\$34,866,200</b>	<b>\$33,122,900</b>	<b>\$32,129,200</b>	<b>\$30,444,600</b>	<b>\$169,303,100</b>

Source: City of Surprise, FY2024 Budget





As shown in Figure A2, the analysis allocates the excess construction sales tax revenue for the next five years to projected development during the next five years. The credit per service unit shown below is included as a credit in the fire, parks and recreational, and police development fee calculations.

**Figure A2: Excess Construction Sales Tax Credit**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Credit per Service Unit
Fire	\$17,570,649	Residential	75%	Population	44,514	\$296.78
		Nonresidential	25%	Vehicle Trips	16,226	\$268.69
Parks and Recreational	\$27,595,880	Residential	98%	Population	44,514	\$607.54
		Nonresidential	2%	Jobs	7,782	\$70.93
Police	\$5,413,237	Residential	61%	Population	44,514	\$73.68
		Nonresidential	39%	Vehicle Trips	16,226	\$131.48
<b>Total</b>	<b>\$50,579,767</b>					

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Credit per Service Unit
Fire	\$6,959,218	Residential	75%	Population	44,514	\$117.55
		Nonresidential	25%	Vehicle Trips	16,226	\$106.42
Parks and Recreational	\$7,743,715	Residential	98%	Population	44,514	\$170.48
		Nonresidential	2%	Jobs	7,782	\$19.90
Police	\$2,226,682	Residential	61%	Population	44,514	\$30.31
		Nonresidential	39%	Vehicle Trips	16,226	\$54.08
Street	\$4,304,205	All Development	100%	EDU	19,417	\$221.67
Water	\$13,966,803	All Development	100%	Avg Gallons	4,336,702	\$3.23
Water Resource	\$9,957,391	All Development	100%	Acre-Feet	43,325	\$229.84
Wastewater	\$22,858,886	All Development	100%	Avg Gallons	3,277,750	\$6.97
<b>Total</b>	<b>\$68,016,900</b>					

**APPENDIX B: PROFESSIONAL SERVICES**

As stated in Arizona’s development fee enabling legislation, “a municipality may assess development fees 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 a development fee pursuant to this section, including the relevant portion of the infrastructure improvements plan” (see ARS § 9-463.05.A). Because development fees must be updated at least every five years, the cost of professional services is allocated to the projected increase in service units, over five years (see Figure B1). Qualified professionals must develop the IIP, using generally accepted engineering and planning practices. A qualified professional is defined as “a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education or experience”.

**Figure B1: Cost of Professional Services**

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Fire	\$16,230	Residential	75%	Population	44,514	\$0.27
		Nonresidential	25%	Vehicle Trips	16,226	\$0.25
Parks and Recreational	\$15,000	Residential	98%	Population	44,514	\$0.33
		Nonresidential	2%	Jobs	7,782	\$0.04
Police	\$16,230	Residential	61%	Population	44,514	\$0.22
		Nonresidential	39%	Vehicle Trips	16,226	\$0.39
Street	\$228,950	All Development	100%	EDU	19,417	\$11.79
Water	\$30,000	All Development	100%	Avg Gallons	4,336,702	\$0.01
Water Resource	\$12,000	All Development	100%	Acre-Feet	43,325	\$0.28
Wastewater	\$30,000	All Development	100%	Avg Gallons	3,277,750	\$0.01
<b>Total</b>	<b>\$348,410</b>					

## **APPENDIX C: LAND USE DEFINITIONS**

### **RESIDENTIAL DEVELOPMENT**

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As discussed below, residential development categories are based on data from the U.S. Census Bureau, American Community Survey. Development fees will be assessed to all new residential units. One-time development fees are determined by site capacity (i.e., number of residential units).

#### **Single Family:**

1. Single-family detached is a one-unit structure detached from any other house, that is, with open space on all four sides. Such structures are considered detached even if they have an adjoining shed or garage. A one-family house that contains a business is considered detached if the building has open space on all four sides.
2. Single-family attached (townhouse) is a one-unit structure that has one or more walls extending from ground to roof separating it from adjoining structures. In row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.

#### **Multi-Family:**

1. Includes units in structures containing two or more housing units, further categorized as units in structures with “2, 3 or 4, 5 to 9, 10 to 19, 20 to 49, and 50 or more apartments.”
2. Includes both occupied and vacant mobile homes, to which no permanent rooms have been added. Mobile homes used only for business purposes or for extra sleeping space and mobile homes for sale on a dealer's lot, at the factory, or in storage are not counted in the housing inventory.
3. Includes any living quarters occupied as a housing unit that does not fit the other categories (e.g., houseboats, railroad cars, campers, and vans). Recreational vehicles, boats, vans, railroad cars, and the like are included only if they are occupied as a current place of residence.

## NONRESIDENTIAL DEVELOPMENT

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The proposed general nonresidential development categories (defined below) can be used for all new construction. Nonresidential development categories represent general groups of land uses that share similar average weekday vehicle trip generation rates and employment densities (i.e., jobs per thousand square feet of floor area).

**Industrial:** Establishments primarily engaged in the production of goods. By way of example, industrial includes manufacturing plants, utility substations, power generation facilities, and telecommunications buildings.

**Office:** Establishments providing management, administrative, professional, or business services; personal and health care services. By way of example, office includes banks, business offices, medical clinics, and hospitals.

**Public/Institutional:** Public and quasi-public buildings providing educational, social assistance, or religious services. By way of example, institutional includes schools, universities, churches, daycare facilities, and government buildings.

**Retail/Commercial:** Establishments primarily selling merchandise, eating/drinking places, entertainment uses, and lodging. By way of example, commercial includes shopping centers, supermarkets, pharmacies, restaurants, bars, nightclubs, automobile dealerships, movie theaters, and lodging.

**Warehouse:** Establishments primarily engaged in transportation or storage of goods. By way of example, warehouse includes distribution warehouses, ~~and~~ trucking companies, ~~and~~ self-storage facilities.

**APPENDIX D: MAJOR ROADWAY IMPROVEMENTS COSTS**



**MAJOR ROADWAY SECTION COSTS**

~~MAJOR ROADWAY SECTION COSTS SHOWN BELOW INCLUDE TYPICAL ROADWAY SECTION COSTS USED IN THE STREET FACILITIES HP FOR ONE MILE OF PARKWAY, MAJOR ARTERIAL, AND MINOR ARTERIAL. STATE STATUTES REGARDING DEVELOPMENT FEES INDICATE COSTS MUST BE RELATED TO IMPROVEMENTS NEEDED TO ACCOMMODATE GROWTH. FOR STREET FACILITIES DEVELOPMENT FEES, AGENCIES TYPICALLY INTERPRET THIS TO MEAN THAT ANY ITEMS RELATED TO INCREASING ROADWAY CAPACITY CAN BE INCLUDED. ITEMS NOT RELATED TO ROADWAY CAPACITY, SUCH AS SIDEWALKS, STREETLIGHTS, STORM DRAINS, AND CONTRACTOR MOBILIZATION ARE USUALLY EXCLUDED. SINCE RIGHT-OF-WAY IS OFTEN DEDICATED BY DEVELOPERS, RIGHT-OF-WAY COSTS ARE EXCLUDED FROM THE DEVELOPMENT FEE CALCULATIONS. THE COSTS SHOWN BELOW INCLUDE THE PROPOSED BID ITEMS, QUANTITIES, AND UNIT COSTS FOR ONE MILE OF PARKWAY (SIX LANES), MAJOR ARTERIAL (SIX LANES), AND MINOR ARTERIAL (FOUR LANES) INCLUDED IN THE DEVELOPMENT FEE CALCULATIONS. THESE COSTS REPRESENT 57 PERCENT TO 60 PERCENT OF THE TOTAL COSTS SHOWN ON THE FOLLOWING PAGES.~~

Item	Unit Cost	Parkway		Major Arterial		Minor Arterial	
		Amount	Total	Amount	Total	Amount	Total
Subgrade preparation and compaction (SY)	\$8.36	42,240	\$353,194	46,933	\$392,435	34,027	\$284,520
Asphalt concrete pavement (Ton)	\$152.61	11,880	\$1,813,064	13,200	\$2,014,515	9,570	\$1,460,524
Aggregate base course (Ton)	\$56.35	19,958	\$1,124,577	22,176	\$1,249,556	16,078	\$905,950
Concrete single curb – median (LF)	\$25.96	10,560	\$274,121	10,560	\$274,121	10,560	\$274,121
Landscaping – median (SY)	\$56.16	36,960	\$2,075,674	9,387	\$527,174	9,387	\$527,174
Signs – both sides (EA)	\$656.14	52	\$34,119	52	\$34,119	52	\$34,119
Traffic signal (EA)	\$624,000.00	2	\$1,248,000	2	\$1,248,000	2	\$1,248,000
Traffic control (LF)	\$21.84	5,280	\$115,315	5,280	\$115,315	5,280	\$115,315
<b>Subtotal, Construction Costs</b>			<b>\$7,038,064</b>		<b>\$5,855,235</b>		<b>\$4,849,723</b>
Preliminary and final design costs (% of constr cost)	15%		\$1,055,710		\$878,285		\$727,458
COS admin costs (design and constr mgmt) (% of constr cost)	32%		\$2,252,180		\$1,873,675		\$1,551,911
<b>Subtotal, Soft Costs</b>			<b>\$3,307,890</b>		<b>\$2,751,960</b>		<b>\$2,279,370</b>
<b>Total, per mile (2023)</b>			<b>\$10,345,954</b>		<b>\$8,607,195</b>		<b>\$7,129,093</b>



**City of Surprise**  
**Standard Parkway Cross-Section**  
 Detail No. 3-01

Item	Width/Frequency Per Design Standards	Unit	Quantity	AVERAGE	
				Unit Cost	Total
Subgrade Preparation	36 Feet Wide Per Side	SY	42,240	\$8.36	\$353,193.98
AC Pavement	36 Feet Wide Per Side, 5" Thick	Ton	11,880	\$152.61	\$1,813,063.82
Aggregate Base Course	36 Feet Wide Per Side, 9" Thick	Ton	19,958	\$56.35	\$1,124,577.42
Curb & Gutter, MAG Det 220-1, Type A		LF	10,560	\$26.22	\$276,921.22
Single Curb, MAG Det 222, Type A		LF	10,560	\$25.96	\$274,120.70
Median Grading	63 Feet Wide	SY	36,960	\$11.70	\$432,432.00
Parkway Grading	16 Feet Inside, 2 Feet Outside Per Side	SY	21,120	\$16.50	\$348,581.38
Concrete Sidewalk, MAG Det 230	12 Feet Wide Per Side	SF	126,720	\$7.14	\$905,389.06
Intersection Curb Ramps	4 at main intersection, 4 at mid-block intersection	Each	8	\$5,071.51	\$40,572.11
Storm Drain Catch Basin	660 Foot Standard Spacing Per Side	Each	16	\$8,528.47	\$136,455.57
18" Storm Drain Pipe, RGRCP Class III		LF	5,280	\$184.20	\$972,601.34
Storm Drain Manholes	400 Foot Maximum Spacing	Each	13	\$8,338.96	\$108,406.54
Street Sign		Each	52	\$656.14	\$34,119.07
Pavement Marking	4" Equivalent, add 15% to account for intersections	LF	6,072	\$0.58	\$3,504.76
Traffic Signals	4 at main intersection, 4 at mid-block intersection	Each	2	\$624,000.00	\$1,248,000.00
Street Lighting	Every 200 Feet Per Side	Each	53	\$3,120.00	\$165,360.00
Landscaping and Irrigation	Median and Parkway Landscaping	SY	58,080	\$56.16	\$3,261,772.80
				<b>Sub Total Construction Cost</b>	<b>\$11,499,071.77</b>
Mobilization/Demobilization			10%		\$1,150,000.00
SWPPP			1%		\$115,000.00
Traffic Control			12%		\$1,379,900.00
Construction Surveying & Layout			2%		\$230,000.00
Contractor QA/QC			4%		\$460,000.00
Contractor Facilities			5%		\$575,000.00
Site Management			5%		\$575,000.00
Contingency (Allowance for Extra Work, Inflation)			20%		\$2,299,900.00
				<b>Total Construction Cost</b>	<b>\$18,283,871.77</b>
<b>Preliminary and Final Design</b>			15%		\$2,742,600.00
<b>Internal City Costs</b>					
Design Project Management			12%		\$2,194,100.00
Construction Management			20%		\$3,656,800.00
<b>Right-of-Way Costs</b>		SF	1,056,000	\$3.90	\$4,118,400.00
				<b>GRAND TOTAL</b>	<b>\$30,995,771.77</b>

**City of Surprise**  
**Standard Major Arterial Cross-Section**  
 Detail No. 3-02B

Item	Width/Frequency Per Design Standards	Unit	Quantity	AVERAGE	
				Unit Cost	Total
Subgrade Preparation	40 Feet Wide Per Side	SY	46,933	\$8.36	\$392,434.97
AC Pavement	40 Feet Wide Per Side, 5" Thick	Ton	13,200	\$152.61	\$2,014,515.36
Aggregate Base Course	40 Feet Wide Per Side, 9" Thick	Ton	22,176	\$56.35	\$1,249,555.51
Curb & Gutter, MAG Det 220-1, Type A		LF	10,560	\$26.22	\$276,921.22
Single Curb, MAG Det 222, Type A		LF	10,560	\$25.96	\$274,120.70
Median Grading	16 Feet Wide	SY	9,387	\$11.70	\$109,827.90
Parkway Grading	10 Feet Inside, 1.5 Feet Outside Per Side	SY	13,493	\$16.50	\$222,699.27
Concrete Sidewalk, MAG Det 230	6 Feet Wide Per Side	SF	63,360	\$7.14	\$452,694.53
Intersection Curb Ramps	4 at main intersection, 4 at mid-block intersection	Each	8	\$5,071.51	\$40,572.11
Storm Drain Catch Basin	660 Foot Standard Spacing Per Side	Each	16	\$8,528.47	\$136,455.57
18" Storm Drain Pipe, RGRCP Class III		LF	5,280	\$184.20	\$972,601.34
Storm Drain Manholes	400 Foot Maximum Spacing	Each	13	\$8,338.96	\$108,406.54
Street Sign		Each	52	\$656.14	\$34,119.07
Pavement Marking	4" Equivalent, add 15% to account for intersections	LF	30,360	\$0.58	\$17,523.79
Traffic Signals	4 at main intersection, 4 at mid-block intersection	Each	2	\$624,000.00	\$1,248,000.00
Street Lighting	Every 200 Feet Per Side	Each	53	\$3,120.00	\$164,736.00
Landscaping and Irrigation	Median and Parkway Landscaping	SY	22,880	\$56.16	\$1,284,940.80
				<b>Sub Total Construction Cost</b>	<b>\$9,000,124.68</b>
Mobilization/Demobilization			10%		\$900,100.00
SWPPP			1%		\$90,100.00
Traffic Control			12%		\$1,080,100.00
Construction Surveying & Layout			2%		\$180,100.00
Contractor QA/QC			4%		\$360,100.00
Contractor Facilities			5%		\$450,100.00
Site Management			5%		\$450,100.00
Contingency (Allowance for Extra Work, Inflation)			20%		\$1,800,100.00
				<b>Total Construction Cost</b>	<b>\$14,310,924.68</b>
<b>Preliminary and Final Design</b>			15%		\$2,146,700.00
<b>Internal City Costs</b>					
Design Project Management			12%		\$1,717,400.00
Construction Management			20%		\$2,862,200.00
<b>Right-of-Way Costs</b>		SF	718,080	\$3.90	\$2,800,512.00
				<b>GRAND TOTAL</b>	<b>\$23,837,736.68</b>



**City of Surprise**  
**Standard Minor Arterial Cross-Section**  
Detail No. 3-03

Item	Width/Frequency Per Design Standards	Unit	Quantity	AVERAGE	
				Unit Cost	Total
Subgrade Preparation	29 Feet Wide Per Side	SY	34,027	\$8.36	\$284,520.16
AC Pavement	29 Feet Wide Per Side, 5" Thick	Ton	9,570	\$152.61	\$1,460,523.64
Aggregate Base Course	29 Feet Wide Per Side, 9" Thick	Ton	16,078	\$56.35	\$905,950.28
Curb & Gutter, MAG Det 220-1, Type A		LF	10,560	\$26.22	\$276,921.22
Single Curb, MAG Det 222, Type A		LF	10,560	\$25.96	\$274,120.70
Median Grading	16 Feet Wide	SY	9,387	\$11.70	\$109,827.90
Parkway Grading	8 Feet Inside, 1.5 Feet Outside Per Side	SY	11,147	\$16.50	\$183,979.01
Concrete Sidewalk, MAG Det 230	6 Feet Wide Per Side	SF	63,360	\$7.14	\$452,694.53
Intersection Curb Ramps	4 at main intersection, 4 at mid-block intersection	Each	8	\$5,071.51	\$40,572.11
Storm Drain Catch Basin	660 Foot Standard Spacing Per Side	Each	16	\$8,528.47	\$136,455.57
18" Storm Drain Pipe, RGRCP Class III		LF	5,280	\$184.20	\$972,601.34
Storm Drain Manholes	400 Foot Maximum Spacing	Each	13	\$8,338.96	\$108,406.54
Street Sign		Each	52	\$656.14	\$34,119.07
Pavement Marking	4" Equivalent, add 15% to account for intersections	LF	30,360	\$0.58	\$17,523.79
Traffic Signals	4 at main intersection, 4 at mid-block intersection	Each	2	\$624,000.00	\$1,248,000.00
Street Lighting	Every 200 Feet Per Side	Each	53	\$3,120.00	\$164,736.00
Landscaping and Irrigation	Median and Parkway Landscaping	SY	20,534	\$56.16	\$1,153,189.44
			<b>Sub Total Construction Cost</b>		<b>\$7,824,141.30</b>
Mobilization/Demobilization			10%		\$782,500.00
SWPPP			1%		\$78,300.00
Traffic Control			12%		\$938,900.00
Construction Surveying & Layout			2%		\$156,500.00
Contractor QA/QC			4%		\$313,000.00
Contractor Facilities			5%		\$391,300.00
Site Management			5%		\$391,300.00
Contingency (Allowance for Extra Work, Inflation)			20%		\$1,564,900.00
			<b>Total Construction Cost</b>		<b>\$12,440,841.30</b>
<b>Preliminary and Final Design</b>			15%		\$1,866,200.00
<b>Internal City Costs</b>					
Design Project Management			12%		\$1,493,000.00
Construction Management			20%		\$2,488,200.00
<b>Right-of-Way Costs</b>		SF	580,800	\$3.90	\$2,265,120.00
				<b>GRAND TOTAL</b>	<b>\$20,553,361.30</b>

**BIG-TICKET ITEM COSTS**

~~SOME ROADWAY SEGMENTS HAVE ADDITIONAL CONSTRAINTS OR IMPROVEMENT NEEDS BEYOND THE TYPICAL ROADWAY SECTIONS. FOR EXAMPLE, RELOCATING A LARGE POWER POLE OR WELL, OR CONSTRUCTING A LARGE BOX CULVERT, INCREASES THE COST OF AN IMPROVEMENT PROJECT. THIS TABLE SHOWS THE PROPOSED “BIG-TICKET” ITEMS AND UNIT COSTS THAT COULD BE PRESENT ON SOME OF THE ROADWAY SEGMENTS INCLUDED IN THE STREET FACILITIES IP. THESE COSTS WILL BE ADDED ON TOP OF THE TYPICAL COSTS ON A SEGMENT-BY-SEGMENT BASIS DEPENDING ON THE NEEDS OF EACH SEGMENT.~~

**DRAFT Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report**

Surprise, Arizona

Item	Unit	Cost	Comments
Underground 12kV power line	LF	\$390.00	
Underground 69kV power line	LF	\$1,872.00	
Relocate 12kV pole	EA	\$31,200.00	
Relocate 69kV pole	EA	\$124,800.00	
Relocate 230 kV pole	EA	\$234,000.00	
Relocate turning pole	EA	\$234,000.00	
Relocate electric cabinet	EA	\$15,600.00	
Relocate 500 kV lattice tower	EA	\$780,000.00	
Relocate well site	EA	\$1,560,000.00	
Relocate gas pressure regulator	EA	\$156,000.00	Likely not a project cost-- usually SWG's responsibility
Remove/replace pipe culvert	LF	\$273.00	
Box culvert (reinforced concrete)	CY	\$1,560.00	
Box culvert removal	EA	\$6,240.00	
Box culvert headwall	EA	\$15,600.00	
Remove/replace unlined irrigation ditch	LF	\$78.00	
Remove/replace concrete-lined irrigation ditch	LF	\$156.00	
Remove/replace concrete-lined irrigation crossing	LF	\$327.60	
Remove/replace concrete-lined irrigation trash rack	EA	\$12,480.00	
Remove/replace concrete-lined irrigation headwall	EA	\$7,800.00	
Remove/replace concrete-lined irrigation turnout structure	EA	\$31,200.00	
Widen slab bridge/canal crossing	SF	\$351.00	
Widen railroad crossing	EA	\$1,560,000.00	For gates and panels
Relocate lift station	EA	\$1,560,000.00	
Fill medium drainage ditch (1' bottom with 1:1 slopes at 1' deep)	LF	\$3.12	
Fill large drainage ditch (4' bottom with 2:1 slopes at 4' deep)	LF	\$4.68	
Dip/Low-flow crossing culvert	EA	\$156,000.00	

TRAFFIC SIGNAL COSTS

~~TRAFFIC SIGNAL COSTS SHOWN BELOW INCLUDE TYPICAL COSTS USED IN THE STREET FACILITIES IIP FOR TRAFFIC SIGNALS. STATE STATUTES REGARDING DEVELOPMENT FEES INDICATE COSTS MUST BE RELATED TO IMPROVEMENTS NEEDED TO ACCOMMODATE GROWTH. FOR STREET FACILITIES DEVELOPMENT FEES, AGENCIES TYPICALLY INTERPRET THIS TO MEAN THAT ANY ITEMS RELATED TO INCREASING ROADWAY CAPACITY CAN BE INCLUDED. ITEMS NOT RELATED TO ROADWAY CAPACITY, SUCH AS SIDEWALKS, STREETLIGHTS, STORM DRAINS, AND CONTRACTOR MOBILIZATION ARE USUALLY EXCLUDED. SINCE RIGHT-OF-WAY IS OFTEN DEDICATED BY DEVELOPERS, RIGHT-OF-WAY COSTS ARE EXCLUDED FROM THE DEVELOPMENT FEE CALCULATIONS. THE COSTS SHOWN BELOW INCLUDE THE PROPOSED BID ITEMS, QUANTITIES, AND UNIT COSTS FOR TRAFFIC SIGNALS INCLUDED IN THE DEVELOPMENT FEE CALCULATIONS.~~



Item	Unit Cost	Parkway		Major Arterial		Minor Arterial	
		Amount	Total	Amount	Total	Amount	Total
Subgrade preparation and compaction (SY)	\$8.36	-	\$0	-	\$0	-	\$0
Asphalt concrete pavement (Ton)	\$152.61	-	\$0	-	\$0	-	\$0
Aggregate base course (Ton)	\$56.35	-	\$0	-	\$0	-	\$0
Concrete single curb – median (LF)	\$25.96	-	\$0	-	\$0	-	\$0
Landscaping – median (SY)	\$56.16	-	\$0	-	\$0	-	\$0
Signs – both sides (EA)	\$656.14	-	\$0	-	\$0	-	\$0
Traffic signal (EA)	\$624,000.00	1	\$624,000	1	\$624,000	1	\$624,000
Traffic control (LF)	\$21.84	-	\$0	-	\$0	-	\$0
<b>Subtotal, Construction Costs</b>			<b>\$624,000</b>		<b>\$624,000</b>		<b>\$624,000</b>
Preliminary and final design costs (% of constr cost)	15%		\$93,600		\$93,600		\$93,600
COS admin costs (design and constr mgmt) (% of constr cost)	32%		\$199,680		\$199,680		\$199,680
<b>Subtotal, Soft Costs</b>			<b>\$293,280</b>		<b>\$293,280</b>		<b>\$293,280</b>
<b>Total, per mile (2023)</b>			<b>\$917,280</b>		<b>\$917,280</b>		<b>\$917,280</b>

**APPENDIX E: MAJOR ROADWAY INVENTORY**

**SOUTH**

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STREET SEGMENT				EXISTING LENGTH (MILES)	ULTIMATE LENGTH (MILES)	EXISTING CROSS-SECTION	ULTIMATE FUNCTIONAL CLASSIFICATION	EXISTING NUMBER OF LANES	ULTIMATE NUMBER OF LANES	VALUE OF EXISTING ROADWAY	VALUE OF ULTIMATE ROADWAY	EXISTING LOS-C CAPACITY (VEH-MILES)	ULTIMATE LOS-C CAPACITY (VEH-MILES)
SEGMENT NAME	ROAD	FROM	TO										
BER	BEARDSLEY ROAD	115TH AVENUE	OLD EL MIRAGE ROAD	0.00	1.00	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$7,129,093	0	28,720
UN	UNION HILLS	111TH AVENUE	115TH AVENUE	0.53	0.53	MAJOR COLLECTOR-W/ TWLTL	MINOR ARTERIAL	2	4	\$2,159,097	\$12,789,354	3,424	15,222
BEL	BELL ROAD	114TH AVENUE (1,150' E)	BEARDSLEY CANAL	9.00	9.00	MAJOR ARTERIAL	MAJOR ARTERIAL	6	6	\$77,464,756	\$77,464,756	437,760	437,760
BE	BELL ROAD	BEARDSLEY CANAL	195TH AVENUE	1.30	1.30	MINOR ARTERIAL	MAJOR ARTERIAL	4	6	\$6,216,308	\$11,189,354	37,336	63,232
GR	GREENWAY ROAD	US 60/GRAND AVENUE	DYSART ROAD	0.64	0.64	MAJOR COLLECTOR-W/ TWLTL	MAJOR ARTERIAL	3	6	\$3,060,336	\$8,079,485	6,906	31,130
GR	GREENWAY ROAD	DYSART ROAD	LITCHFIELD ROAD	1.00	1.00	MINOR ARTERIAL w/ TWLTL	MINOR ARTERIAL	4	4	\$6,110,651	\$7,129,093	27,280	28,720
GR	GREENWAY ROAD	LITCHFIELD ROAD	BULLARD AVENUE	1.00	1.00	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$7,129,093	\$7,129,093	28,720	28,720
GR	GREENWAY ROAD	BULLARD AVENUE	SARIVAL AVENUE	1.90	1.90	MINOR ARTERIAL w/ TWLTL	MINOR ARTERIAL	4	4	\$11,610,237	\$13,545,276	51,832	54,568
GR	GREENWAY ROAD	SARIVAL AVENUE	COTTON LANE	1.00	1.00	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$7,129,093	\$7,129,093	28,720	28,720
GR	GREENWAY ROAD	COTTON LANE	179TH AVENUE/CITRUS ROAD	1.00	1.00	MAJOR COLLECTOR-W/ TWLTL	MINOR ARTERIAL	2	4	\$4,073,767	\$15,420,609	6,460	28,720
GR	GREENWAY ROAD	179TH AVENUE/CITRUS ROAD	BEARDSLEY CANAL	0.81	0.81	LOCAL STREET	MINOR ARTERIAL	2	4	\$1,649,876	\$13,294,389	1,296	23,263
GR	GREENWAY ROAD	BEARDSLEY CANAL	McMICKEN DAM	0.00	0.27	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$3,190,210	0	7,754
GR	GREENWAY ROAD	McMICKEN DAM	195TH AVENUE	0.00	0.92	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$7,546,412	0	26,422

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STREET SEGMENT				EXISTING LENGTH (MILES)	ULTIMATE LENGTH (MILES)	EXISTING CROSS-SECTION	ULTIMATE FUNCTIONAL CLASSIFICATION	EXISTING NUMBER OF LANES	ULTIMATE NUMBER OF LANES	VALUE OF EXISTING ROADWAY	VALUE OF ULTIMATE ROADWAY	EXISTING LOS-C CAPACITY (VEH-MILES)	ULTIMATE LOS-C CAPACITY (VEH-MILES)
SEGMENT NAME	ROAD	FROM	TO										
WA	WADDELL ROAD	DYSART ROAD	LITCHFIELD ROAD	1.00	1.00	MAJOR ARTERIAL w/ TWLTL	MAJOR ARTERIAL	6	6	\$7,650,840	\$8,607,195	46,210	48,640
WA	WADDELL ROAD	LITCHFIELD ROAD	BULLARD AVENUE	1.00	1.00	MAJOR ARTERIAL	MAJOR ARTERIAL	6	6	\$8,607,195	\$8,607,195	48,640	48,640
WA	WADDELL ROAD	BULLARD AVENUE	REEMS ROAD	1.00	1.00	MAJOR ARTERIAL w/ TWLTL	MAJOR ARTERIAL	6	6	\$7,650,840	\$8,607,195	46,210	48,640
WA	WADDELL ROAD	REEMS ROAD	LOOP-303	1.40	1.40	MAJOR ARTERIAL	MAJOR ARTERIAL	6	6	\$12,050,073	\$12,050,073	64,694	68,096
WA	WADDELL ROAD	LOOP-303	COTTON LANE	0.50	0.50	MAJOR ARTERIAL	MAJOR ARTERIAL	5	6	\$3,825,420	\$4,624,958	20,320	24,320
WA	WADDELL ROAD	COTTON LANE	175TH AVENUE	0.52	0.52	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$994,609	\$6,534,052	2,330	25,293
WA	WADDELL ROAD	175TH AVENUE	CITRUS ROAD	0.50	0.50	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$3,564,546	\$3,564,546	14,360	14,360
WA	WADDELL ROAD	CITRUS ROAD	BEARDSLEY CANAL	0.82	0.82	LOCAL STREET	MINOR ARTERIAL	2	4	\$1,670,245	\$12,335,721	1,312	23,550
WA	WADDELL ROAD	BEARDSLEY CANAL	McMICKEN-DAM	0.00	0.30	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$4,597,132	0	8,616
WA	WADDELL ROAD	McMICKEN-DAM	195TH AVENUE	0.00	0.94	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$7,688,994	0	26,997
CA	CACTUS ROAD	DYSART ROAD	RAILROAD CROSSING	0.51	0.51	MAJOR ARTERIAL	MAJOR ARTERIAL	5	6	\$3,901,928	\$4,389,669	20,726	24,806
CA	CACTUS ROAD	RAILROAD CROSSING	LITCHFIELD ROAD	0.48	0.48	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$1,444,829	\$6,705,485	2,150	23,347
CA	CACTUS ROAD	LITCHFIELD ROAD	BULLARD AVENUE	1.00	1.00	MINOR ARTERIAL	MAJOR ARTERIAL	4	6	\$6,694,485	\$9,121,371	28,720	48,640
CA	CACTUS ROAD	BULLARD AVENUE	REEMS ROAD	1.00	1.00	MINOR ARTERIAL w/ TWLTL	MAJOR ARTERIAL	4	6	\$5,738,130	\$29,161,381	27,280	48,640
CA	CACTUS ROAD	REEMS ROAD	SARIVAL AVENUE	0.91	0.91	MAJOR COLLECTOR w/ TWLTL	MAJOR ARTERIAL	2	6	\$1,740,566	\$28,144,344	5,879	44,262

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STREET SEGMENT				EXISTING LENGTH (MILES)	ULTIMATE LENGTH (MILES)	EXISTING CROSS-SECTION	ULTIMATE FUNCTIONAL CLASSIFICATION	EXISTING NUMBER OF LANES	ULTIMATE NUMBER OF LANES	VALUE OF EXISTING ROADWAY	VALUE OF ULTIMATE ROADWAY	EXISTING LOS-C CAPACITY (VEH-MILES)	ULTIMATE LOS-C CAPACITY (VEH-MILES)
SEGMENT NAME	ROAD	FROM	TO										
CA	CACTUS ROAD	SARIVAL AVENUE	AUTOSHOW AVE	0.75	0.75	MAJOR COLLECTOR	MAJOR ARTERIAL	5	6	\$6,455,396	\$18,482,294	8,520	36,480
CA	CACTUS ROAD	AUTOSHOW AVE	COTTON LANE	0.25	0.25	MAJOR COLLECTOR w/ TWLTL	MAJOR ARTERIAL	2	6	\$478,178	\$3,967,483	1,615	12,160
CA	CACTUS ROAD	COTTON LANE	175TH AVENUE	0.50	0.50	MINOR ARTERIAL	MAJOR ARTERIAL	3	6	\$3,825,420	\$14,297,894	8,640	24,320
CA	CACTUS ROAD	175TH AVENUE	PERRYVILLE ROAD	1.50	1.50	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$2,869,065	\$25,829,465	6,720	72,960
CA	CACTUS ROAD	PERRYVILLE ROAD	BEARDSLEY CANAL	0.35	0.35	LOCAL STREET	MAJOR ARTERIAL	2	6	\$0	\$5,037,086	560	17,024
CA	CACTUS ROAD	BEARDSLEY CANAL	McMICKEN DAM	0.00	0.25	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$8,252,818	0	12,160
CA	CACTUS ROAD	McMICKEN DAM	JACKRABBIT TRAIL	0.00	0.80	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$7,873,402	0	38,912
PE	PEORIA AVENUE	DYSART ROAD	SOLAR CANYON WAY	0.30	0.30	MINOR ARTERIAL w/ TWLTL	MINOR ARTERIAL	3	4	\$1,222,130	\$9,073,677	4,926	8,616
PE	PEORIA AVENUE	SOLAR CANYON WAY	136TH AVENUE	0.32	0.32	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$726,107	\$9,551,502	1,434	9,190
PE	PEORIA AVENUE	136TH AVENUE	LITCHFIELD ROAD	0.38	0.38	MAJOR COLLECTOR w/ TWLTL	MINOR ARTERIAL	2	4	\$1,161,024	\$7,577,659	2,455	10,914
PE	PEORIA AVENUE	LITCHFIELD ROAD	BULLARD AVENUE	1.00	1.00	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$3,055,325	\$8,101,528	4,480	28,720
PE	PEORIA AVENUE	BULLARD AVENUE	REEMS ROAD	1.00	1.00	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$2,036,884	\$19,181,378	4,480	28,720
PE	PEORIA AVENUE	REEMS ROAD	SARIVAL AVENUE	0.92	0.92	MINOR ARTERIAL w/ TWLTL	MINOR ARTERIAL	4	4	\$5,621,799	\$6,558,765	25,098	26,422
PE	PEORIA AVENUE	SARIVAL AVENUE	LOOP 303	0.50	0.50	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$1,018,442	\$5,733,726	2,240	14,360
PE	PEORIA AVENUE	LOOP 303	COTTON LANE	0.50	0.50	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$956,355	\$8,915,114	2,240	24,320



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STREET SEGMENT				EXISTING LENGTH (MILES)	ULTIMATE LENGTH (MILES)	EXISTING CROSS-SECTION	ULTIMATE FUNCTIONAL CLASSIFICATION	EXISTING NUMBER OF LANES	ULTIMATE NUMBER OF LANES	VALUE OF EXISTING ROADWAY	VALUE OF ULTIMATE ROADWAY	EXISTING LOS-C CAPACITY (VEH-MILES)	ULTIMATE LOS-C CAPACITY (VEH-MILES)
SEGMENT NAME	ROAD	FROM	TO										
PE	PEORIA AVENUE	COTTON LANE	183RD LANE	1.60	1.60	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$3,060,336	\$24,922,704	7,168	77,824
PE	PEORIA AVENUE	183RD LANE	PERRYVILLE ROAD	0.40	0.40	MINOR ARTERIAL	MAJOR ARTERIAL	3	6	\$1,912,710	\$10,056,467	6,912	19,456
PE	PEORIA AVENUE	PERRYVILLE ROAD	BEARDSLEY CANAL	0.50	0.50	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$1,434,533	\$6,353,874	2,240	24,320
PE	PEORIA AVENUE	BEARDSLEY CANAL	JACKRABBIT TRAIL	0.00	0.80	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$8,087,642	0	38,912
OL	OLIVE AVENUE	PERRYVILLE ROAD	BEARDSLEY CANAL	0.50	0.50	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$956,355	\$8,211,335	2,240	24,320
OL	OLIVE AVENUE	BEARDSLEY CANAL	203RD AVENUE	1.50	1.50	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$2,869,065	\$21,847,814	6,720	72,960
115A	115TH AVENUE	BEARDSLEY ROAD	UNION HILLS DRIVE	0.95	0.95	LOCAL STREET	MAJOR ARTERIAL	2	6	\$1,817,075	\$9,783,635	1,520	46,208
115A	115TH AVENUE	UNION HILLS DRIVE	BELL ROAD	0.95	0.95	MAJOR COLLECTOR	MAJOR ARTERIAL	2	6	\$1,817,075	\$12,514,794	6,460	46,208
115A	115TH AVENUE	BELL ROAD	IRISH GOLD DR	0.00	0.45	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$3,208,092	0	12,924
EM	EL MIRAGE ROAD	BEARDSLEY ROAD	BELL ROAD	2.00	2.00	MINOR ARTERIAL	MAJOR ARTERIAL	4	6	\$9,563,550	\$17,214,390	57,440	97,280
EM	EL MIRAGE ROAD	BELL ROAD	GREENWAY ROAD	1.04	1.04	MINOR ARTERIAL w/TWLTL	MAJOR ARTERIAL	4	6	\$5,967,655	\$10,879,643	28,371	50,586
DY	DYSART ROAD	BELL ROAD	WADDELL ROAD	2.00	2.00	MINOR ARTERIAL w/TWLTL	MAJOR ARTERIAL	4	6	\$11,476,260	\$69,172,678	54,560	97,280
DY	DYSART ROAD	WADDELL ROAD	SOLEDAD STREET	0.25	0.25	MAJOR ARTERIAL	MAJOR ARTERIAL	6	6	\$2,151,799	\$2,151,799	12,160	12,160
DY	DYSART ROAD	SOLEDAD STREET	SWEETWATER AVENUE	0.25	0.25	MAJOR ARTERIAL w/TWLTL	MAJOR ARTERIAL	5	6	\$1,673,621	\$2,347,427	9,653	12,160
DY	DYSART ROAD	SWEETWATER AVENUE	CACTUS ROAD	0.50	0.50	MINOR ARTERIAL	MAJOR ARTERIAL	4	6	\$3,347,243	\$5,653,310	14,360	24,320

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STREET SEGMENT				EXISTING LENGTH (MILES)	ULTIMATE LENGTH (MILES)	EXISTING CROSS-SECTION	ULTIMATE FUNCTIONAL CLASSIFICATION	EXISTING NUMBER OF LANES	ULTIMATE NUMBER OF LANES	VALUE OF EXISTING ROADWAY	VALUE OF ULTIMATE ROADWAY	EXISTING LOS-C CAPACITY (VEH-MILES)	ULTIMATE LOS-C CAPACITY (VEH-MILES)
SEGMENT NAME	ROAD	FROM	TO										
DY	DYSART ROAD	CACTUS ROAD	PEORIA AVENUE	1.00	1.00	MINOR ARTERIAL w/ TWLTL	MAJOR ARTERIAL	4	6	\$5,738,130	\$24,643,059	27,280	48,640
LI	LITCHFIELD ROAD	US 60/GRAND AVENUE	BELL ROAD	0.47	0.47	MINOR ARTERIAL w/ TWLTL	MINOR ARTERIAL	4	4	\$2,872,006	\$3,350,674	12,822	13,498
LI	LITCHFIELD ROAD	BELL ROAD	STALTER STREET	0.68	0.68	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$4,847,783	\$4,847,783	19,530	19,530
LI	LITCHFIELD ROAD	STALTER STREET	GREENWAY ROAD	0.35	0.35	MINOR ARTERIAL w/ TWLTL	MINOR ARTERIAL	4	4	\$2,138,728	\$2,495,182	9,548	10,052
LI	LITCHFIELD ROAD	GREENWAY ROAD	WADDELL ROAD	1.00	1.00	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$7,129,093	\$7,129,093	28,720	28,720
LI	LITCHFIELD ROAD	WADDELL ROAD	PEORIA AVENUE	2.00	2.00	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$14,258,186	\$14,258,186	57,440	57,440
BU	BULLARD AVENUE	BELL ROAD	CHOLLA STREET	3.50	3.50	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$24,951,825	\$24,951,825	100,520	100,520
BU	BULLARD AVENUE	CHOLLA STREET	PEORIA AVENUE	0.50	0.50	MINOR ARTERIAL	MINOR ARTERIAL	3	4	\$2,546,105	\$3,660,954	8,640	14,360
RE	REEMS ROAD	GRAND AVENUE	MOUNTAIN VIEW BLVD (745' S)	0.38	0.38	MAJOR ARTERIAL w/ TWLTL	MAJOR ARTERIAL	6	6	\$2,907,319	\$3,270,734	17,560	18,493
RE	REEMS ROAD	MOUNTAIN VIEW BLVD (745' S)	BELL ROAD	1.45	1.45	MAJOR ARTERIAL	MAJOR ARTERIAL	6	6	\$12,480,433	\$12,480,433	70,528	70,528
RE	REEMS ROAD	BELL ROAD	CACTUS ROAD	3.00	3.00	MINOR ARTERIAL w/ TWLTL	MAJOR ARTERIAL	4	6	\$17,214,390	\$32,049,028	81,840	145,920
RE	REEMS ROAD	CACTUS ROAD	PEORIA AVENUE	1.00	1.00	MINOR ARTERIAL	MAJOR ARTERIAL	4	6	\$6,694,485	\$8,769,161	28,720	48,640
SU	SUNRISE BLVD	US 60/GRAND AVENUE	BELL ROAD	2.50	2.50	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$17,822,732	\$17,822,732	71,800	71,800
SA	SARIVAL AVENUE	BELL ROAD	YOUNG STREET	0.18	0.18	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$1,283,237	\$1,283,237	5,170	5,170
SA	SARIVAL AVENUE/NRP	YOUNG STREET	GREENWAY ROAD	1.07	1.07	MINOR ARTERIAL w/ TWLTL	MINOR ARTERIAL	4	4	\$6,538,397	\$7,628,129	29,190	30,730

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STREET SEGMENT				EXISTING LENGTH (MILES)	ULTIMATE LENGTH (MILES)	EXISTING CROSS-SECTION	ULTIMATE FUNCTIONAL CLASSIFICATION	EXISTING NUMBER OF LANES	ULTIMATE NUMBER OF LANES	VALUE OF EXISTING ROADWAY	VALUE OF ULTIMATE ROADWAY	EXISTING LOS-C CAPACITY (VEH-MILES)	ULTIMATE LOS-C CAPACITY (VEH-MILES)
SEGMENT NAME	ROAD	FROM	TO										
SA	SARIVAL AVENUE	GREENWAY ROAD	WADDELL ROAD	1.00	1.00	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$3,055,325	\$31,809,541	4,480	28,720
SA	SARIVAL AVENUE	WADDELL ROAD	ALEXANDRIA WAY	0.25	0.25	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$1,782,273	\$1,782,273	7,180	7,180
SA	SARIVAL AVENUE	ALEXANDRIA WAY	LARKSPUR DR	0.55	0.55	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$1,120,286	\$3,921,001	2,464	15,796
SA	SARIVAL AVENUE	LARKSPUR DR	CACTUS ROAD	0.25	0.25	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$1,782,273	\$1,782,273	7,180	7,180
SA	SARIVAL AVENUE	CACTUS ROAD	JENAN DRIVE	0.25	0.25	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$509,221	\$2,666,013	1,120	7,180
SA	SARIVAL AVENUE	JENAN DRIVE	CHOLLA STREET	0.25	0.25	MINOR ARTERIAL w/ TWLTL	MINOR ARTERIAL	4	4	\$1,527,663	\$1,782,273	6,820	7,180
SA	SARIVAL AVENUE	CHOLLA STREET	PEORIA AVENUE	0.50	0.50	MINOR ARTERIAL w/ TWLTL	MINOR ARTERIAL	3	4	\$2,546,105	\$5,452,536	8,210	14,360
CO	COTTON LANE	UNION HILLS DRIVE	BELL ROAD (300' N)	0.95	0.95	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$2,902,559	\$12,627,817	4,256	27,284
CO	COTTON LANE	BELL ROAD (300' N)	BELL ROAD (670' S)	0.17	0.17	MINOR ARTERIAL w/ TWLTL	MINOR ARTERIAL	4	4	\$1,038,811	\$1,211,946	4,638	4,882
CO	COTTON LANE	BELL ROAD (670' S)	GREENWAY ROAD	0.88	0.88	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$3,584,915	\$6,337,874	3,942	25,274
CO	COTTON LANE	GREENWAY ROAD	GREENWAY ROAD (1,200' S)	0.23	0.23	MINOR ARTERIAL	MAJOR ARTERIAL	4	6	\$1,539,732	\$2,045,534	6,606	11,187
CO	COTTON LANE	GREENWAY ROAD (1,200' S)	ACOMA DRIVE	0.25	0.25	MAJOR COLLECTOR w/ TWLTL	MAJOR ARTERIAL	2	6	\$956,355	\$2,556,712	1,615	12,160
CO	COTTON LANE	ACOMA DRIVE	HEARN ROAD	0.28	0.28	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$535,559	\$2,812,357	1,254	13,619
CO	COTTON LANE	HEARN ROAD	WADDELL ROAD (655' S)	0.37	0.37	MAJOR COLLECTOR w/ TWLTL	MAJOR ARTERIAL	2	6	\$1,061,554	\$3,184,662	2,390	17,997

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SEGMENT NAME	ROAD	FROM	TO										
CO	COTTON LANE	WADDELL ROAD (655'-S)	PEORIA AVENUE	1.85	1.85	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$10,615,541	\$41,466,610	8,288	89,984
CI	CITRUS ROAD	GREENWAY ROAD	WADDELL ROAD	0.00	1.00	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$7,129,093	0	28,720
CI	CITRUS ROAD	WADDELL ROAD	CACTUS ROAD	1.00	1.00	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$7,129,093	\$7,468,068	4,480	28,720
CI	CITRUS ROAD	CACTUS ROAD	PEORIA AVENUE	0.00	1.00	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$7,129,093	0	28,720
PER	PERRYVILLE ROAD	GREENWAY ROAD	GREENWAY ROAD (2,110'-S)	0.00	0.40	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$2,851,637	0	11,488
PER	PERRYVILLE ROAD	GREENWAY ROAD (2,110'-S)	CACTUS ROAD	0.00	1.60	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$15,312,679	0	45,952
PER	PERRYVILLE ROAD	CACTUS ROAD	SHANGRI-LA ROAD	0.50	0.50	MAJOR COLLECTOR	MINOR ARTERIAL	3	4	\$2,036,884	\$3,596,682	3,400	14,360
PER	PERRYVILLE ROAD	SHANGRI-LA ROAD	PEORIA AVENUE	0.50	0.50	MINOR ARTERIAL	MINOR ARTERIAL	4	4	\$3,564,546	\$3,564,546	14,360	14,360
PER	PERRYVILLE ROAD	PEORIA AVENUE	OLIVE AVENUE	1.00	1.00	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$3,055,325	\$7,219,074	4,480	28,720
JA	JACKRABBIT TRAIL	BELL ROAD	OLIVE AVENUE	0.00	6.00	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$62,296,254	0	291,840
TOTAL, SOUTH	-	-	-	79.64	95.37	-	-	279	482	\$449,377,186	\$1,123,261,682	1,908,248	3,818,888



**NORTH**



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STREET SEGMENT				EXISTING LENGTH (MILES)	ULTIMATE LENGTH (MILES)	EXISTING CROSS-SECTION	ULTIMATE FUNCTIONAL CLASSIFICATION	EXISTING NUMBER OF LANES	ULTIMATE NUMBER OF LANES	VALUE OF EXISTING ROADWAY	VALUE OF ULTIMATE ROADWAY	EXISTING LOS-C CAPACITY (VEH-MILES)	ULTIMATE LOS-C CAPACITY (VEH-MILES)
SEGMENT NAME	ROAD	FROM	TO										
DO	DOVE VALLEY ROAD	155TH AVENUE	179TH AVENUE	0.00	3.10	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$31,220,894	0	89,032
DO	DOVE VALLEY ROAD	LONE MOUNTAIN ROAD	187TH AVENUE	0.00	1.80	DOES NOT EXIST	PARKWAY	0	6	\$0	\$11,522,094	0	104,976
DO	DOVE VALLEY ROAD	187TH AVENUE	CENTER STREET	3.50	3.50	MINOR COLLECTOR	PARKWAY	2	6	\$8,046,853	\$34,598,936	15,680	204,120
CE	CENTER STREET	DOVE VALLEY ROAD	US 60/GRAND AVENUE	0.36	0.36	MINOR COLLECTOR	PARKWAY	2	6	\$827,676	\$12,638,300	1,613	20,995
QR	QUAIL RUN ROAD	195TH AVENUE	203RD AVENUE	0.00	0.70	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$16,040,459	0	20,104
LO	LONE MOUNTAIN ROAD	155TH AVENUE	DOVE VALLEY ROAD	0.00	2.85	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$35,393,980	0	138,624
LO	LONE MOUNTAIN ROAD	DOVE VALLEY ROAD	US 60/GRAND AVENUE	0.00	3.30	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$38,351,719	0	160,512
DI	DIXILETA ROAD	139TH AVENUE	163RD AVENUE	0.00	3.00	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$42,701,000	0	86,160
DI	DIXILETA ROAD	163RD AVENUE	168TH DRIVE	0.62	0.62	LOCAL STREET	MINOR ARTERIAL	2	4	\$1,262,868	\$16,006,340	992	17,806
DI	DIXILETA DRIVE	168TH DRIVE	179TH AVENUE	0.00	1.38	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$13,524,003	0	39,634
DI	DIXILETA DRIVE	187TH AVENUE	LONE MOUNTAIN ROAD	0.00	1.10	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$9,564,693	0	31,592
PA	PATTON ROAD	139TH AVENUE	157TH AVENUE	0.00	2.25	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$9,220,406	0	64,620
PA	PATTON ROAD	157TH AVENUE	163RD AVENUE	0.75	0.75	LOCAL STREET	MINOR ARTERIAL	2	4	\$1,527,663	\$18,167,099	1,200	21,540
PA	PATTON ROAD	163RD AVENUE	PAT TILMAN BOULEVARD	0.00	2.40	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$23,013,331	0	68,928

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SEGMENT NAME	ROAD	FROM	TO										
JO	JOMAX ROAD	EL GRANADA BLVD (135TH AVENUE)	175TH LANE	5.30	5.30	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$10,795,483	\$35,059,869	23,744	152,216
JO	JOMAX ROAD	175TH LANE	179TH AVENUE	0.00	0.37	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$15,184,968	0	10,626
JO	JOMAX ROAD	PAT TILLMAN BOULEVARD	US 60/GRAND AVENUE	0.00	1.00	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$11,005,305	0	48,640
HA	HAPPY VALLEY ROAD	139TH AVENUE	RANCHO MERCADO PARKWAY	0.54	0.54	MINOR ARTERIAL	MAJOR ARTERIAL	4	6	\$3,615,022	\$5,930,343	15,509	26,266
HA	HAPPY VALLEY ROAD	RANCHO MERCADO PARKWAY	147TH AVENUE	0.50	0.50	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$1,434,533	\$5,703,274	2,240	24,320
HA	HAPPY VALLEY ROAD	147TH AVENUE	163RD AVENUE	1.84	1.84	MINOR ARTERIAL	MAJOR ARTERIAL	4	6	\$12,317,852	\$26,033,874	52,845	89,498
HA	HAPPY VALLEY ROAD	163RD AVENUE	PAT TILLMAN BOULEVARD	0.00	0.96	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$11,620,421	0	46,694
PI	PINNACLE PEAK ROAD	147TH AVENUE	163RD AVENUE	0.00	1.85	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$17,208,549	0	53,132
139A	139TH AVENUE	DIXILETA DRIVE	BRILES ROAD	0.00	2.13	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$8,554,911	0	61,174
139A	139TH AVENUE	BRILES ROAD	YEARLING ROAD	0.25	0.25	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$763,831	\$19,248,550	1,700	7,180
139A	139TH AVENUE	YEARLING ROAD	HAPPY VALLEY ROAD	0.00	0.70	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$13,144,966	0	20,104
139A	139TH AVENUE	HAPPY VALLEY ROAD	LOOP 303	0.00	0.80	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$27,432,639	0	22,976
147A	147TH AVENUE	DYNAMITE BOULEVARD	BLACK HILL ROAD	0.00	0.28	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$17,588,121	0	8,042
147A	147TH AVENUE	BLACK HILL ROAD	HAPPY VALLEY ROAD	1.63	1.63	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$3,320,120	\$57,270,424	11,084	46,814

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SEGMENT NAME	ROAD	FROM	TO										
147A	147TH AVENUE	HAPPY VALLEY ROAD	PINNACLE PEAK ROAD	0.00	1.00	DOES NOT EXIST	MINOR ARTERIAL	2	4	\$3,055,325	\$19,041,646	0	28,720
155A	155TH AVENUE	DOVE VALLEY ROAD	CAP CANAL	0.00	1.20	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$10,596,722	0	34,464
155A	155TH AVENUE	CAP CANAL	JOMAX ROAD	0.00	2.70	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$4,216,691	0	77,544
155A	155TH AVENUE	JOMAX ROAD	FRONTIER ROAD	0.43	0.43	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$875,860	\$4,038,661	2,924	12,350
155A	155TH AVENUE	FRONTIER ROAD	PINNACLE PEAK ROAD	0.00	1.50	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$11,985,415	0	43,080
163A	163RD AVENUE	DOVE VALLEY ROAD	CAP CANAL	1.62	1.70	MINOR COLLECTOR	PARKWAY	2	6	\$3,908,471	\$41,571,315	7,258	99,144
163A	163RD AVENUE	CAP CANAL	JOMAX ROAD	2.33	2.33	MINOR COLLECTOR	PARKWAY	2	6	\$5,356,905	\$13,118,178	10,438	135,886
163A	163RD AVENUE	JOMAX ROAD	DESERT OASIS BOULEVARD	0.47	0.47	MAJOR COLLECTOR	MAJOR ARTERIAL	3	6	\$1,348,461	\$24,170,458	5,339	22,861
163A	163RD AVENUE	DESERT OASIS BOULEVARD	DESERT OASIS BLVD (1,930' S)	0.36	0.36	MAJOR COLLECTOR	MAJOR ARTERIAL	2	6	\$1,032,863	\$10,822,183	2,448	17,510
163A	163RD AVENUE	DESERT OASIS BLVD (1,930' S)	SURPRISE FIRE STATION 304	0.19	0.19	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$545,122	\$11,219,750	851	9,242
163A	163RD AVENUE	SURPRISE FIRE STATION 304	SAN YSIDRIO ROAD	0.22	0.22	MINOR ARTERIAL	MAJOR ARTERIAL	4	6	\$1,051,991	\$7,129,093	6,318	10,701
163A	163RD AVENUE	SAN YSIDRIO ROAD	ASANTE BLVD	0.25	0.25	MAJOR ARTERIAL	MAJOR ARTERIAL	5	6	\$1,912,710	\$12,119,458	10,160	12,160
163A	163RD AVENUE	ASANTE BLVD	PINNACLE PEAK ROAD	0.50	0.50	MAJOR ARTERIAL	MAJOR ARTERIAL	6	6	\$4,303,598	\$18,075,110	24,320	24,320
163A	163RD AVENUE	PINNACLE PEAK ROAD	US 60/GRAND AVENUE	0.73	0.73	MINOR ARTERIAL	MAJOR ARTERIAL	4	6	\$4,188,835	\$10,529,716	20,966	35,507
171A	171ST AVENUE	DOVE VALLEY ROAD	CAP CANAL	0.00	1.70	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$16,053,044	0	48,824

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SEGMENT NAME	ROAD	FROM	TO										
171A	171ST AVENUE	CAP-CANAL	GAMBIT TRAIL	0.00	1.50	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$34,298,629	0	43,080
171A	171ST AVENUE	GAMBIT TRAIL	JOMAX ROAD	0.70	0.70	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$2,138,728	\$7,746,476	3,136	20,104
179A	179TH AVENUE	LONE MOUNTAIN ROAD	CAP-CANAL	0.00	1.00	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$30,525,091	0	28,720
179A	179TH AVENUE	CAP-CANAL	PAT-TILLMAN BOULEVARD	0.00	1.70	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$37,974,990	0	48,824
187A	187TH AVENUE	DOVE VALLEY ROAD	CAP-CANAL	0.00	2.10	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$9,164,384	0	102,144
187A	187TH AVENUE	CAP-CANAL	PAT-TILLMAN BOULEVARD	0.00	0.85	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$628,365,451	0	41,344
195A	195TH AVENUE	DOVE VALLEY ROAD	LONE MOUNTAIN ROAD	0.00	1.20	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$0	0	34,464
203A	203RD AVENUE	DOVE VALLEY ROAD	PAT-TILLMAN BOULEVARD	1.83	1.40	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$2,677,794	\$10,783,235	8,198	68,096
PT	PAT-TILLMAN BOULEVARD	163RD AVENUE	ASANTE BOULEVARD	0.90	0.90	MAJOR ARTERIAL	MAJOR ARTERIAL	6	6	\$7,746,476	\$0	43,776	43,776
PT	PAT-TILLMAN BOULEVARD	ASANTE BOULEVARD	CAP-CANAL	0.00	4.50	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$3,154,952	0	218,880
PT	PAT-TILLMAN BOULEVARD	CAP-CANAL	DOVE VALLEY ROAD	0.00	3.40	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$3,154,952	0	165,376
<b>TOTAL, NORTH</b>				<b>25.82</b>	<b>79.79</b>			<b>68</b>	<b>266</b>	<b>\$84,055,040</b>	<b>\$1,562,805,067</b>	<b>272,739</b>	<b>3,113,446</b>



WEST



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STREET SEGMENT				EXISTING LENGTH (MILES)	ULTIMATE LENGTH (MILES)	EXISTING CROSS-SECTION	ULTIMATE FUNCTIONAL CLASSIFICATION	EXISTING NUMBER OF LANES	ULTIMATE NUMBER OF LANES	VALUE OF EXISTING ROADWAY	VALUE OF ULTIMATE ROADWAY	EXISTING LOS-C CAPACITY (VEH-MILES)	ULTIMATE LOS-C CAPACITY (VEH-MILES)
SEGMENT NAME	ROAD	FROM	TO										
PA	PATTON ROAD	US 60/GRAND AVENUE	CAP CANAL	1.65	1.65	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$3,360,858	\$33,703,857	7,392	47,388
JO	JOMAX ROAD	US 60/GRAND AVENUE	195TH AVENUE	1.15	0.00	MINOR COLLECTOR	DOES NOT EXIST	2	0	\$0	\$0	5,152	0
JO	JOMAX ROAD	195TH AVENUE	203RD AVENUE	0.00	1.10	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$9,467,915	0	53,504
JO	JOMAX ROAD	203RD AVENUE	207TH AVENUE	0.50	0.50	LOCAL STREET	MAJOR ARTERIAL	2	6	\$956,355	\$14,484,282	800	24,320
JO	JOMAX ROAD	207TH AVENUE	211TH AVENUE	0.00	0.50	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$4,303,598	0	24,320
HA	HAPPY VALLEY ROAD	US 60/GRAND AVENUE	211TH AVENUE	3.88	3.88	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$7,903,109	\$46,588,984	17,382	111,434
NO	NORWICH DRIVE	US 60/GRAND AVENUE	181ST DRIVE	0.85	0.85	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$1,731,351	\$23,421,203	3,808	24,412
PI	PINNACLE PEAK ROAD	CITRUS ROAD	187TH AVENUE	1.00	0.00	MINOR COLLECTOR	DOES NOT EXIST	2	0	\$0	\$0	4,480	0
PI	PINNACLE PEAK ROAD	219TH AVENUE	223RD AVENUE	0.50	0.50	LOCAL STREET	DOES NOT EXIST	2	0	\$0	\$0	800	0
PI	PINNACLE PEAK ROAD	DEER VALLEY ROAD	CAP CANAL	0.00	1.40	DOES NOT EXIST	PARKWAY	0	6	\$0	\$21,941,494	0	81,648
DE	DEER VALLEY ROAD	US 60/GRAND AVENUE	178TH AVENUE	1.32	1.32	MINOR COLLECTOR	PARKWAY	2	6	\$2,496,676	\$15,514,127	5,914	76,982
DE	DEER VALLEY ROAD	178TH AVENUE	195TH AVENUE	2.25	2.25	MINOR COLLECTOR	PARKWAY	2	6	\$4,255,697	\$31,870,154	10,080	131,220
DE	DEER VALLEY ROAD	195TH AVENUE	219TH AVENUE	0.00	2.98	DOES NOT EXIST	PARKWAY	0	6	\$0	\$139,482,758	0	173,794
DE	DEER VALLEY ROAD	219TH AVENUE	227TH AVENUE/PINNACLE PEAK ROAD	0.00	1.00	DOES NOT EXIST	PARKWAY	0	6	\$0	\$10,345,954	0	58,320
DE	DEER VALLEY ROAD	227TH AVENUE/PINNACLE PEAK ROAD	255TH AVENUE	0.00	3.50	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$95,972,385	0	100,520

**DRAFT Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report**  
*Surprise, Arizona*

STREET SEGMENT				EXISTING LENGTH (MILES)	ULTIMATE LENGTH (MILES)	EXISTING CROSS-SECTION	ULTIMATE FUNCTIONAL CLASSIFICATION	EXISTING NUMBER OF LANES	ULTIMATE NUMBER OF LANES	VALUE OF EXISTING ROADWAY	VALUE OF ULTIMATE ROADWAY	EXISTING LOS-C CAPACITY (VEH-MILES)	ULTIMATE LOS-C CAPACITY (VEH-MILES)
SEGMENT NAME	ROAD	FROM	TO										
BER	BEARDSLEY ROAD	UNION HILLS DRIVE	255TH AVENUE	0.00	0.50	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$75,347,713	0	244,120
UN	UNION HILLS DRIVE	JACKRABBIT TRAIL	203RD AVENUE	0.00	2.00	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$14,258,186	0	57,440
SU	SUN VALLEY PARKWAY	195TH AVENUE	255TH AVENUE	0.30	0.30	PARKWAY	PARKWAY	4	6	\$47,706,342	\$96,204,331	324,032	484,056
187A	187TH AVENUE	HAPPY VALLEY ROAD	WILLIAMS DRIVE	0.00	1.51	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$10,764,930	0	43,367
187A	187TH AVENUE	WILLIAMS DRIVE	JACKRABBIT TRAIL	0.51	0.30	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$916,598	\$2,302,621	2,285	8,616
195A	195TH AVENUE	PATTON ROAD	JOMAX ROAD	1.03	0.00	MINOR COLLECTOR	DOES NOT EXIST	2	0	\$0	\$0	4,614	0
JA	JACKRABBIT TRAIL	JOMAX ROAD	PINNACLE PEAK ROAD	1.88	1.88	MINOR COLLECTOR	MAJOR ARTERIAL	2	6	\$3,595,895	\$24,279,799	8,422	91,443
JA	JACKRABBIT TRAIL	PINNACLE PEAK ROAD	DEER VALLEY ROAD	0.00	1.25	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$11,619,713	0	65,664
JA	JACKRABBIT TRAIL	DEER VALLEY ROAD	BELL ROAD	0.00	3.25	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$178,209,184	0	158,080
195A	195TH AVENUE	PINNACLE PEAK ROAD	DEER VALLEY ROAD	1.00	0.00	MINOR COLLECTOR	DOES NOT EXIST	2	0	\$0	\$0	4,480	0
195A	195TH AVENUE	DEER VALLEY ROAD	BELL ROAD	0.00	3.00	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$92,680,994	0	86,160
203A	203RD AVENUE	CAP CANAL	PATTON ROAD	0.00	0.05	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$51,982,939	0	1,436
203A	203RD AVENUE	PATTON ROAD	JOMAX ROAD	1.00	1.00	LOCAL STREET	MINOR ARTERIAL	2	4	\$2,036,884	\$27,490,462	1,600	28,720
203A	203RD AVENUE	JOMAX ROAD	HAPPY VALLEY ROAD	0.00	0.89	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$6,344,893	0	25,561
203A	203RD AVENUE	DEER VALLEY ROAD	SUN VALLEY PARKWAY	0.00	2.20	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$84,519,316	0	63,184

**DRAFT Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report**  
*Surprise, Arizona*

STREET SEGMENT				EXISTING LENGTH (MILES)	ULTIMATE LENGTH (MILES)	EXISTING CROSS-SECTION	ULTIMATE FUNCTIONAL CLASSIFICATION	EXISTING NUMBER OF LANES	ULTIMATE NUMBER OF LANES	VALUE OF EXISTING ROADWAY	VALUE OF ULTIMATE ROADWAY	EXISTING LOS-C CAPACITY (VEH-MILES)	ULTIMATE LOS-C CAPACITY (VEH-MILES)
SEGMENT NAME	ROAD	FROM	TO										
211A	211TH AVENUE	CAP-CANAL	JOMAX ROAD	0.00	0.56	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$11,129,933	0	27,238
211A	211TH AVENUE	JOMAX ROAD	SUN-VALLEY PARKWAY	0.00	4.60	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$132,739,293	0	223,744
219A	219TH AVENUE	PINNACLE-PEAK ROAD	SUN-VALLEY PARKWAY	2.50	2.50	MINOR COLLECTOR	MINOR ARTERIAL	2	4	\$5,092,209	\$103,175,948	11,200	71,800
227A	227TH AVENUE	CAP-CANAL	SUN-VALLEY PARKWAY	0.00	3.65	DOES NOT EXIST	MAJOR ARTERIAL	0	6	\$0	\$55,754,462	0	177,536
235A	235TH AVENUE	CAP-CANAL	SUN-VALLEY PARKWAY	0.00	2.47	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$22,771,508	0	70,938
243A	243RD AVENUE	CAP-CANAL	SUN-VALLEY PARKWAY	0.00	2.00	DOES NOT EXIST	PARKWAY	0	6	\$0	\$38,802,150	0	116,640
251A	251ST AVENUE	CAP-CANAL	SUN-VALLEY PARKWAY	0.00	2.15	DOES NOT EXIST	MINOR ARTERIAL	0	4	\$0	\$27,865,410	0	61,748
<b>TOTAL, WEST</b>				<b>29.32</b>	<b>73.59</b>			<b>34</b>	<b>160</b>	<b>\$80,051,973</b>	<b>\$1,515,340,494</b>	<b>412,441</b>	<b>3,015,353</b>

**APPENDIX F: PLANNED MAJOR ROADWAY IMPROVEMENTS**

**SOUTH**

**DRAFT Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report**  
*Surprise, Arizona*

Street Segment				Existing Length (miles)	Existing Number of Lanes	Ultimate Functional Classification	Ultimate Length (miles)	Ultimate Number of Lanes	IIP Number of Lanes	Percent Physically Complete with IIP	Increase in LOS C Capacity with IIP (veh-miles)	Preliminary Estimate of IIP Roadway Construction Cost
Segment Name	Road	From	To									
PE	Peoria Avenue	Solar Canyon Way	136th Avenue	0.32	2	Minor Arterial	0.32	4	4	100%	776	\$5,086,552
-	Cactus Road	Traffic Signal	at Magnolia Drive	-	-	-	-	-	-	100%	-	\$917,250
-	Greenway Road	Traffic Signal	at 175th Avenue	-	-	-	-	-	-	100%	-	\$917,250
-	Greenway Road	Traffic Signal	at Verde Vista Drive	-	-	-	-	-	-	100%	-	\$917,250
-	Sweetwater Avenue	Traffic Signal	at Cotton Lane	-	-	-	-	-	-	100%	-	\$917,250
-	Greenway Road	Traffic Signal	at Civic Center Road	-	-	-	-	-	-	100%	-	\$917,250
-	Peoria Avenue	Traffic Signal	at Cotton Lane	-	-	-	-	-	-	100%	-	\$917,250
-	Sweetwater Avenue	Traffic Signal	at Reems Road	-	-	-	-	-	-	100%	-	\$917,250
-	Waddell Road	Traffic Signal	at 157th Avenue	-	-	-	-	-	-	100%	-	\$917,250
-	Waddell Road	Traffic Signal	at Legacy Park Way	-	-	-	-	-	-	100%	-	\$917,250
-	Bell Road	Traffic Signal	at 183rd Avenue	-	-	-	-	-	-	100%	-	\$917,250
-	Bell Road	Traffic Signal	at Bell Point Boulevard	-	-	-	-	-	-	100%	-	\$917,250
-	Cotton Lane	Traffic Signal	at 1/4 mile north of Peoria Ave	-	-	-	-	-	-	100%	-	\$917,250
<b>Total, South</b>												<b>\$16,093,552</b>



**NORTH**

**DRAFT Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report**  
*Surprise, Arizona*

Street Segment				Existing Length (miles)	Existing Number of Lanes	Ultimate Functional Classification	Ultimate Length (miles)	Ultimate Number of Lanes	IIP Number of Lanes	Percent Physically Complete with IIP	Increase in LOS C Capacity with IIP (veh-miles)	Preliminary Estimate of IIP Roadway Construction Cost
Segment Name	Road	From	To									
PT	Pat Tillman Boulevard	Asante Boulevard	CAP Canal	0.00	0	Major Arterial	4.50	6	6	100%	1,532	\$3,154,952
PT	Pat Tillman Boulevard	CAP Canal	Dove Valley Road	0.00	0	Major Arterial	3.40	6	6	100%	9,923	\$3,154,952
-	151st Avenue	Traffic Signal	at Happy Valley Road	-	-	-	-	-	-	100%	-	\$917,333
-	155th Avenue	Traffic Signal	at Happy Valley Road	-	-	-	-	-	-	100%	-	\$917,333
-	159th Avenue	Traffic Signal	at Happy Valley Road	-	-	-	-	-	-	100%	-	\$917,333
-	163rd Avenue	Traffic Signal	at Asante Boulevard	-	-	-	-	-	-	100%	-	\$917,333
-	163rd Avenue	Traffic Signal	at Happy Valley Road	-	-	-	-	-	-	100%	-	\$917,333
-	171st Avenue	Traffic Signal	at Jomax Road	-	-	-	-	-	-	100%	-	\$917,333
<b>Total, North</b>												<b>\$11,813,904</b>

WEST

**DRAFT Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report**  
*Surprise, Arizona*

Street Segment				Existing Length (miles)	Existing Number of Lanes	Ultimate Functional Classification	Ultimate Length (miles)	Ultimate Number of Lanes	IIP Number of Lanes	Percent Physically Complete with IIP	Increase in LOS C Capacity with IIP (veh-miles)	Preliminary Estimate of IIP Roadway Construction Cost
Segment Name	Road	From	To									
DE	Deer Valley Road	US 60/Grand Avenue	178th Avenue	1.32	2	Parkway	1.32	6	6	100%	54,722	\$6,750,796
DE	Deer Valley Road	178th Avenue	195th Avenue	2.25	2	Parkway	2.25	6	6	100%	39,976	\$17,985,943
<b>Total, West</b>												<b>\$24,736,739</b>

**CITY OF SURPRISE**  
**Summary of Changes to the November 13, 2023 LUA IIP**

Page	November 13, 2023	Page	February 13, 2024
1	Paragraph 1	1	Corrected Arizona Revised Statute citation.
1	Paragraph 2	1	Removed Street Facilities.
1	Paragraph 3	1	Updated citation to Enabling Legislation.
6	Figure 1	6	Removed Pools under Parks and Recreational Facilities Incremental Expansion.
6	Figure 1	6	Removed Street Facilities.
7	Figure 2	7	Removed Street Facilities.
10	South Street Service Area subsection	10	Removed.
11	North Street Service Area subsection	10	Removed.
11	West Street Service Area subsection	10	Removed.
12	Outside Street Service Area subsection	11	Removed.
12	All SPA 1 fees, Figure 12	11	Updated all SPA 1 fees, renamed Figure 12 to 9.
13	All SPA 2 fees, Figure 13	11	Updated all SPA 2 fees, renamed Figure 13 to 10.
13	All SPA 3 fees, Figure 14	12	Updated all SPA 3 fees, renamed Figure 14 to 11.
13	All SPA 4 fees, Figure 15	12	Updated all SPA 4 fees, renamed Figure 15 to 12.
14	All SPA 5 fees, Figure 16	12	Updated all SPA 5 fees, renamed Figure 16 to 13.
15	South Street Service Area subsection, including Figure 17	14	Removed Street (South) fees, updated all fee differences, renamed Figure 17 to 14.
15	North Street Service Area subsection	14	Removed.
16	West Street Service Area subsection	14	Removed.
16	Outside Street Service Area subsection	14	Removed.
17	SPAs 1-3, Figures 21-23	15	Updated all SPAs 1-3 fees, renamed Figures 21-23 to 15-17.
18	SPAs 4-5, Figures 24-25	16	Updated all SPAs 4-5 fees, renamed Figures 24-25 to 18-19.
19	Paragraph 3	17	Removed "The service area for the Street Facilities IIP is shown in Figure L1." Renamed text Figure L2 for water facilities, water resource facilities, and wastewater facilities to L1.
19	Paragraph 4	17	Renamed text "Figure L20 through Figure L23" to Figure L13.
20	Figure L1	18	Removed.
21	Figure L2	19	Renamed Figure L2 to L1.
22	Paragraph and Figure L3	20	Renamed Figure L3 to L2.
23	Paragraph 2 and Figure L4	21	Renamed Figure L4 to L3.
23	Paragraph and Figure L5	21	Renamed text Figure L4 to L3. Renamed Figure L5 to L4.
24	Paragraph 1	22	Renamed text Figure L4 to L3.
24	Header only	22	Removed.
24	Paragraph 3 and Figure L6	22	Renamed text Figure L4 to L3 and Figure L6 to L5.
25-26	Entire subsection	23-24	Removed.
27	Paragraph 2 and Figure L10	25	Renamed text Figure L10 to L6.
28	Figure L11	26	Renamed Figure L11 to L7.
29	Header only	27	Removed.
29	Paragraph 2	27	Renamed text Figure L10 to L6.
29	Figure L12	27	Renamed Figure L12 to L8.
30-32	Street Service Area Projections: entire section	28-30	Removed.
33	Figure L16	31	Renamed Figure L16 to L9.
34	Commuter Trip Adjustment paragraph and Figure L17	32	Renamed Figure L17 to L10.
35	Paragraph and Figure L18	33	Renamed text Figure L18 to L11 and Figure L18 to L11.
36	Paragraph and Figure L19	34	Renamed text Figure L19 to L12 and Figure L19 to L12.
37	Citywide Projections header	35	Removed.
37	Figure L20	35	Renamed Figure L20 to L13.
38-40	Street Service Area Projections: entire section	36-38	Removed.
48	2nd paragraph: analysis figures	46	Updated.
48	Figure 12, Ambulance unit cost	46	Updated (reduced by 50,000), all other Figure amounts updated based on this reduction.
49	Not reported	47-48	Inserted Bond Credit section.
50	Figure F14	50	Renamed Figure F14 to F16.
51	Figure F15	51	Renamed Figure F15 to F17.
52	Figure F16	52	Renamed Figure F16 to F18.
53	Paragraph and Figure F17	53	Updated cost for support apparatus. Renamed Figure F17 to F19.
54	Revenue Credit/Offset paragraph	53	Inserted sentence on how the City allocates the construction privilege tax credit.
54	Paragraphs 2-4 and Figure F18	54	Updated cost and fee amounts, renamed Figure F18 to F20, updated proposed fees in now Figure F20.
55	Paragraph and Figure F19	55	Renamed Figure F19 to F21, updated revenue and expenditure amounts, updated amounts in now Figure F21.
56	Figure 20	56	Renamed to Figure F22, rearranged order of projects and added biennial audit cost description.
57	Paragraph 2	57	Removed reference to "pools".
59	Paragraph	59	Reduced amount of acres of provided park land. Added "and develop".
59	Figure PR3	59	Reduced total acres for Surprise Recreation Campus.
60	Paragraph 2	60	Updated source of cost estimates and estimated cost amounts.
60	Figure PR4	60	Updated Cost Factors
64	Pools - Incremental Expansion: entire section	64-65	Removed.
66	Figure PR10	66	Renamed Figure PR10 to PR8.
66	Paragraph 4	66	Updated verbiage.
67	Paragraph and Figure PR11	67	Updated cost and verbiage. Renamed Figure PR11 to PR9.
68	Figure PR12	68	Renamed Figure PR12 to PR10.
69	Figure PR13	69	Renamed Figure PR13 to PR11.
70	Pools - Incremental Expansion: entire section	70	Removed.
71	Paragraph 1	71	Inserted sentence on how the City allocates the construction privilege tax credit.

**CITY OF SURPRISE**  
**Summary of Changes to the November 13, 2023 LUA IIP**

71	Not reported	71	Add paragraph 2 regarding a site development credit.
71	Paragraphs 2-4 and Figure PR15	71-72	Updated cost and fee amounts, renamed Figure PR15 to PR12, updated proposed fees in now Figure PR12.
72	Paragraph and Figure PR16	73	Renamed Figure PR16 to PR13, updated revenue and expenditure amounts, updated amounts in now Figure PR13.
73	Figure PR17	74	Renamed Figure PR17 to PR14, updated capital plan elements and costs and added biennial audit cost description.
79	Paragraph and Figure P8	80	Updated number of vehicles due to decreasing MCC vehicles from 2 to 1, and updated cost amounts. Figure P8 updated to reflect same reduction in MCC vehicles.
80	Paragraphs 1-2 and Figure P9	81	Updated vehicle and cost amounts.
82	Not reported	83-84	Inserted Bond Credit section.
82	Paragraph 4	85	Updated number of vehicles.
83	Figure P12	86	Renamed Figure P12 to P14.
84	Figure P13	87	Renamed Figure P13 to P15.
85	Paragraph and Figure P14	88	Updated number of vehicles and updated cost amounts. Figure P14 renamed to P16 and updated.
86	Figure P15	89	Renamed Figure P15 to P17.
87	Paragraph 1	90	Inserted sentence on how the City allocates the construction privilege tax credit.
87	Paragraphs 2-4	90	Renamed text Figure P16 to P18, updated cost and fee amounts.
87	Figure P16	91	Renamed Figure P16 to P18 and updated proposed fees.
88	Paragraph and Figure 17	92	Renamed Figure P17 to P19, updated revenue and expenditure amounts, updated amounts in now Figure P19.
89	Figure P18	93	Renamed Figure P18 to P20. Rearranged order of projects and added biennial audit cost description.
90-108	Streets Facilities IIP: entire section	94-112	Removed.
109	Paragraph 2	113	Inserted "(SPA 1 only)" after "water lines".
114	Figure W6	118	Updated Booster Pump Stations amounts for SPA 3.
117	Paragraph and Figure W10	121	Updated system value of SPA 2 by removing values for water lines.
118	Paragraph and Figure W11	122	Updated system value of SPA 3 by removing values for water lines.
118	Paragraph and Figure S12	123	Updated cost per gallon for SPA 2 and SPA 3 by removing values for water lines and updating the Booster Pump Stations value for SPA 3.
119	Revenue Credit/Offset paragraph	124	Inserted sentence on how the City allocates the construction privilege tax credit.
120	Paragraphs 1-2 and Figure W15	125	Updated cost and fee amounts, and proposed fees.
121	Paragraphs 1-2 and Figure W16	126	Updated cost and fee amounts, and proposed fees.
122	Paragraphs 1-2 and Figure W17	127	Updated cost and fee amounts, and proposed fees.
123	Paragraphs 1-2 and Figure W18	128	Updated cost and fee amounts, and proposed fees.
124	Paragraph and Figure W19	129	Updated revenue amounts in text and Figure W19. Added sentence regarding offset by development fee credits.
125	Figure W19	130	Updated Water Facilities Capital Plan for various projects and added biennial audit cost description, renamed Figure W19 to W20.
131	Figure WR7	136	Renamed Bartlett Dam Estimate to Renewable Water Supply Estimate
132	Revenue Credit/Offset paragraph	138	Inserted sentence on how the City allocates the construction privilege tax credit.
132	Paragraphs 1-2 and Figure WR9	138	Updated cost and fee amounts, and proposed fees.
133	Paragraph and Figure WR10	139	Updated revenue and expenditure amounts, updated amounts in Figure WR10.
134	Figure WR11	140	Updated Water Resource Facilities Capital Plan for various projects and added biennial audit cost description.
135	Paragraph 2	141	Inserted "(SPA 1 only)" after "wastewater lines".
142	Paragraph 2 and Figure WW10	148	Updated system value of SPA 2 by removing values for wastewater lines.
143	Paragraph 2 and Figure WW11	152, 154	Updated system value of SPA 3 by removing values for wastewater lines.
144	Cost per Gallon paragraph	156	Updated cost per gallon for SPA 2 and SPA 3 by removing values for wastewater lines.
144	Revenue Credit/Offset paragraph	157	Inserted sentence on how the City allocates the construction privilege tax credit.
145	Paragraphs 1-2 and Figure WW15	157-158	Updated cost and fee amounts, and proposed fees.
146	Paragraphs 1-2 and Figure WW16	159	Updated cost and fee amounts, and proposed fees.
147	Paragraphs 1-2 and Figure WW17	160	Updated cost and fee amounts, and proposed fees.
148	Paragraphs 1-2 and Figure WW18	161	Updated cost and fee amounts, and proposed fees.
149	Paragraphs 1-2 and Figure WW19	162	Updated cost and fee amounts, and proposed fees.
150	Paragraph and Figure WW20	163	Updated revenue amounts in text and Figure WW20.
151	Figure WW21	164	Updated Wastewater Facilities Capital Plan for various projects and added biennial audit cost description.
152	Paragraph 3 and Figure A1	166	Inserted sentences for retail sales tax rate and and related construction sales tax credit, and updated Figure A1.
153	Paragraph and Figure A2	168	Updated paragraph verbiage and Figure A2 to include only Fire, Parks and Rec, and Police in the Excess Construction Sales Tax Credit.
156	Warehouse category paragraph	171	Added "self-storage facilities".
157-162	Appendix D: entire section	172-185	Removed.
163-172	Appendix E: entire section	186-208	Removed.
173-174	Appendix F: entire section	209-215	Removed.



**RESOLUTION # 2024-31**

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SURPRISE, ARIZONA, ADOPTING THE CITY'S LAND USE ASSUMPTIONS AND INFRASTRUCTURE IMPROVEMENTS PLAN RELATED TO THE FUTURE IMPOSITION OF DEVELOPMENT IMPACT FEES.**

**WHEREAS**, the City, in anticipation of adopting development impact fees, released the proposed Land Use Assumptions (LUA) and an Infrastructure Improvements Plan (IIP) to the public on November 13, 2023, including posting the required material on the City's website, all in conformance with Arizona Revised Statutes (ARS) § 9.463.05;

**WHEREAS**, at least 60 days passed after the release of the LUA and IIP before the public hearing on the LUA and IIP; such hearing was held on January 16, 2024;

**WHEREAS**, at least 30 days but less than 60 days has passed since the public hearing on the LUA and IIP; and

**WHEREAS**, with the adoption of the LUA and IIP, development impact fees will be brought forward by resolution after completion of a public notice and public hearing in accordance with ARS § 9.463.05.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the City of Surprise, Arizona, as follows.

**Section 1.** The LUA dated February 20, 2024, and IIP dated February 20, 2024, are hereby adopted.

**Section 2.** The City Manager is hereby directed to provide notice of the City's intent to impose development impact fees based on the LUA and IIP adopted by this Resolution.

**APPROVED AND ADOPTED** this \_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Skip Hall, Mayor

Attest:

Approved as to form:

\_\_\_\_\_  
Kristi Passarelli, City Clerk

\_\_\_\_\_  
Robert Wingo, City Attorney



**CITY OF SURPRISE**  
**Regular City Council Meeting**

Council Meeting Date: February 20, 2024  
Submitting Department: City Manager Office  
Staff Recommendations:

Contact Person: Robert Wingo, CITY ATTORNEY  
District: Internal

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Consent: No      Regular: No      Public Hearing: No      Report/Discussion: No

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**Agenda Wording:**

*Consideration and action to recess into executive session in order for the City Council to consider and provide its position and instructions pertaining to the negotiation of contracts pertaining to the utilization of Surprise Stadium and related facilities pursuant to A.R.S. 38-431.03(A)(4).*

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**Motion:**

*I move to recess into executive session for the purpose noticed.*

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**Background:**

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**Objective Analysis:**

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**Policy Compliant:**

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**Financial Impact:**

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**Budget Impact:**

**FTE Impact:**

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**ATTACHMENTS:**

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