**MEETING AGENDA**
**City Council**
**REGULAR SESSION CITY COUNCIL**
**January 7, 2025**

**HAL BALDWIN MUNICIPAL COMPLEX COUNCIL CHAMBERS**
**1400 SCHERTZ PARKWAY BUILDING #4**
**SCHERTZ, TEXAS 78154**

**CITY OF SCHERTZ CORE VALUES**
**Do the right thing**
**Do the best you can**
**Treat others the way you want to be treated**
**Work cooperatively as a team**

## AGENDA
## TUESDAY, JANUARY 7, 2025 at 6:00 p.m.

**Call to Order**

**Opening Prayer and Pledges of Allegiance to the Flags of the United States and State of Texas. (Councilmember Allison Heyward)**

**Employee Introductions**

- **Animal Services:** Carla Cardona-Kennel Technician
- **EMS:** Valentin Hernandez-Paramedic; Steven Amen-EMT (Part-Time); Noah Ellis-EMT (Part-time); Anne Koker-EMT (Part-time)
- **Neighborhood Services:** Patrick McIntyre-Code Enforcement Officer
- **Parks:** Steven Lovelace-Parks Maintenance Technician (P/T)
- **Police:** Luis Gonzales-Public Safety Communications Officer
- **Police:**Jonathan Bagby-Police Officer; Francisco Lopez-Police Officer; Daniel Hall-Police Cadet
- **Utility Billing:** Marvin Burkett-Meter Technician

**City Events and Announcements**

- Announcements of upcoming City Events (B. James/S. Gonzalez)
- Announcements and recognitions by the City Manager (S. Williams)
- Announcements and recognitions by the Mayor (R. Gutierrez)

**Hearing of Residents**

*This time is set aside for any person who wishes to address the City Council. Each person should fill out the speaker's register prior to the meeting. Presentations should be limited to no more than **3** minutes.*

***All remarks shall be addressed to the Council as a body, and not to any individual member thereof. Any person making personal, impertinent, or slanderous remarks while addressing the Council may be requested to leave the meeting.***

***All handouts and/or USB devices must be submitted to the City Secretary no later than noon on the Monday preceding the meeting. Handouts will be provided to each Councilmember prior to the start of the meeting by the City Secretary. All USB devices will be vetted by City IT staff to ensure City property is protected from malware.***

*Discussion by the Council of any item not on the agenda shall be limited to statements of specific factual information given in response to any inquiry, a recitation of existing policy in response to an inquiry, and/or a proposal to place the item on a future agenda. The presiding officer, during the Hearing of Residents portion of the agenda, will call on those persons who have signed up to speak in the order they have registered.*

**Consent Agenda Items**

The Consent Agenda is considered self-explanatory and will be enacted by the Council with one motion. There will be no separate discussion of these items unless they are removed from the Consent Agenda upon the request of the Mayor or a Councilmember.

1. **Minutes** - Approval of the minutes from the Council Meeting on December 17, 2024 and the Canvassing the Election Meeting on December 26, 2024. (S.Edmondson/S.Courney)

2. **Resolution 24-R-143** - Authorizing an agreement with GenServ Inc. for preventative maintenance and on-call generator services (B.James/D.Hardin/C.Hernandez/A.Puentes)

3. **Resolution 25-R-001** - Authorizing the EMS, Utility Billing, Schertz Magazine, and Library debt revenue adjustments. (S.Gonzalez/J.Walters)

**Discussion and Action Items**

4. **Resolution 25-R-006** - Articulating the City of Schertz' position on potential truck bypass routes on FM 2252. (S.Williams/B.James)

5. **Resolution 25-R-005** Approving a Utility Service Extension Request for the Woman Hollering Townhomes (B.James/K.Woodlee)

**Public Hearings**

6. **Ordinance 25-S-002** – Conduct a public hearing and consider a request to rezone approximately 85 acres of land, from Agricultural District (AD) to approximately 30 acres as Single-Family Residential District (R-6) and approximately 55 acres as Single-Family Residential District (R-2), generally located 2,000 feet North of the intersection of Weir Road and Trainer Hale Road, more specifically known as Bexar County Property Identification Numbers 310048 and 1190132, City of Schertz, Bexar County, Texas. (B.James/L.Wood/D.Marquez)

7. **Ordinance 25-S-001** - Conduct a public hearing and consider a request to rezone approximately 26 acres of land, from Single-Family Residential District (R-2) to Single-Family Residential District (R-6), known as a portion of Guadalupe County Property Identification Number 64640, generally located 78 feet South of the intersection of Savannah Drive and Irish Creek Road, City of Schertz, Guadalupe County, Texas.(B.James/L.Wood/D.Marquez).

8. **Ordinance 25-S-003** - Conduct a public hearing and consider a request to rezone approximately 20 acres of land from General Business District (GB), Agricultural District (AD), and Pre-Development District (PRE) to Middle Density Residential District (R-5), more specifically known as 5524 Eckhardt Road, also known as a portion of Comal County Property Identification Numbers 75449 and 78233, City of Schertz, Comal County, Texas. (B.James/L.Wood/S.Haas)

9. **Ordinance 25-S-004** - Conduct a public hearing and consider amendments to Part III of the Schertz Code of Ordinances, Unified Development Code (UDC), to Article 11, Section 21.11.6 Prohibited Signs and Section 21.11.17 Temporary Signs. (B.James/L.Wood/E.Delgado)

**Information available in City Council Packets - NO DISCUSSION TO OCCUR**

10. **Quarterly Update**- City Council Approved Zoning and Specific Use Permit Ordinances in relation to current development status

11. **Information** regarding a pending update to the City of Schertz Water and Wastewater Master Plans, Land Use Assumptions, and Capital Improvement Plans that establish the basis for updates to the City's Water and Wastewater Impact Fees.

**Requests and Announcements**

- Requests by Mayor and Councilmembers for updates or information from Staff
- Requests by Mayor and Councilmembers that items or presentations be placed on a future City Council agenda

- City and Community Events attended and to be attended (Council)

## Adjournment

**CERTIFICATION**

I, SHEILA EDMONDSON, CITY SECRETARY OF THE CITY OF SCHERTZ, TEXAS, DO HEREBY CERTIFY THAT THE ABOVE AGENDA WAS PREPARED AND POSTED ON THE OFFICIAL BULLETIN BOARDS ON THIS THE 2ND DAY OF JANUARY 2025 AT 11:45 A.M., WHICH IS A PLACE READILY ACCESSIBLE TO THE PUBLIC AT ALL TIMES AND THAT SAID NOTICE WAS POSTED IN ACCORDANCE WITH CHAPTER 551, TEXAS GOVERNMENT CODE.

SHEILA EDMONDSON

**I CERTIFY THAT THE ATTACHED NOTICE AND AGENDA OF ITEMS TO BE CONSIDERED BY THE CITY COUNCIL WAS REMOVED BY ME FROM THE OFFICIAL BULLETIN BOARD ON _____DAY OF _____, 2025.**
**TITLE: _____**

*This facility is accessible in accordance with the Americans with Disabilities Act. Handicapped parking spaces are available. If you require special assistance or have a request for sign interpretative services or other services, please call 210-619-1030.*

**The City Council for the City of Schertz reserves the right to adjourn into closed session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by the Texas Open Meetings Act.**

**Closed Sessions Authorized: This agenda has been reviewed and approved by the City's legal counsel and the presence of any subject in any Closed Session portion of the agenda constitutes a written interpretation of Texas Government Code Chapter 551 by legal counsel for the governmental body and constitutes an opinion by the attorney that the items discussed therein may be legally discussed in the closed portion of the meeting considering available opinions of a court of record and opinions of the Texas Attorney General known to the attorney. This provision has been added to this agenda with the intent to meet all elements necessary to satisfy Texas Government Code Chapter 551.144(c) and the meeting is conducted by all participants in reliance on this opinion.**

COUNCIL COMMITTEE AND LIAISON ASSIGNMENTS

| | |
|---|---|
| **Mayor Gutierrez**<br>Member<br>Audit Committee<br>Investment Advisory Committee<br>Main Street Committee<br><br>Liaison<br>Board of Adjustments<br>Senior Center Advisory Board-Alternate | **Councilmember Davis– Place 1**<br>Member<br>Interview Committee<br>Main Street Committee - Chair<br>TIRZ II Board<br><br>Liaison<br>Parks & Recreation Advisory Board<br>Schertz Housing Authority Board<br>Transportation Safety Advisory Board |
| **Councilmember Watson-Place 2**<br>Member<br>Audit Committee<br><br>Liaison | **Councilmember Macaluso – Place 3**<br>Member<br>Interview Committee<br>Hal Baldwin Scholarship Committee |

| | |
|---|---|
| Library Advisory Board<br>Senior Center Advisory Board<br>Cibolo Valley Local Government Corporation-Ex-Officio | Liaison<br>TIRZ II Board<br>Animal Services Advisory Committee |
| **Councilmember – Place 4** | **Councilmember Westbrook – Place 5**<br>Liaison<br>Schertz-Seguin Local Government Corporation (SSLGC)<br>Planning and Zoning Commission<br>Schertz Historical Preservation Society<br>Cibolo Valley Local Government Corporation (CVLGC)-Alternate |
| **Councilmember Heyward – Place 6**<br>Member<br>Animal Services Advisory Committee<br>Audit Committee<br>Interview Committee-Chair<br>Investment Advisory Committee<br>Main Street Committee<br><br>Liaison<br>Building and Standards Commission<br>Economic Development Corporation - Alternate<br>Senior Center Advisory Board | **Councilmember Brown – Place 7**<br>Member<br>Main Street Committee<br>Schertz-Seguin Local Government Corporation (SSLGC)<br><br>Liaison<br>Economic Development Corporation |

**Agenda No. 1.**

# CITY COUNCIL MEMORANDUM

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **City Secretary** |
| **Subject:** | **Minutes - Approval of the minutes from the Council Meeting on December 17, 2024 and the Canvassing the Election Meeting on December 26, 2024. (S.Edmondson/S.Courney)** |

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**Attachments**

Minutes 12-17-2024

Minutes 12-26-2024 Canvassing

# D R A F T

MINUTES
REGULAR MEETING
December 17, 2024

A Regular Meeting was held by the Schertz City Council of the City of Schertz, Texas, on December 17, 2024, at 6:00 p.m. in the Hal Baldwin Municipal Complex Council Chambers, 1400 Schertz Parkway, Building #4, Schertz, Texas. The following members present to-wit:

| | |
|---|---|
| Present: | Mayor Ralph Gutierrez; Mayor Pro-Tem Robert Westbrook; Councilmember Mark Davis; Councilmember Michelle Watson; Councilmember Paul Macaluso; Councilmember Tim Brown |
| Absent: | Councilmember Place 4 (Vacant); Councilmember Allison Heyward |
| Staff present: | City Manager Steve Williams; City Attorney Natalie Thamm; Deputy City Manager Brian James; Assistant City Manager Sarah Gonzalez; Deputy City Secretary Sheree Courney |

**Call to Order**
Mayor Gutierrez called the meeting to order ta 6:00 p.m.

**Opening Prayer and Pledges of Allegiance to the Flags of the United States and State of Texas. (Mayor Pro-Tem Westbrook)**
Mayor Pro-Tem Robert Westbrook provided the opening prayer and led the Pledges of Allegiance to the Flags of the United States and State of Texas.

**City Events and Announcements**

- Announcements of upcoming City Events (B.James/S.Gonzalez)
  Deputy City Manager Brian James presented upcoming City events.

- Announcements and recognitions by the City Manager (S.Williams)
  City Manager Steve Williams congratulated the following employees on their promotions:

  Starla Blake to Police Records Manager
  Sarah Rodriguez to Administrative Assistant
  Marc Yamazi to Building Inspector
  Nathaniel DeLeon to Paramedic
  Alexis Martinez to Paramedic
  Frank Trifilio to Paramedic
  Marty Trevino to Police Lieutenant

  He also congratulated Jessica Kurz for earning her Senior Certified Professional designation from the Public Sector HR Association (PSHRA).

He extended kudos to PD for their Blue Santa Program.

- Announcements and recognitions by the Mayor (R.Gutierrez)
  Mayor Gutierrez extended kudos to the staff for a job well-done on the Deck the City Hall Tree Lighting event and Holidazzle Parade.

**Hearing of Residents**

*This time is set aside for any person who wishes to address the City Council. Each person should fill out the speaker's register prior to the meeting. Presentations should be limited to no more than **3** minutes.*

***All remarks shall be addressed to the Council as a body, and not to any individual member thereof. Any person making personal, impertinent, or slanderous remarks while addressing the Council may be requested to leave the meeting.***

***All handouts and/or USB devices must be submitted to the City Secretary no later than noon on the Monday preceding the meeting. Handouts will be provided to each Councilmember prior to the start of the meeting by the City Secretary. All USB devices will be vetted by City IT staff to ensure City property is protected from malware.***

Mayor Pro-Tem Robert Westbrook recognized the following resident:

**Ben Guerrero,** 506 Capot Court Ln, thanked residents of Schertz who voted in the Special Election and congratulated all candidates on their efforts. As one of the candidates, he encouraged all registered voters to vote in the Runoff Election to be held in January 2025.

**Consent Agenda Items**

The Consent Agenda is considered self-explanatory and will be enacted by the Council with one motion. There will be no separate discussion of these items unless they are removed from the Consent Agenda upon the request of the Mayor or a Councilmember.

1. **Minutes** - Approval of the minutes from the Council Meeting on December 3, 2024. (S.Edmondson/S.Courney)

2. **Resolution 24-R-165** - Authorizing the City Manager to reject all bids received for the Schertz Soccer Complex Well Drilling Project. (S.Gonzalez/L.Shrum)

No items were removed for separate action.

Mayor Gutierrez asked for a motion to approve Consent Agenda Items #1 and #2.

Moved by Councilmember Mark Davis, seconded by Mayor Pro-Tem Robert Westbrook

AYE: Mayor Pro-Tem Robert Westbrook, Councilmember Mark Davis, Councilmember Michelle Watson, Councilmember Paul Macaluso, Councilmember Tim Brown

Other: Councilmember Place 4 (Vacant) (ABSENT), Councilmember Allison Heyward (ABSENT)

Passed

**Discussion and Action**

3. **Resolution 24-R-162** - Approving a Resolution to canvass the returns and declaring the results of the December 14, 2024 Special Election, and other matters in connection therewith. (Mayor/Council/S.Edmondson)

   Item postponed until December 26, 2024.

4. **Oath of Office -** City Council Place 4

   No action taken.

5. **Resolution 24-R-163** Approving a Resolution to call for a Runoff Election on January 18, 2025, with Guadalupe County, Bexar County and Comal County and approving the Guadalupe County Election Contract stating that Guadalupe County will oversee the entire Runoff Election. (Mayor/Council/S.Edmondson)

   Item postponed until December 26, 2024.

6. **Resolution No. 24-R-164** - Authorizing Professional Service Agreements with Freeland Turk Engineering Group, LLC, Halff Associates, Inc., Kimley-Horn and Associates, Inc., Unintech Consulting Engineers, Inc., and Utility Engineering Group, PLLC, for on-call engineering services. (B.James/K.Woodlee)

   Mayor Gutierrez recognized City Engineer Kathy Woodlee who presented Resolution 24-R-164 authorizing a Professional Services Agreement with five companies, Freeland Turk Engineering Group, Halff Associates, Kimley-Horn and Associates, Unintech Consulting Engineers, and Utility Engineering Group for on-call engineering services.

   Mayor Gutierrez opened the floor to Council for discussion.

   No discussion occurred.

   Moved by Councilmember Tim Brown, seconded by Councilmember Michelle Watson

   AYE: Mayor Pro-Tem Robert Westbrook, Councilmember Mark Davis, Councilmember Michelle Watson, Councilmember Paul Macaluso, Councilmember Tim Brown

Other: Councilmember Place 4 (Vacant) (ABSENT), Councilmember Allison Heyward (ABSENT)

Passed

**Public Hearings**

**7.** **Ordinance 24-M-164** - Conduct a public hearing and consider a request to amend the Comprehensive Land Use Plan by adopting the Parks, Recreation, Open Space & Trails (PROST) Master Plan. (S. Gonzalez/L.Shrum)

Parks and Recreation Director Lauren Shrum introduced Ordinance 24-M-164 to consider a request to amend the Comprehensive Land Use Plan by adopting the Parks, Recreation, Open Space & Trails (PROST) Master Plan. She recognized Caitlin Admire, Freese and Nichols Project Manager, who presented the 10-year plan to Council.

Public Hearing opened at 6:27 p.m.
No residents came forward to speak.
Public Hearing closed at 6:28 p.m.

Mayor Gutierrez opened the floor to Council for discussion.

The brief discussion included positive comments regarding the prioritization and overall work done on the plan. Some concerns were expressed regarding how the plan aligned with the Strategic Plan and whether it addressed the lack of access to baseball fields for free-use by residents. Ms. Shrum addressed the concerns and explained that some items in the strategic plan are already underway and not included in this plan. Mr. Williams expressed the need for the city to tweak the CIP to align with the Strategic Plan as well as the PROST plan.

Mayor Gutierrez asked for a motion to approve Ordinance 24-M-164.

Moved by Councilmember Mark Davis, seconded by Mayor Pro-Tem Robert Westbrook

AYE: Mayor Pro-Tem Robert Westbrook, Councilmember Mark Davis, Councilmember Michelle Watson, Councilmember Paul Macaluso, Councilmember Tim Brown

Other: Councilmember Place 4 (Vacant) (ABSENT), Councilmember Allison Heyward (ABSENT)

Passed

**Information available in City Council Packets - NO DISCUSSION TO OCCUR**

**8.** Monthly Update - Major Projects In Progress/CIP (B.James/K.Woodlee)

**Requests and Announcements**

- Requests by Mayor and Councilmembers for updates or information from Staff
  No requests were made by Mayor or Councilmembers for updates or information from Staff.

- Requests by Mayor and Councilmembers that items or presentations be placed on a future City Council agenda
  No requests were made by Mayor or Councilmembers that items or presentations be placed on a future City Council agenda.

- City and Community Events attended and to be attended (Council)
  ^Mayor Pro-Tem Robert Westbrook attended the retirement celebration for Todd Kaiser, Deck the City Hall, Holidazzle Parade, and the Prize Palooza with the Tri-County Chamber of Commerce.
  ^Councilmember Michelle Watson attended Deck the City Hall, Holidazzle Parade, and the Police Department Luncheon.
  ^Councilmember Paul Macaluso attended Deck the City Hall and the Holidazzle Parade.
  ^Councilmember Tim Brown attended the Holidazzle Parade.

**Adjournment**
Mayor Gutierrez adjourned the meeting at 6:39 p.m.

_____
Ralph Gutierrez, Mayor

ATTEST:

_____
Sheila Edmondson, City Secretary

# D R A F T

MINUTES
SPECIAL SESSION MEETING
December 26, 2024

A Special Session Meeting was held by the Schertz City Council of the City of Schertz, Texas, on December 26, 2024, at 4:00 p.m. in the Hal Baldwin Municipal Complex Council Chambers, 1400 Schertz Parkway, Building #4, Schertz, Texas. The following members present to-wit:

| | |
|---|---|
| Present: | Mayor Ralph Gutierrez; Mayor Pro-Tem Robert Westbrook; Councilmember Mark Davis; Councilmember Michelle Watson; Councilmember Allison Heyward; Councilmember Tim Brown |
| Absent: | Councilmember Paul Macaluso; Councilmember Place 4 (Vacant) |
| Staff present: | City Manager Steve Williams; Assistant City Manager Sarah Gonzalez; City Secretary Sheila Edmondson; Deputy City Secretary Sheree Courney |

**Call to Order**
Mayor Gutierrez called the meeting to order at 4:00 p.m.

**Opening Prayer and Pledges of Allegiance to the Flags of the United States and State of Texas. (Mayor Gutierrez)**
Mayor Gutierrez provided the opening prayer and led the Pledges of Allegiance to the Flags of the United States and State of Texas.

**Hearing of Residents**

*This time is set aside for any person who wishes to address the City Council. Each person should fill out the speaker's register prior to the meeting. Presentations should be limited to no more than **3** minutes.*

***All remarks shall be addressed to the Council as a body, and not to any individual member thereof. Any person making personal, impertinent, or slanderous remarks while addressing the Council may be requested to leave the meeting.***

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No residents signed up to speak during the Hearing of Residents.

**Discussion and Action Items**

1. **Resolution 24-R-162** - Approving a Resolution to canvass the returns and declaring the results of the December 14, 2024 Special Election, and other matters in connection therewith. (Mayor/Council/S.Edmondson)

   Deputy City Secretary Sheree Courney introduced Resolution 24-R-162 to canvass the returns and declare the results of the December 14, 2024, Special Election as follows:

   - Mr. Tim Dusek received 285 votes (28.99%)
   - Mr. Ben Guerrero received 220 votes (22.38%)
   - Ms. Heather Stamper received 164 votes (16.68%)
   - Ms. Paula Del Toro received 173 votes (17.60%)
   - Mr. Tyrone Taylor received 141 votes (14.34%)

   Total votes cast were 983. No candidate received 50% plus 1.

   Mayor Gutierrez asked for a motion to approve Resolution 24-R-162.

   Moved by Councilmember Allison Heyward, seconded by Councilmember Michelle Watson

   AYE: Mayor Pro-Tem Robert Westbrook, Councilmember Mark Davis, Councilmember Michelle Watson, Councilmember Allison Heyward, Councilmember Tim Brown

   Passed

2. **Resolution 24-R-163** Approving a Resolution to call for a Runoff Election on January 18, 2025, with Guadalupe County, Bexar County and Comal County and approving the Guadalupe County Election Contract stating that Guadalupe County will oversee the entire Runoff Election. (Mayor/Council/S.Edmondson)

   Deputy City Secretary Sheree Courney presented Resolution 24-R-163 ordering a Runoff Election to be held January 18, 2025, with Guadalupe, Bexar, and Comal Counties and approving the Guadalupe County Election Contract to oversee the entire Runoff Election. No candidate received 50% plus 1 during the Special Election held December 14, 2024. Therefore, a Runoff Election is required in conformity with the City of Schertz Charter and State Election Code as amended. The candidates with the highest and second highest number of votes will be on the Runoff Election ballot.

   The two candidates are:
   - Mr. Tim Dusek with 285 votes (28.99%)
   - Mr. Ben Guerrero with 220 votes (22.38%)

   Early voting dates are January 2–14, 2025, from 8:00 a.m. - 5:00 p.m. Monday through Friday. No weekend voting.

Mayor Gutierrez asked for a motion to approve Resolution 24-R-163.

Moved by Councilmember Mark Davis, seconded by Councilmember Michelle Watson

AYE: Mayor Pro-Tem Robert Westbrook, Councilmember Mark Davis, Councilmember Michelle Watson, Councilmember Allison Heyward, Councilmember Tim Brown

Passed

**Adjournment**
Mayor Gutierrez adjourned the meeting at 4:06 p.m.

_____
Ralph Gutierrez, Mayor

ATTEST:

_____
Sheila Edmondson, City Secretary

**Agenda No. 2.**

# CITY COUNCIL MEMORANDUM

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **Internal Services** |
| **Subject:** | **Resolution 24-R-143 - Authorizing an agreement with GenServ Inc. for preventative maintenance and on-call generator services (B.James/D.Hardin/C.Hernandez/A.Puentes)** |

## BACKGROUND

A new preventative maintenance and on-call generator services contract needs to be established for City-owned generators to perform proper preventative maintenance and perform emergency on-call services to keep the functionality of City-owned buildings to include Emergency Services and City-owned pump and lift stations. The City currently has 13 generators that will require quarterly and annual preventative maintenance.

The City issued a solicitation for proposals (RFP) from qualified firms with demonstrated competence and experience in preventative maintenance and repairs of all City-owned generators. Three (3) proposals were received in response to the solicitation. Proposals were reviewed by key City stakeholders and scored based on criteria including cost, proposer's experience, qualifications, reputation, quality of proposed services and responsiveness of the proposal. The City recommends awarding the contract to the highest ranked firm, GenServ Inc., for an initial term of three years with two (2) one-year renewal options.

## GOAL

To enter into a contract with GenServ Inc. to perform preventative maintenance and emergency-on-call services on all City-owned generators.

## COMMUNITY BENEFIT

City buildings, including Emergency Services, and all pump and lift stations, would be able to maintain full operations during inclement weather and other types of emergency situations, therefore allowing for all services to be continued throughout the City and its residents.

## SUMMARY OF RECOMMENDED ACTION

City staff recommends approval of 24-R-143.

## FISCAL IMPACT

The initial three-year contract for scheduled preventative maintenance will be $100,836. Subsequent renewal options (if exercised) would be approximately $22,400 per year. Staff is requesting a total not-to-exceed contract value of $200,000, which will also cover on-call or emergency repairs as needed. Funds are available and approved through Fleet's base budget for FY 24-25.

## RECOMMENDATION

City staff recommends approval of 24-R-143.

**Attachments**

2024-005 Bid Tab
Resolution 24-R-143

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

# 2024-018 - Generator On-Call Service
## Scoring Summary

## Active Submissions

| | Total | Proposer's Qualifications, Abilities, and Reputation | Quality of Proposed Services/System | Responsiveness of Proposal | Cost |
|---|---|---|---|---|---|
| Supplier | / 100 pts | / 30 pts | / 30 pts | / 10 pts | / 30 pts |
| GenServe, Inc. | 74 | 20 | 18 | 6 | 30 |
| RSS - Rental Sales and Service | 59.55 | 14 | 14 | 5.333 | 26.22 |
| Kentech, Inc. | 42.18 | 10 | 8 | 2.667 | 21.51 |

**RESOLUTION NO. 24-R-143**

**A RESOLUTION BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS AUTHORIZING AN AGREEMENT WITH GENSERV INC. FOR PREVENTATIVE MAINTENANCE AND ON-CALL GENERATOR SERVICES AND OTHER MATTERS IN CONNECTION THEREWITH**

**WHEREAS,** the City of Schertz (the "City") requires preventative maintenance and on-call generator services; and

**WHEREAS,** the Fleet Services Department solicited proposals from qualified vendors to perform preventative maintenance and on-call generator services; and

**WHEREAS,** City staff recommends awarding a contract to the highest ranked firm, Genserve Inc., to perform preventative maintenance and on-call generator services; and

**WHEREAS,** the City of Schertz will fund the preventative maintenance and on-call generator services through the approved 2024-2025 annual budget.

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS THAT:**

Section 1. The City Council hereby authorizes the City Manager to execute an agreement with Genserve Inc. for preventative maintenance and on-call generator services as set forth in Exhibit A, with a total contract amount not-to-exceed $200,000.

Section 2. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Resolution for all purposes and are adopted as a part of the judgment and findings of the City Council.

Section 3. All resolutions, or parts thereof, which are in conflict or inconsistent with any provision of this Resolution are hereby repealed to the extent of such conflict, and the provisions of this Resolution shall be and remain controlling as to the matters resolved herein.

Section 4. This Resolution shall be construed and enforced in accordance with the laws of the State of Texas and the United States of America.

Section 5. If any provision of this Resolution or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Resolution and the application of such provision to other persons and circumstances shall nevertheless be valid, and the City Council hereby declares that this Resolution would have been enacted without such invalid provision.

Section 6. It is officially found, determined, and declared that the meeting at which this Resolution is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this Resolution, was given, all as required by Chapter 551, Texas Government Code, as amended.

Section 7. This Resolution shall be in force and effect from and after its final passage, and it is so resolved.

PASSED AND ADOPTED, this ____ day of _____, 2025.

CITY OF SCHERTZ, TEXAS

_____
Ralph Gutierrez, Mayor

ATTEST:

_____
Sheila Edmondson, City Secretary

**EXHIBIT A**

Agreement for Preventative Maintenance & On-Call Generator Services

# CITY OF SCHERTZ

## SERVICE AGREEMENT

**THE STATE OF TEXAS §**
**§**
**GUADALUPE COUNTY §**

This Service Agreement ("Agreement") is made and entered by and between the City of Schertz, Texas, (the "City") a Texas municipality, and Genserve, Inc. ("Contractor").

**Section 1. Duration**
This Agreement shall become effective upon the date of the final signature affixed hereto and shall remain in effect through 31 December 2027 with the option to renew for two (2) additional terms of (1) year each unless terminated as provided for in this Agreement.

**Section 2. Scope of Work**
(A) Contractor shall perform the Work as more particularly described in the Scope of Work attached hereto as Exhibit "A". The work as described in the Scope of Work constitutes the "Project".

(B) The Quality of Work provided under this Agreement shall be of the level of quality performed by Contractors regularly rendering this type of service.

(C) The Contractor shall perform its Work for the Project in compliance with all statutory, regulatory and contractual requirements now or hereafter in effect as may be applicable to the rights and obligations set forth in the Agreement.

(D) The Contractor may rely upon the accuracy of reports and surveys provided to it by the City except when defects should have been apparent to a reasonably competent Contractor or when it has actual notice of any defects in the reports and surveys.

**Section 3. Compensation**
(A) The Contractor shall be paid in full upon completion of the project or in the manner set forth in Exhibit "A" and as provided herein.

(B) *Billing Period.* Subject to Chapter 2251, Texas Government Code (the "Prompt Payment Act"), payment is due within thirty (30) days of the City's receipt of the Contractor's invoice. Interest on overdue payments shall be calculated in accordance with the Prompt Payment Act.

(C) *Reimbursable Expenses.* Any and all reimbursable expenses related to the Project shall be included in the scope of Work (Exhibit A) and accounted for in the total contract amount.

(D) *Payments Subject to Future Appropriation.* This Agreement shall not be construed as a commitment, issue, pledge or obligation of any specific taxes or tax revenues for payment to Contractor.

(1) All payments or expenditures made by the City under this Agreement are subject to the City's appropriation of funds for such payments or expenditures to be paid in the budget year for which they are made.

(2) The payments to be made to Contractor, or other expenditures under this Agreement, if paid, shall be made solely from annual appropriations of the City as may be legally set aside for the implementation of Article III, Section 52-a of the Texas Constitution or Chapter 380 of the Texas Local Government Code or any other economic development or financing program authorized by statute or home rule powers of the City under applicable Texas law, subject to any applicable limitations or procedural requirements.

(3) In the event the City does not appropriate funds in any fiscal year for payments due or expenditures under this Agreement, the City shall not be liable to Contractor for such payments or expenditures unless and until appropriation of said funds is made; provided, however, that Contractor, in its sole discretion, shall have the right but not the obligation to terminate this Agreement and shall have no obligations under this Agreement for the year in respect to which said unappropriated funds relate.

(4) To the extent there is a conflict between this Section and any other language or covenants in this Agreement, this Section 3 shall control.

**Section 4. Time of Completion**

The prompt completion of the Work under the Scope of Work relates is critical to the City. Unnecessary delays in providing Work under a Scope of Work shall be grounds for dismissal of the Contractor and termination of this Agreement without any or further liability to the City other than a prorated payment for necessary, timely, and conforming work done by Contractor prior to the time of termination.

*(A) Contract Times: Days*

This section intentionally left blank

**Section 5. Insurance**

Before commencing work under this Agreement, Contractor shall obtain and maintain the liability insurance provided for below throughout the term of the Project plus an additional two years. The contractor shall provide evidence of such insurance to the City. Such documentation shall meet the requirements noted in Exhibit B.

Contractor shall maintain the following limits and types of insurance:

Workers Compensation Insurance: Contractor shall carry and maintain during the term of this Agreement, workers compensation and employers' liability insurance meeting the requirements of the State of Texas on all the Contractor's employees carrying out the work involved in this contract.

General Liability Insurance: Contractor shall carry and maintain during the term of this Agreement, general liability insurance on a per occurrence basis with limits of liability not less than $1,000,000 for each occurrence and for fire damage. For Bodily Injury and Property Damage, coverage shall be no less than $1,000,000. As a minimum, coverage for Premises, Operations, Products and Completed Operations shall be $2,000,000. This coverage shall protect the public or any person from injury or property damage sustained by reason of the Contractor or its employees

carrying out the work involved in this Agreement. The general aggregate shall be no less than $2,000,000.

Automobile Liability Insurance: Contractor shall carry and maintain during the term of this Agreement, automobile liability insurance with either a combined limit of at least $1,000,000 per occurrence for bodily injury and property damage or split limits of at least $1,000,000 for bodily injury per person per occurrence and $1,000,000 for property damage per occurrence. Coverage shall include all owned, hired, and non-owned motor vehicles used in the performance of this contract by the Contractor or its employees.

Subcontractor: In the case of any work sublet, the Contractor shall require subcontractor and independent contractors working under the direction of either the Contractor or a subcontractor to carry and maintain the same workers compensation and liability insurance required of the Contractor.

Qualifying Insurance: The insurance required by this Agreement shall be written by non-assessable insurance company licensed to do business in the State of Texas and currently rated "B+" or better by the A.M. Best Companies. All policies shall be written on a “per occurrence basis” and not a “claims made” form.

Evidence of such insurance shall be attached as Exhibit “C”.
Failure of Certificate Holder to demand a certificate or other evidence of full compliance with these insurance requirements or failure of Certificate Holder to identify a deficiency from evidence that is provided will not be construed as a waiver of Insured’s obligation to maintain such insurance.

**Section 6. Miscellaneous Provisions**

(A) *Subletting.* The Contractor shall not sublet or transfer any portion of the work under this Agreement, or any Scope of Work issued pursuant to this Agreement unless specifically approved in writing by the City, which approval shall not be unreasonably withheld. Subcontractors shall comply with all provisions of this Agreement and the applicable Scope of Work. The approval or acquiescence of the City in the subletting of any work shall not relieve the Contractor of any responsibility for work done by such subcontractor.

(B) *Compliance with Laws.* The Contractor shall comply with all federal, state and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts, administrative, or regulatory bodies in any matter affecting the performance of this Agreement, including, without limitation, worker’s compensation laws, minimum and maximum salary and wage statutes and regulations, and licensing laws and regulations. When required, the Contractor shall furnish the City with satisfactory proof of compliance.

(C) *Independent Contractor.* Contractor acknowledges that Contractor is an independent contractor of the City and is not an employee, agent, official or representative of the City. Contractor shall not represent, either expressly or through implication, that Contractor is an employee, agent, official or representative of the City. Income taxes, self-employment taxes, social security taxes and the like are the sole responsibility of the Contractor.

(D) *Non-Collusion.* Contractor represents and warrants that Contractor has not given, made, promised or paid, nor offered to give, make, promise or pay any gift, bonus, commission, money or other consideration to any person as an inducement to or in order to obtain the work

to be provided to the City under this Agreement. Contractor further agrees that Contractor shall not accept any gift, bonus, commission, money, or other consideration from any person (other than from the City pursuant to this Agreement) for any of the Work performed by Contractor under or related to this Agreement. If any such gift, bonus, commission, money, or other consideration is received by or offered to Contractor, Contractor shall immediately report that fact to the City and, at the sole option of the City, the City may elect to accept the consideration for itself or to take the value of such consideration as a credit against the compensation otherwise owing to Contractor under or pursuant to this Agreement.

(E) *Force Majeure.* If the performance of any covenant or obligation to be performed hereunder by any party is delayed as a result of circumstances which are beyond the reasonable control of such party (which circumstances may include, without limitation, pending litigation, acts of God, war, acts of civil disobedience, fire or other casualty, shortage of materials, adverse weather conditions [such as, by way of illustration and not of limitation, severe rain storms or below freezing temperatures, or tornados] labor action, strikes or similar acts, moratoriums or regulations or actions by governmental authorities), the time for such performance shall be extended by the amount of time of such delay, but no longer than the amount of time reasonably occasioned by the delay. The party claiming delay of performance as a result of any of the foregoing force majeure events shall deliver written notice of the commencement of any such delay resulting from such force majeure event not later than seven (7) days after the claiming party becomes aware of the same, and if the claiming party fails to so notify the other party of the occurrence of a force majeure event causing such delay and the other party shall not otherwise be aware of such force majeure event, the claiming party shall not be entitled to avail itself of the provisions for the extension of performance contained in this subsection.

(F) *Conflict of Terms*.

*Scope of work:*

In the case of any conflicts between the terms of this Agreement within the Scope of Work, this Agreement shall govern. The Scope of Work is intended to detail the technical scope of Work, fee schedule, and contract time only and shall not dictate Agreement terms.

*Other Agreements between parties:*

In the case of any conflicts between the terms of this Agreement and wording contained within any other attachment, amendment, and agreement executed between the parties in conjunction with this Agreement, this Agreement shall govern.

(G) *Non-Boycott of Israel.* Pursuant to Section 2270.002 of the Texas Government Code, Contractor certifies that either (i) it meets an exemption criterion under Section 2270.002; or (ii) it does not boycott Israel and will not boycott Israel during the term of the contract resulting from this solicitation. Contractor shall state any facts that make it exempt from the boycott certification as an attachment to this agreement.

Relevant definitions from the bill:

"Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

"Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes.

(H) *Non-Boycott of Energy.* Pursuant to Texas Senate Bill 13 (2021), Contractor certifies that either (i) it does not boycott Israel and will not boycott energy companies; and (2) will not boycott energy companies during the term of the contract resulting from this solicitation. Contractor shall state any facts that make it exempt from the boycott certification as an attachment to this agreement.

(I) *Non-Boycott of Firearm Entity.* Pursuant to Texas Senate Bill 19 (2021), Contractor certifies that it: (a) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and (b) will not discriminate during the term of the contract against a firearm entity or firearm trade association.

(J) *Access to Premises.* Authorized representatives of the Contractor will be allowed access to the facilities on City premises at reasonable times to fulfil the obligations of the Contractor regarding such facilities. The contractor shall adhere to all City rules, regulations, and guidelines while on City property. It is expressly understood that the City may limit or restrict the right of access herein granted in any manner considered necessary (e.g., national security, public safety).

(K) *Interlocal Participation.* The City may enter Interlocal Cooperation Purchasing Agreements with other governmental entities or governmental cooperatives (hereafter collectively referred to as “Entity” or “Entities”) to enhance the City’s purchasing power. At the City’s sole discretion and option, City may inform other Entities that they may acquire items listed in this IFB. Such acquisition(s) shall be at the prices stated herein and shall be subject to bidder’s acceptance. Entities desiring to acquire items listed in this IFB shall be listed on a rider attached hereto, if known at the time of issuance of the IFB. City may issue subsequent riders after contract award setting forth additional Entities desiring to utilize this bid. VENDOR shall sign and return any subsequently issued riders within ten calendar days of receipt.

In no event shall City be considered a dealer, re-marketer, agent or other representative of Vendor or Entity. Further, City shall not be considered and is not an agent; partner or representative of the Entity making purchases hereunder, and shall not be obligated or liable for any such order.

Entity purchase orders shall be submitted to Vendor by the Entity. City will not be liable or responsible for any obligations, including, but not limited to, payment, and for any item ordered by an entity other than City.

Vendor authorizes City’s use of Vendor’s name, trademarks and Vendor provided materials in City’s presentations and promotions regarding the availability of use of this contract. The City makes no representation or guarantee as to any minimum amount being purchased by City or Entities, or whether Entity will purchase utilizing City’s contract.

**Section 7. Termination**

(A) This Agreement may be terminated:

(1) By the mutual agreement and consent of both Contractor and City;

(2) By either party, upon the failure of the other party to fulfill its obligations as set forth in either this Agreement or a Scope of Work issued under this Agreement;

(3) By the City, immediately upon notice in writing to the Contractor, as consequence of the failure of Contractor to perform the Work contemplated by this Agreement in a timely or satisfactory manner;

(4) By the City, at will and without cause upon not less than thirty (30) days written notice to the Contractor.

(B) If the City terminates this Agreement pursuant to subsection 7(A)(2) or (3), above, the Contractor shall not be entitled to any fees or reimbursable expenses other than the fees and reimbursable expenses then due and payable as of the time of termination and only then for those Work that have been timely and adequately performed by the Contractor considering the actual costs incurred by the Contractor in performing work to date of termination, the value of the work that is nonetheless usable to the City, the cost to the City of employing another Contractor to complete the work required and the time required to do so, and other factors that affect the value to the City of the work performed at time of termination. In the event of termination not the fault of the Contractor, the Contractor shall be compensated for all basic, special, and additional Work actually performed prior to termination, together with any reimbursable expenses then due.

**Section 8. Indemnification**

**CONTRACTOR AGREES TO INDEMNIFY AND HOLD THE CITY OF SCHERTZ, TEXAS AND ALL OF ITS PRESENT, FUTURE AND FORMER AGENTS, EMPLOYEES, OFFICIALS AND REPRESENTATIVES HARMLESS IN THEIR OFFICIAL, INDIVIDUAL AND REPRESENTATIVE CAPACITIES FROM ANY AND ALL CLAIMS, DEMANDS, CAUSES OF ACTION, JUDGMENTS, LIENS AND EXPENSES (INCLUDING ATTORNEY'S FEES, WHETHER CONTRACTUAL OR STATUTORY), COSTS AND DAMAGES (WHETHER COMMON LAW OR STATUTORY), COSTS AND DAMAGES (WHETHER COMMON LAW OR STATUTORY, AND WHETHER ACTUAL, PUNITIVE, CONSEQUENTIAL OR INCIDENTAL), OF ANY CONCEIVABLE CHARACTER, FOR INJURIES TO PERSONS (INCLUDING DEATH) OR TO PROPERTY (BOTH REAL AND PERSONAL) CREATED BY, ARISING FROM OR IN ANY MANNER RELATING TO THE WORK OR GOODS PERFORMED OR PROVIDED BY CONTRACTOR – EXPRESSLY INCLUDING THOSE ARISING THROUGH STRICT LIABILITY OR UNDER THE CONSTITUTIONS OF THE UNITED STATES.**

**Section 9. Notices**

Any notice required or desired to be given from one party to the other party to this Agreement shall be in writing and shall be given and shall be deemed to have been served and received (whether actually received or not) if (i) delivered in person to the address set forth below; (ii) deposited in an official depository under the regular care and custody of the United States Postal Service located within the confines of the United States of America and sent by certified mail, return receipt requested, and addressed to such party at the address hereinafter specified; or (iii) delivered to such party by courier receipted delivery. Either party may designate another address within the confines of the continental United States of America for notice, but until written notice of such change is received by the other party, the last address of such party designated for notice shall remain such party's address for notice.

**Section 10. No Assignment**

Neither party shall have the right to assign that party's interest in this Agreement without the prior written consent of the other party.

**Section 11. Severability**

If any term or provision of this Agreement is held to be illegal, invalid or unenforceable, the legality, validity or enforceability of the remaining terms or provisions of this Agreement shall not be affected thereby, and in lieu of each such illegal, invalid or unenforceable term or provision, there shall be added automatically to this Agreement a legal, valid or enforceable term or provision as similar as possible to the term or provision declared illegal, invalid or unenforceable.

**Section 12. Waiver**

Either City or the Contractor shall have the right to waive any requirement contained in this Agreement that is intended for the waiving party's benefit, but, except as otherwise provided herein, such waiver shall be effective only if in writing executed by the party for whose benefit such requirement is intended. No waiver of any breach or violation of any term of this Agreement shall be deemed or construed to constitute a waiver of any other breach or violation, whether concurrent or subsequent, and whether of the same or of a different type of breach or violation.

**Section 13. Governing Law; Venue**

This Agreement and all of the transactions contemplated herein shall be governed by and construed in accordance with the laws of the State of Texas. The provisions and obligations of this Agreement are performable in Guadalupe County, Texas such that exclusive venue for any action arising out of this Agreement shall be in Guadalupe County, Texas.

**Section 14. Paragraph Headings; Construction**

The paragraph headings contained in this Agreement are for convenience only and shall in no way enlarge or limit the scope or meaning of the various and several paragraphs hereof. Both parties have participated in the negotiation and preparation of this Agreement and this Agreement shall not be construed either more or less strongly against or for either party.

**Section 15. Binding Effect**

Except as limited herein, the terms and provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, devisees, personal and legal representatives, successors and assigns.

**Section 16. Gender**
Within this Agreement, words of any gender shall be held and construed to include any other gender, and words in the singular number shall be held and construed to include the plural, unless the context otherwise requires.

**Section 17. Counterparts**
This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, and all of which shall constitute but one and the same instrument.

**Section 18. Exhibits & Attachments**
All exhibits and attachments to this Agreement are incorporated herein by reference for all purposes wherever reference is made to the same.

**Section 19. Entire Agreement**
It is understood and agreed that this Agreement, which incorporates the original RFP, Contractor's Response to RFP, and Purchase Order(s) issued for payment contains the entire agreement between the parties and supersedes any and all prior agreements, arrangements or understandings between the parties relating to the subject matter. No oral understandings, statements, promises or inducements contrary to the terms of this Agreement exist. This Agreement cannot be changed or terminated orally.

**Order of Precedence**. In the event of a conflict between the terms and conditions included in the body of this Agreement and the terms and conditions included in any of the incorporated documents, the order of precedence shall be: (a)Agreement; (b) the attachments and/or exhibits to Agreement, (c)Contractor's Response to RFP, and (d) Purchase Order(s).

**Section 20. Relationship of Parties**
Nothing contained in this Agreement shall be deemed or construed by the parties hereto or by any third party to create the relationship of principal and agent or of partnership or of joint venture or of any association whatsoever between the parties, it being expressly understood and agreed that no provision contained in this Agreement nor any act or acts of the parties hereto shall be deemed to create any relationship between the parties other than the relationship of independent parties contracting with each other solely for the purpose of effecting the provisions of this Agreement.

**Section 21. Right To Audit**
City shall have the right to examine and audit the books and records of Contractor with regards to the work described in Exhibit A, or any subsequent changes, at any reasonable time. Such books and records will be maintained in accordance with generally accepted principles of accounting and will be adequate to enable determination of: (1) the substantiation and accuracy of any payments required to be made under this Agreement; and (2) compliance with the provisions of this Agreement.

**Section 22. Dispute Resolution**
In accordance with the provisions of Subchapter I, Chapter 271, TEX. LOCAL GOV'T CODE, the parties agree that, prior to instituting any lawsuit or other proceeding arising from a dispute under this agreement, the parties will first attempt to resolve the dispute by taking the following steps: (1) A written notice substantially describing the nature of the dispute shall be delivered by the

dissatisfied party to the other party, which notice shall request a written response to be delivered to the dissatisfied party not less than 5 days after receipt of the notice of dispute. (2) If the response does not reasonably resolve the dispute, in the opinion of the dissatisfied party, the dissatisfied party shall give notice to that effect to the other party whereupon each party shall appoint a person having authority over the activities of the respective parties who shall promptly meet, in person, in an effort to resolve the dispute. (3) If those persons cannot or do not resolve the dispute, then the parties shall each appoint a person from the highest tier of managerial responsibility within each respective party, who shall then promptly meet, in person, in an effort to resolve the dispute.

**Section 23. Disclosure of Business Relationships/Affiliations; Conflict of Interest Questionnaire**

Contractor states that it is in compliance with the applicable filing and disclosure requirements of Chapter 176 of the Texas Local Government Code.

**Certificate of Interested Parties**

Effective January 1, 2016, pursuant to House Bill 1295 passed by the 84th Texas Legislature (Section 2252.908, Texas Government Code, as amended) and formal rules released by the Texas Ethics Commission (TEC), all contracts with private business entities requiring approval by the Schertz City Council will require the on-line completion of Form 1295 "Certificate of Interested Parties." Form 1295 is also required for all contract amendments, extensions or renewals. Contractors are required to complete and file electronically with the Texas Ethics Commission using the online filing application.

Please visit the State of Texas Ethics Commission website, https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm and https://www.ethics.state.tx.us/tec/1295-Info.htm for more information.

IF YOU HAVE ANY QUESTIONS ABOUT COMPLIANCE, PLEASE CONSULT YOUR OWN LEGAL COUNSEL. COMPLIANCE IS THE INDIVIDUAL RESPONSIBILITY OF EACH PERSON OR AGENT OF A PERSON WHO IS SUBJECT TO THE FILING REQUIREMENT. AN OFFENSE UNDER CHAPTER 176 IS A CLASS C MISDEMEANOR.

**[The remainder of this page is intentionally left blank.]**

**EXECUTED** on this the _____ day of _____ , 20__.

| **CITY:** | **CONTRACTOR:** |
|---|---|
| By: _____ | By: _____ |
| Name: Steve Williams | Name: **Glen D. Howard** |
| Title: City Manager | Title: **Vice President Sales - Service** |

**ADDRESS FOR NOTICE:**

| **CITY:** | **CONTRACTOR:** |
|---|---|
| City of Schertz<br>Attn: Steve Williams, City Manager<br>1400 Schertz Parkway<br>Schertz, Texas 78154 | GenServe LLC<br>Attn: Glen D. Howard<br>2004 W. Howard Lane<br>Austin, TX 78728 |

# Exhibit "A"

## SCOPE OF WORK

**General**

The City of Schertz has approximately 13 locations with backup power generators that require a variety of preventative maintenance and repairs services.

For this proposal, maintenance and repair is defined as work that involves the mending of a broken system, component(s), or sub-component(s) of a power generator, annual maintenance (AM) services, and/or routine preventative maintenance (PM) services for the generators located throughout the City owned facilities.

Respondent shall furnish all labor, supervision, tools, equipment, materials, metering instruments, supplies, parts, transportation, mobilization, insurance, bonds, permits, reports, incidentals, and quality control necessary to provide electrical services on an "as-needed basis". The City does not guarantee a minim value of this contract but will order services on an as-needed basis.

**Services**

Generator repair and maintenance services shall include, but is not limited to, the following: servicing, trouble shooting, repairing, ordering replacement parts in accordance with the manufacturer's recommendations and making any necessary repairs to ensure each generator is operating as designed for intended application. Specific work requirements will be identified in each individual project as they are deemed necessary and approved by the City.

**Maintenance Parts & Supplies**

The contractor shall ensure that replacement parts are available for repairs in a timely manner. Operating supplies for routine annual services and preventative services shall always be available. Parts shall be provided on a cost-plus percentage (%) mark-up basis.

**Damage**

The contractor shall be responsible for damage to the City's equipment, property, workplace, and its contents caused by negligence in work, its personnel and equipment usage.

**Delivery of Services**

The specified services shall be scheduled and available as follows and scheduled with the Fleet Services Department:

**Annual Maintenance (AM) (Level 1):** shall be performed once per year in October
**Quarterly Maintenance (QM) (Level 2):** shall be performed once per
**3rd Year Maintenance (Level 3**): Shall be performed once every three years

**Quarterly Preventative Maintenance (Level 1)**

Per location quarterly preventative maintenance service (QM) shall include complete service checks and cleaning as specified to the locations shown on the pricing schedule in Section 8. Quarterly shall mean three (3) times per year spaced three months apart. The fourth quarter shall

be reserved for the Annual Maintenance (AM).

**GENERAL**

Visual Inspection - Visual inspection of overall condition of unit to identify foreign objects, loose or broken fittings, guards, and components.

Wipe off unit - Clean oil, coolant, fuel, and acid deposits. Police generator area.

**COOLING SYSTEM**

Radiator/Heat Exchanger - Visual inspection for leaks, damage, and debris. Check louver operation.

Coolant - Visual inspection for correct level and condition of coolant (rust, oil, and contaminants). Check coolant conditioner concentration and temperature protection. Check filler cap gasket and sealing surface. Replace filler cap as required at additional cost.

Hoses and Connections - Visual inspection of all hoses for deterioration. Check tightness of connections.

Fan Drive Pulley and Fan - Check for loose or worn pulleys. Check fan operation and clearance.

Fan Belts - Inspect for wear or deterioration. Check tension and adjust as necessary.

Jacket Water Heater - Inspect for proper operation. Record engine temperature prior to starting unit.

Water Pump - Visual and operational inspection for leaks or unusual noises.

**FUEL SYSTEM – LIQUID (DIESEL/GASOLINE)**

Fuel Tank - Visually inspect fuel tank system for leaks and fuel level (Natural gas and LP as well). Test day tank pump for proper operation.

Water Trap/Separator - Drain water from fuel tank if possible or water separator if applicable.

Fuel Lines and Connections - Inspect for leaks and check line brackets mounting (Natural Gas and LP as well)

Governor and Controls - Inspect governor oil level. Inspect controls and linkage for proper operation. Add oil as necessary.

Fuel Filters (Primary/Secondary) - Inspect for damage, leaks, and proper operation.

Fuel Pressure- Record if available.

## AIR INDUCTION AND EXHAUST SYSTEM

Air Filter Service Indicator - Record reading. Inspect for proper operation. Reset indicator.

Air Filter - Inspect. Clean as necessary. Replace as required at additional cost.

Air Inlet System - Inspect piping and air filter housing for damage, loose connections, and evidence of leaks. Clean air filter housing if air filter is cleaned or replaced. Check housing seals and gaskets.

Turbocharger - Inspect for oil leakage, exhaust leakage, or unusual noises.

Exhaust Manifold - Inspect for damage, loose or missing hardware, evidence of exhaust leakage, and et-stacking. Provide load bank recommendation.

Exhaust System - Inspect silencer and piping for damage, corrosion, or leakage. Check rain cap. Check supports for vibration damage and loose connections.

## LUBE OIL SYSTEM

Oil Level - Inspect for correct oil level. Visually inspect unit for leaks. Add as required at additional cost.

Oil Pressure - Record oil pressure reading. Operational and visual inspection of prelube pump if applicable.

Crankcase Breather - Inspect for proper operation. Check connections and inspect hose for deterioration. Visual inspection for excessive blowby.

S.O.S. - Obtain oil sample for analysis.

## STARTING SYSTEM

Batteries - Inspect for damage or leakage, clean battery with acid neutralizer. Clean and tighten all battery cable connections. (Lead acid batteries only)

Batteries (Specific Gravity) - Check electrolyte level and specific gravity. (Lead acid batteries only)

Battery Charger - Inspect for proper operation, loose terminals, and deteriorated wiring. Record output.

Starting Motor - Inspect electrical connections and wiring. For air starters, inspect oil jar and feeder operation. Perform operational check for abnormal engagement and cranking noises.

Alternator - Inspect for proper operation, loose connections, and mounting hardware. Check belts, pulley, and voltage output. Record output if applicable.

**ENGINE MONITORS AND SAFETY CONTROLS**

Safety Controls - Inspect for loose connections, wire deterioration, and proper operation.

Remote Annunciator and Alarms - Inspect and test all panel and system alarms for proper operation.

**CONTROL PANEL**

Start Controls-Manual/Auto - Operational check for proper operation. Check automatic start: with customer approval.

Voltmeter - Operational check for correct readings. Record readings.

Ammeter - Operational check for correct readings if load is available. Record readings.

Frequency Meter - Operational check for correct readings. Load and no load readings if load is available.

**GENERATOR**

Verify anti-condensation heater operation if applicable. Record temperature.

Vibration Isolators - Check for proper adjustment and

**Annual Maintenance (Level 2)**

Annual Maintenance service (AM) shall include all complete service checks and cleaning as specified to the locations shown on the pricing schedule, section 8. The AM service shall include all services required in the QM in addition to the services outlined below. Annual shall mean one (1) time per year during the non-services quarter outlined in the QM specifications. Annual maintenance shall include but not be limited to:

**FUEL SYSTEM**

Fuel Filter - Replace. Inspect for proper sealing and operation.

**LUBE OIL SYSTEM**

Oil and Filters - Change. Inspect all gaskets and seals.

Crankcase Breather - Inspect and clean as required. Replace if applicable at additional cost.

**COOLING SYSTEM**

Lube fan drive bearing as required.

**GENERATOR**

Generator Rear Bearing - Lubricate if applicable per manufacturer specification.

Change reduction gearbox oil – if applicable.

**CONTROL PANEL**

Circuit Breakers - Inspect for free movement and tight connections, if accessible.

**3rd Year Level 3 Maintenance**

3rd Year, level 3 maintenance shall include all previously listed services under Quarterly and Annual Maintenance as well as the following, completed once every three years.

**COOLING SYSTEM**

Coolant - Drain and replace coolant. (Coolant flush as required at additional cost.)

Thermostats - Replace

Fan Belts - Replace

Replace all cooling system hoses including jacket water heater hoses.

**STARTING SYSTEM**

Batteries – Replace (Lead Acid ONLY)

Alternator – Verify pulley alignment if applicable.

**GENERATOR**

Visually inspect exciter, Permanent Magnet (PMG) if applicable, and rotating rectifiers

**AIR INDUCTION AND EXHAUST SYSTEM**

Air Filter - Replace.

**Emergency Service**

The contractor shall be available to provide as-needed repair service twenty-four (24) hours a day, seven (7) days a week, to include holidays. The contractor is expected to respond within two (2) hours of notification of a catastrophic failure.

**Repair Service**

The contractor shall have the ability to repair or replace any city generator system that is listed.

Equipment covered by original equipment manufacturers (OEM) warranty will be repaired under warranty first. Repairs to equipment outside of OEM warranty will be repaired under the terms of this service agreement. All components deemed defective will be replaced with new OEM approved parts or equivalent.

The City seeks hourly cost for repairs during normal business hours Monday through Friday (8:00 AM – 5:00 PM) and cost for repairs outside normal business hours, weekends and holidays.

Respondent shall contact City about repair within one-hour (1) of notification from City.

The City seeks response time of no less than two-hours (2) for service and repair calls for any time of day if catastrophic failure is reported. A four-hour (4) response time is acceptable for routine, non-emergency repairs.

The City requires a percentage of mark-up on parts and materials costs. Documentation of successful respondents' costs will be required if applicable.

Any damage to a facility because of the repair work will be the responsibility of the successful respondent to repair as required and supervised by the City.

If during the preventative/scheduled maintenance services, the service provider determines the need for repair or replacement of parts, the scope of which extends beyond the assigned preventive/scheduled maintenance tasks, the service provider shall provide a written estimate to the Public Works Department for approval.

If any generator repair/service is expected to exceed twenty-four (24) hours the contractor must notify the Public Works Department immediately.

**Minimum Qualifications**

The City has established the following minimum qualifications for on-call electrical contractors.

Respondent and all other persons designated by respondent to provide said services required by this RFP must have the requisite training, licenses and/or certifications. Respondent must have a valid contractor's license issued by the State of Texas and be registered with the City where work is performed.

Respondent shall employ a master generator technician to be the subject matter expert in competent troubleshooting and repair processes and procedures. Master generator technician will have the ultimate responsibility to determine that all services provided comply with applicable laws, as well as administrative and safety codes.

Respondent shall have a minimum of one (1) certified master generator technician with a minimum of three (3) years commercial/industrial or structural generator experience. All Apprentice/Helpers will be under the direct supervision of the Journeyman, or a Master certified generator technician or factory trained equivalent.

For all work performed, respondent must have at a minimum a certified journeyman generator technician or factory trained equivalent present while any generator apprentice is performing work on City property. Respondent and any such other persons must meet all competence standards promulgated by authoritative bodies and regulatory agencies, including, but not limited to factory training from a reputable outfit or similarly accredited qualifications.

Respondent for ATS/electrical repairs shall employ a master electrician and electricians licensed by the State of Texas. Master electrician will have the ultimate responsibility to determine that all services provided comply with applicable laws, as well as administrative and safety codes. For all work performed, the respondent must have at a minimum, a licensed and registered journeyman electrician present while any electrical apprentice is performing work on City property.

All apprentices/helpers will be under the direct supervision of the Master or Journeyman electrician. Respondent and any such other persons must meet all competence standards promulgated by authoritative bodies and regulatory agencies, including, but not limited to the Texas Commission of Licensing and Regulation, as applicable to the services provided herein

# Pricing Schedule

| Generator ID | LOCATION | | MANUFACTURER MODEL | Annual Maintenance Price | Preventative Maintenance Price | 3rd YR Lvl 3 Price |
|---|---|---|---|---|---|---|
| **FL81** | **City Hall** | **1400 Schertz Pkwy Bldg. 1** | **GENERAC HINO 13** | $672.00 | $280.00 | $3,955.00 |
| **FL76** | **Central Station** | **1400 Schertz Pkwy, Bldg. 6** | **Detroit 14.0L 400DSE/6063HK35** | $884.00 | $280.00 | $4,695.00 |
| **FL80** | **Fire Station #2** | **19085 N IH-35 Frontage Rd** | **KATO LIGHT D180PJG4T3-39269** | $650.00 | $280.00 | $3,598.00 |
| **FL82** | **Fire Station #3** | **11917 Lower Seguin Rd** | **GENERAC SD200** | $650.00 | $280.00 | $3,598.00 |
| **FL85** | **Live Oak Tank Site** | **1057 Live Oak Rd** | **CUMMINS** 750DQCB | $2,384.00 | $350.00 | $7,800.00 |
| **FL87** | **NACO Well Site** | **19625 FM 3009** | **Caterpillar D500GC** | $978.00 | $280.00 | $5,475.00 |
| **FL86** | **Northcliff** | **3490 Morning Dr** | **Caterpillar D**4050GC | $978.00 | $280.00 | $5,250.00 |
| **FL88** | **Woman Hollering Creek** | **13805 IH-10E Frontage Rd** | **Caterpillar D**4050GC | $978.00 | $280.00 | $5,250.00 |
| **FL84** | **Parklands Lift Station** | **5118 Parkland Way** | **CAT ENGINE** D100GC | $502.00 | $280.00 | $3,285.00 |
| **FL83** | **I-35 (Diesel) NAPA** | **22330 I-35** | **GENERAC 11755930100 (6.8)** | $650.00 | $280.00 | $3,598.00 |
| **FL79** | **FM 3009 (Diesel)** | **7303 FM 3009** | **GENERAC 11529360100** | $424.00 | $280.00 | $2,697.00 |
| **FL78** | **Friesenhahn Ln (Diesel)** | **441 Friesenhahn Ln** | **GENERAC 1175701D100** | $513.00 | $280.00 | $3,285.00 |
| **FL77** | **East Live Oak (Diesel)** | **1057 Live Oak Ln** | **Generac LX-H61A** | $978.00 | $280.00 | $5,475.00 |

| | |
|---|---|
| **Hourly Repair Cost - Normal Business Hours** | $175.00 |
| **Hourly Repair Cost - Emergency Hours** | $262.50 |
| **Parts Cost Plus Percentage (%)** | 30% |

# Exhibit "B"

## REQUIREMENTS FOR ALL INSURANCE DOCUMENTS

The Contractor shall comply with each and every condition contained herein. The Contractor shall provide and maintain the minimum insurance coverage set forth below during the term of its agreement with the City. Any Subcontractor(s) hired by the Contractor shall maintain insurance coverage equal to that required of the Contractor. It is the responsibility of the Contractor to assure compliance with this provision. The City of Schertz accepts no responsibility arising from the conduct, or lack of conduct, of the Subcontractor.

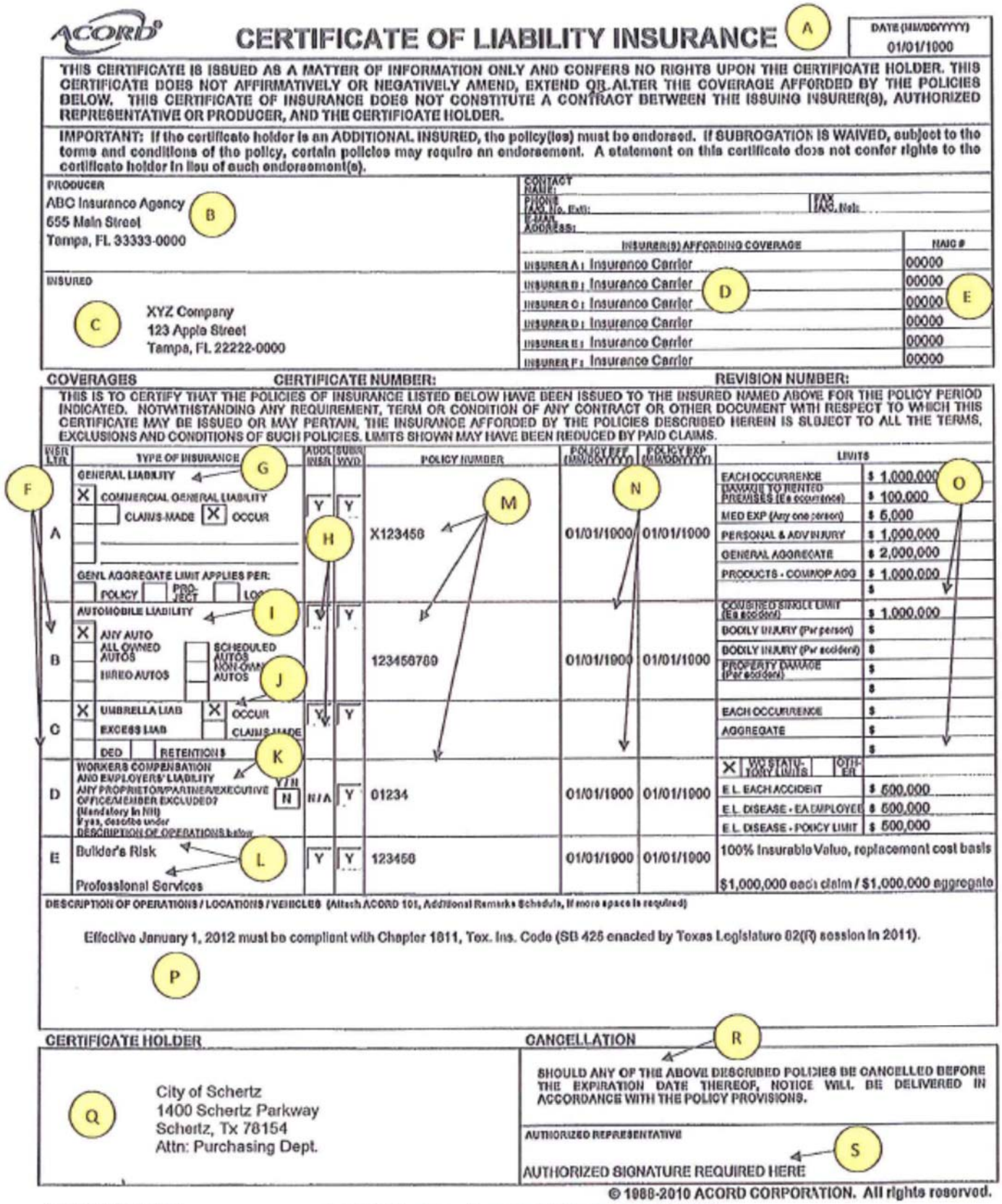
INSTRUCTIONS FOR COMPLETION OF INSURANCE DOCUMENT

With reference to the foregoing insurance requirements, Contractor shall specifically endorse applicable insurance policies as follows:

1. The City of Schertz shall be named as an additional insured with respect to General Liability and Automobile Liability **on a separate endorsement.**
2. A waiver of subrogation in favor of The City of Schertz shall be contained in the Workers Compensation and all liability policies and must be provided **on a separate endorsement**.
3. All insurance policies shall be endorsed to the effect that The City of Schertz will receive at least thirty (30) days written notice prior to cancellation or non-renewal of the insurance.
4. All insurance policies, which name The City of Schertz as an additional insured, must be endorsed to read as primary and non-contributory coverage regardless of the application of other insurance.
5. **Chapter 1811 of the Texas Insurance Code, Senate Bill 425 82(R) of 2011, states that the above endorsements cannot be on the certificate of insurance. Separate endorsements must be provided for each of the above.**
6. All insurance policies shall be endorsed to require the insurer to immediately notify The City of Schertz of any material change in the insurance coverage.
7. All liability policies shall contain no cross liability exclusions or insured versus insured restrictions.
8. Required limits may be satisfied by any combination of primary and umbrella liability insurances.
9. Contractor may maintain reasonable and customary deductibles, subject to approval by The City of Schertz.
10. Insurance must be purchased from insurers having a minimum AmBest rating of B+.
11. All insurance must be written on forms filed with and approved by the Texas Department of Insurance. (ACORD 25 2010/05). Coverage must be written on an occurrence form.
12. Contractual Liability must be maintained covering the Contractors obligations contained in the contract. Certificates of Insurance shall be prepared and executed by the insurance company or its authorized agent and shall contain provisions representing and warranting all endorsements and insurance coverages according to requirements and instructions contained herein.
13. Upon request, Contractor shall furnish The City of Schertz with certified copies of all insurance policies.
14. A valid certificate of insurance verifying each of the coverages required above shall be issued directly to the City of Schertz within ten (10) business days after contract award and prior to starting any work by the successful Contractor's insurance agent of record or insurance company. Also, prior to the start of any work and at the same time that the Certificate of Insurance is issued and sent to the City of Schertz, all required endorsements identified in sections A, B, C and D, above shall be sent to the City of Schertz. The certificate of insurance and endorsements shall be sent to:

**City of Schertz**
**Purchasing Department**
**1400 Schertz Parkway**
**Schertz, TX 78154**

**emailed to: purchasing@schertz.com**
**Faxed to: 210-619-1169**



ACORD

# CERTIFICATE OF LIABILITY INSURANCE

A

DATE (MM/DD/YYYY)
01/01/1000

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
ABC Insurance Agency
655 Main Street
Tampa, FL 33333-0000

B

CONTACT NAME:
PHONE (A/C, No, Ext):
FAX (A/C, No):
E-MAIL ADDRESS:

| INSURER(S) AFFORDING COVERAGE | NAIC # |
|---|---|
| INSURER A: Insurance Carrier | 00000 |
| INSURER B: Insurance Carrier | 00000 |
| INSURER C: Insurance Carrier | 00000 |
| INSURER D: Insurance Carrier | 00000 |
| INSURER E: Insurance Carrier | 00000 |
| INSURER F: Insurance Carrier | 00000 |

D

E

INSURED
C
XYZ Company
123 Apple Street
Tampa, FL 22222-0000

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

F

| INSR LTR | TYPE OF INSURANCE | G | ADDL INSR | SUBR WVD | POLICY NUMBER | M | POLICY EFF (MM/DD/YYYY) | N | POLICY EXP (MM/DD/YYYY) | LIMITS | O |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | GENERAL LIABILITY<br>X COMMERCIAL GENERAL LIABILITY<br>CLAIMS-MADE X OCCUR<br>GEN'L AGGREGATE LIMIT APPLIES PER:<br>POLICY PRO-JECT LOC | H | Y | Y | X123456 | | 01/01/1000 | | 01/01/1000 | EACH OCCURRENCE $ 1,000,000<br>DAMAGE TO RENTED PREMISES (Ea occurrence) $ 100,000<br>MED EXP (Any one person) $ 5,000<br>PERSONAL & ADV INJURY $ 1,000,000<br>GENERAL AGGREGATE $ 2,000,000<br>PRODUCTS - COMP/OP AGG $ 1,000,000<br>$ |
| B | AUTOMOBILE LIABILITY<br>X ANY AUTO<br>ALL OWNED AUTOS<br>SCHEDULED AUTOS<br>HIRED AUTOS<br>NON-OWNED AUTOS | I<br>J | Y | Y | 123456789 | | 01/01/1000 | | 01/01/1000 | COMBINED SINGLE LIMIT (Ea accident) $ 1,000,000<br>BODILY INJURY (Per person) $<br>BODILY INJURY (Per accident) $<br>PROPERTY DAMAGE (Per accident) $<br>$ |
| C | X UMBRELLA LIAB X OCCUR<br>EXCESS LIAB CLAIMS-MADE<br>DED RETENTION $ | K | Y | Y | | | | | | EACH OCCURRENCE $<br>AGGREGATE $<br>$ |
| D | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY<br>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N N<br>If yes, describe under DESCRIPTION OF OPERATIONS below | | N/A | Y | 01234 | | 01/01/1000 | | 01/01/1000 | X WC STATU-TORY LIMITS OTH-ER<br>E.L. EACH ACCIDENT $ 500,000<br>E.L. DISEASE - EA EMPLOYEE $ 500,000<br>E.L. DISEASE - POLICY LIMIT $ 500,000 |
| E | Builder's Risk<br>Professional Services | L | Y | Y | 123456 | | 01/01/1000 | | 01/01/1000 | 100% Insurable Value, replacement cost basis<br>$1,000,000 each claim / $1,000,000 aggregate |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Effective January 1, 2012 must be compliant with Chapter 1811, Tex. Ins. Code (SB 425 enacted by Texas Legislature 82(R) session in 2011).

P

CERTIFICATE HOLDER

Q
City of Schertz
1400 Schertz Parkway
Schertz, Tx 78154
Attn: Purchasing Dept.

CANCELLATION

R

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

S

AUTHORIZED SIGNATURE REQUIRED HERE

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(***Instructions for completing and submitting a certificate to the City of Schertz***)

Complete the certificate of insurance with the information listed below:

A) Certificate of Insurance date
B) Producer (Insurance Agency) Information – complete name, address, telephone information, & email address.
C) Insured's (Insurance Policy Holder) Information – complete name & address information
D) Insurer (name/names of insurance company) **(Remember the city requires all insurance companies to be Authorized to do business in the State of Texas be rated by A.M. Best with a rating of B+ (or better) Class VI (or higher) or otherwise be acceptable to the City if not rated by A.M. Best)
E) NAIC # (National Association of Insurance Commissioners, a # that is assigned by the State to all insurance companies)
F) Insurer letter represents which insurance company provides which type of coverage from D
G) General Liability Insurance Policy – must have an (x) in box. Also, "Occurrence" type policy – must have an (x) in the box (occurrence policy preferred but claims made policy can be accepted with special approval)
H) This section shall be filled in with "Y" for yes under Additional Insured for all coverages, except for Contractor Liability and Workers' Compensation. There shall also be a "Y" for yes under all coverages for subrogation waived.
I) Automobile Liability Insurance – must be checked for Any Auto, All Owned Autos, Hired Autos
J) Umbrella Coverage – must be checked in this section and by occurrence whenever it is required by written contract and in accordance with the contract value.
K) Worker's Compensation and Employers Liability Insurance – information must be completed in this section of the certificate of insurance form (if applicable).
L) Builder's Risk Policy – for construction projects as designated by the City of Schertz.
Professional Liability Coverage – for professional services if required by the City of Schertz.
M) Insurance Policy #'s
N) Insurance policy effective dates (always check for current dates)
O) Insurance Policy limits (See Insurance Requirements Checklist)
P) This section is to list projects, dates of projects, or location of project. Endorsements to the insurance policy(ies) must be provided separately and not in this section. The following endorsements are required by the City of Schertz.
    (1) Adding the City of Schertz as an additional insured. The "additional insured" endorsement is not required for professional liability and workers compensation insurance; and
    (2) Waiver of Subrogation
    (3) Primary and Non-Contributory
    (4) Cancellation Notice
Q) City of Schertz's name and address information must be listed in this section
R) Notice of cancellation, non-renewal, or material change to the insurance policy(ies) must be provided to the City of Schertz in accordance with a cancellation notice endorsement to the policy and/or per the policy provisions based on the endorsement adding the city as an additional insured. (Sec. 1811.155, Tex. Ins. Code)
S) The certificate must be signed by the Authorized Agent in this section of the certificate form.

# Exhibit “C”

EVIDENCE OF INSURANCE

**Agenda No. 3.**

# CITY COUNCIL MEMORANDUM

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **Finance** |
| **Subject:** | **Resolution 25-R-001 - Authorizing the EMS, Utility Billing, Schertz Magazine, and Library debt revenue adjustments. (S.Gonzalez/J.Walters)** |

## BACKGROUND

In the EMS, Utility Billing, Library and Magazine functions, services are provided to customers up front and billing is settled later. Since services are provided before receiving payment, inevitably the City has customers that do not pay for the services provided.

When this occurs, staff reaches out to the customer to try to collect the outstanding payment including follow-up notices and phone calls to try to reach out to the customer to remind them of the outstanding balance and encourage payment. However, the longer the customer account goes without a payment the less likely that any payment will be received.

Once a customer account reaches 180 days without payment, Staff brings those accounts to the City Council to be "written off". This process is an accounting procedure following the Generally Accepted Accounted Principles (GAAP), which lays the framework of accounting practices in the U.S. This designation means it is unlikely those outstanding balances will ever be collected. This leads to an accounting adjustment on the City's Financial Statements to accurately show how much is still outstanding and is reasonable to expect collection.

If a customer's account has been written off, this does not erase or forgive that debt. The city can and does collect some portion of the amount owed by those customers. This can be through the debt collection agency used by EMS or if the customer returns to the City and requests new services through the Magazine or Utility Billing.

On August 27, 2019, City Council approved the Schertz EMS Charity Care Policy. Approving the Charity Care Policy benefits our citizens who do not have insurance and do not have the ability to pay for ambulance services. In the past, these accounts were sent to collections and written off throughout year with little expectation to recover any revenue.

When library materials are damaged while in possession of a cardholder, or when cardholders lose or never return library materials, the cost of the item is charged to the cardholders account. In addition, a $5.00 processing fee is charged per item. The processing fee is a recovery fee for such things as barcodes, property stamps, mylar covers, and RFID tags that are added to library property prior to circulation to the public.

Library items can be checked out for 3 weeks and subsequently renewed for 2 additional 3-week periods, for a total check-out period of 9 weeks. If items are not returned at that time, they go into an overdue notification process. The first notification goes out by email, text or phone at 7 days overdue, followed by additional notifications at 30 days, 45 days, and a final billing notification at 60 days overdue.

The resolution authorizes the debt for these areas that is more than 180 days outstanding as of March 1, 2024, to be written off. These write-offs come before council quarterly and last came before council on March 19, 2024.

Previous Write off Amount:

| | |
|---|---|
| March 2021: | $1,330,234.88 |
| June 2021: | $904,511.15 |
| September 2021: | $750,502.47 |
| December 2021: | $587.362.56 |
| March 2022: | $675,977.28 |
| June 2022: | $564,972.72 |
| September 2022: | $842,197.07 |
| December 2022: | $660,162.69 |
| March 2023: | $709,180.00 |
| June 2023: | $629,399.75 |
| September 2023: | $1,043,989.48 |
| December 2023: | $736,479.42 |
| March 2024: | $939,856.26 |
| June 2024: | $786,518.97 |
| September 2024: | $755,410.63 |
| December 2024: | $718,424.29 |

**Note: These are EMS amounts from June and September. June's normal write-off schedule was delayed in preparation of the new utility billing software. Selecting accounts and writing off is still an outstanding item for the software company that staff is working towards. As such, this adjustment is only for EMS and includes 2 quarters of write-off amounts. Utility Billing amounts will be adjusted at the next write-off scheduled in December and will include 3 quarters of Utility Billing write-offs.**

**GOAL**

To approve write-offs of bad debt in accordance with the standards laid out by GAAP.

**COMMUNITY BENEFIT**

This will show the City's Financial Statements according to national standards and City policy.

**SUMMARY OF RECOMMENDED ACTION**

Approve Resolution No. 24-R-122 to write off receivables that are older than 180 days.

**FISCAL IMPACT**

This accounting adjustment will not affect the City’s Budget or financial standing. The amount written off is estimated during the budget process and is accounted for in the revenue estimations and the bad debt expense accounts. The action taken tonight will reduce the amount shown as owed to the City by $718,424.29 and set it equal to the amount seen as still reasonably collectible. The breakdown is as follows:

EMS - $462,202.71
EMS Charity Care - $162,213.52
Utility Billing - $91,358.06
Library - $0.00

Magazine - $2,650.00

**Note: Staff has resolved the issue with the new software for Utility write-offs so this quarter includes the amounts from June, September, and December 2024.**

**RECOMMENDATION**

Staff recommends Council approve Resolution No.25-R-001.

---

**Attachments**

Resolution 25-R-001 Revenue Adjustments

**RESOLUTION NO. 25-R-001**

**A RESOLUTION BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS AUTHORIZING DEBT REVENUE ADJUSTMENTS FOR CERTAIN INACTIVE OUTSTANDING RECEIVABLES AND OTHER MATTERS IN CONNECTION THEREWITH.**

**WHEREAS**, the City staff of the City of Schertz (the "City") has recommended that the City maintains quarterly debt revenue adjustments for inactive outstanding accounts; and

**WHEREAS**, The Centers for Medicare and Medicaid Services requires a charity care policy to continue participating in the Texas Ambulance Services Supplemental Payment Program (TASSPP); and

**WHEREAS**, the City Council has determined that it is in the best interest of the City that all inactive outstanding accounts after 180 days nonpayment will be sent to City Council for consideration for write offs.

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS THAT:**

Section 1. The City Council hereby authorizes the write off, including Charity Care, in the amount and distribution of accounts below:

| *Function* | *Amount* |
|---|---|
| EMS | $462,202.71 |
| Charity Care | $162,213.52 |
| Utility Billing | $91,358.06 |
| Magazine | $2,650.00 |
| Library | $0.00 |
| Total | $718,424.29 |

Section 2. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Resolution for all purposes and are adopted as a part of the judgment and finding of the City Council.

Section 3. All resolutions or parts thereof, which are in conflict or inconsistent with any provision of this Resolution are hereby repealed to the extent of such conflict, and the provisions of this Resolution shall be and remain controlling as to the matters resolved herein.

Section 4. This Resolution shall be construed and enforced in accordance with the laws of the State of Texas and the United States of America.

Section 5. If any provision of this Resolution or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Resolution and the application of such provision to other persons and circumstances shall nevertheless be valid, and the City Council hereby declares that this Resolution would have been enacted without such invalid provision.

Section 6. It is officially found, determined, and declared that the meeting at which this Resolution is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this Resolution, was given, all as required by Chapter 551, Texas

Section 7. This Resolution shall be in force and effect from and after its final passage, and it is so resolved.

PASSED AND ADOPTED, this _____ day of _____, 2025.

CITY OF SCHERTZ, TEXAS

_____
Ralph Gutierrez, Mayor

ATTEST:

_____
Sheila Edmondson, City Secretary

**Agenda No. 4.**

**CITY COUNCIL MEMORANDUM**

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **Executive Team** |
| **Subject:** | **Resolution 25-R-006 - Articulating the City of Schertz' position on potential truck bypass routes on FM 2252. (S.Williams/B.James)** |

**BACKGROUND**

In April of 2024, Garden Ridge City Councilwoman Lisa Swint, at the time Mayor Pro Tem, reached out to City Staff on a proposal that they were "working on to divert heavy truck traffic away from Garden Ridge proper and down the 2252 spur toward IH-35." She noted that TxDOT staff indicated that they would likely need "concurrence from Schertz as the route would go though a small portion of Schertz." A map of the proposed truck bypass route was subsequently provided (see attached). The proposal from Councilwoman Swint is to not allow through truck traffic on FM 2252, and instead force that traffic down through Schertz on the 2252 spur.

Staff met with Councilwoman Swint in October to better understand her position. Staff made clear that we would not support a change until the implications were fully understood. In particular, the implication of forcing truck traffic that currently used FM 2252 to get to and from FM 3009 and FM 1337 down the spur of FM 2252 (the section that runs north/south from FM 2252 proper to the intersection of FM 482 and IH-35 near FS #2). Staff has concerns that the 2252 spur has not been sufficiently improved to handle the additional traffic. Further, staff has concerns about communities not considering the entire region in decisions they make with regard to land use and transportation issues. To date not traffic studies have been done to understand the change in traffic patterns of the proposal.

In November, staff received a request from the Alamo Area Metropolitan Planning Organization (AAMPO) to meet "to initiate a conversation about safety mitigation measures for the high volume of trucks using FM 2252 and FM 1337 in the Garden Ridge area." Included on the email were representatives from TxDOT, Garden Ridge and Schertz. The meeting occurred in December. Also at the meeting were a Comal ISD Board member and Comal ISD's Director of Transportation. Representatives from State Representative Carrie Isaac's office and State Senator Campbell's office was also invited, but could not attend. Schertz Staff indicated our support in working with other entities on existing safety issues and noted some past actions we had taken in this regard, including Schertz Police Department's Commercial Vehicle Enforcement efforts. Staff reiterated our position that we would not recommend changes for the proposed truck route to the Schertz City Council without data to understand the implications and potential measures to mitigate negative impacts. Staff also made clear we did not support suggesting or encouraging businesses to alter their traffic patterns. Sonia Jimenez from AAMPO would look at seeing if this area could be added to their Freight Study. TxDOT provided a copy of the relevant section of TxDOT's Sign Guidelines and Applications Manual.

In light of the number of entities becoming involved in this effort, staff felt it would be beneficial for Council to make clear their position at this point. As such staff has drafted Resolution 25-R-006 stating that the City of Schertz is opposed to promoting or requiring any changes in traffic

patterns, particularly of truck traffic, on FM 2252 until studies have been conducted to understand the implications of such a change and any negative impacts on Schertz have been mitigated. Further the Resolution emphasizes the need to work in partnership on regional issues and to cooperate to solve regional challenges.

**GOAL**

To ensure that adequate consideration is given regarding the implications and impacts of any proposed or contemplated changes being mandated or promoted to existing traffic patterns in the vicinity of FM 2252.

**COMMUNITY BENEFIT**

Ensure the City of Schertz, its residents and businesses are appropriately considered in any changes regarding traffic patterns, particularly truck travel, through the City of Schertz.

**SUMMARY OF RECOMMENDED ACTION**

Approval of Resolution 25-R-006 expressing the City's position regarding consideration of a truck bypass route on FM 2252.

**RECOMMENDATION**

Approval of Resolution 25-R-006.

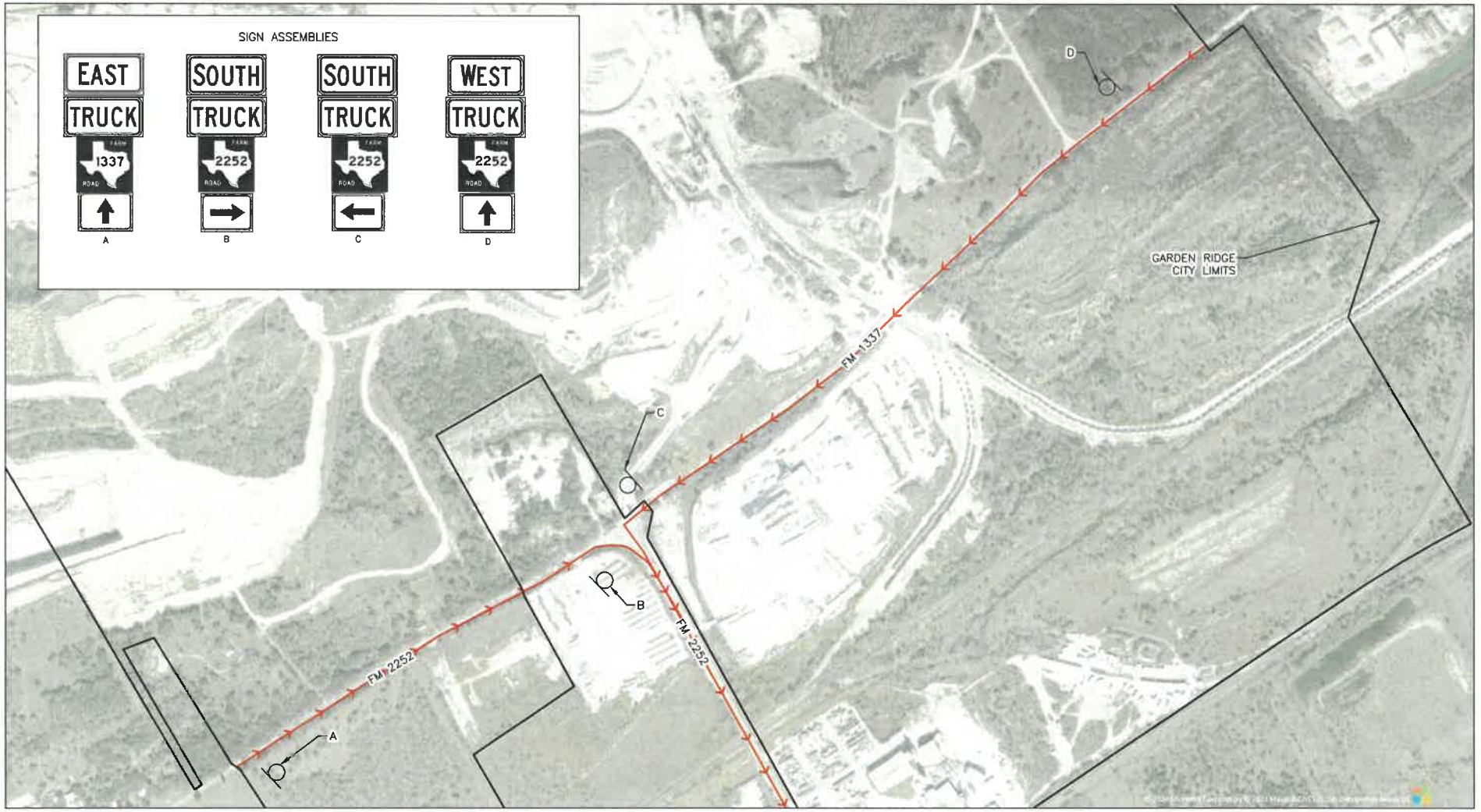
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**Attachments**

Info October Meeting

Info December Meeting

Resolution 25-R-006




**EXPLANATION**

- PROPOSED TRUCK ROUTE
- SINGLE POLE SIGN
- GARDEN RIDGE CITY LIMITS

N

0 500'


Trihydro CORPORATION

Headquarters
1252 Commerce Drive
Laramie, Wyoming 82070
(P) 307/745.7474 (F) 307/745.7729
www.trihydro.com

New Braunfels Branch Office
Texas Engineering Firm F-131
Texas Survey Firm 10194320
1672 Independence Dr., Ste. 315
New Braunfels, Texas 78132
(P) 830/626.3588 (F) 830/626.3544


**FIGURE 1**

**TRUCK ROUTE EXHIBIT**

**TRUCK ROUTES**
**CITY OF GARDEN RIDGE**
**COMAL COUNTY, TEXAS**

| Drawn By: JM | Checked By: SJ | Scale: 1" = 500' | Date: 2/22/2024 |
|---|---|---|---|

L:\CITY OF GARDEN RIDGE - DOCUMENTS\CADD\TRUCKROUTES\TRUCKROUTE

# City of Garden Ridge Truck Route Proposal

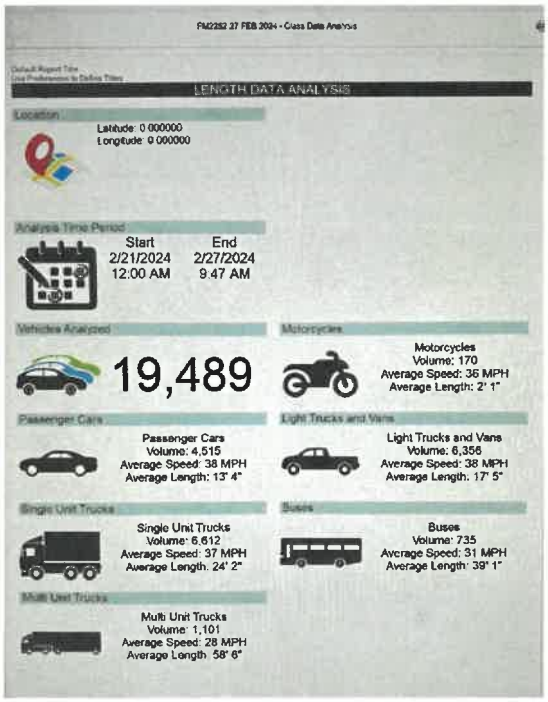
Under current TxDOT guidelines, a city has the ability "to restrict truck traffic on a state highway through the establishment of a Truck Route as described in the *TxDOT Signs Guidelines and Application Manual*". Through the passage of appropriate legislation, the City "may reroute trucks from a certain highway route within their corporate limits to an alternate highway route within their city limits". The Truck Route should follow TxDOT's basic guidelines:

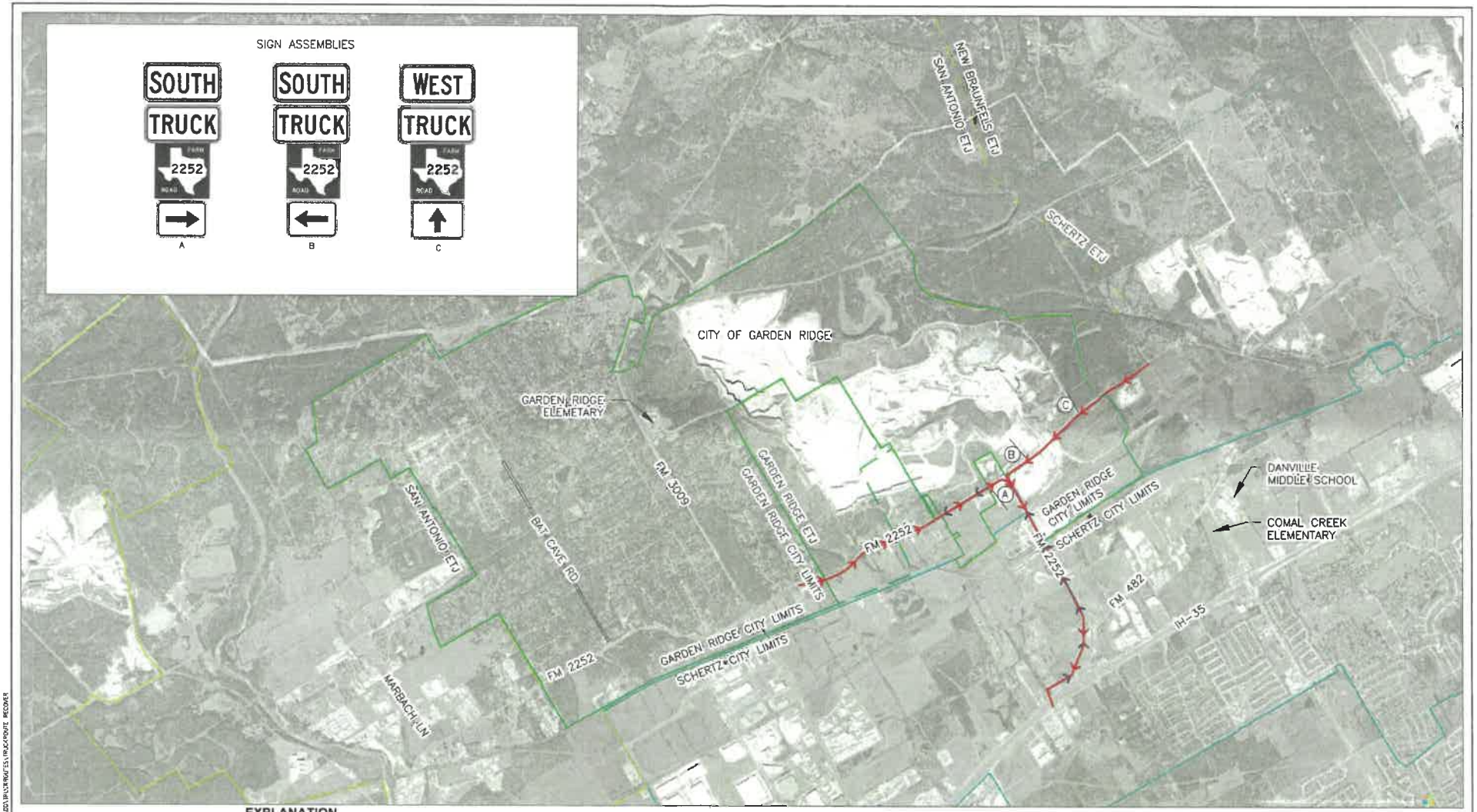
- *Weight and size carrying capability of the alternate route should be reasonably comparable*
- *The (new) route should not be unreasonably longer than the original route*
- *The route should not be confusing to follow & should be selected so as not to jeopardize public safety*
- *All truck routes should be on the state highway system*

The city of Garden Ridge is being negatively impacted by heavy truck traffic on FM 2252. Concerns for citizen safety, traffic disruption and repetitive damage to roads and private vehicles support the establishment of a Truck Route on FM 2252 to divert traffic away from the core of Garden Ridge to the better equipped I35 Freeway. Garden Ridge citizens frequently complain about dangerous driving conditions, congestion during prime morning and afternoon school commutes, rock damage to cars, pollution from idling vehicles and frequent near misses between cars and gravel trucks.

The concentration of Aggregate Production Operations on FM 2252 including but not limited to: Heidelberg Materials, Industrial Asphalt, Asphalt Inc./Lone Star Aggregates, Anderson Columbia, Capital Aggregate, Clark Asphalt, Ingram Readymix and Cemex, has resulted in thousands of truck trips a day along the two lane highway. The addition of Guadalupe Ready Mix and the proposed expansion of the Heidelberg Materials quarry will add hundreds of more trucks to an already overburdened road.

A traffic analysis by the City of Garden Ridge Police Department from February 21st at 12:00am until February 26th at 9:47am showed a vehicle count of 19,489 with 8,448 vehicles designated as Single Unit Trucks, Multi Unit Trucks and Busses traveling from around 20901 FM 2252 toward FM 3009. On average, GRPD is counting 10,000 trucks a day driving past multiple churches, residences, and businesses on an approximately 1.6 mile stretch of road.






**EXPLANATION**

- PROPOSED TRUCK ROUTE
- SINGLE POLE SIGN
- GARDEN RIDGE CITY LIMITS
- GARDEN RIDGE ETJ
- SAN ANTONIO ETJ
- SCHERTZ CITY LIMITS
- SCHERTZ ETJ

N

0 3,000'


Trihydro CORPORATION
Texas Engineering Firm F 131
Texas Survey Firm 10194320
New Braunfels
1672 Independence Dr Suite 315
New Braunfels, Texas 78132
(P) 830.628.3688 (F) 830.628.3544
Austin
5508 Highway 290 West, Suite 201
Austin, Texas 78735
(P) 512.442.3008 (F) 512.448.7811
www.trihydro.com


**FIGURE 1**

**TRUCK ROUTE EXHIBIT**

**TRUCK ROUTES**
**CITY OF GARDEN RIDGE**
**COMAL COUNTY, TEXAS**

| Drawn By: JM | Checked By: HC | Scale: 1" = 3000' | Date: 12/9/2024 |
|---|---|---|---|

C:\CITY OF GARDEN RIDGE\2024\PLOTTING\TSS\TRUCK ROUTE RECOVER

# Section 6 — Truck Routes

## Introduction

Local authorities may adopt traffic regulations controlling the movement of trucks on public roads within their jurisdiction consistent with state law.

## Authority

By passage and enforcement of a city ordinance/resolution, a city may reroute trucks from a certain highway route within their corporate limits to an alternate highway route within their city limits.

The Texas Department of Transportation (TxDOT) has no legal authority to prohibit the use of any highway by any class of vehicle. In other words, TxDOT cannot discriminate between types of vehicles as long as they are within the weight and size limits established by law. TxDOT's authority is covered in the Texas Transportation Code, Chapter 201, Subchapter K,Section 201.901, "Prohibiting Use of Highway Road."

## Proposals

Cities should submit all proposals for re-routing on the state highway system in writing to the TxDOT district office for review and comment.

## Route Guidelines

If an alternate route affects a county or another city, the city should obtain written consent from the affected county or city.

Weight and size carrying capability of the alternate route should be reasonably comparable. Also, the route should not be unreasonably longer than the original route. It should not be confusing to follow and should be selected so as not to jeopardize public safety. All truck routes should be on the State highway system.

The city assumes all responsibility for the route, including enforcement and any other legal matters.

Any route involving the Interstate System should be approved by the Federal Highway Administration (FHWA). The TxDOT Traffic Operations Division (TRF) coordinates the necessary approval with the FHWA.

## Signing Guidelines

Proposed truck route signing should be adequate and in compliance with current signing practice. All signs required must conform to current standards as set out in the *Texas Manual on Uniform Traffic Control Devices* (TMUTCD) with regard to shape, size, color, letter size and style, mounting, location, etc.

The large and small advance TRUCK ROUTE sign assemblies may be used for additional emphasis of an existing or proposed truck route. See Figure 5-4 for an example of large advance truck route sign assembly.

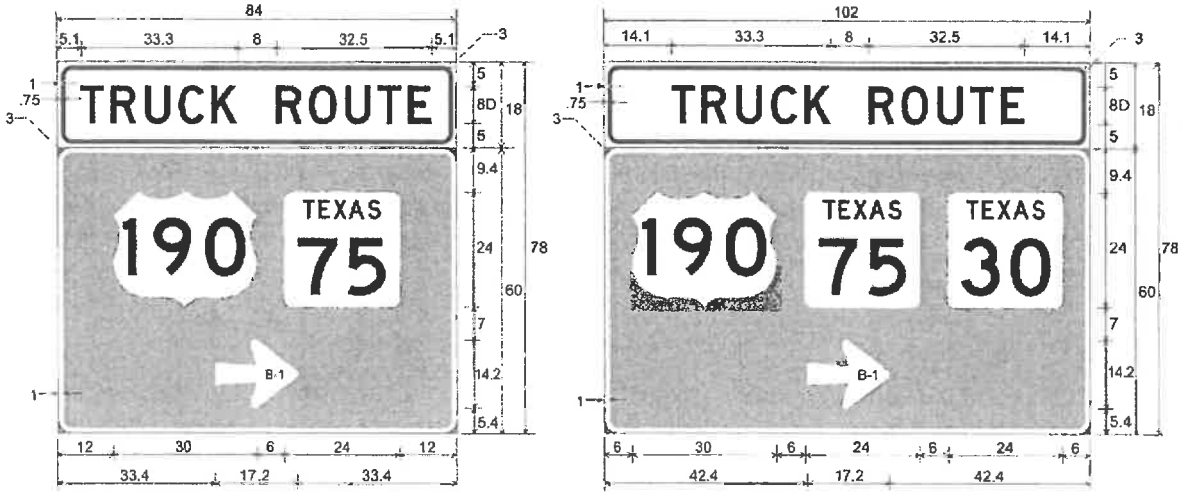



*Figure 5-4. Large Advanced Truck Route Sign Assembly sign details*

Advance truck route sign assemblies are typically used to denote a truck route. See Figure 5-5 for an example of small advance truck route sign assembly.

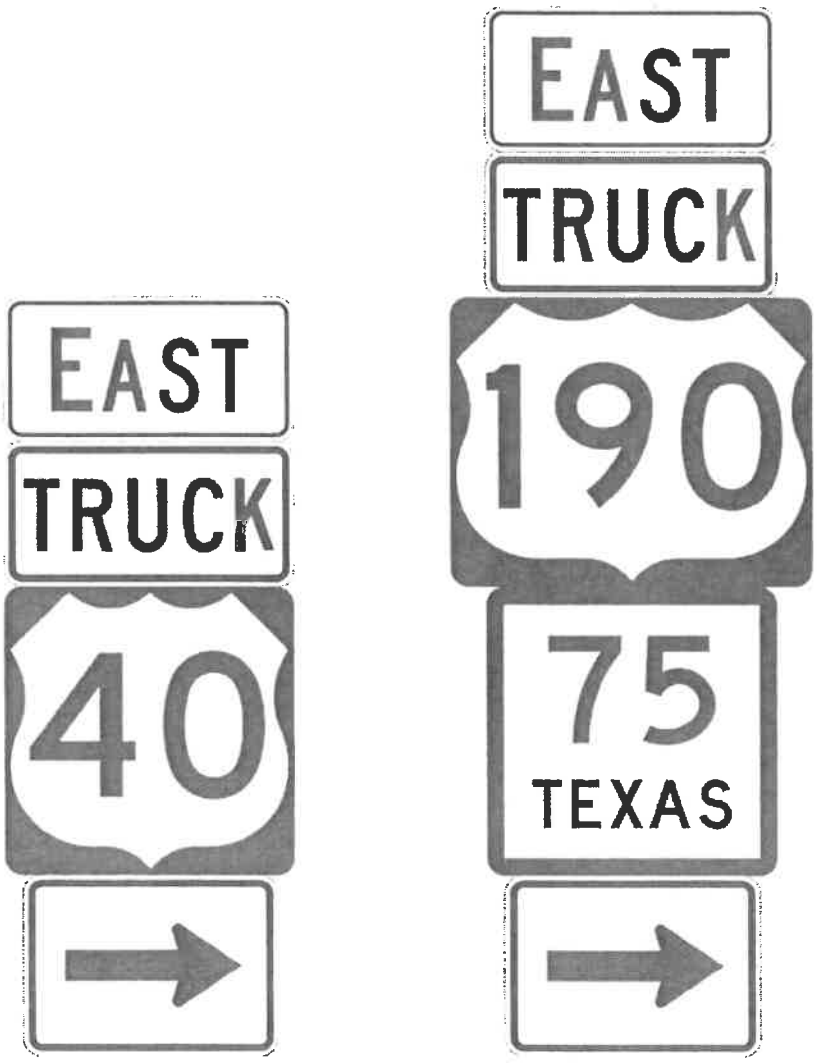



*Figure 5-5. Small Advance Truck Route Sign Assembly*

The city must submit to the district office a suitable sign design detail drawn to scale showing the proposed sign shape, color, size, text and locations.

TxDOT installs all signs on expressways and freeways. Depending on the provisions of the municipal maintenance agreement, a city may be allowed to install signs on a conventional highway within its corporate limits. TxDOT installs signs on highways outside the corporate limits of a city as necessary to achieve a continuous connecting route.

The city bears all costs for signs and sign installations.

The TRUCK (M4-4) panel sign is not used in conjunction with an interstate route marker.

After the city passes the ordinance establishing the truck route, the district should provide a map that clearly defines the route to TRF.

### Process Summary

The process of establishing a truck route is as follows:

1. City submits proposal for the truck route to TxDOT district.
2. District reviews proposal and forwards it to TRF for review and comment.
3. TRF reviews and comments on the proposal from an engineering standpoint (obtaining FHWA approval if necessary) and notifies the district.
4. District notifies city of comments.
5. City passes ordinance establishing the truck route.
6. Appropriate signs are installed to accommodate the truck route.
7. District provides TRF with map clearly defining the truck route.

### Restricted Truck Lanes

For information on restricted truck lanes, see Section 8 of this chapter.

**RESOLUTION NO. 25-R-006**

**A RESOLUTION BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS ARTICULATING THE CITY'S POSITION WITH REGARD TO A PROPOSED TRUCK ROUTE ON FM 2252.**

**WHEREAS,** the a proposal for a truck bypass route on FM 2252 has been put forth by a Councilwoman from the City of Garden Ridge that would divert additional traffic through Schertz via the spur of FM 225; and

**WHEREAS,** the basis provided for this proposal is that the City of Garden Ridge is being negatively impacted by heavy truck traffic on FM 2252 as well as concerns for citizen safety, dangerous driving conditions, congestion during prime morning and afternoon school commutes, rock damage to cars, pollution from idling vehicles and frequent near misses between cars and gravel trucks; and

**WHEREAS,** there are a number of options to mitigate the above concerns, including more frequent sweeping of streets, enforcement of existing traffic laws, improvements to FM 2252, etc.; and

**WHEREAS,** no studies have been done to determine the impact of a proposed truck bypass route on FM 2252, that would divert truck traffic away from the City Garden Ridge and into the City of Schertz; and

**WHEREAS**, no analysis has been done to determine the ability of the spur of FM 2252 within Schertz to safely handle existing traffic let alone increased traffic; and

**WHEREAS**, no commitments have been made to mitigate any potential negative impacts from a truck bypass route, including funding for improvements within Schertz; and

**WHEREAS**, Cities in the region must work cooperatively to solve issues and challenges.

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS THAT:**

Section 1. The City Council hereby opposes any efforts to alter the current traffic patterns in the vicinity of FM 2252 without a full understanding of the impacts of the proposed changes and without providing for the mitigation of the resulting negative impacts of such changes. The City Council supports working in a thoughtful and collaborative manner with partner agencies and surrounding communities to find solutions that benefit all residents and businesses.

Section 2. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Resolution for all purposes and are adopted as a part of the judgment and findings of the City Council.

Section 3. All resolutions, or parts thereof, which are in conflict or inconsistent with any provision of this Resolution are hereby repealed to the extent of such conflict, and the

provisions of this Resolution shall be and remain controlling as to the matters resolved herein.

Section 4. This Resolution shall be construed and enforced in accordance with the laws of the State of Texas and the United States of America.

Section 5. If any provision of this Resolution or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Resolution and the application of such provision to other persons and circumstances shall nevertheless be valid, and the City Council hereby declares that this Resolution would have been enacted without such invalid provision.

Section 6. It is officially found, determined, and declared that the meeting at which this Resolution is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this Resolution, was given, all as required by Chapter 551, Texas Government Code, as amended.

Section 7. This Resolution shall be in force and effect from and after its final passage, and it is so resolved.

PASSED AND ADOPTED, this ____ day of _____, 2025.

CITY OF SCHERTZ, TEXAS

_____
Ralph Gutierrez, Mayor

ATTEST:

_____
Sheila Edmondson, City Secretary

**Agenda No. 5.**

**CITY COUNCIL MEMORANDUM**

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **Engineering** |
| **Subject:** | **Resolution 25-R-005 Approving a Utility Service Extension Request for the Woman Hollering Townhomes (B.James/K.Woodlee)** |

## BACKGROUND

When a property within the City Limits of the City of Schertz is proposed for development and is within the City's area of Certificate of Convenience and Necessity (CCN), the connection to the City's water and/or wastewater utilities is reviewed and processed through established procedures of the platting process. In the past, when a property outside the City Limits was proposed for development and there was a need for City water and/or wastewater service, it was required that the property be annexed into the City. Subsequent to annexation, the platting process would take place. The City cannnot require annexation as a condition to provide utility services to a property within its CCN. As a result the UDC was amended via Ordinance 24-S-14 to instead require that the developer submit a request for Utility Service Extension. According to the UDC, authority to approve the request lies with City Council. Once approved, the developer may submit for permits to construct the necessary improvements in order to be served by the City's utility infrastructure.

The proposed development is approximately 30.48 acres situated along FM 1518 on the north side of its intersection with Woman Hollering Road (12535 Woman Hollering Road). The developer proposes to construct **a multifamily or townhome development** with up to 230 living unit equivalents (LUEs) and desires to connect to public water and wastewater systems. Staff has evaluated the request based on existing water and wastewater facilities, flows expected to be generated by the proposed development, and the projection of other future flows from the vicinity. Adequate capacity in both the water distribution system and the wastewater collection system currently exists to serve the development. The following criteria should be considered for final action determination.

1. Whether the proposed development to be served by the extension is consistent with the Comprehensive Land Plan.

   The property lies within areas designated as Complete Neighborhood and Local Corridor. A mixture of housing types and multifamily developments are identified as appropriate in those areas.

2. Whether the extension is proposed to be constructed in accordance with all applicable City ordinances, resolutions, regulations, and standards.

   The utility extensions and connections will be constructed in accordance with applicable City standards.

3. Whether it is feasible to annex the property, and any intervening property which is needed for utility rights-of-way, into the City.

   If requested by the property owner, the property could be annexed into the City. No additional rights-of-way across the property are currently identified as being needed.

4. Whether the utility extension would compromise the City's ability to timely provide adequate water or wastewater facilities to property inside the City.

   The proposed extensions are not expected to compromise the City's ability to provide timely

and adequate water or wastewater facilities to property inside the City Limits.

5. Whether the utility extension will lead to premature development that cannot be served efficiently and timely by roadway, drainage, or park facilities.

The proposed extensions will not lead to premature development that cannot be served by existing roadway, drainage, or park facilities.

6. Whether the utility extension is financially feasible given the proposed means of financing the extension.

The proposed extensions will be paid for by the developer.

7. Whether the utility extension will lead to significant degradation of water quality or other environmental resources, either from construction of the water or wastewater improvements, development of the property owner's land, or development of other land that may be served through the extended facilities.

The proposed extensions are not expected to lead to significant degradation of environmental resources.

8. Whether the property owner proposes to extend wastewater facilities without utilizing City water facilities.

The property owner proposes to extend and be served by both City wastewater and City water facilities.

9. The extent to which the proposed agreement promotes the health, safety, or general welfare of the City and the safe, orderly, efficient and healthful development of the City.

By following City standards and extending utilities to provide for future extension beyond the proposed development, the extensions and proposed development of the property will allow for orderly development and is not expected to jeopardize the safe, efficient, and healthful development of the City.

**GOAL**

The goal of the resolution is the approval of the water and wastewater Utility Extension Request for the proposed development known as the Woman Hollering Townhomes.

**COMMUNITY BENEFIT**

By allowing the extension of public utilities to the proposed Woman Hollering Townhome development, a short extension of the sanitary sewer main will be constructed to provide a connection point for several parcels within the City's CCN and the City Limits. Also, without approval of the service extension request, the property might still be developed, although at a lower density but with on-site septic facilities which are not desirable if public facilities are nearby and accessible.

**SUMMARY OF RECOMMENDED ACTION**

Staff recommends that Council approve the request for Utility Service Extension for City of Schertz Public Water and Wastewater infrastructure to the proposed Woman Hollering Townhomes project.

**RECOMMENDATION**

Approve Resolution 25-R-005.

---

**Attachments**

Resolution 25-R-005

Vicinity Map

Utility Service Extension Request

**RESOLUTION NO. 25-R-005**

**A RESOLUTION BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS, APPROVING A UTILITY SERVICE EXTENSION REQUEST FOR WATER AND WASTEWATER UTILITIES TO THE PROJECT KNOWN AS THE WOMAN HOLLERING TOWNHOMES**

WHEREAS, the City of Schertz (the "City") provides retail water and wastewater service under Certificates of Convenience and Necessity (CCNs) issued by the Public Utility Commission of Texas (PUC) to certain areas in Bexar County; and

WHEREAS, the property on the north side of the intersection of Woman Hollering Road and FM 1518 is outside the City Limits of the City but within the City's water and wastewater CCNs; and

WHEREAS, the developer of the property on the north side of the intersection of Woman Hollering Road and FM 1518 (12535 Woman Hollering Road) proposes a project known as the Woman Hollering Townhomes and has submitted a Utility Service Extension Request to be served by City water and wastewater without being annexed into the City; and

WHEREAS, the City Council has determined that the criteria for approval of the Utility Service Extension Request as set forth in Unified Development Code (UDC) Section 21.4.11 are being met.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS THAT:

Section 1. The City Council hereby approves the Utility Service Extension Request for the project known as the Woman Hollering Townhomes thereby allowing the submittal of applications for, construction of, and connection to City water and wastewater utilities for up to 230 living unit equivalents (LUEs).

Section 2. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Resolution for all purposes and are adopted as a part of the judgment and findings of the City Council.

Section 3. All resolutions, or parts thereof, which are in conflict or inconsistent with any provision of this Resolution are hereby repealed to the extent of such conflict, and the provisions of this Resolution shall be and remain controlling as to the matters resolved herein.

Section 4. This Resolution shall be construed and enforced in accordance with the laws of the State of Texas and the United States of America.

Section 5. If any provision of this Resolution or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Resolution and the application of such provision to other persons and circumstances shall nevertheless be valid, and the City Council hereby declares that this Resolution would have been enacted without such invalid provision.

Section 6. It is officially found, determined, and declared that the meeting at which this Resolution is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this Resolution, was given, all as required by Chapter 551, Texas Government Code, as amended.

Section 7. This Resolution shall be in force and effect from and after its final passage, and it is so resolved.

PASSED AND ADOPTED, this __ day of _____, 2025.

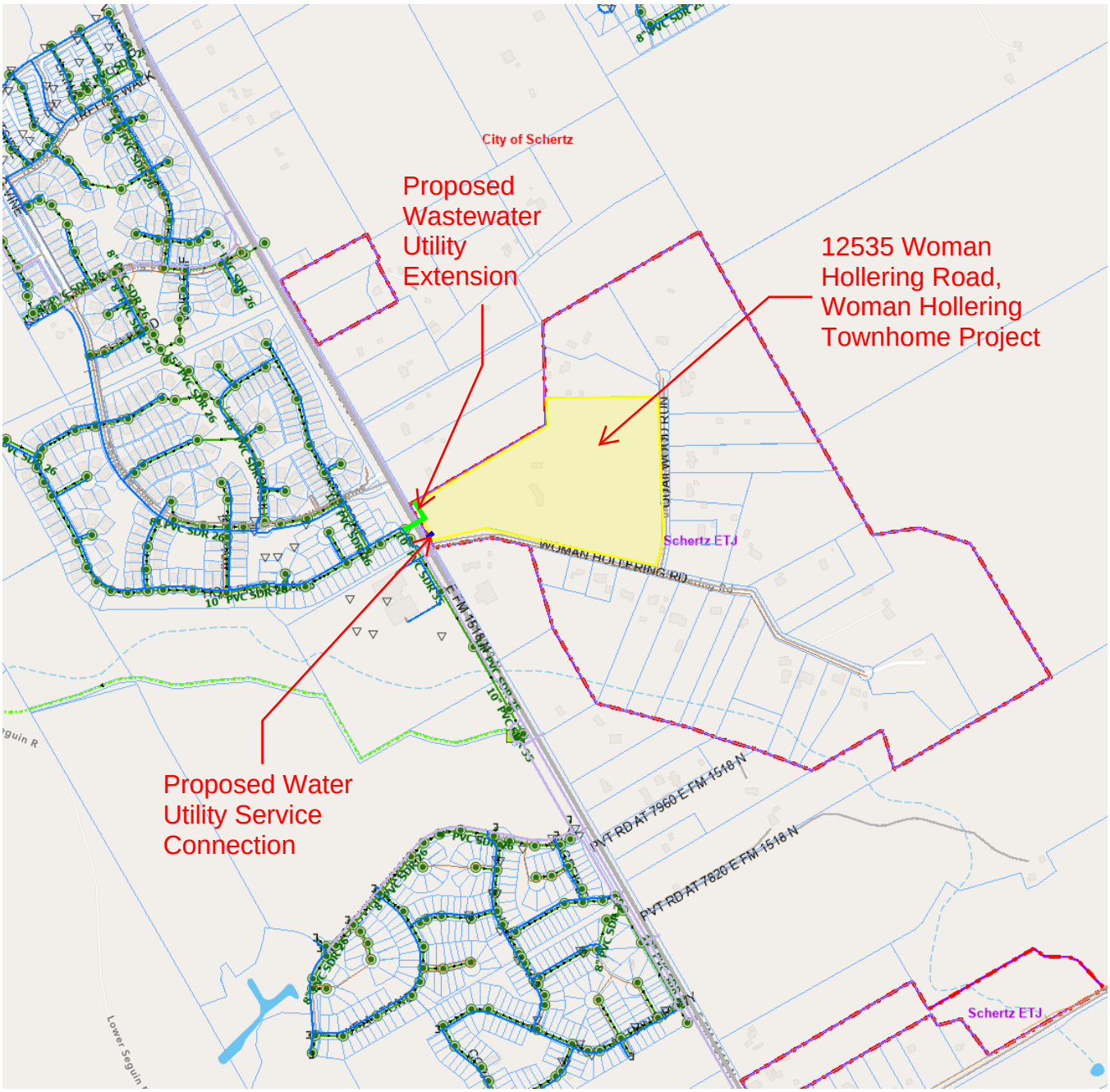
CITY OF SCHERTZ, TEXAS

_____
Ralph Gutierrez, Mayor

ATTEST:

_____
Sheila Edmondson, City Secretary

(CITY SEAL)




RESOLUTION 25-R-005
UTILITY SERVICE EXTENSION REQUEST (WATER AND WASTEWATER) FOR WOMAN HOLLERING TOWNHOMES

MALONE ★ WHEELER
SINCE INC. 1995

CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT

May 21st, 2024

City of Schertz
Attn: Kathryn Woodlee
City Engineer
11 Commercial Place
Schertz, TX 78154

Re: Woman Hollering Townhomes – Service Extension Request (SER)

Ms. Woodlee,

The Woman Hollering project is located in a 30.48-acre tract at 12535 Woman Hollering Road, in the Extraterritorial Jurisdiction of the City of Schertz, Texas. The property is located west of FM 1518 and north of Woman Hollering Road, a private roadway owned by a third-party individual in the Tom Williams subdivision. The subject tract used to have an existing single-family home that was recently demolished. The property is currently vacant/undeveloped and is proposed to be developed with up to 230 residential units, which could be townhomes or apartments with a proposed clubhouse, which would equal but not exceed 230 LUEs. No subdivision of the land is being proposed; the City of Schertz issued a "Certificate of Determination" in March 13, 2023 acknowledging that the City will not require platting given that the property is located in the ETJ.

This letter is being submitted to serve as the Service Extension Request (SER) for water (domestic, irrigation and fire flow) and wastewater services for this project. Per previous discussions with City staff, no water line extension will be required along Woman Hollering Road, a private dead-end road, where an existing 4" water line is already in place serving the properties in the cul-de-sac, and where no additional development is feasible due to the nature of the lot and street layout. A water meter is proposed to connect to the existing City of Schertz 12" water line on the west side of FM 1518 to serve the proposed Woman Hollering development; the proposed water meter size will be determined with site plan design when fixture unit counts become available. For wastewater service, an 8" wastewater line is proposed to be extended along the property's frontage on the west side of FM 1518 and connect to the existing City of Schertz wastewater system on the east side of FM 1518. Per the wastewater analysis performed, the proposed 8" line will have adequate capacity to handle the 230 LUEs and estimated I&I (16,100 gpd) for the Woman Hollering development. An exhibit showing the proposed wastewater line extension and water meter is included with this submittal.

A "Will Serve Letter" was issued by the City of Schertz on December 6th, 2022, confirming the City's availability to provide water and wastewater services for the Woman Hollering project. This SER is being submitted as the next step in the development process to show the proposed public improvements and confirm that water and wastewater capacity will be reserved in the City's public utility systems for the requested 230 LUEs that are anticipated for the project.

Should there be any questions or comments, please do not hesitate to contact me via email at claudiam@malonewheeler.com or by phone at 512-618-0437. Thank you for your efforts on this project.

Sincerely,
Malone Wheeler, Inc.



Claudia Morlotti, E.I.T.
Assistant Project Manager

**Agenda No. 6.**

**CITY COUNCIL MEMORANDUM**

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **Planning & Community Development** |
| **Subject:** | **Ordinance 25-S-002 – Conduct a public hearing and consider a request to rezone approximately 85 acres of land, from Agricultural District (AD) to approximately 30 acres as Single-Family Residential District (R-6) and approximately 55 acres as Single-Family Residential District (R-2), generally located 2,000 feet North of the intersection of Weir Road and Trainer Hale Road, more specifically known as Bexar County Property Identification Numbers 310048 and 1190132, City of Schertz, Bexar County, Texas. (B.James/L.Wood/D.Marquez)** |

## BACKGROUND

The applicant is requesting to rezone a total of 85 acres of land from Agricultural District (AD) to approximately 30 acres as Single-Family Residential District (R-6) and approximately 55 acres as Single-Family Residential District (R-2). As per UDC Section 21.5.5, the maximum size tract that can be zoned Single-Family Residential District (R-6) is 30 acres.

On November 19, 2024, eleven (11) public hearing notices were mailed to the surrounding property owners within a 200-foot boundary of the subject property. At the time of the staff report, three (3) responses in favor, zero (0) responses neutral, and one (1) response in opposition have been received. A public hearing notice was published in the "San Antonio Express" on December 18, 2024. Additionally, two (2) notification signs were placed on the properties along Weir Rd by the applicant. The Planning and Zoning Commission held a public hearing for the item on December 4, 2024.

## GOAL

The applicant is requesting to rezone a total of approximately 85 acres from Agricultural District (AD) to a portion being approximately 55 acres as Single-Family Residential District (R-2) and the remainder approximately 30 acres as Single-Family Residential District (R-6).

| | ***Table 21.5.7.A. Dimensional Requirements*** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Minimum Lot Size Dimensions (Ft)** | | | **Minimum Yard Setbacks (Ft)** | | | **Misc. Lot Requirements** | | |
| | *Code* | *Zoning District* | *Area Sqft* | *Width* | *Depth* | *Front* | *Side* | *Rear* | *Min. Off-Street Parking* | *Maximum Height* | *Max Imperv Cover* |
| Existing | AD | Agricultural District | 217,870 | 100 | 100 | 25 | 25 | 25 | 2 | 35 | 30% |
| Proposed | R-2 | Single-Family Residential District | 8,400 | 70 | 120 | 25 | 10 | 20 | 2 | 35 | 50% |
| Proposed | R-6 | Single-Family Residential District | 7,200 | 60 | 120 | 25 | 10 | 20 | 2 | 35 | 50% |

**COMMUNITY BENEFIT**

It is the City's desire to promote safe, orderly, efficient development and ensure compliance with the City's vision of future growth.

**SUMMARY OF RECOMMENDED ACTION**

The subject property is located along Weir Road which is designated as a Principal Arterial with 120-130 feet of Right-Of-Way Width. Right-of-Way dedication and roadway improvements are determined during the platting process. The property is also located within the 0.2% Annual Chance Flood Hazard.

The City of Schertz Fire, EMS, and Police Departments have been notified of the proposed zone change and have not provided objections. A public hearing notice was also mailed to Schertz-Cibolo-Universal City Independent School District. The most recent SCUC ISD Demographic Report and 10 Year Campus Forecasting Report have been attached to the Staff Report.

***When Staff evaluates zone changes, they look to the Criteria for Approval as listed in UDC Section 21.5.4.D. The criteria are listed below.***

***1. Whether the proposed zoning change implements the policies of the adopted Comprehensive Land Plan, or any other applicable adopted plans.***

The proposed zone change does implement the policies of the adopted Comprehensive Land Plan. The subject property is identified as Complete Neighborhood in the Comprehensive Land Use Plan- Future Land Use Map. Complete Neighborhood is described as general areas characterized by a mixture of housing options with supporting land uses while considering roadway classification, conflicts among land uses, and undue concentration or diffusion of population when considering appropriateness of housing density and commercial activity. The applicant is proposing Single-Family Residential District (R-6) and Single-Family Residential District (R-2) within the same development. The proposed zone change offers a mix of single-family zoning districts within one housing development and is surrounded by undeveloped land.

***2. Whether the proposed zoning change promotes the health, safety, and general welfare of the City.***

As part of promoting health, safety, and welfare, the City should encourage development compatible with surrounding uses utilizing standards and transitional uses to alleviate negative impacts. The proposed single family zoning acts as a transitional use to the existing undeveloped agricultural land.

***3. Whether the uses permitted by the proposed change will be consistent and appropriate with existing uses in the immediate area;***

The proposed zone change to Single-Family Residential District (R-2) and Single-Family Residential District (R-6) are appropriate for development in the immediate area. As per UDC Section 21.5.5, the maximum tract size that can be zoned Single-Family Residential District (R-6) is 30 acres. The Single-Family Residential District (R-6) and Single Family Residential District (R-2) are intended for detached single-family homes, together with schools, churches, and parks necessary to create basic neighborhood units.

The subject property is adjacent to a portion of the Planned Development District (PDD) Sterling Grove, which is designated for the development of single-family homes with minimum lot sizes of 6,050 square feet and 7,150 square feet. The proposed zone change at the subject property, to minimum residential lot sizes of 8,400 square feet and 7,200 square feet, is consistent with the Sterling Grove PDD allowed uses and proposed residential development. To the north and south of the subject property, the land is undeveloped and has continuing agricultural operations. The proposed Single-Family Residential Districts are also appropriate transitional uses between the current agricultural operations and future development.

***4. Whether other factors are deemed relevant and important in the consideration of the amendment.***

The Planning and Zoning Commission and City Council have not provided additional criteria for the proposed zone change.

**RECOMMENDATION**

***Staff Recommendation:***

The proposed zone change meets the intent of the Comprehensive Land Use Plan- Future Land Use Map and is appropriate with the existing uses in the immediate area. Staff recommends approval of Ordinance 25-S-002.

***Planning and Zoning Commission:***

The Planning and Zoning Commission held a public hearing for the item on December 4, 2024, and made a recommendation of approval to City Council with a unanimous vote.

---

**Attachments**

Ordinance 25-S-002 With Attachments

Aerial Exhibit

Notification Map

Public Hearing Responses

SCUCISD Demographic Report

SCUCISD 10 Year Campus Forecasting

City Council Presentation Slides

**ORDINANCE NO. 25-S-002**

**AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS TO REZONE APPROXIMATELY 85 ACRES OF LAND FROM AGRICULTURAL DISTRICT (AD) TO APPROXIMATELY 55 ACRES AS SINGLE-FAMILY RESIDENTIAL DISTRICT (R-2) AND APPROXIMATELY 30 ACRES AS SINGLE-FAMILY RESIDENTIAL DISTRICT (R-6), LOCATED APPROXIMATELY 2,000 NORTH OF THE INTERSECTION OF WEIR ROAD AND TRAINER HALE ROAD, CITY OF SCHERTZ, BEXAR COUNTY, BEXAR PROPERTY IDENTIFICATION NUMBERS 310048 AND 1190132, TEXAS.**

**WHEREAS,** an application for a request to rezone approximately 85 acres of land from Agricultural District (AD) to approximately 55 acres as Single-Family Residential District (R-2) and approximately 30 acres as Single-Family Residential District (R-6), located approximately 2,000 feet north of the intersection of Weir Road and Trainer Hale Road, also known as Bexar Property Identification Numbers 310048 and 1190132, more specifically described in the Exhibit A and Exhibit B attached herein (herein, the "Property") has been filed with the City; and

**WHEREAS,** the City's Unified Development Code Section 21.5.4.D. provides for certain criteria to be considered by the Planning and Zoning Commission in making recommendations to City Council and by City Council in considering final action on a requested zoning (the "Criteria"); and

**WHEREAS,** on December 4, 2024, the Planning and Zoning Commission conducted a public hearing and, after considering the Criteria, made a recommendation to City Council to approve the requested zoning; and

**WHEREAS,** on January 7, 2025, the City Council conducted a public hearing and after considering the Criteria and recommendation by the Planning and Zoning Commission, determined that the requested zoning be approved as provided for herein.

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS THAT:**

Section 1. The Property as shown and more particularly described in the attached Exhibit A and Exhibit B, is hereby zoned to approximately 55 acres to Single-Family Residential District (R-2) and approximately 30 acres as Single-Family Residential District (R-6).

Section 2. The Official Zoning Map of the City of Schertz, described and referred to in Article 2 of the Unified Development Code, shall be revised to reflect the above amendment.

Section 3. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Ordinance for all purposes and are adopted as a part of the judgment and findings of the Council.

Section 4. All ordinances and codes, or parts thereof, which are in conflict or inconsistent with any provision of this Ordinance are hereby repealed to the extent of such conflict, and

the provisions of this Ordinance shall be and remain controlling as to the matters resolved herein.

Section 5. This Ordinance shall be construed and enforced in accordance with the laws of the State of Texas and the United States of America.

Section 6. If any provision of this Ordinance or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Ordinance and the application of such provision to other persons and circumstances shall nevertheless be valid, and the City hereby declares that this Ordinance would have been enacted without such invalid provision.

Section 7. It is officially found, determined, and declared that the meeting at which this Ordinance is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this Ordinance, was given, all as required by Chapter 551, as amended, Texas Government Code.

Section 8. This Ordinance shall be effective upon the date of final adoption hereof and any publication required by law.

Section 9. This Ordinance shall be cumulative of all other ordinances of the City of Schertz, and this Ordinance shall not operate to repeal or affect any other ordinances of the City of Schertz except insofar as the provisions thereof might be inconsistent or in conflict with the provisions of this Ordinance, in which event such conflicting provisions, if any, are hereby repealed.

PASSED, APPROVED and ADOPTED on this ____day of _____ 2025.

CITY OF SCHERTZ, TEXAS

_____
Ralph Gutierrez, Mayor

ATTEST:

_____
Sheila Edmondson, City Secretary

(city seal)

Exhibit “A”
Property Description: Legal Metes and Bounds

**Exhibit "A" Property Description: Legal Metes and Bounds**

• Engineers
• Surveyors
• Planners
Moy Tarin Ramirez Engineers, LLC

Field Notes for a Tract of Land
Containing 54.232 acre (2,362,354.68 square feet)

A 54.232 acre (2,362,354.68 square feet) tract of land situated in the Julian Diaz Survey Number 66, Abstract Number 187, County Block 5066, and the Francisco Rodriguez Survey Number 84, Abstract Number 609, County Block 5066, Bexar County, Texas, being all of a 42.116 acre tract designated as Exhibit "A", Tract "A", as conveyed to Melvin Alvin Krueger, by Trustee's Special Warranty Deed, and partially out of a 42.116 acre tract, designated as Exhibit "B", Tract "B", as conveyed to Ruth E. Martin, both as recorded in Document Number 20130066514, of the Official Public Records of Bexar County, Texas, said 54.232 acre (2,362,354.68 square feet) tract of land being more particularly described as follows:

**Beginning**: at the most northeasterly corner of said 42.116 acre tract, Exhibit "A", Tract "A", being on the west right of line of Weir Road, being a southeast corner of a 10.126 acre tract as conveyed to Krickhahn ETC Enterprises, LLC by Warranty Deed, as recorded in Volume 11319, Page 762, of the Official Public Records of Bexar County, Texas, and being the most northerly northeast corner of said Exhibit "A", Tract "A", and of the herein described tract;

**Thence,** with the west right of way line of said Weir Road, being the east boundary of said 42.116 acre tract Exhibit "A", Tract "A", the following six (6) courses;

South 15 degrees 03 minutes 44 seconds West, a distance of 77.20 feet to a point of a tangent curvature to the left;

Along the arc of said curve to the left, 434.15 feet, having a radius of 603.69 feet, a central angle of 41 degree 12 minute 17 seconds, and a chord bearing and distance of South 05 degrees 32 minutes 25 seconds East, 424.85 feet to a point of tangency;

South 26 degrees 08 minutes 16 seconds East, passing the northeast corner of said 42.116 acre tract, Exhibit "B", Tract "B", and continuing said course with the west right of way line of said Weir Road, being the east boundary of said 42.116 acre tract Exhibit "B", Tract "B" for a total distance of 858.27 feet to a point, and being an angle point in the herein described tract;

South 23 degrees 44 minutes 40 seconds East, a distance of 231.75 feet to a point, being an angle point in the herein described tract;

South 36 degrees 57 minutes 36 seconds East, a distance of 82.78 feet to a point, being an angle point in there herein described tract;

South 29 degrees 42 minutes 53 seconds East, a distance of 674.14 feet to a point, being the northeast corner of a 68.146 acre tract, as conveyed to Charles Otto Luensmann by Warranty Deed with Vendor's Lien, as recorded in Volume 7421, Page 1739, of the Official Public Records of Bexar County, Texas, and being the southeast corner of both said 42.116 acre tract, Exhibit "B", Tract "B", and of the herein described tract;

**Thence**, leaving the west right of way line of said Weir Road, with the northwest boundary of said 68.146 acre tract, being the southeast boundary of said 42.116 acre tract, Exhibit "B", Tract "B", South 60 degrees 48 minutes 51 seconds West, a distance of 90.00 feet to a point, being a southwest corner of the herein described tract;

**Thence**, leaving the northwest boundary of said 68.146 acre tract, over and across said 42.116 acre tract, Exhibit "B", Tract "B", the following five (5) courses;

North 29 degrees 42 minutes 53 seconds West, a distance of 667.61 feet to a point, being an angle point in the herein described tract;

North 36 degrees 57 minutes 36 seconds West, a distance of 87.51 feet to a point, being an angle point in the herein described tract;

North 23 degrees 44 minutes 40 seconds West, a distance of 240.29 feet to a point, being an angle point in the herein described tract;

North 26 degrees 08 minutes 16 seconds West, a distance of 94.36 feet to a point, being an interior corner of the herein described tract;

South 60 degrees 26 minutes 49 seconds West, a distance of 1,434.33 feet to a point, being on the northeast boundary of a 188.68 acre tract, as conveyed to Rebecca Robertson, David Wiederstein, Diane Hunter and Vickie McDaniel by Probate Will, by Open Will Case Number 2021PC03810, of Bexar County, Texas, being the same property conveyed to Richard H. Wiederstein as described in Warranty Deed with Vendor's Lien, as recorded in Volume 2043, Pages 460-463, of the Official Public Records of Bexar County, Texas, being on the southwest boundary of said 42.116 acre tract, Exhibit "B", Tract "B", and being a southwest corner of the herein described tract;

**Thence,** with the northeast boundary of said 188.68 acre tract, being the southwest boundary of said 42.116 acre tract, Exhibit "B", Tract "B", North 50 degrees 56 minutes 13 seconds West, passing the west corner of said 42.116 acre tract, Exhibit "B", Tract "B", being the south corner of said 42.116 acre tract, Exhibit "A", Tract "A", and continuing said course with the southwest boundary of said 42.116 acre tract, Exhibit "A", Tract "A", for a total distance of 309.88 feet to a point, being an angle point in the herein described tract;

**Thence**, continuing with the southwest boundary of said 42.116 acre tract, Exhibit "A", Tract "A", being the northeast boundary of said 188.68 acre tract, North 66 degrees 51 minutes 03 seconds West, passing an east corner of a 5.767 acre tract, as conveyed to Rebecca Robertson, David Wiederstein, Diane Hunter and Vickie McDaniel by Probate Will, by Open Will Case Number 2021PC03810, of Bexar County, Texas, being the same property conveyed to Ray Joy Wiederstein as described in Warranty Deed, as recorded in Volume 5261, Page 231, of the Official Public Records of Bexar County, Texas, and continuing said course with the southwest boundary of said 42.116 acre tract, Exhibit "A", Tract "A", being the northeast boundary of said 5.767 acre tract, for a total distance of 581.41 feet to a point, being an angle point in the herein described tract;

**Thence,** continuing with the northeast boundary of said 5.767 acre tract, being the southwest boundary of said 42.116 acre tract, Exhibit "A", Tract "A", North 34 degrees 31 minutes 23 seconds West, a distance of 448.98 feet to a point, being on the southeast boundary of a 176.439 acre tract, as conveyed to Ancient KK Endeavors LLC, by General Warranty Deed, as recorded in Document Number 20230019542, of the Official Public Records of Bexar County, Texas, being the north corner of said 5.767 acre tract, and being the northwest corner of the herein described tract;

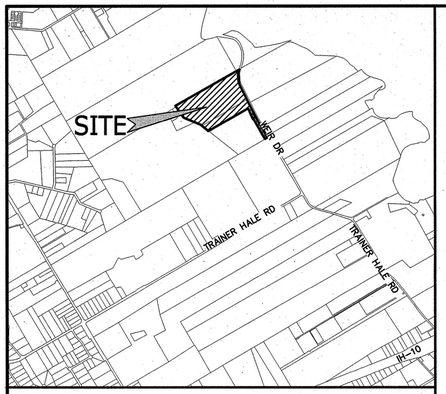
**Thence,** with the southeast boundary of said 176.439 acre tract, being the northwest boundary of said 42.116 acre tract, Exhibit "A", Tract "A", North 60 degrees 26 minutes 49 seconds East, passing the east corner of said 176.439 acre tract, being the south corner of said 10.126 acre tract, and continuing said course with the northwest boundary of said 42.116 acre tract, Exhibit "A", Tract "A", being the southeast boundary of said 10.126 acre tract, for a total distance of 2,300.87 feet to the **Point of Beginning**, containing a 54.232 acres (2,362,354.68 square feet) of land.

**Note:** This description is based on the instrument recorded as Trustee's Special Warranty Deed, recorded in Document Number 20130066514, of the Official Public Records of Bexar County, Texas. An on the ground survey was not performed by Moy Tarin Ramirez Engineers, LLC. An exhibit of even date was prepared for this description.




Stephanie L. James, R.P.L.S.
Registered Professional Land Surveyor
No. 5950
Date: 2024-10-15 Job No. 24231
SL

# Exhibit "A" Property Description: Legal Metes and Bounds




VICINITY MAP NOT TO SCALE

| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| CURVE NO. | DELTA | ARC LENGTH | RADIUS | CHORD BEARING | CHORD DIST. |
| C1 | 41°12'17" | 434.15' | 603.69' | S05°32'25"E | 424.85' |

SCALE: 1"=200'

0 200 400

LEGEND:

O.P.R.B.C.T. OFFICIAL PUBLIC RECORDS BEXAR COUNTY, TEXAS

KRICKHAHN ETC ENTERPRISES, LLC WARRANTY DEED 10.126 ACRE TRACT VOLUME 11319, PAGE 762 O.P.R.B.C.T.

POINT OF BEGINNING

S15°03'44"W 77.20'

ANCIENT KK ENDEAVORS LLC 176.439 ACRES GENERAL WARRANTY DEED DOCUMENT NUMBER 20230019542 O.P.R.B.C.T.

N60°26'49"E 2300.87'

C1

APPROXIMATE SURVEY LINE

FRANCISCO RODRIGUEZ SURVEY NUMBER 84 ABSTRACT NUMBER 609 COUNTY BLOCK 5066

JULIAN DIAZ SURVEY NUMBER 66 ABSTRACT NUMBER 187 COUNTY BLOCK 5066

54.232 ACRE (2,362,354.68 SQUARE FEET)

MELVIN ALVIN KRUEGER

TRUSTEE'S SPECIAL WARRANTY DEED EXHIBIT "A" TRACT "A" 42.116 ACRES DOCUMENT NUMBER 20130066514 O.P.R.B.C.T.

S26°08'16"E 858.27'

WEIR ROAD

APPROXIMATE SURVEY LINE

ELIGIO GORTARI SURVEY NUMBER 1 ABSTRACT NUMBER 5

N34°31'23"W 448.98'

DEED LINE

N26°08'16"W 94.36'

S23°44'40"E 231.75'

S36°57'36"E 82.78'

N23°44'40"W 240.29'

S60°26'49"W 1434.33'

N36°57'36"W 87.51'

S29°42'53"E 674.14'

N29°42'53"W 667.61'

REBECCA ROBERTSON, DAVID WIEDERSTEIN, DIANE HUNTER AND VICKIE McDANIEL PROBATE WILL CASE NUMBER 2021PC03810 BEXAR COUNTY, TEXAS

DESCRIBED IN RAY JOY WEDERSTEIN, WARRANTY DEED 5.767 ACRES VOLUME 5261, PAGE 231 O.P.R.B.C.T.

N66°51'03"W 581.41'

N50°56'13"W 309.88'

RUTH E. MARTIN

TRUSTEE'S SPECIAL WARRANTY DEED EXHIBIT "B" TRACT "B" 42.116 ACRES DOCUMENT NUMBER 20130066514 O.P.R.B.C.T.

S60°48'51"W 90.00'

REBECCA ROBERTSON, DAVID WIEDERSTEIN, DIANE HUNTER AND VICKIE McDANIEL PROBATE WILL CASE NUMBER 2021PC03810 BEXAR COUNTY, TEXAS

DESCRIBED IN RICHARD H. WIEDERSTEIN, WARRANTY DEED WITH VENDOR'S LIEN 188.68 ACRES VOLUME 2043, PAGES 460–463 O.P.R.B.C.T.

CHARLES OTTO LUENSMANN WARRANTY DEED WITH VENDORS LIEN 68.146 ACRES VOLUME 7421, PAGE 1739 O.P.R.B.C.T.

STATE OF TEXAS REGISTERED STEPHANIE L. JAMES 5950 PROFESSIONAL LAND SURVEYOR

Stephanie L. James

**EXHIBIT OF**

A 54.232 ACRE (2,362,354.68 SQUARE FEET) TRACT OF LAND SITUATED IN THE JULIAN DIAZ SURVEY NUMBER 66, ABSTRACT NUMBER 187, COUNTY BLOCK 5066, AND THE FRANCISCO RODRIGUEZ SURVEY NUMBER 84, ABSTRACT NUMBER 609, COUNTY BLOCK 5066, BEXAR COUNTY, TEXAS, BEING ALL OF A 42.116 ACRE TRACT DESIGNATED AS EXHIBIT "A", TRACT "A", AS CONVEYED TO MELVIN ALVIN KRUEGER, BY TRUSTEE'S SPECIAL WARRANTY DEED, AND PARTIALLY OUT OF A 42.116 ACRE TRACT, DESIGNATED AS EXHIBIT "B", TRACT "B", AS CONVEYED TO RUTH E. MARTIN, BOTH AS RECORDED IN DOCUMENT NUMBER 20130066514, OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS,

DATE: 2024–10–15 JOB NO. 24231

GENERAL NOTES:

1) THIS EXHIBIT IS BASED ON THE INSTRUMENT RECORDED AS TRUSTEE'S SPECIAL WARRANTY DEED, RECORDED IN DOCUMENT NUMBER 20130066514, OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.

2) AN ON THE GROUND SURVEY WAS NOT PERFORMED BY MOY TARIN RAMIREZ ENGINEERS, LLC.

3) ONLY THOSE COPIES WHICH BEAR AN ORIGINAL INK IMPRESSION SEAL AND AN ORIGINAL SIGNATURE OF THE SURVEYOR WILL BE CONSIDERED A "VALID" COPY. MOY TARIN RAMIREZ ENGINEERS, LLC., WILL NOT BE RESPONSIBLE FOR THE CONTENT OF ANYTHING OTHER THAN A VALID COPY OF THIS SURVEY.

4) A FIELD NOTE DESCRIPTION OF EVEN DATE WAS PREPARED FOR THIS EXHIBIT.

5) THIS EXHIBIT IS NOT INTENDED TO BE USED FOR THE TRANSFER OF REAL PROPERTY. NO MONUMENTATION HAS BEEN SET.


MTR · Engineers · Surveyors · Planners

Moy Tarin Ramirez Engineers, LLC

TBPELS ENGINEERING F–5297/SURVEYING NO. 10131500

12770 CIMARRON PATH, SUITE 100 TEL: (210) 698–5051

SAN ANTONIO, TEXAS 78249 FAX: (210) 698–5085



V:\24231\Krueger-Martin Feasibility\drawings\24231 Krueger-Martin (54.232 ac) zoning exhibit.dwg 2024/10/15 9:58am stoner

Exhibit "A" Property Description: Legal Metes and Bounds

• Engineers
• Surveyors
• Planners
Moy Tarin Ramirez Engineers, LLC

# Parcel Map Check Report

**Job No. 24231 (54.232 ac) tract of land**

**Point of Beginning: North: 13737749.9968' East: 2218011.0128'**

**Segment #1 : Line**
**Course: S15° 03' 44"W Length: 77.20'**
**North: 13737675.4491' East: 2217990.9510'**

**Segment #2 : Curve**
**Length: 434.15' Radius: 603.69'**
**Delta: 041°12'17" Tangent: 226.94'**
**Chord: 424.85' Course: S05° 32' 25"E**
**Course In: S74° 56' 16"E Course Out: S63° 51' 27"W**
**RP North: 13737518.5695' East: 2218573.9008'**
**End North: 13737252.5805' East: 2218031.9677'**

**Segment #3 : Line**
**Course: S26° 08' 16"E Length: 485.20'**
**North: 13736816.9984' East: 2218245.7134'**

**Segment #4 : Line**
**Course: S26° 08' 16"E Length: 373.07'**
**North: 13736482.0795' East: 2218410.0624'**

**Segment #5 : Line**
**Course: S23° 44' 40"E Length: 231.75'**
**North: 13736269.9470' East: 2218503.3783'**

## Exhibit "A" Property Description: Legal Metes and Bounds

**Segment #6 : Line**
**Course: S36° 57' 36"E Length: 82.78'**
**North: 13736203.8012' East: 2218553.1504'**

**Segment #7 : Line**
**Course: S29° 42' 53"E Length: 674.14'**
**North: 13735618.3078' East: 2218887.3094'**

**Segment #8 : Line**
**Course: S60° 48' 51"W Length: 90.00'**
**North: 13735574.4199' East: 2218808.7355'**

**Segment #9 : Line**
**Course: N29° 42' 53"W Length: 667.61'**
**North: 13736154.2419' East: 2218477.8134'**

**Segment #10 : Line**
**Course: N36° 57' 36"W Length: 87.51'**
**North: 13736224.1673' East: 2218425.1974'**

**Segment #11 : Line**
**Course: N23° 44' 40"W Length: 240.29'**
**North: 13736444.1169' East: 2218328.4427'**

**Segment #12 : Line**
**Course: N26° 08' 16"W Length: 94.36'**
**North: 13736528.8274' East: 2218286.8742'**

**Segment #13 : Line**
**Course: S60° 26' 49"W Length: 1434.33'**
**North: 13735821.3738' East: 2217039.1514'**

**Segment #14 : Line**
**Course: N50° 56' 13"W Length: 291.01'**
**North: 13736004.7611' East: 2216813.1959'**

**Segment #15 : Line**
**Course: N50° 56' 13"W Length: 18.87'**
**North: 13736016.6525' East: 2216798.5442'**

**Segment #16 : Line**
**Course: N66° 51' 03"W Length: 581.41'**
**North: 13736245.2201' East: 2216263.9467'**

**Segment #17 : Line**
**Course: N34° 31' 23"W Length: 448.98'**
**North: 13736615.1339' East: 2216009.4928'**

**Segment #18 : Line**
**Course: N60° 26' 49"E Length: 2300.87'**
**North: 13737749.9904' East: 2218011.0181'**

**Perimeter: 8613.52' Area: 2362354.68 Sq. Ft.**
**Error Closure: 0.0083 Course: S39° 04' 07"E**
**Error North: -0.00646 East: 0.00525**
**Precision 1: 1037774.70**

**Exhibit "A" Property Description: Legal Metes and Bounds**

• Engineers
• Surveyors
• Planners
Moy Tarin Ramirez Engineers, LLC

Field Notes for a Tract of Land
Containing 30.000 acres (1,306,811.14 square feet)

A 30.000 acre (1,306,811.14 square feet) tract of land situated in the Julian Diaz Survey Number 66, Abstract Number 187, County Block 5066, Bexar County, Texas being out of a 42.116 acre tract designated as Exhibit "B", Tract "B", as conveyed to Ruth E. Martin, by Trustee's Special Warranty Deed, as recorded in Document Number 20130066514, of the Official Public Records of Bexar County, Texas, said 30.000 acre (1,306,811.14 square feet) tract of land being more particularly described as follows:

**Beginning**: at an east corner of a 188.68 acre tract, as conveyed to Rebecca Robertson, David Wiederstein, Diane Hunter and Vickie McDaniel by Probate Will, by Open Will Case Number 2021PC03810, of Bexar County, Texas, being the same property conveyed to Richard H. Wiederstein as described in Warranty Deed with Vendor's Lien, as recorded in Volume 2043, Pages 460-463, being on the northwest boundary of a 68.146 acre tract, as conveyed to Charles Otto Luensmann by Warranty Deed with Vendor's Lien, as recorded in Volume 7421, Page 1739, both of the Official Public Records of Bexar County, Texas, and being the south corner of both said 42.116 acre tract, Exhibit "B", Tract "B", and of the herein described tract;

**Thence,** leaving the northwest boundary of said 68.146 acre tract, with the northeast boundary of said 188.68 acre tract, being the southwest boundary of said 42.116 acre tract, Exhibit "B", Tract "B", North 50 degrees 56 minutes 13 seconds West, a distance of 1,161.20 feet to a point, being the west corner of the herein described tract,

**Thence,** leaving the northeast boundary of said 188.68 acre tract, over and across said 42.116 acre tract, Exhibit "B", Tract "B", the following five (5) course;

North 60 degrees 26 minutes 49 seconds East, a distance of 1,434.33 feet to a point, being the north corner of the herein described tract,

South 26 degrees 08 minutes 16 seconds East, a distance of 94.36 feet to a point, being an angle point in the herein described tract;

South 23 degrees 44 minutes 40 seconds East, a distance of 240.29 feet to a point, being an angle point in the herein described tract;

South 36 degrees 57 minutes 36 seconds East, a distance of 87.51 feet to a point, being an angle point in the herein described tract;

South 29 degrees 42 minutes 53 seconds East, a distance of 667.61 feet to a point on the northwest boundary of said 68.146 acre tract, being on the southeast boundary of said 42.116 acre tract, Exhibit "B", Tract "B", being the east corner of the herein described tract;

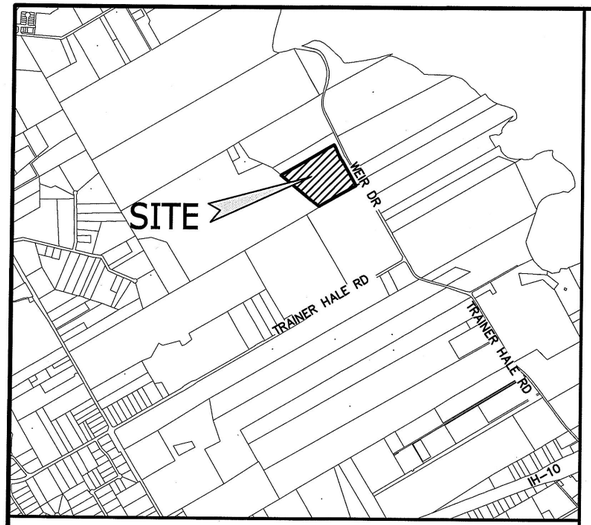
**Thence,** with the northwest boundary of said 68.146 acre tract, being the southeast boundary of said 42.116 acre tract, Exhibit "B", Tract "B", South 60 degrees 48 minutes 51 seconds West, a distance of 994.19 feet to the **Point of Beginning**, containing a 30.000 acres (1,306,811.14 square feet) of land.

**Note:** This description is based on the instrument recorded as Trustee's Special Warranty Deed, recorded in Document Number 20130066514, of the Official Public Records of Bexar County, Texas. An on the ground survey was not performed by Moy Tarin Ramirez Engineers, LLC. An exhibit of even date was prepared for this description.

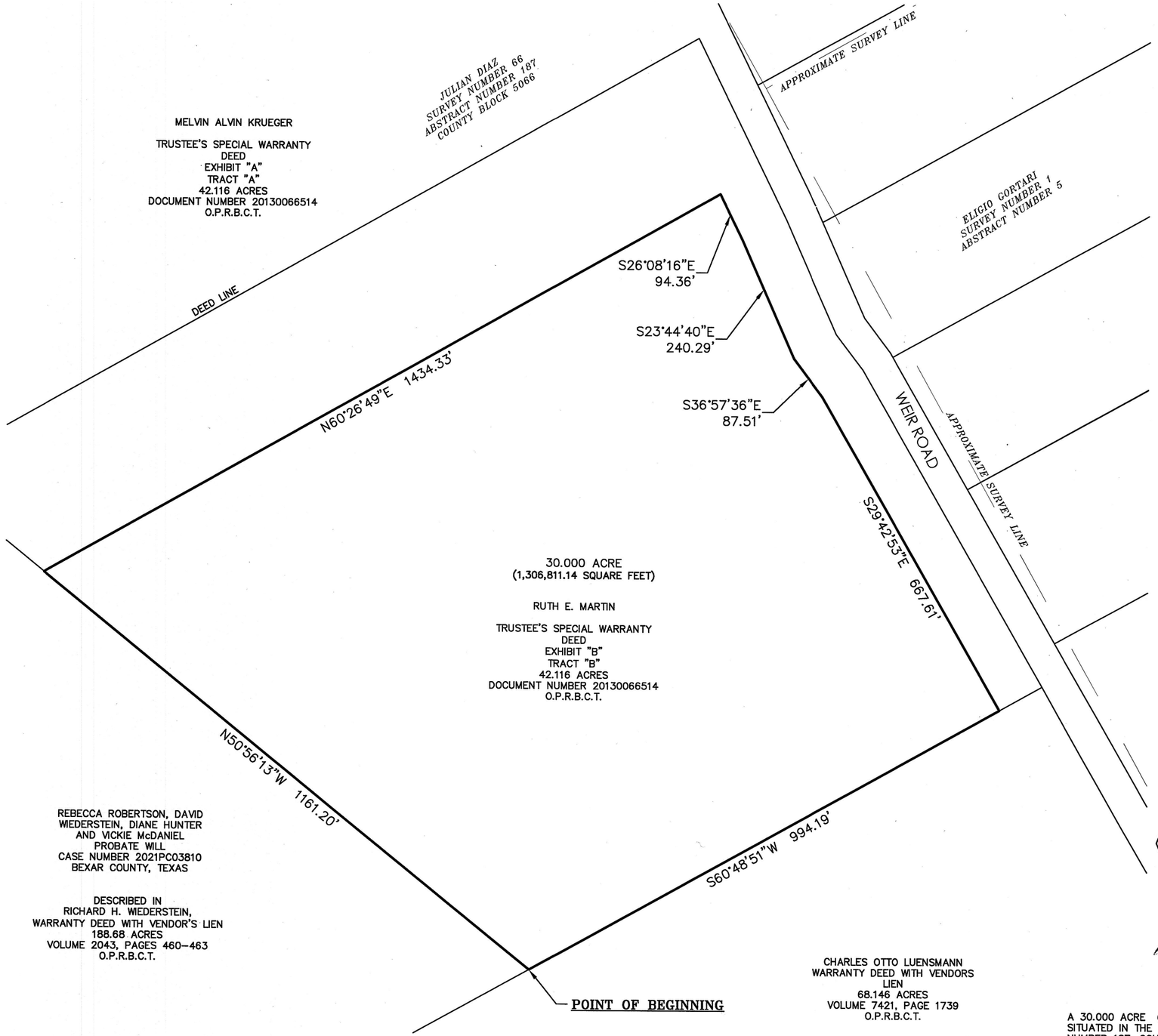



Stephanie L. James, R.P.L.S.
Registered Professional Land Surveyor
No. 5950
Date: 2024-10-16 Job No. 24231
SL

# Exhibit "A" Property Description: Legal Metes and Bounds




VICINITY MAP NOT TO SCALE




SCALE: 1"=200'

0 200 400

LEGEND:

O.P.R.B.C.T. OFFICIAL PUBLIC RECORDS BEXAR COUNTY, TEXAS

GENERAL NOTES:

1) THIS EXHIBIT IS BASED ON THE INSTRUMENT RECORDED AS TRUSTEE'S SPECIAL WARRANTY DEED, RECORDED IN DOCUMENT NUMBER 20130066514, OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS.

2) AN ON THE GROUND SURVEY WAS NOT PERFORMED BY MOY TARIN RAMIREZ ENGINEERS, LLC.

3) ONLY THOSE COPIES WHICH BEAR AN ORIGINAL INK IMPRESSION SEAL AND AN ORIGINAL SIGNATURE OF THE SURVEYOR WILL BE CONSIDERED A "VALID" COPY. MOY TARIN RAMIREZ ENGINEERS, LLC., WILL NOT BE RESPONSIBLE FOR THE CONTENT OF ANYTHING OTHER THAN A VALID COPY OF THIS SURVEY.

4) A FIELD NOTE DESCRIPTION OF EVEN DATE WAS PREPARED FOR THIS EXHIBIT.

5) THIS EXHIBIT IS NOT INTENDED TO BE USED FOR THE TRANSFER OF REAL PROPERTY. NO MONUMENTATION HAS BEEN SET.

STATE OF TEXAS
REGISTERED
STEPHANIE L. JAMES
5950
PROFESSIONAL
LAND SURVEYOR

Stephanie L. James

## EXHIBIT OF

A 30.000 ACRE (1,306,811.14 SQUARE FEET) TRACT OF LAND SITUATED IN THE JULIAN DIAZ SURVEY NUMBER 66, ABSTRACT NUMBER 187, COUNTY BLOCK 5066, BEXAR COUNTY, TEXAS BEING OUT OF A 42.116 ACRE TRACT DESIGNATED AS EXHIBIT "B", TRACT "B", AS CONVEYED TO RUTH E. MARTIN, BY TRUSTEE'S SPECIAL WARRANTY DEED, AS RECORDED IN DOCUMENT NUMBER 20130066514, OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS

DATE: 2024-10-16 JOB NO. 24231


MTR · Engineers · Surveyors · Planners

Moy Tarin Ramirez Engineers, LLC

TBPELS ENGINEERING F-5297/SURVEYING NO. 10131500

12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051

SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085


V:\24231 Krueger Martin Feasibility\drawings\24231 Krueger Martin (30.000 ac) zoning exhibit.dwg 2024/10/16 8:04am slopez

Exhibit "A" Property Description: Legal Metes and Bounds

• Engineers
• Surveyors
• Planners
Moy Tarin Ramirez Engineers, LLC

# Parcel Map Check Report

**Job No. 24231 (30.000 ac) tract of land**

**Point of Beginning: North: 13735089.6207' East: 2217940.7633'**

**Segment #1 : Line**
**Course: N50° 56' 13"W Length: 1161.20'**
**North: 13735821.3802' East: 2217039.1462'**

**Segment #2 : Line**
**Course: N60° 26' 49"E Length: 1434.33'**
**North: 13736528.8338' East: 2218286.8689'**

**Segment #3 : Line**
**Course: S26° 08' 16"E Length: 94.36'**
**North: 13736444.1233' East: 2218328.4374'**

**Segment #4 : Line**
**Course: S23° 44' 40"E Length: 240.29'**
**North: 13736224.1737' East: 2218425.1921'**

**Segment #5 : Line**
**Course: S36° 57' 36"E Length: 87.51'**
**North: 13736154.2484' East: 2218477.8081'**

**Segment #6 : Line**
**Course: S29° 42' 53"E Length: 667.61'**
**North: 13735574.4263' East: 2218808.7303'**

## Exhibit "A" Property Description: Legal Metes and Bounds

**Segment #7 : Line**

**Course: S60° 48' 51"W Length: 994.19'**

**North: 13735089.6157' East: 2217940.7600'**

**Perimeter: 4679.48' Area: 1306811.14 Sq. Ft.**

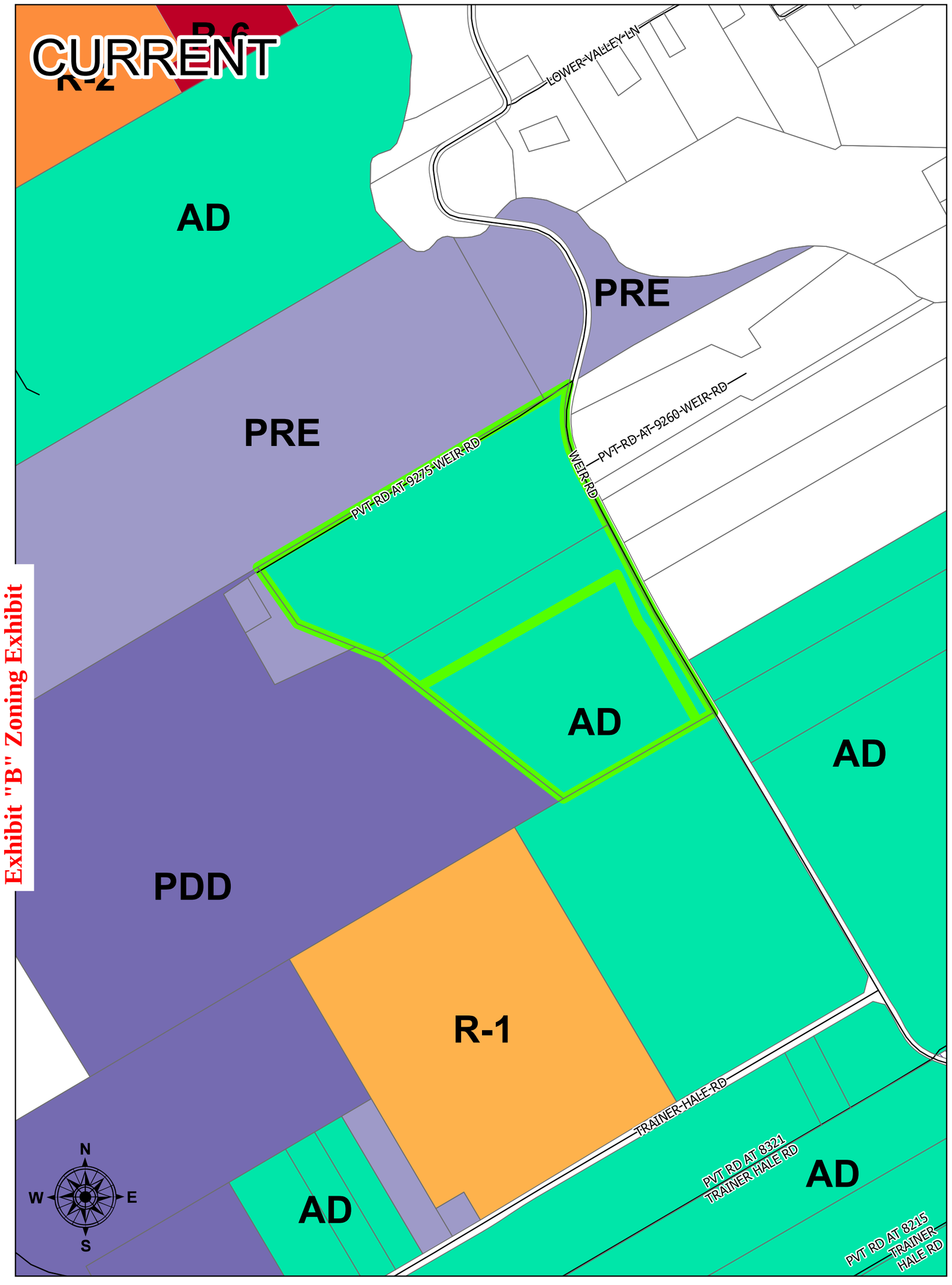
**Error Closure: 0.0060 Course: S33° 34' 47"W**

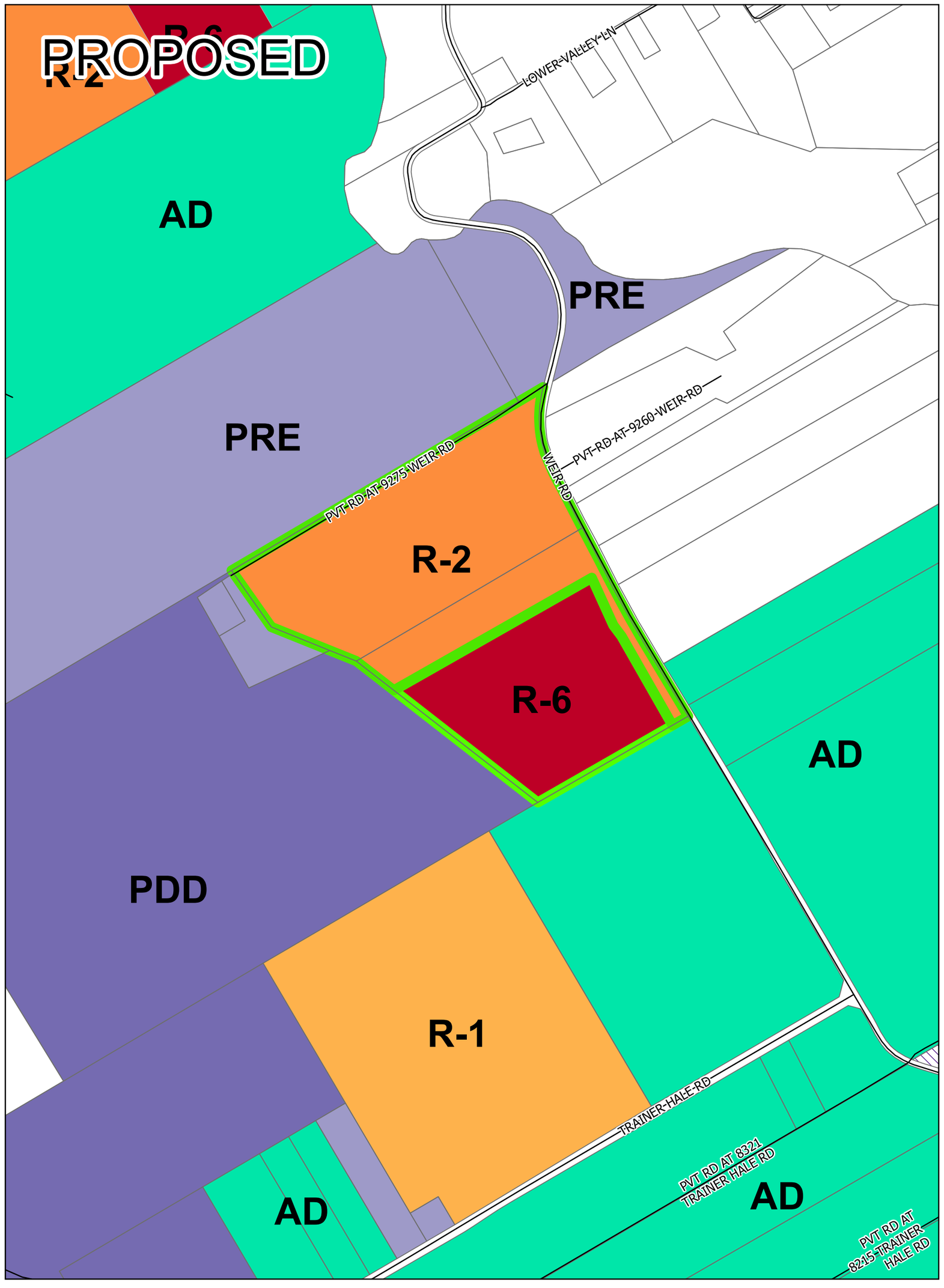
**Error North: -0.00498 East: -0.00331**

**Precision 1: 779915.00**

Exhibit “B”
Zoning Exhibit

Exhibit "B" Zoning Exhibit




SCHERTZ
COMMUNITY ★ SERVICE ★ OPPORTUNITY

Last update: November 7th, 2024

City of Schertz, GIS Specialist: Alexa Venezia, avenezia@schertz.com (210) 619-1174

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# PROPOSED ZONING CHANGE

## BEXAR COUNTY
## PARCEL IDs:
## 310048 & 1190132

**Classification**

- (PRE) Pre-Development
- (PDD) Planned Development
- (PUB) Public Use
- (R-A) Single-family Residential/Agricultural
- (R-1) Single-Family Residential
- (R-2) Single-Family Residential
- (R-3) Two-Family Residential
- (R-4) Apartment/Multi-Family Residential
- (R-6) Single-family Residential
- (R-7) Single-family Residential
- (AD) Agricultural District
- (GH) Garden Home/Single-Family Residential (Zero Lot Line)
- (TH) Townhome
- (MHS) Manufactured Home Subdivision
- (MHP) Manufactured Home Parks
- (GB) General Business
- (GB-2) General Business II
- (NS) Neighborhood Services
- (OP) Office and Professional
- (MSMU) Main Street Mixed Use
- (MSMU-ND) Main Street Mixed Use New Development
- (M-1) Manufacturing (Light)
- (M-2) Manufacturing (Heavy)
- (DVL) Development Agreement (Delayed Annexation)

0 250 500 1,000 1,500 Feet

312009
ANCIENT
KK ENDEAVORS LLC &

1366687
RUNDUS PAUL
D & RUNDUS MARY GAYLE

1366676
RUNDUS PAUL D & RUNDUS
MARY GAYLE

312010
KRICKHAHN ETC
ENTERPRISES LLC

1269117; RUNDUS PAUL D
& MARY GAYLE

312012; GARCIA JOSEPH & JACQUELINE IRIS

1315951; GODDARD ROYCE E II & NANCY J

310045
ANCIENT KK ENDEAVORS
LLC &

1340731
DZIUK JARRETT SEAN

312015
WEIR DALE MORGAN

312017
WEIR DALE MORGAN

310051
KRUEGER STEVEN
BRIAN

310054
ROBERTSON REBECCA, WIEDERSTEIN
DAVID, McDANIEL
VICKIE & HUNTER DIANE

310053
ROBERTSON REBECCA, WIEDERSTEIN DAVID,
McDANIEL VICKIE & HUNTER DIANE

310059
LUENSMANN
CHARLES O

Bexar County
Guadalupe
County

Maxar, Microsoft, Esri Community Maps Contributors, City of Cibolo, Texas, BCAD, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, FoursquareSafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

SCHERTZ
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PARCEL IDs:
310048 & 1190132

PLZC20240260

Highways
Major Roads
Minor Roads

Freeway
Principal Arterial
Planned Principal Arterial
Secondary Arterial
Planned Secondary Arterial
Secondary Rural Arterial

Planned Secondary Rural Arterial
Residential Collector
Planned Residential Collector
Planned Commercial Collector B
Commercial Collector A
Planned Commercial Collector A

1" 2" 3" 4" 6"
8" 10" 12" 16" 18"
20" 24" 30" 36" Unknown

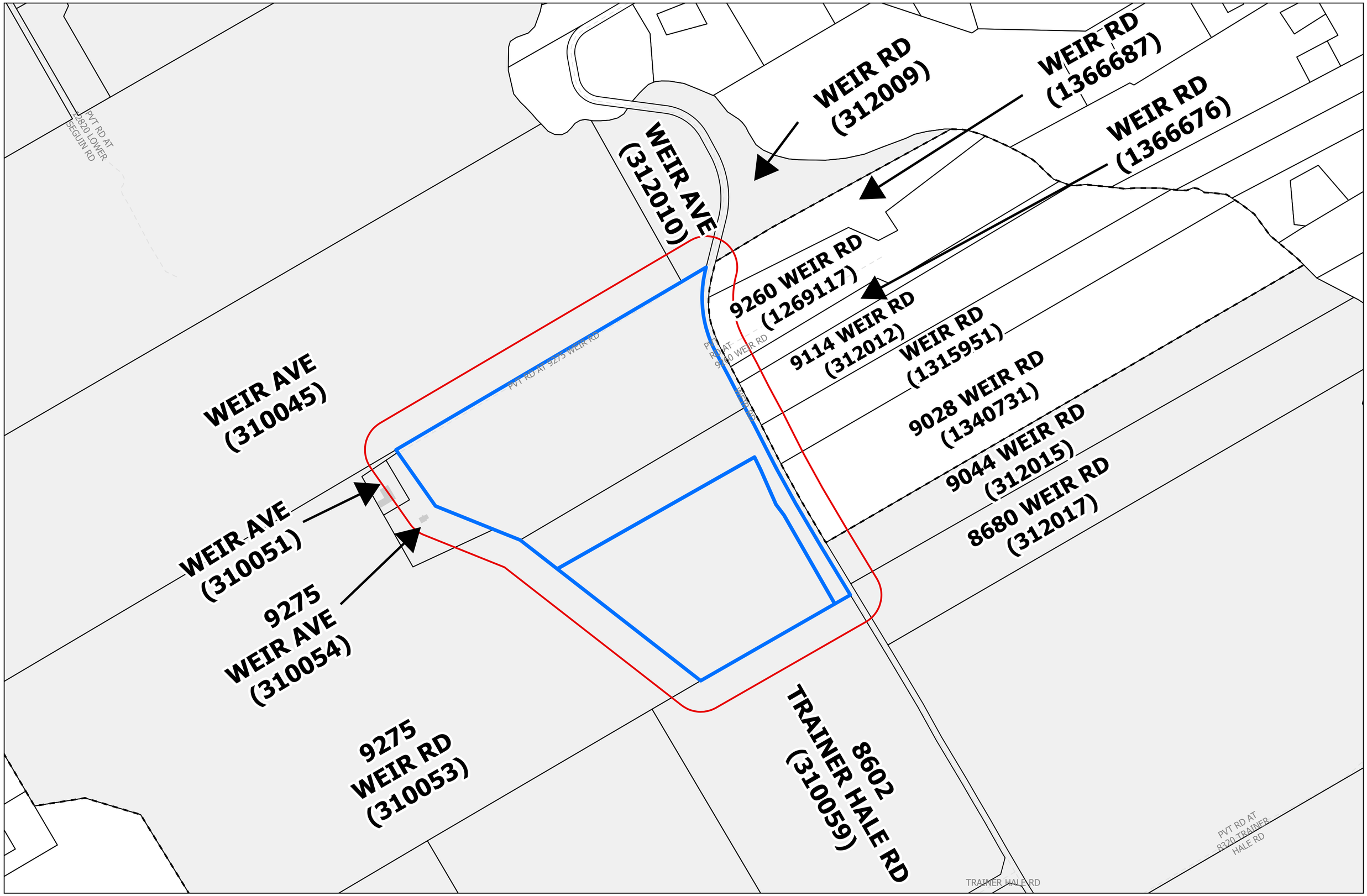
Schertz Gravity
Schertz Pressure
Neighboring Gravity
Private Pressure

Hydrant
Manholes
CCMA Lift Station
Private Lift Station

Schertz Lift Station
CCMA Treatment Plant
Schertz Treatment Plant

County Boundaries
Schertz Municipal Boundary
ETJ

0 300 600 1,200 1,800 Feet




SCHERTZ
COMMUNITY ★ SERVICE ★ OPPORTUNITY

# City of Schertz

PARCEL IDs:
310048 & 1190132

Project Boundary
City Limits
Schertz ETJ Boundary
200' Buffer

N
W E
S

0 200 400 800 1,200 Feet

Last update: November 7th, 2024

City of Schertz, GIS Specialist: Alexa Venezia, avenezia@schertz.com (210) 619-1174

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## Reply Form:

*City Council will have a reading on the request after the recommendation from the Planning and Zoning Commission. This form is used to calculate the protest in accordance with LGC, Local Government Code 211.006(d).* ***The written protest must be received by City no later than noon (central time) on the Friday before the reading by the City Council.*** *If the name of the person signing this form does not match the name listed as the owner on the appraisal district website, proof of ownership is required in order for this to count towards the protest.*

I am: in favor of ☐ opposed to ☑ neutral to ☐ the request for **PLZC20240260**

COMMENTS: Rezoning an area that does not have sewage services. Rezoning is a deterrent to ag ~~[illegible]~~ activities on surrounding parcels.

NAME: Jarrett Sean Dziuk SIGNATURE Jarrett Dziuk
(PLEASE PRINT)

STREET ADDRESS: 9028 Weir Rd.

DATE: 11/25/2024

Attn: Daisy Marquez
Schertz Planning and Zoning Commission

**Reply Form:**

*City Council will have a reading on the request after the recommendation from the Planning and Zoning Commission. This form is used to calculate the protest in accordance with LGC, Local Government Code 211.006(d).* ***The written protest must be received by City no later than noon (central time) on the Friday before the reading by the City Council****. If the name of the person signing this form does not match the name listed as the owner on the appraisal district website, proof of ownership is required in order for this to count towards the protest.*

I am: in favor of ☑ opposed to ☐ neutral to ☐ the request for **PLZC20240260**

COMMENTS: _____

NAME: Melvin Alvin Krueger SIGNATURE Melvin A Krueger
(PLEASE PRINT)

STREET ADDRESS: 9261 Weir Ave, Cibolo, TX 78108 (Situs)

DATE: 11/26/2024



Thank-you
Melvin A Krueger
MelKrueger1@hotmail.com

MELVIN A KRUEGER
334 PRIVATE ROAD-5936
YANTIS TX 75497-3721

**Reply Form:**

*City Council will have a reading on the request after the recommendation from the Planning and Zoning Commission. This form is used to calculate the protest in accordance with LGC, Local Government Code 211.006(d).* ***The written protest must be received by City no later than noon (central time) on the Friday before the reading by the City Council****. If the name of the person signing this form does not match the name listed as the owner on the appraisal district website, proof of ownership is required in order for this to count towards the protest.*

I am: in favor of ☑ opposed to ☐ neutral to ☐ the request for **PLZC20240260**

COMMENTS: _____

NAME: Ruth E. Martin SIGNATURE Ruth E Martin
(PLEASE PRINT)

STREET ADDRESS: 3057 Haeckerville Rd, Cibolo Tx 78108-4135

DATE: 27 Nov 2024

**Reply Form:**

*City Council will have a reading on the request after the recommendation from the Planning and Zoning Commission. This form is used to calculate the protest in accordance with LGC, Local Government Code 211.006(d).* ***The written protest must be received by City no later than noon (central time) on the Friday before the reading by the City Council****. If the name of the person signing this form does not match the name listed as the owner on the appraisal district website, proof of ownership is required in order for this to count towards the protest.*

I am: in favor of ☒ opposed to ☐ neutral to ☐ the request for **PLZC20240260**

COMMENTS: _____

NAME: Rebecca Robertson (PLEASE PRINT) SIGNATURE Rebecca Robertson

STREET ADDRESS: 9275 Weir Road, Schertz, TX 78108

DATE: 22 Nov 24

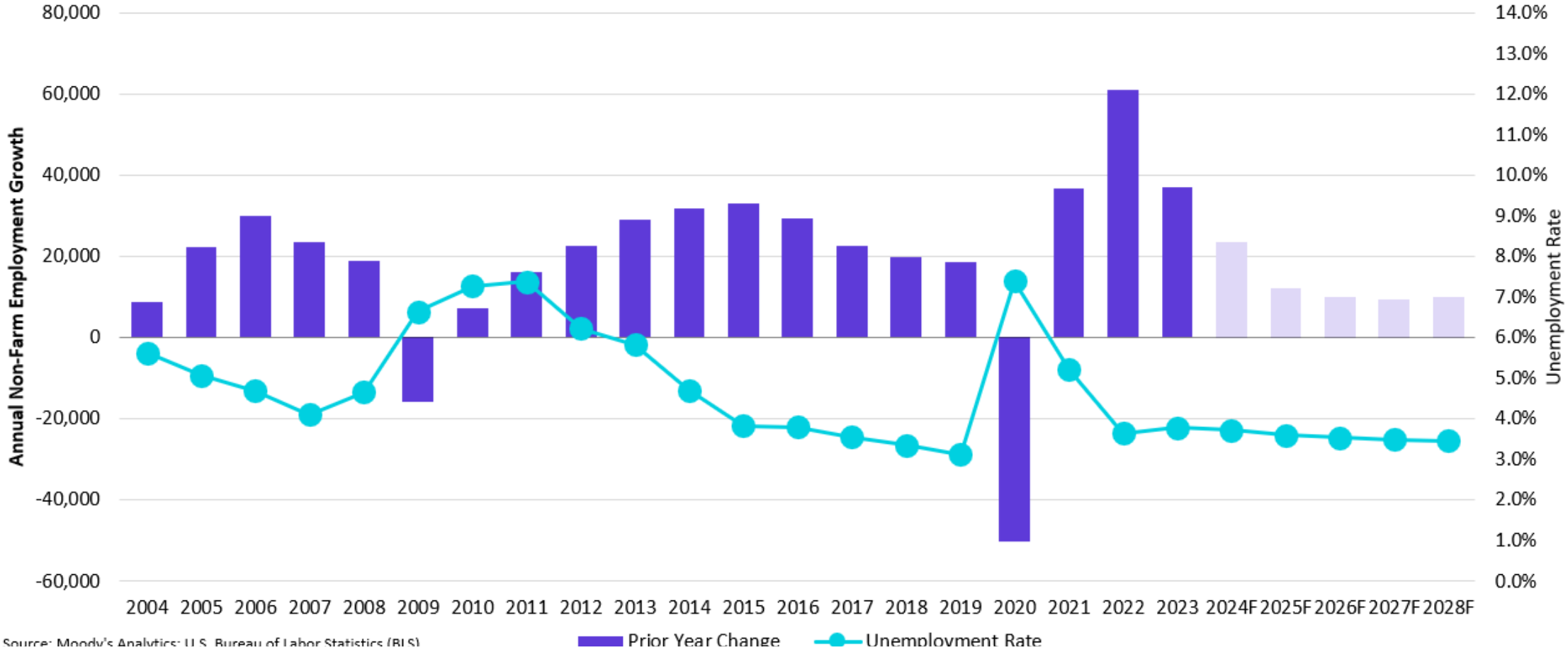
Zonda™
Education




# 1Q24

# Demographic Report

# San Antonio MSA Employment Growth




Source: Moody's Analytics; U.S. Bureau of Labor Statistics (BLS)

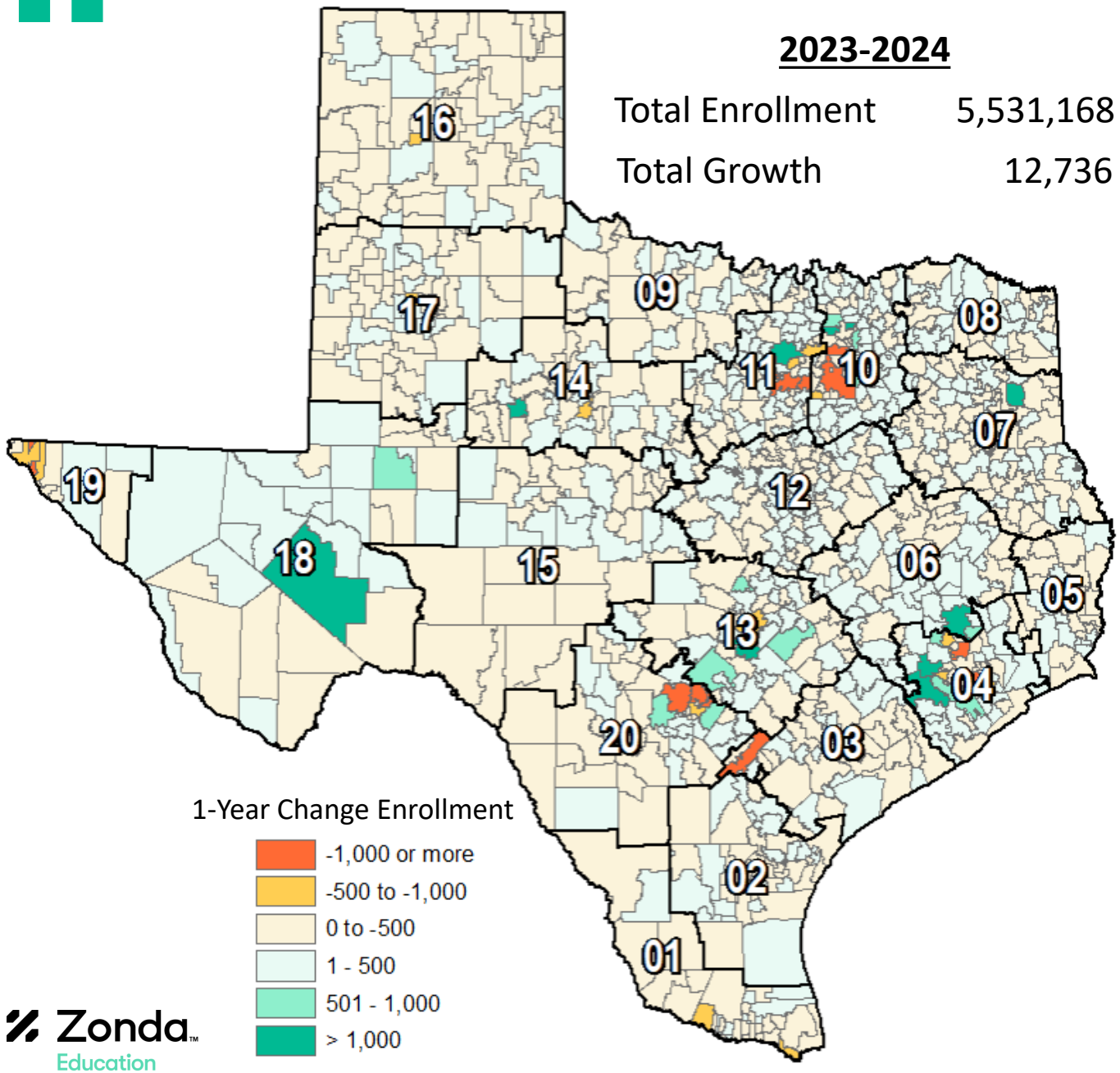
**San Antonio-New Braunfels, TX Metropolitan Statistical Area - Moody's Analytics Five-Year Forecast**

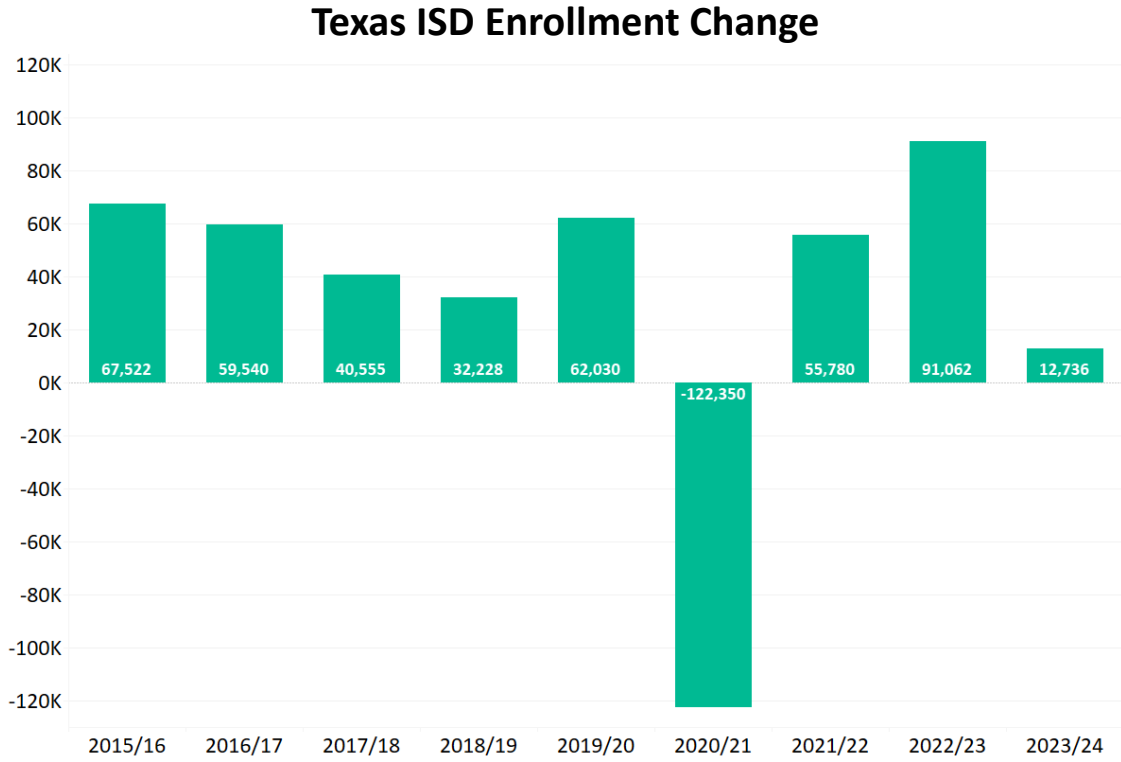
| Category | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024F | 2025F | 2026F | 2027F | 2028F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Non-Farm Employment | 954,342 | 987,300 | 1,016,558 | 1,039,067 | 1,059,033 | 1,077,492 | 1,027,075 | 1,063,783 | 1,124,892 | 1,161,892 | 1,185,282 | 1,197,417 | 1,207,281 | 1,216,665 | 1,226,577 |
| Prior Year Change | 31,767 | 32,958 | 29,258 | 22,508 | 19,967 | 18,458 | (50,417) | 36,708 | 61,108 | 37,000 | 23,390 | 12,135 | 9,864 | 9,384 | 9,912 |
| Annual % Change | 3.4% | 3.5% | 3.0% | 2.2% | 1.9% | 1.7% | -4.7% | 3.6% | 5.7% | 3.3% | 2.0% | 1.0% | 0.8% | 0.8% | 0.8% |
| **Unemployment Rate** | **4.7%** | **3.8%** | **3.8%** | **3.6%** | **3.4%** | **3.1%** | **7.4%** | **5.2%** | **3.6%** | **3.8%** | **3.7%** | **3.6%** | **3.5%** | **3.5%** | **3.5%** |

# State Enrollment Trends

**2023-2024**

| | |
|---|---|
| Total Enrollment | 5,531,168 |
| Total Growth | 12,736 |

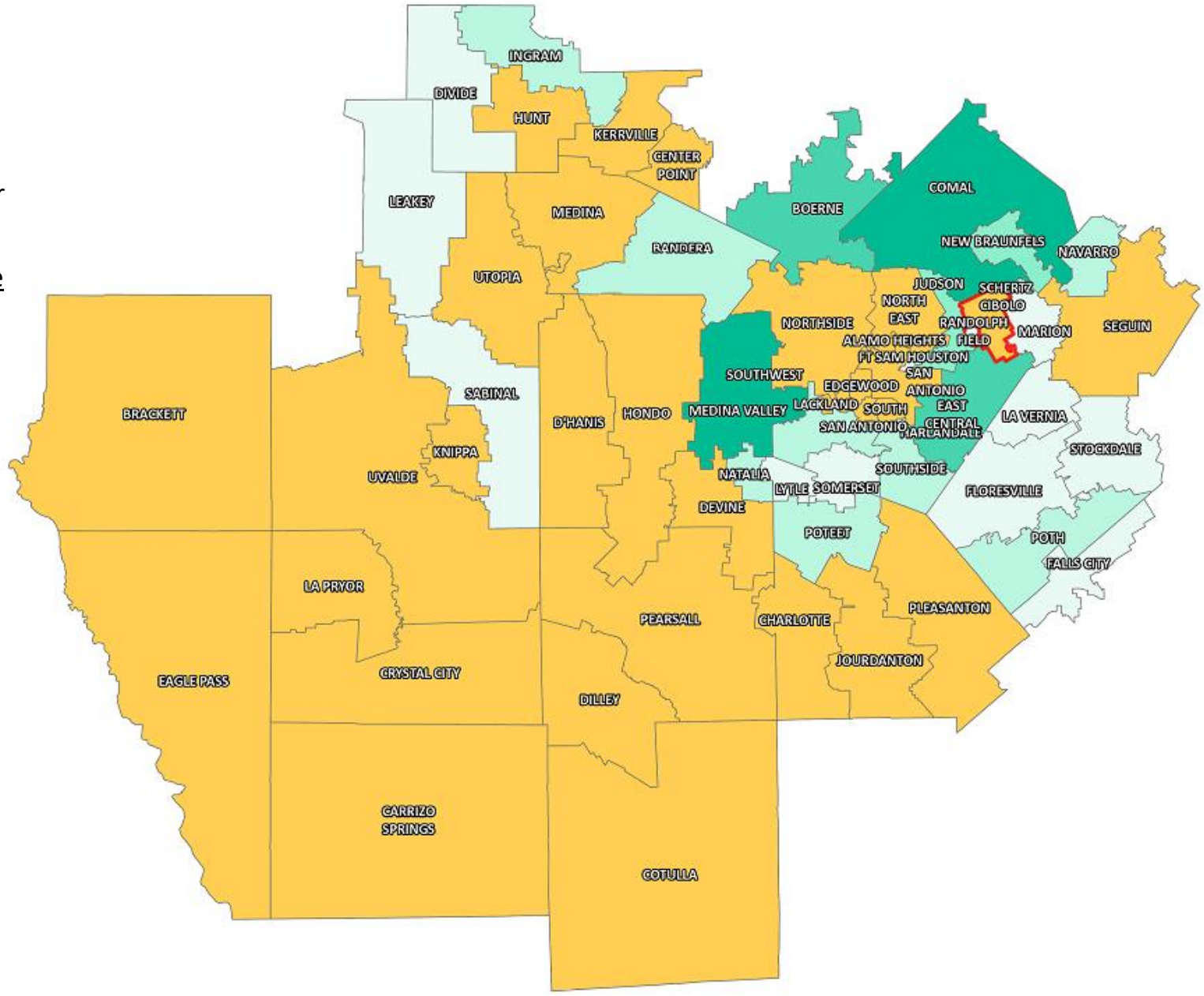



Zonda Education

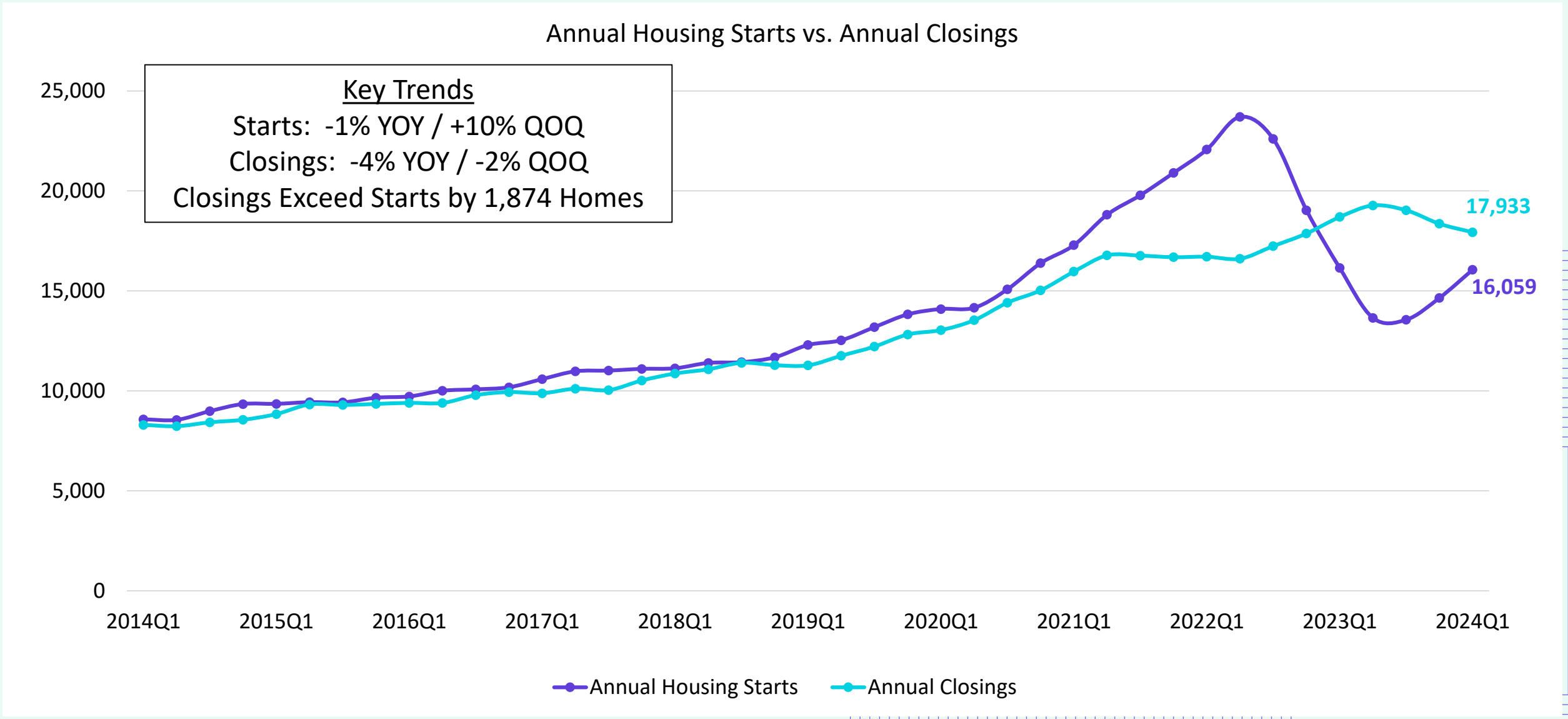
# Region 20 Enrollment Trends

- Schertz-Cibolo-Universal City ISD enrollment declined by 672 students between 2018/19 and 2023/24 (-4.2%).
- SCUCISD enrollment declined by 382 students, or -2.5%, since 2022/23
- Region 20 has seen a 5-year enrollment decrease of 11,586 students (-2.5% growth).
- Student enrollment declined by 4,285 students from 2022/23, in Region 20 (-1% growth).




Zonda Education

# San Antonio New Home Starts & Closings




Source: Zonda

Zonda Education

© 2022 Zonda

# San Antonio New Home Ranking Report

ISD Ranked by Annual Closings – 1Q24

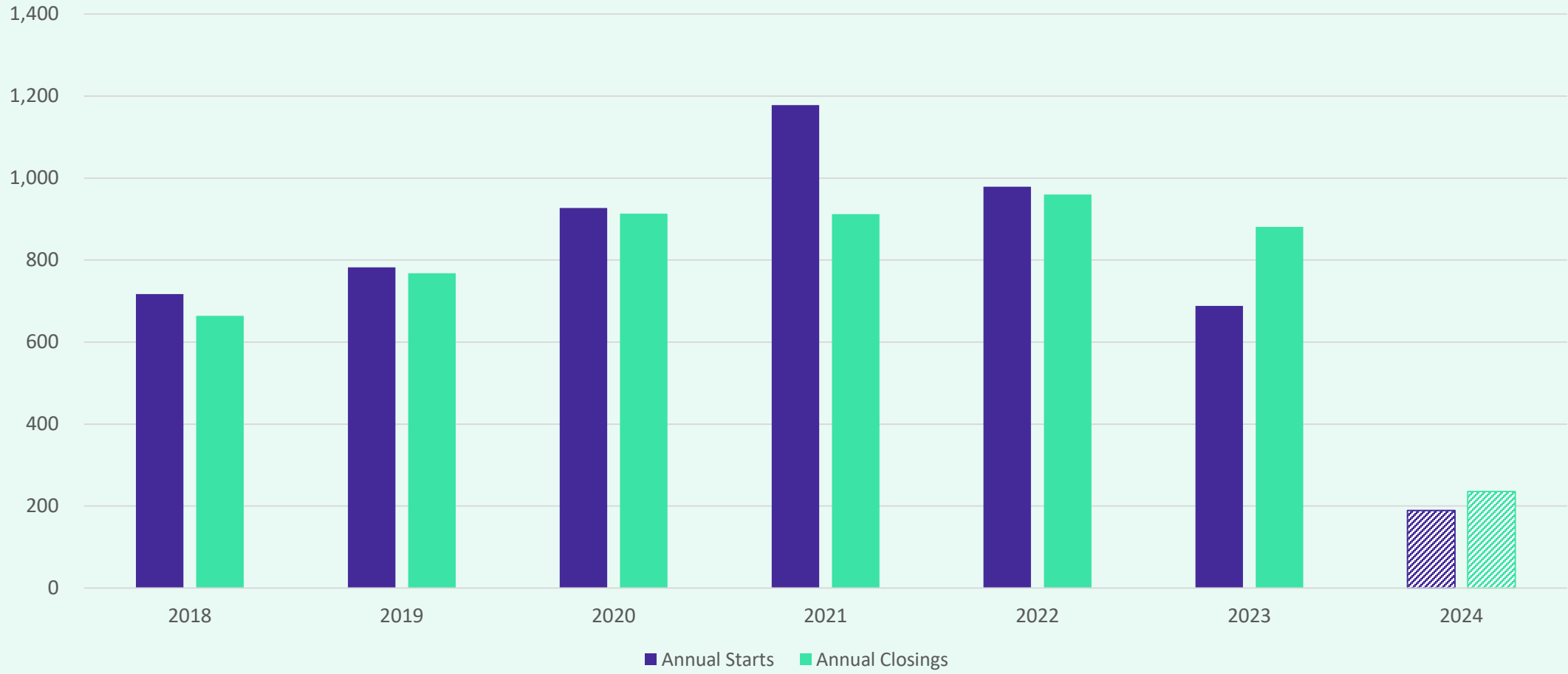
| Rank | District Name | Annual Starts | Annual Closings | Inventory | VDL | Future |
|---|---|---|---|---|---|---|
| 1 | NORTHSIDE ISD (BEXAR) | 3,403 | 3,625 | 2,242 | 6,817 | 22,741 |
| 2 | COMAL ISD | 2,537 | 2,918 | 1,865 | 4,945 | 23,012 |
| 3 | EAST CENTRAL ISD | 1,653 | 2,094 | 964 | 4,679 | 24,881 |
| 4 | MEDINA VALLEY ISD | 2,155 | 2,087 | 1,456 | 4,197 | 28,248 |
| 5 | SOUTHWEST ISD | 1,079 | 1,186 | 646 | 2,295 | 7,897 |
| 6 | JUDSON ISD | 803 | 1,068 | 495 | 701 | 1,120 |
| 7 | SCHERTZ CIBOLO ISD | 717 | 831 | 453 | 1,746 | 6,698 |
| 8 | NAVARRO ISD | 840 | 824 | 529 | 1,443 | 6,317 |
| 9 | BOERNE ISD | 646 | 740 | 518 | 1,138 | 10,321 |
| 10 | NEW BRAUNFELS ISD | 490 | 642 | 306 | 1,262 | 6,275 |
| 11 | SOUTHSIDE ISD | 637 | 547 | 349 | 1,118 | 12,722 |
| 12 | NORTH EAST ISD | 358 | 451 | 234 | 789 | 5,491 |
| 13 | SEGUIN ISD | 347 | 358 | 224 | 669 | 5,600 |
| 14 | SOUTH SAN ANTONIO ISD | 137 | 203 | 132 | 331 | 620 |
| 15 | SAN ANTONIO ISD | 119 | 147 | 171 | 372 | 670 |
| 16 | FLORESVILLE ISD | 147 | 117 | 91 | 147 | 101 |
| 17 | MARION ISD | 157 | 76 | 109 | 202 | 4,495 |
| 18 | LYTLE ISD | 62 | 66 | 41 | 392 | 1,046 |
| 19 | PLEASANTON ISD | 59 | 48 | 22 | 59 | 50 |
| 20 | ALAMO HEIGHTS ISD | 18 | 46 | 35 | 18 | 19 |

** Based on additional Zonda Education housing research*

*** Totals **DO NOT** include Age-restricted communities*

Zonda Education

# District New Home Starts and Closings




| Starts | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|
| 1Q | 175 | 201 | 237 | 294 | 349 | 103 | 189 |
| 2Q | 180 | 176 | 197 | 300 | 393 | 187 | |
| 3Q | 177 | 207 | 261 | 265 | 174 | 241 | |
| 4Q | 185 | 198 | 232 | 319 | 63 | 157 | |
| **Total** | **717** | **782** | **927** | **1,178** | **979** | **688** | **189** |

| Closings | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|
| 1Q | 133 | 138 | 165 | 190 | 181 | 280 | 235 |
| 2Q | 185 | 211 | 249 | 258 | 227 | 247 | |
| 3Q | 185 | 240 | 286 | 268 | 218 | 199 | |
| 4Q | 161 | 179 | 213 | 196 | 334 | 155 | |
| Total | **664** | **768** | **913** | **912** | **960** | **881** | **235** |

# District Housing Overview by Elementary Zone

| Elementary | Annual Starts | Quarter Starts | Annual Closings | Quarter Closings | Under Const. | Inventory | Vacant Dev. Lots | Future |
|---|---|---|---|---|---|---|---|---|
| CIBOLO VALLEY | 81 | 16 | 91 | 32 | 27 | 64 | 324 | 238 |
| GREEN VALLEY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PASCHAL | 3 | 0 | 1 | 0 | 2 | 3 | 42 | 242 |
| ROSE GARDEN | 188 | 43 | 233 | 66 | 77 | 110 | 512 | 3,017 |
| SCHERTZ | 22 | 0 | 50 | 11 | 2 | 11 | 0 | 60 |
| SIPPEL | 180 | 69 | 129 | 58 | 100 | 145 | 533 | 1,719 |
| WATTS | 89 | 21 | 112 | 25 | 21 | 45 | 41 | 580 |
| WIEDERSTEIN | 154 | 40 | 215 | 43 | 37 | 75 | 294 | 842 |
| **Grand Total** | **717** | **189** | **831** | **235** | **266** | **453** | **1,746** | **6,698** |

Highest activity in the category

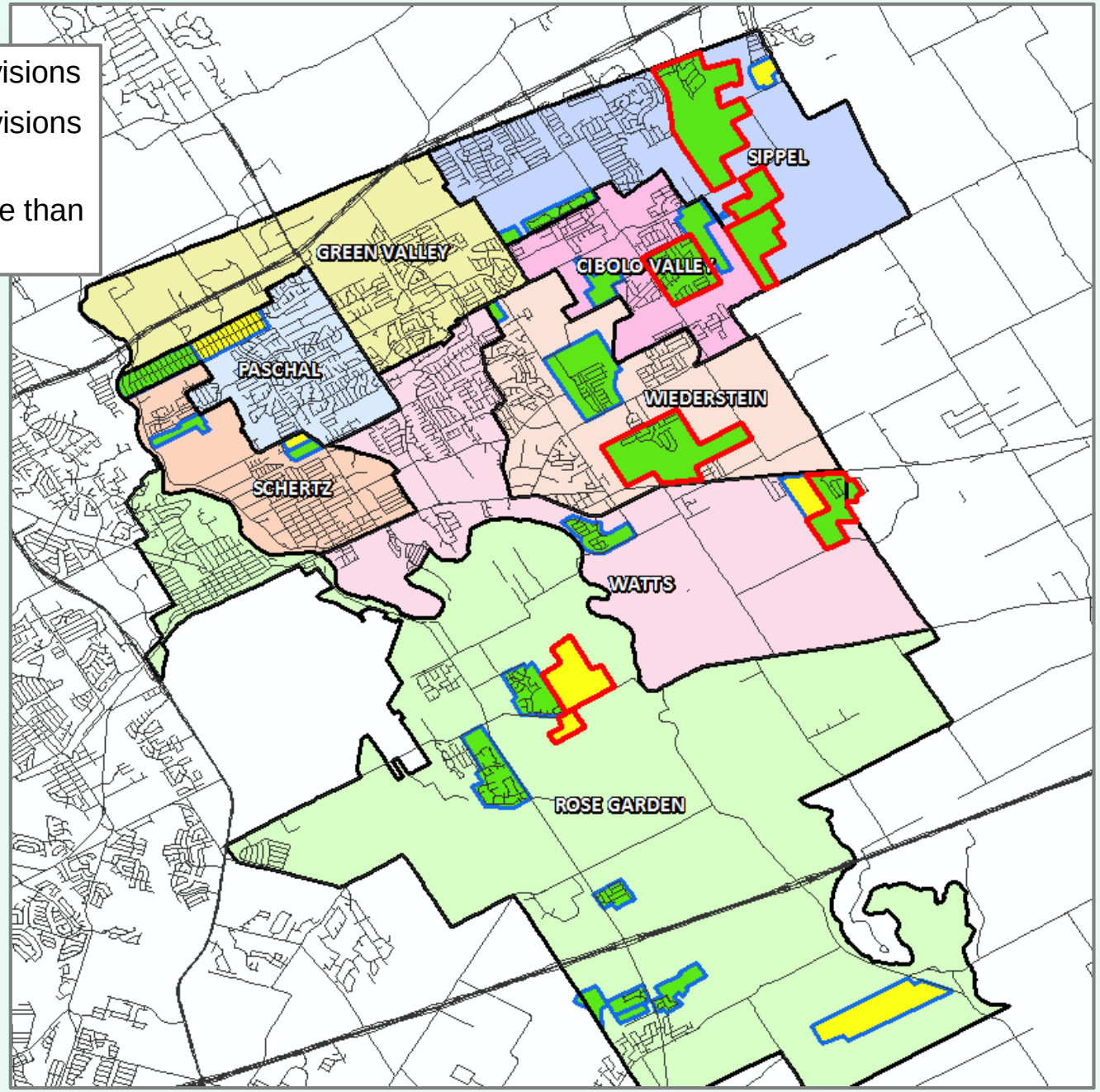
Second highest activity in the category

Third highest activity in the category

Zonda Education

# District Housing Overview

- The district has 23 actively building subdivisions
- Within SCUCISD there are 7 future subdivisions in various stages of planning
- Of these, groundwork is underway on more than 970 lots within 8 subdivisions

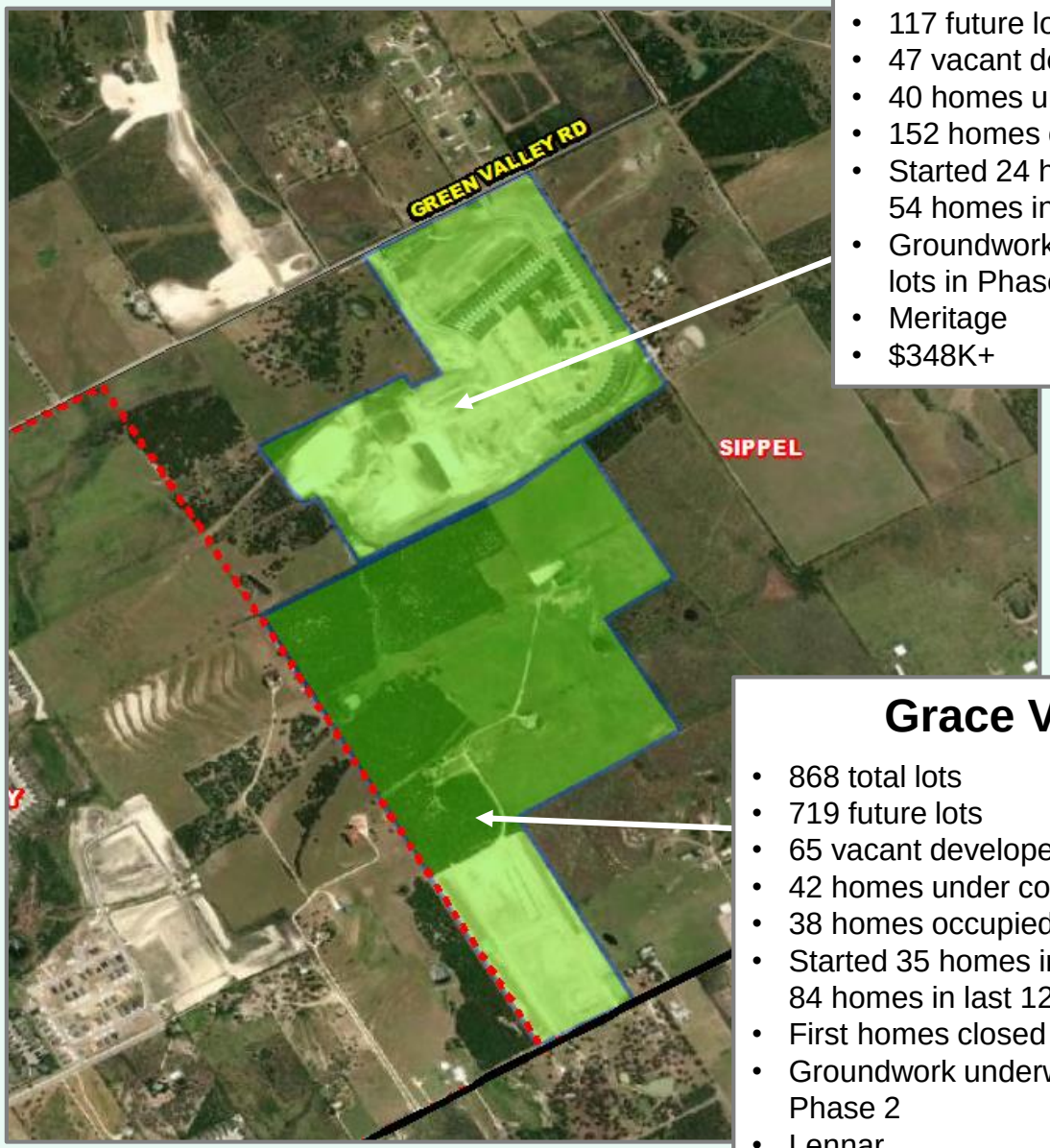



Zonda Education

# Residential Activity

## Legendary Trails

- 361 total lots
- 117 future lots
- 47 vacant developed lots
- 40 homes under construction
- 152 homes occupied
- Started 24 homes in 1Q24, started 54 homes in last 12 months
- Groundwork underway on remaining lots in Phase 3
- Meritage
- $348K+







## Grace Valley

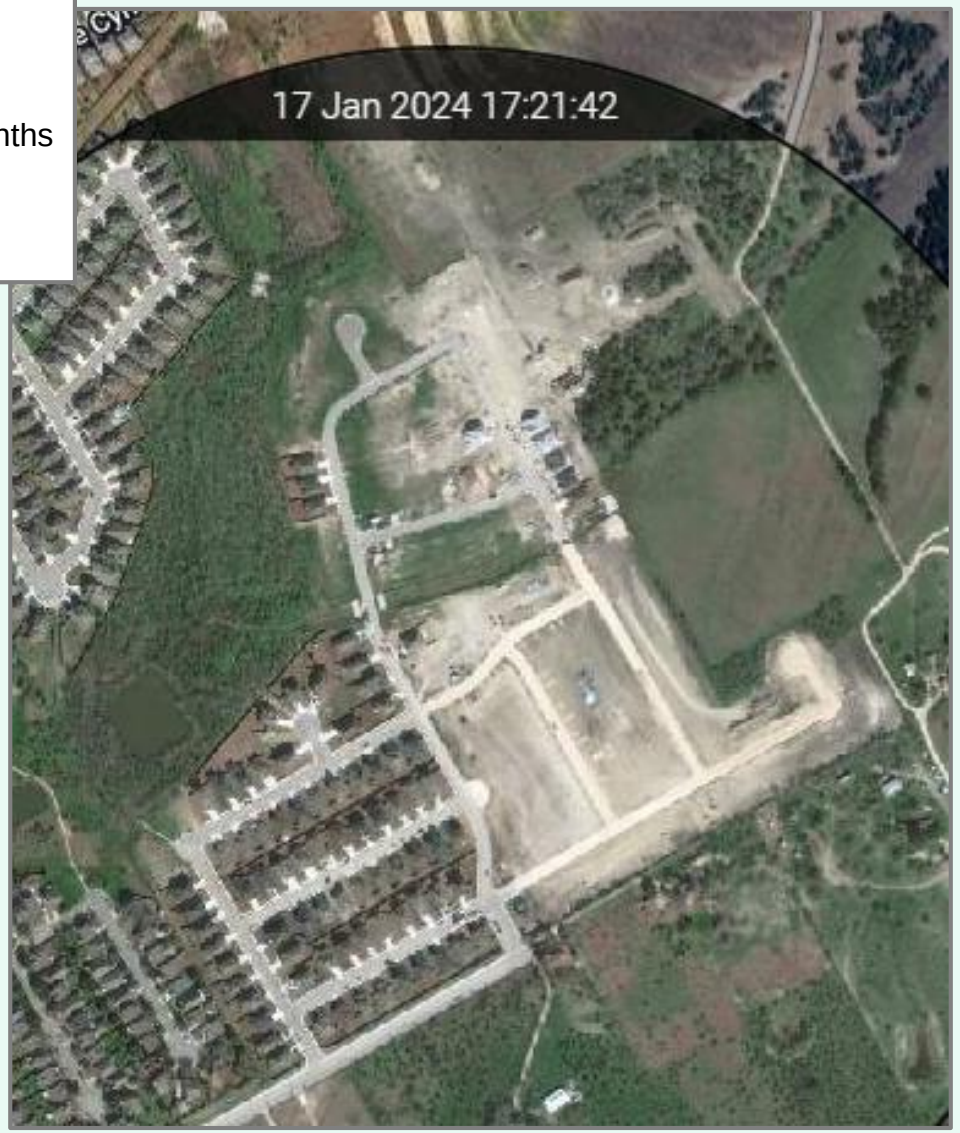
- 868 total lots
- 719 future lots
- 65 vacant developed lots
- 42 homes under construction
- 38 homes occupied
- Started 35 homes in 1Q24, started 84 homes in last 12 months
- First homes closed 4Q23
- Groundwork underway on 162 lots in Phase 2
- Lennar
- $242K - $280K

# Residential Activity

## Saddle Creek Ranch

- 807 total lots
- 35 future lots
- 92 vacant developed lots
- 13 homes under construction
- 639 homes occupied
- Closed 37 homes in last 12 months
- Groundwork underway on remaining lots
- $300K+

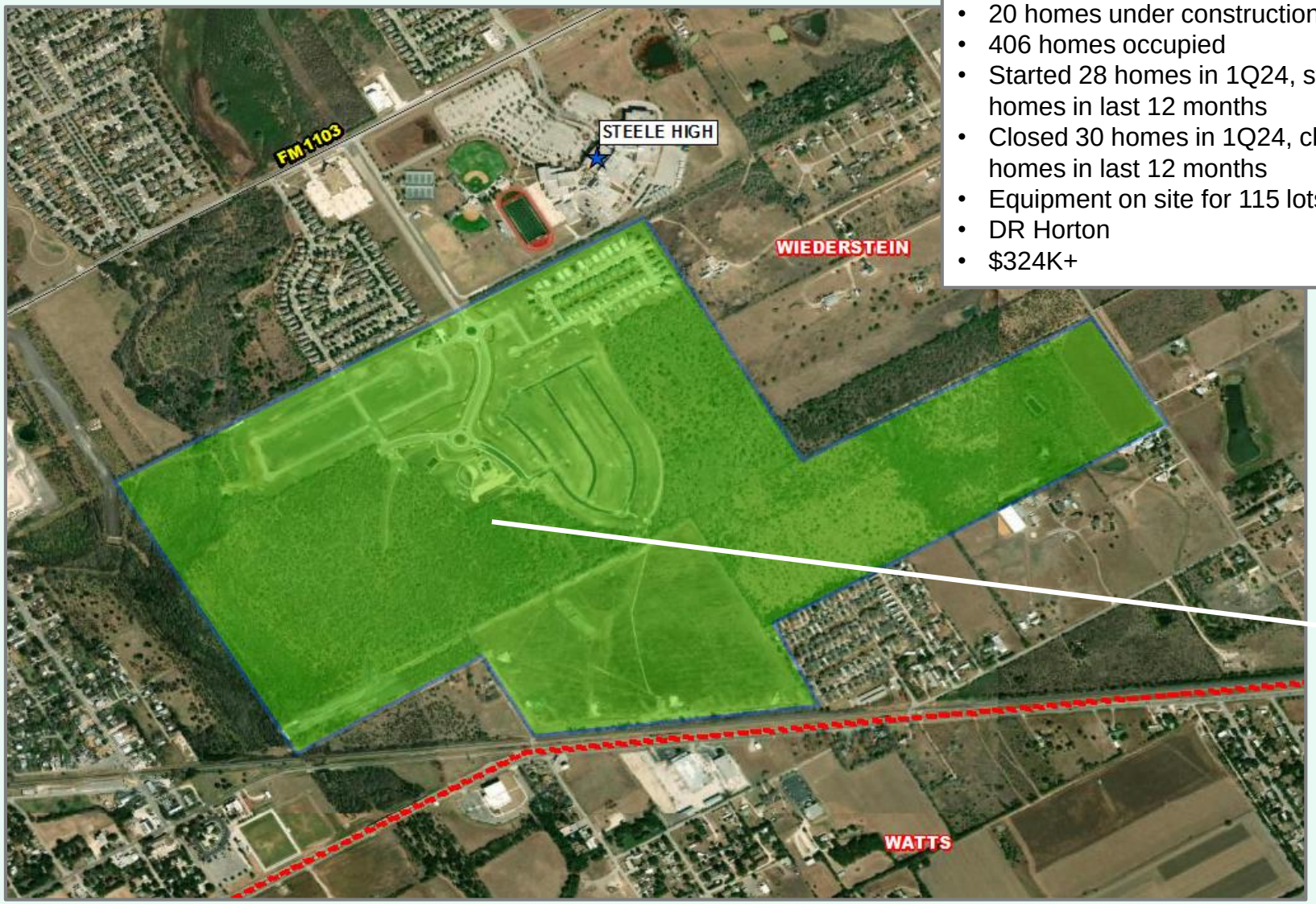


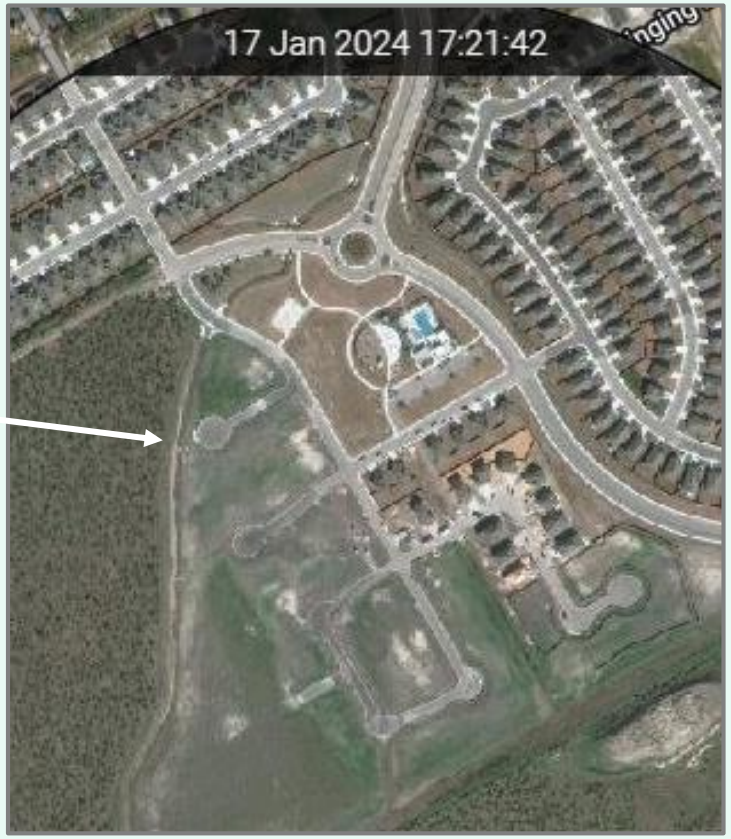



# Residential Activity

## Steele Creek

- 940 total lots
- 387 future lots
- 114 vacant developed lots
- 20 homes under construction
- 406 homes occupied
- Started 28 homes in 1Q24, started 97 homes in last 12 months
- Closed 30 homes in 1Q24, closed 145 homes in last 12 months
- Equipment on site for 115 lots in Phase 6
- DR Horton
- $324K+

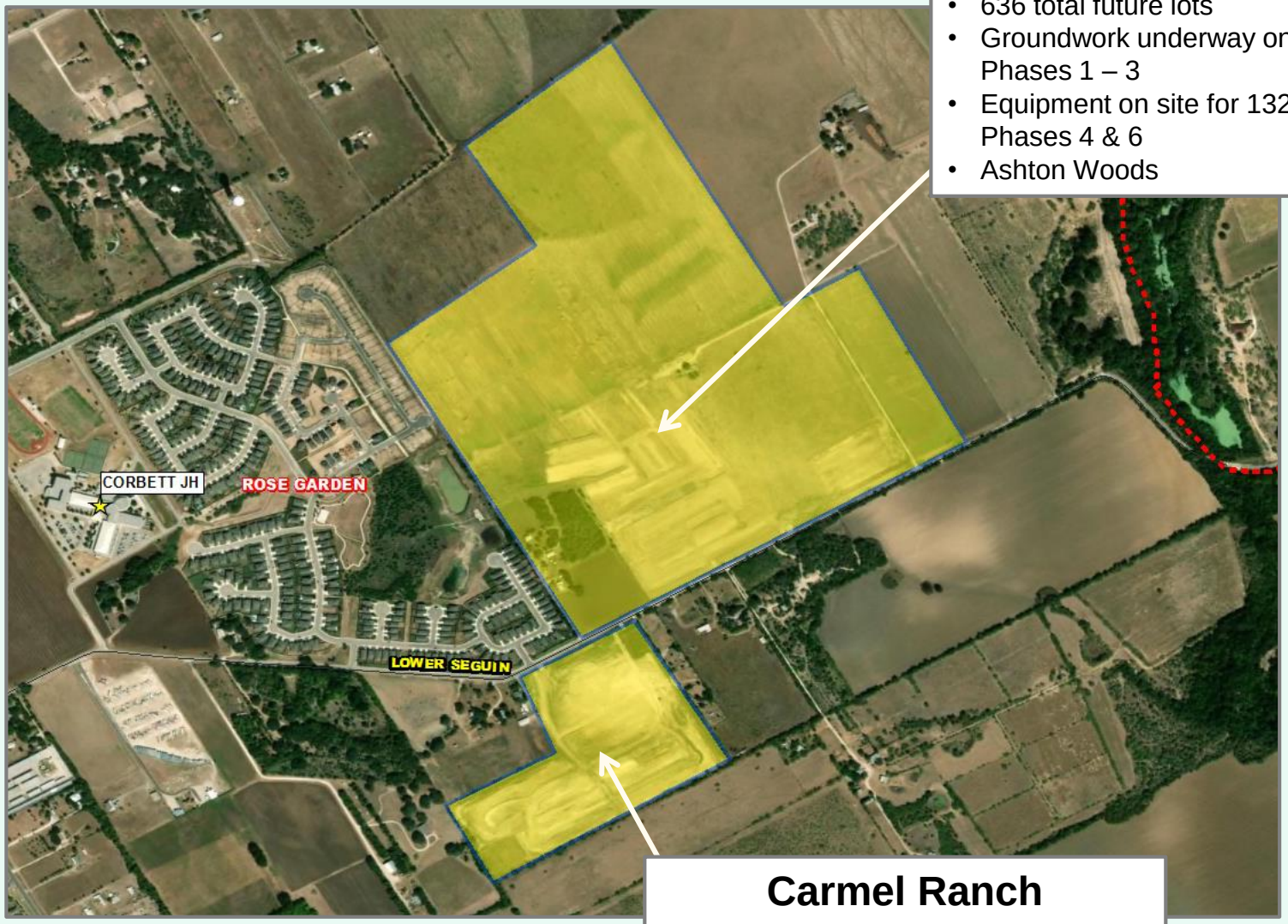


# Residential Activity

## Saddlebrook Ranch

- 636 total future lots
- Groundwork underway on 168 lots in Phases 1 – 3
- Equipment on site for 132 lots in Phases 4 & 6
- Ashton Woods







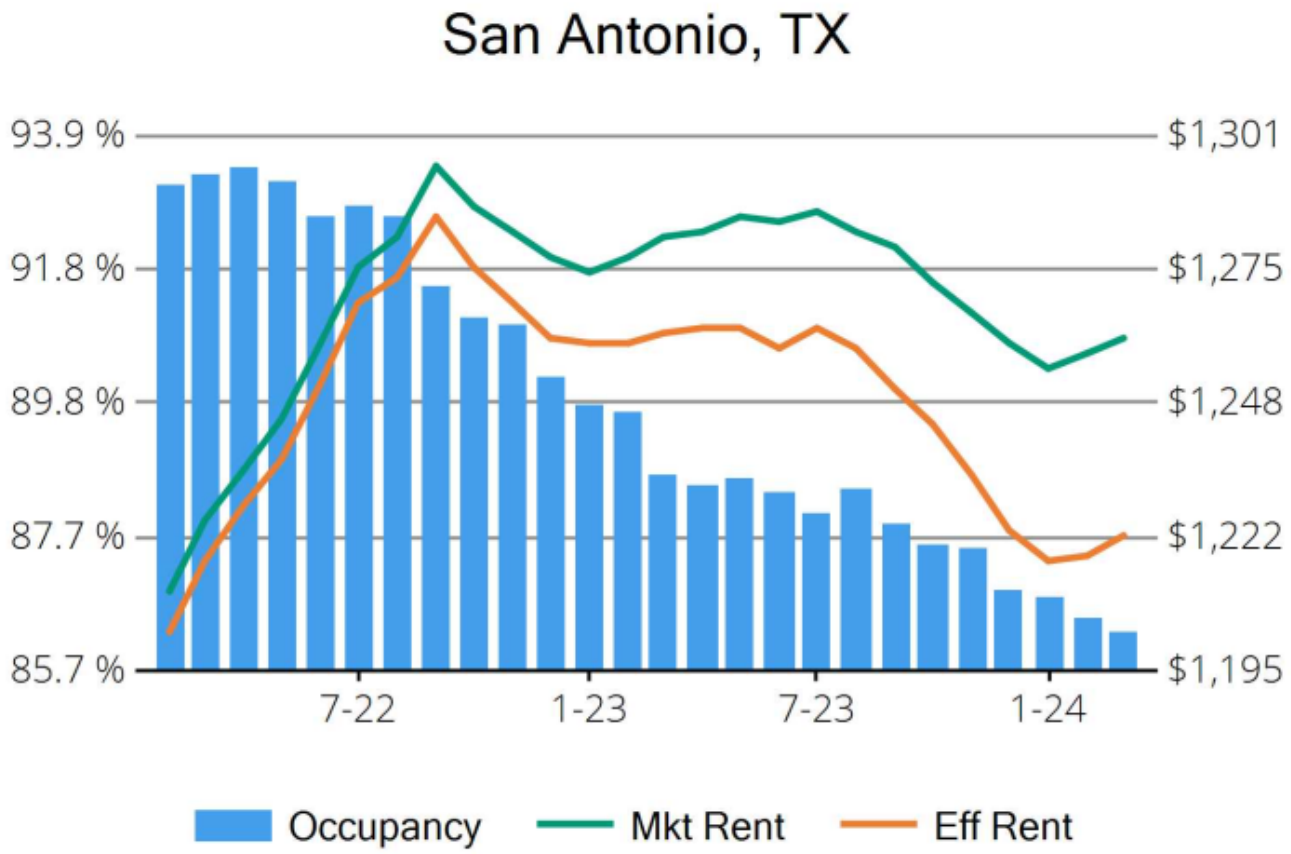
## Carmel Ranch

- 127 total future lots
- Final plat approved Jan 2023
- Groundwork underway on all lots
- Meritage

# Housing Market Trends: Multi-family Market- March 2024

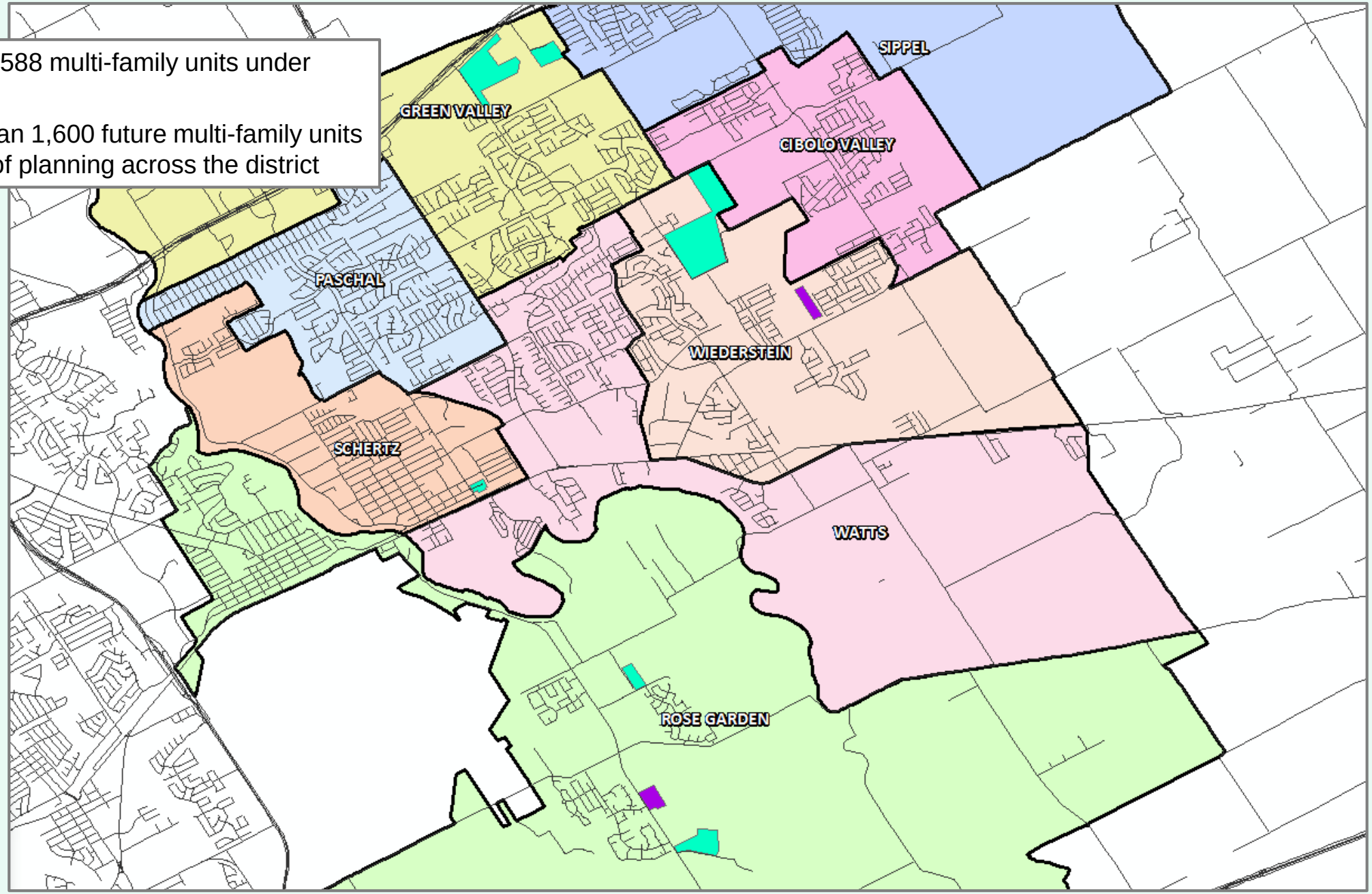
## *Stabilized and Lease-up Properties*

| Conventional Properties | Mar 2024 | Annual Change |
|---|---|---|
| Occupancy | 86.3 | -2.9% |
| Unit Change | 7,058 | |
| Units Absorbed (Annual) | 908 | |
| Average Size (SF) | 860 | +0.6% |
| Asking Rent | $1,261 | -1.7% |
| Asking Rent per SF | $1.47 | -2.3% |
| Effective Rent | $1,222 | -3.3% |
| Effective Rent per SF | $1.42 | -3.9% |
| % Offering Concessions | 42% | +76.9% |
| Avg. Concession Package | 6.5% | +25.5% |



# District Multi-Family Overview

- There are roughly 588 multi-family units under construction
- There are more than 1,600 future multi-family units in various stages of planning across the district




**Multi-Family Developments**

- FUTURE
- UNDER CONSTRUCTION

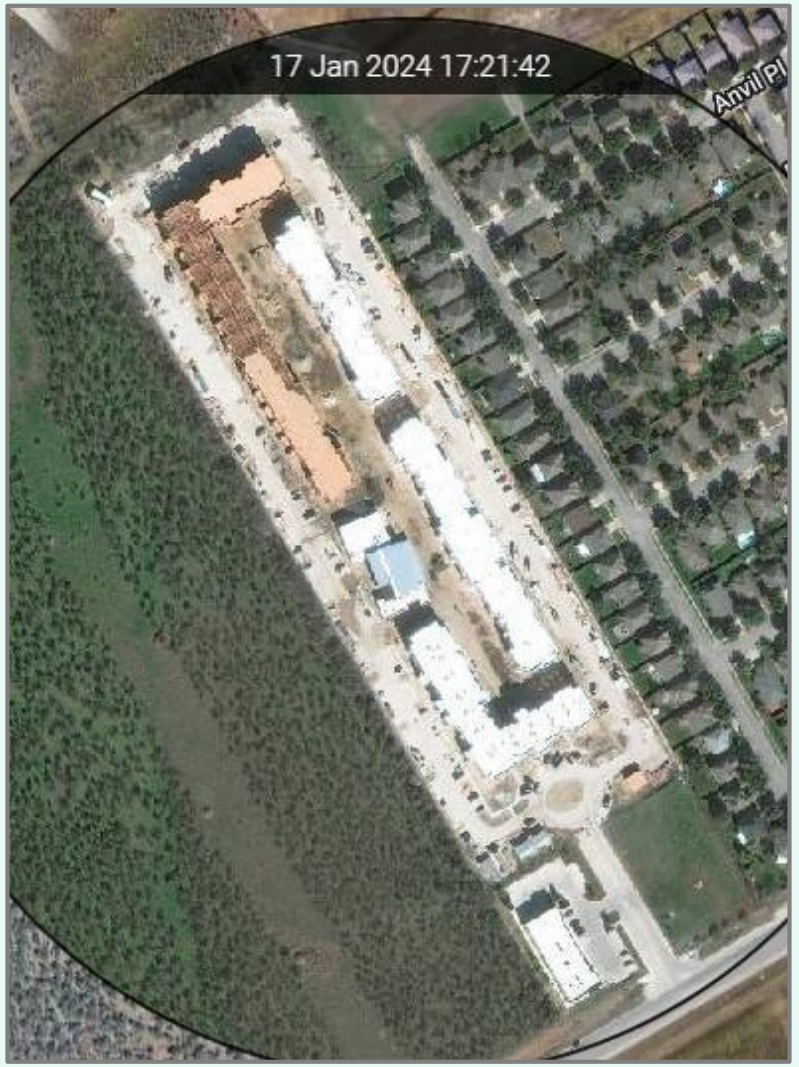
Zonda Education

# Multi-Family Activity

## Cibolo Commons

- 288 apartment units under construction
- Construction went vertical mid 2023
- Estimated lease date Aug 2024



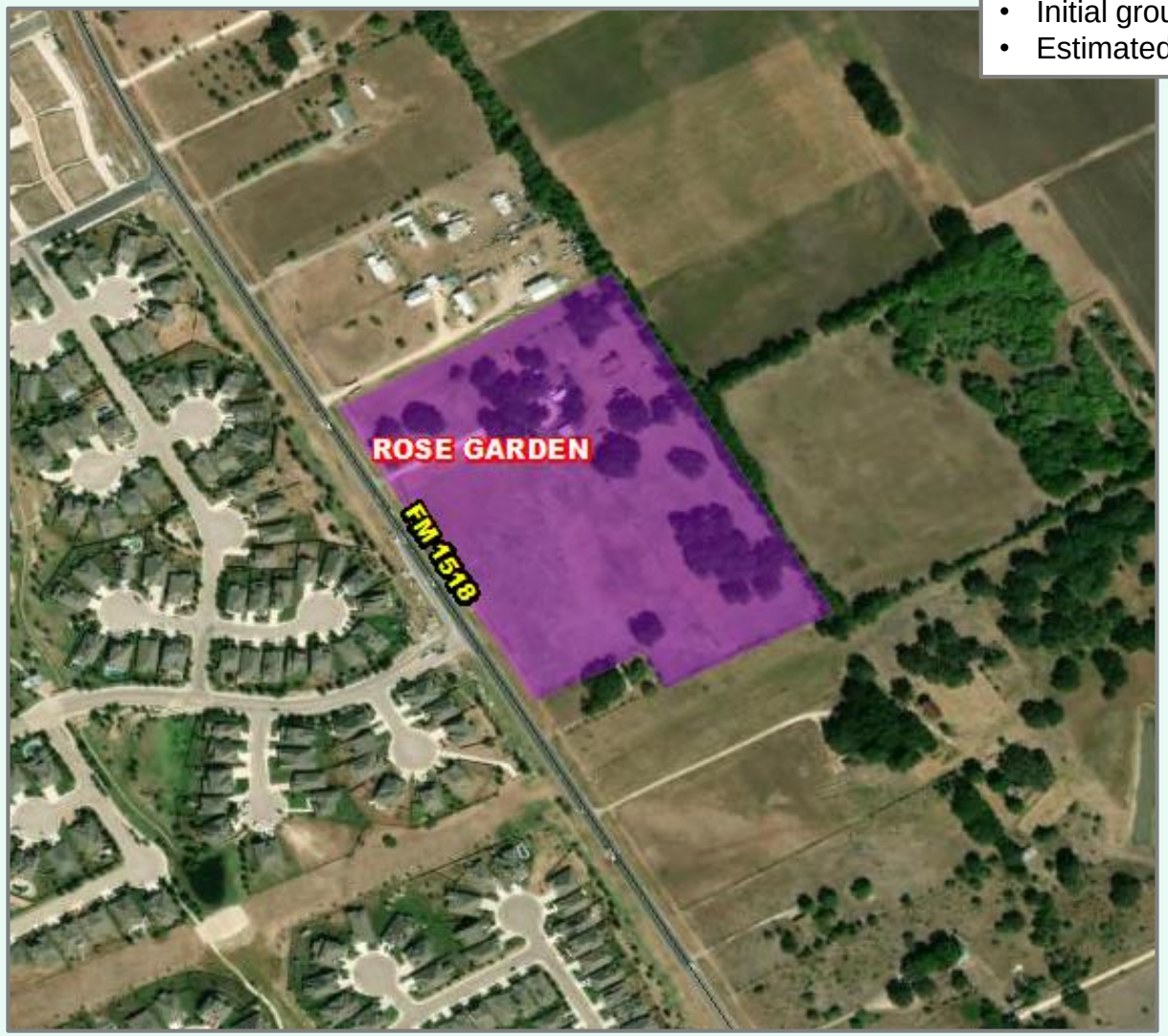




Zonda Education

# Multi-Family Activity

## Aviator 1518

- 300 apartment units under construction
- Initial groundwork underway
- Estimated lease date Fall 2025





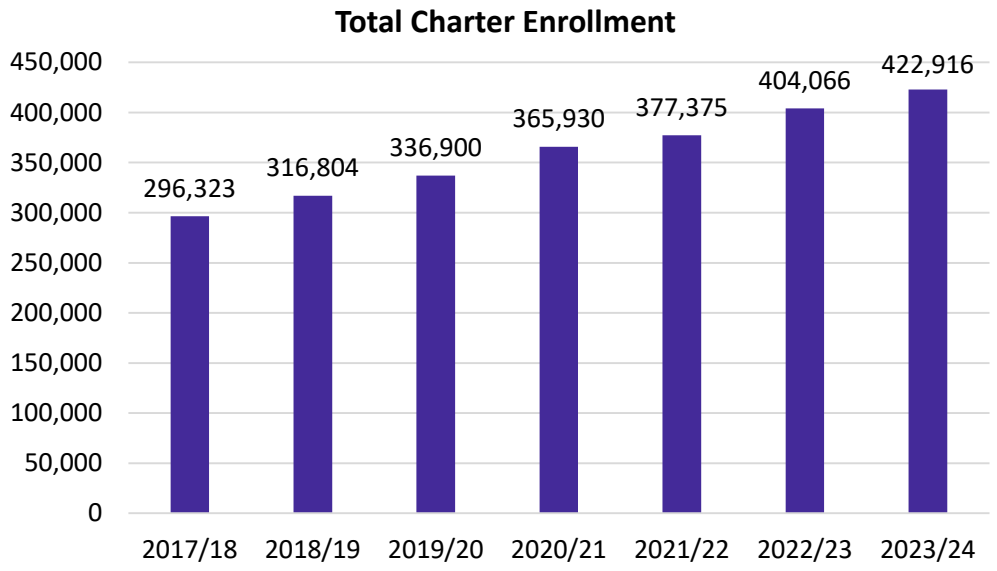

# TEA Transfer Report

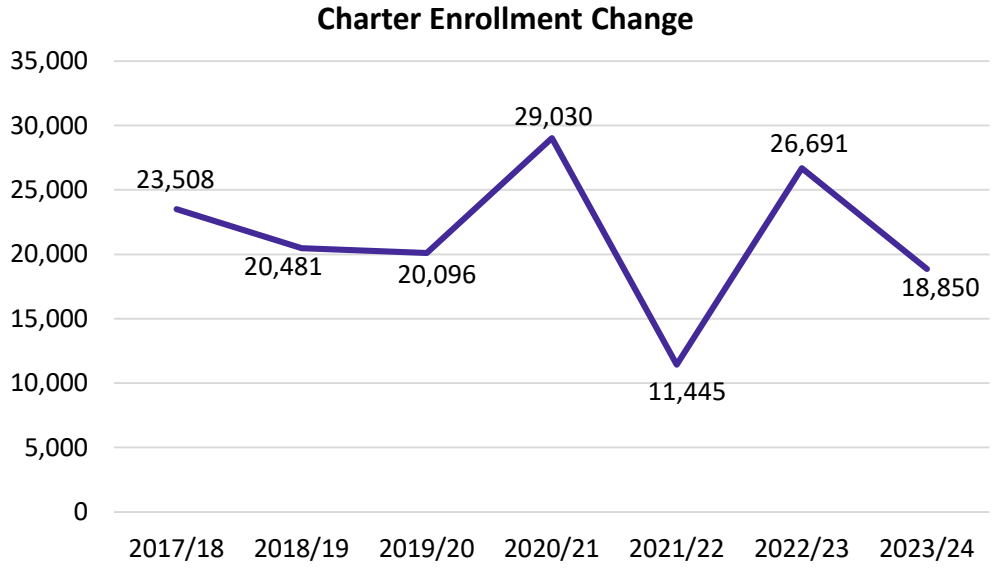
| Transfers In From: | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 5 Year Change |
|---|---|---|---|---|---|---|---|
| Comal ISD | 47 | 48 | 48 | 46 | 47 | 47 | 0 |
| East Central ISD | 15 | 3 | 3 | 16 | 16 | 30 | +15 |
| Judson ISD | 111 | 109 | 93 | 92 | 93 | 83 | -28 |
| Marion ISD | 18 | 28 | 29 | 36 | 27 | 22 | +4 |
| New Braunfels ISD | 32 | 29 | 32 | 37 | 30 | 21 | -11 |
| North East ISD | 47 | 45 | 52 | 52 | 55 | 34 | -13 |
| Seguin ISD | 3 | 3 | 10 | 10 | 3 | 11 | +8 |
| **Total Transfers In*** | **304** | **296** | **300** | **317** | **308** | **275** | **-29** |

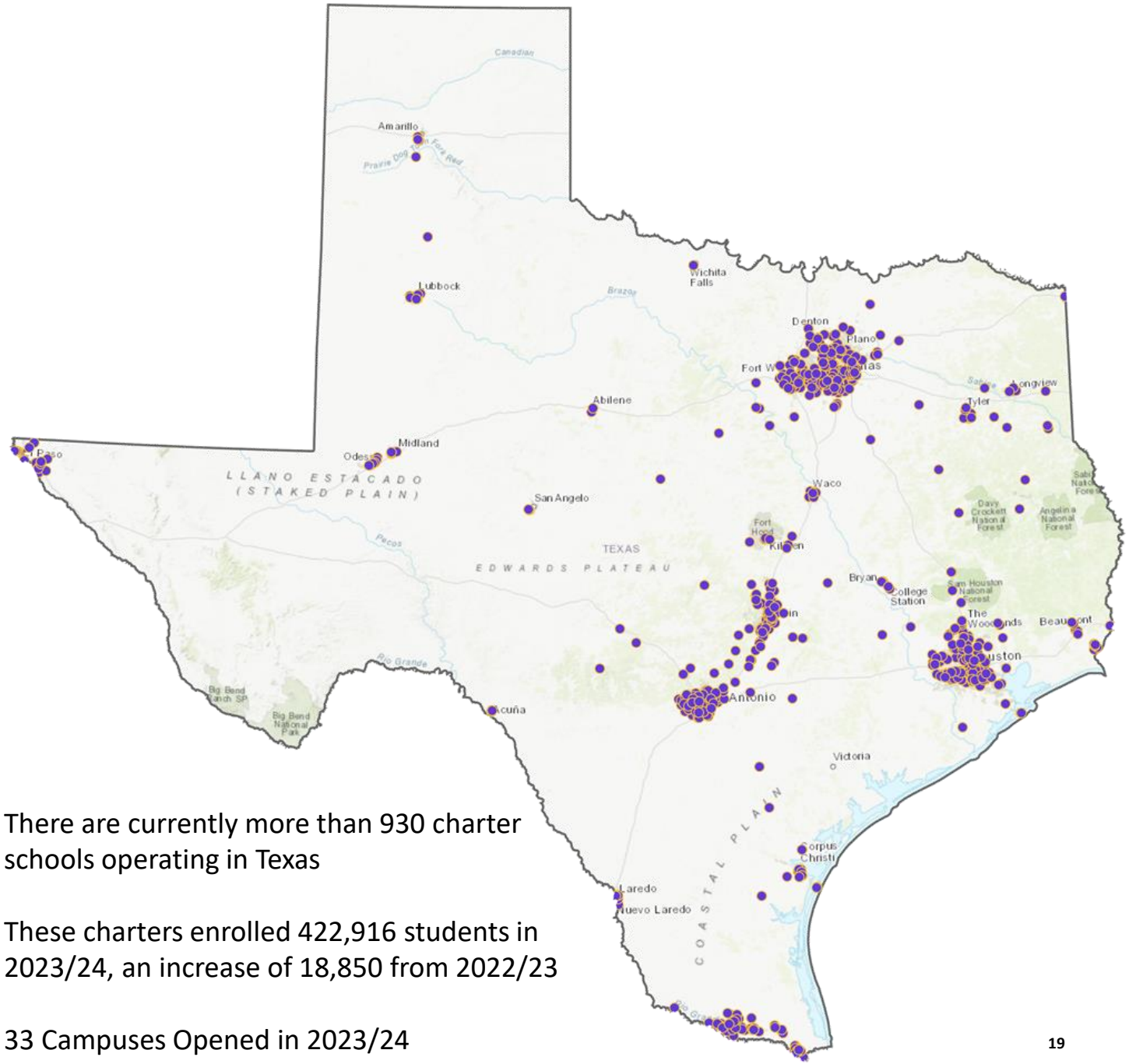
| Transfers Out To: | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 5 Year Change |
|---|---|---|---|---|---|---|---|
| Basis Texas | 19 | 13 | 22 | 50 | 46 | 48 | +29 |
| Comal ISD | 34 | 42 | 60 | 109 | 100 | 112 | +78 |
| East Central ISD | 10 | 11 | 11 | 13 | 13 | 20 | +10 |
| FT Sam Houston ISD | 40 | 45 | 56 | 59 | 53 | 49 | +9 |
| Great Hearts Texas | 34 | 43 | 119 | 159 | 192 | 192 | +158 |
| IDEA Public Schools | 53 | 71 | 91 | 77 | 65 | 465 | +412 |
| Judson ISD | 30 | 57 | 52 | 106 | 229 | 152 | +122 |
| Legacy Traditional Schools | 0 | 0 | 0 | 0 | 463 | 527 | +527 |
| North East ISD | 14 | 19 | 20 | 38 | 42 | 61 | +47 |
| Randolph Field ISD | 444 | 472 | 551 | 529 | 504 | 526 | +82 |
| San Antonio ISD | 18 | 27 | 26 | 14 | 41 | 40 | +22 |
| School of Science and Technology | 16 | 27 | 74 | 288 | 370 | 628 | +612 |
| Texas College Preparatory Academies | 272 | 328 | 356 | 365 | 414 | 309 | +337 |
| **Total Transfers Out*** | **1,079** | **1,283** | **1,591** | **1,981** | **2,695** | **3,312** | **+2,233** |

** Totals include additional districts due to TEA rounding rules*

# Charter Schools




- There are currently more than 930 charter schools operating in Texas
- These charters enrolled 422,916 students in 2023/24, an increase of 18,850 from 2022/23
- 33 Campuses Opened in 2023/24

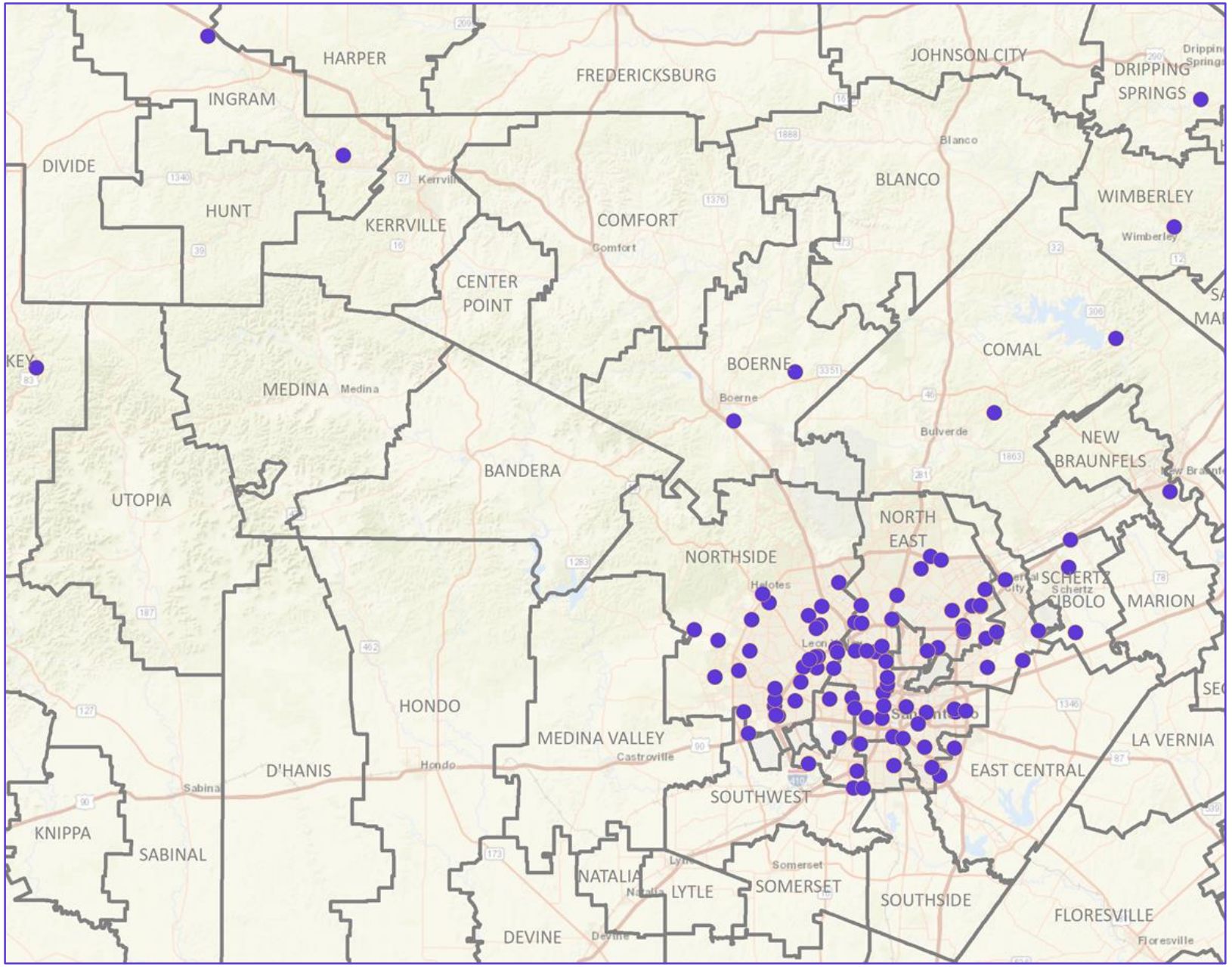
Zonda Education

# Charter Schools: San Antonio

There are currently more than 130 charter school campuses open in the San Antonio Area

These campuses enrolled more than 55,000 students in 2023/24, a rise of nearly 3,500 students over last year

5 separate campuses opened or began reporting enrollment in 2023/24

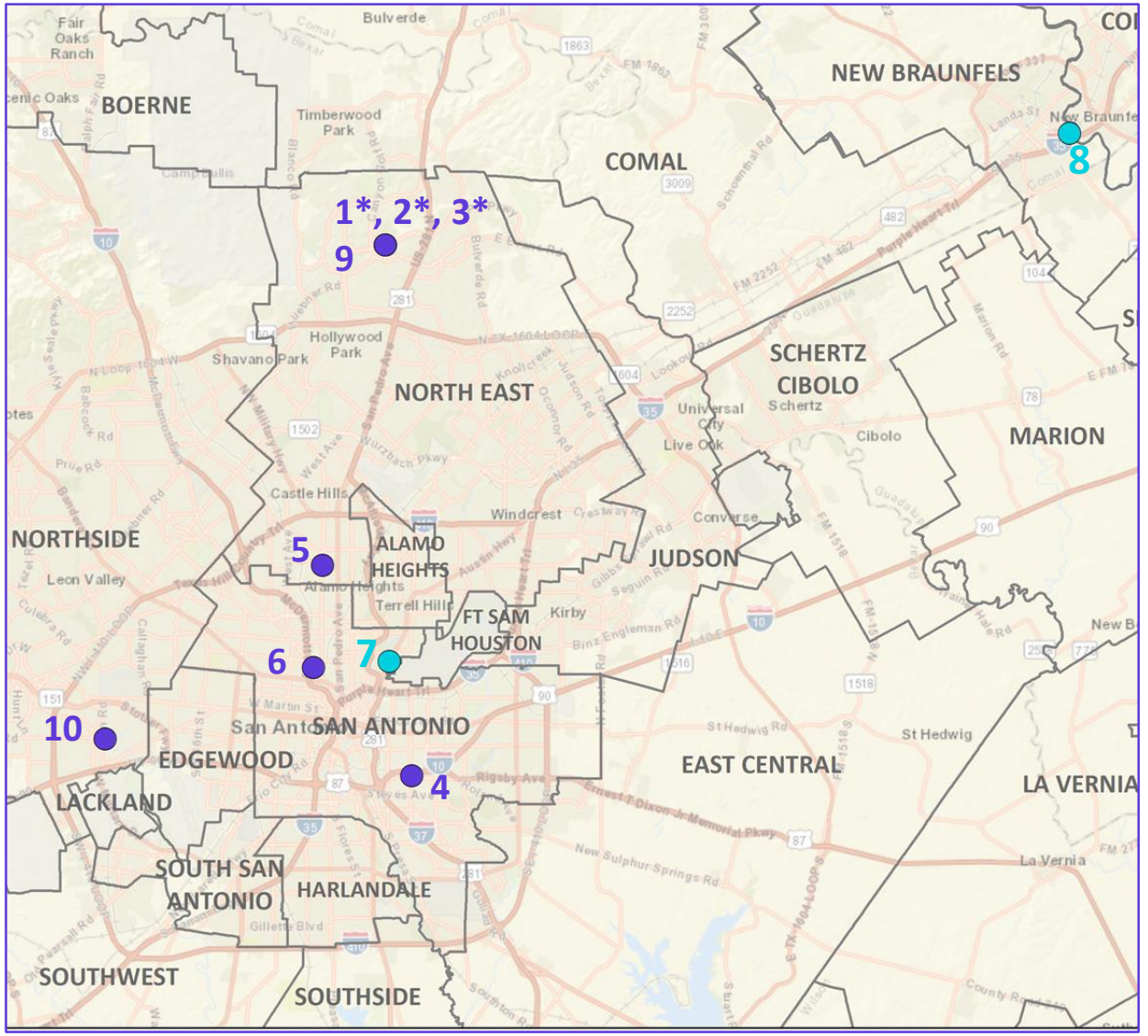



Zonda Education

# Charter Schools: Opening in San Antonio 2024/25

| MAP ID | CAMPUS | GRADES | NOTES |
|---|---|---|---|
| 1 | Somerset Prepatory Academy* | PK4-8 | |
| 2 | George Gervin Academy Expansion Campus 1* | K-12 | |
| 3 | George Gervin Acadrmy Expansion Campus 2* | K-12 | |
| 4 | Compass Rose Opportunity | K-12 | |
| 5 | George Gervin Academy | | |
| 6 | Trimuph Public High Schools - San Antonio | 9-12 | |
| 7 | Celebrate Dyslexia Schools | K-8 | Opening Aug 2024 With K-2, 112 Student Capacity |
| 8 | Innova Mercy Inspire Academy | 7-12 | Day Treatment Center For Students 12-17 |
| 9 | School Of Science And Technology- Sonterra | K-12 | Application Approved, Location TBD |
| 10 | Davinci Academy For Science And The Arts- San Antonio | EE-12 | Application Under Review |

***Undisclosed Address – Approximate Location on Map***




Zonda Education

# Ten Year Forecast by Grade Level

| Year (Oct.) | EE/PK | K | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | 11th | 12th | Total | Total Growth | % Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2019/20 | 413 | 1,048 | 1,036 | 1,093 | 1,125 | 1,184 | 1,211 | 1,234 | 1,183 | 1,180 | 1,419 | 1,340 | 1,282 | 1,224 | 15,972 | 154 | 1.0% |
| 2020/21 | 325 | 951 | 1,019 | 1,040 | 1,077 | 1,135 | 1,143 | 1,232 | 1,248 | 1,219 | 1,293 | 1,394 | 1,305 | 1,292 | 15,673 | -299 | -1.9% |
| 2021/22 | 455 | 935 | 997 | 1,019 | 1,074 | 1,116 | 1,124 | 1,221 | 1,287 | 1,318 | 1,428 | 1,347 | 1,305 | 1,264 | 15,890 | 217 | 1.4% |
| 2022/23 | 436 | 819 | 962 | 998 | 1,077 | 1,114 | 1,067 | 1,133 | 1,230 | 1,306 | 1,478 | 1,371 | 1,247 | 1,283 | 15,521 | -369 | -2.3% |
| 2023/24 | 430 | 788 | 838 | 967 | 997 | 1,090 | 1,079 | 1,097 | 1,178 | 1,264 | 1,435 | 1,459 | 1,238 | 1,286 | 15,146 | -375 | -2.4% |
| 2024/25 | 384 | 747 | 849 | 866 | 1,006 | 1,043 | 1,108 | 1,118 | 1,126 | 1,198 | 1,413 | 1,427 | 1,354 | 1,225 | 14,864 | -282 | -1.9% |
| 2025/26 | 406 | 789 | 795 | 870 | 896 | 1,052 | 1,061 | 1,134 | 1,145 | 1,145 | 1,328 | 1,387 | 1,321 | 1,332 | 14,661 | -203 | -1.4% |
| 2026/27 | 443 | 861 | 840 | 816 | 897 | 933 | 1,072 | 1,093 | 1,167 | 1,164 | 1,269 | 1,316 | 1,274 | 1,306 | 14,451 | -210 | -1.4% |
| 2027/28 | 438 | 850 | 918 | 851 | 841 | 932 | 950 | 1,104 | 1,120 | 1,187 | 1,294 | 1,256 | 1,218 | 1,258 | 14,217 | -234 | -1.6% |
| 2028/29 | 446 | 866 | 907 | 945 | 879 | 879 | 947 | 975 | 1,128 | 1,138 | 1,318 | 1,278 | 1,161 | 1,206 | 14,073 | -144 | -1.0% |
| 2029/30 | 456 | 886 | 919 | 941 | 978 | 919 | 893 | 974 | 994 | 1,147 | 1,265 | 1,304 | 1,180 | 1,151 | 14,007 | -66 | -0.5% |
| 2030/31 | 465 | 904 | 940 | 951 | 970 | 1,020 | 935 | 919 | 1,000 | 1,010 | 1,277 | 1,251 | 1,205 | 1,170 | 14,017 | 10 | 0.1% |
| 2031/32 | 477 | 931 | 960 | 973 | 982 | 1,012 | 1,038 | 962 | 944 | 1,017 | 1,128 | 1,263 | 1,156 | 1,193 | 14,036 | 19 | 0.1% |
| 2032/33 | 489 | 954 | 984 | 995 | 1,006 | 1,025 | 1,029 | 1,068 | 989 | 960 | 1,130 | 1,117 | 1,167 | 1,146 | 14,059 | 22 | 0.2% |
| 2033/34 | 500 | 976 | 1,011 | 1,021 | 1,028 | 1,051 | 1,042 | 1,059 | 1,099 | 999 | 1,066 | 1,120 | 1,034 | 1,156 | 14,162 | 103 | 0.7% |

*Yellow box = largest grade per year*
*Green box = second largest grade per year*

# Ten Year Forecast by Campus

| Campus | Functional Capacity | Max Capacity | Fall | ENROLLMENT PROJECTIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 2027/28 | 2028/29 | 2029/30 | 2030/31 | 2031/32 | 2032/33 | 2033/34 |
| CIBOLO VALLEY EL | 891 | 1,200 | 657 | 611 | 587 | 589 | 594 | 594 | 608 | 617 | 620 | 627 | 637 |
| GREEN VALLEY EL | 673 | 924 | 533 | 497 | 482 | 469 | 497 | 506 | 524 | 535 | 537 | 535 | 529 |
| NORMA PASCHAL EL | 673 | 924 | 625 | 591 | 582 | 564 | 544 | 546 | 559 | 569 | 574 | 580 | 585 |
| ROSE GARDEN EL | 891 | 1,200 | 896 | 882 | 878 | 891 | 923 | 957 | 999 | 1,046 | 1,075 | 1,104 | 1,131 |
| SCHERTZ EL | 675 | 1,102 | 668 | 628 | 605 | 601 | 576 | 581 | 588 | 591 | 586 | 582 | 582 |
| SIPPEL EL | 675 | 1,058 | 672 | 679 | 690 | 721 | 756 | 782 | 827 | 867 | 904 | 961 | 1,030 |
| WATTS EL | 673 | 924 | 513 | 469 | 440 | 428 | 423 | 428 | 446 | 457 | 463 | 476 | 490 |
| WIEDERSTEIN EL | 675 | 1,058 | 546 | 538 | 544 | 527 | 517 | 529 | 549 | 568 | 574 | 587 | 602 |
| **ELEMENTARY TOTALS** | | | 5,110 | 4,895 | 4,808 | 4,790 | 4,830 | 4,922 | 5,099 | 5,250 | 5,335 | 5,453 | 5,587 |
| Elementary Percent Change | | | -5.48% | -4.21% | -1.78% | -0.37% | 0.83% | 1.91% | 3.59% | 2.96% | 1.63% | 2.20% | 2.46% |
| Elementary Absolute Change | | | -296 | -215 | -87 | -18 | 40 | 92 | 177 | 151 | 85 | 117 | 134 |
| JORDAN INT | 810 | 1,000 | 769 | 796 | 763 | 777 | 742 | 676 | 646 | 641 | 695 | 734 | 739 |
| SCHLATHER INT | 810 | 1,200 | 682 | 700 | 689 | 640 | 573 | 563 | 594 | 597 | 651 | 682 | 677 |
| WILDER INT | 810 | 1,250 | 725 | 730 | 743 | 748 | 739 | 683 | 627 | 616 | 654 | 681 | 685 |
| **INTERMEDIATE TOTALS** | | | 2,176 | 2,226 | 2,195 | 2,165 | 2,054 | 1,922 | 1,867 | 1,854 | 2,000 | 2,097 | 2,101 |
| Intermediate Percent Change | | | -1.09% | 2.30% | -1.39% | -1.37% | -5.13% | -6.43% | -2.86% | -0.70% | 7.87% | 4.85% | 0.19% |
| Intermediate Absolute Change | | | -24 | 50 | -31 | -30 | -111 | -132 | -55 | -13 | 146 | 97 | 4 |
| DOBIE JH | 1,300 | 1,540 | 1,316 | 1,229 | 1,194 | 1,228 | 1,196 | 1,152 | 1,058 | 1,009 | 1,025 | 1,025 | 1,109 |
| CORBETT JH | 1,080 | 1,500 | 1,126 | 1,095 | 1,096 | 1,103 | 1,111 | 1,114 | 1,083 | 1,001 | 936 | 924 | 989 |
| **JUNIOR HIGH SCHOOL TOTALS** | | | 2,442 | 2,324 | 2,290 | 2,331 | 2,307 | 2,266 | 2,141 | 2,010 | 1,961 | 1,949 | 2,098 |
| Junior High School Percent Change | | | -3.71% | -4.83% | -1.46% | 1.79% | -1.03% | -1.78% | -5.52% | -6.12% | -2.44% | -0.61% | 7.64% |
| Junior High School Absolute Change | | | -94 | -118 | -34 | 41 | -24 | -41 | -125 | -131 | -49 | -12 | 149 |
| CLEMENS HS | 2,700 | 3,300 | 2,563 | 2,576 | 2,550 | 2,469 | 2,419 | 2,397 | 2,400 | 2,418 | 2,383 | 2,292 | 2,183 |
| STEELE HS | 2,160 | 3,200 | 2,700 | 2,688 | 2,663 | 2,541 | 2,452 | 2,411 | 2,345 | 2,330 | 2,202 | 2,113 | 2,038 |
| ALSELC | | | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 |
| **HIGH SCHOOL TOTALS** | | | 5,418 | 5,419 | 5,368 | 5,165 | 5,026 | 4,963 | 4,900 | 4,903 | 4,740 | 4,560 | 4,376 |
| High School Percent Change | | | 0.73% | 0.02% | -0.94% | -3.78% | -2.69% | -1.25% | -1.27% | 0.06% | -3.32% | -3.80% | -4.04% |
| High School Absolute Change | | | 39 | 1 | -51 | -203 | -139 | -63 | -63 | 3 | -163 | -180 | -184 |
| **DISTRICT TOTALS** | | | **15,146** | **14,864** | **14,661** | **14,451** | **14,217** | **14,073** | **14,007** | **14,017** | **14,036** | **14,059** | **14,162** |
| District Percent Change | | | -2.42% | -1.86% | -1.37% | -1.43% | -1.62% | -1.01% | -0.47% | 0.07% | 0.14% | 0.16% | 0.73% |
| District Absolute Change | | | -375 | -282 | -203 | -210 | -234 | -144 | -66 | 10 | 19 | 22 | 103 |

*Yellow box = exceeds Functional Capacity*

# Key Takeaways




- SCUCISD has roughly 450 homes currently in inventory with nearly 1,750 additional lots available to build on
- Groundwork is underway on more than 970 lots within 8 subdivisions
- Schertz-Cibolo-Universal City ISD is forecasted to enroll more than 14,000 students by 2028/29 and more than 14,160 students by 2033/34

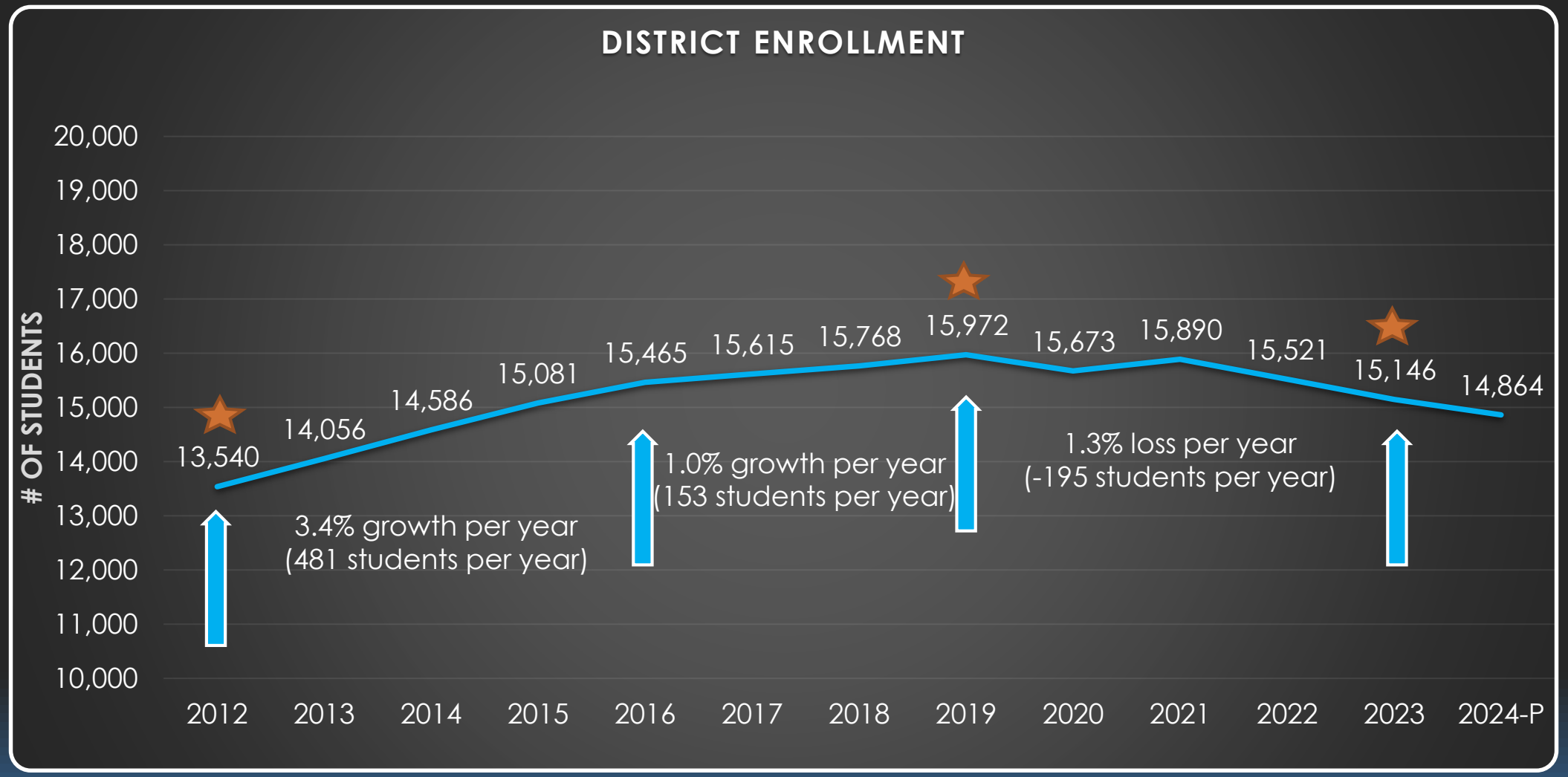
SCHERTZ - CIBOLO - UNIVERSAL CITY ISD

# 10 YEAR CAMPUS FORECASTING

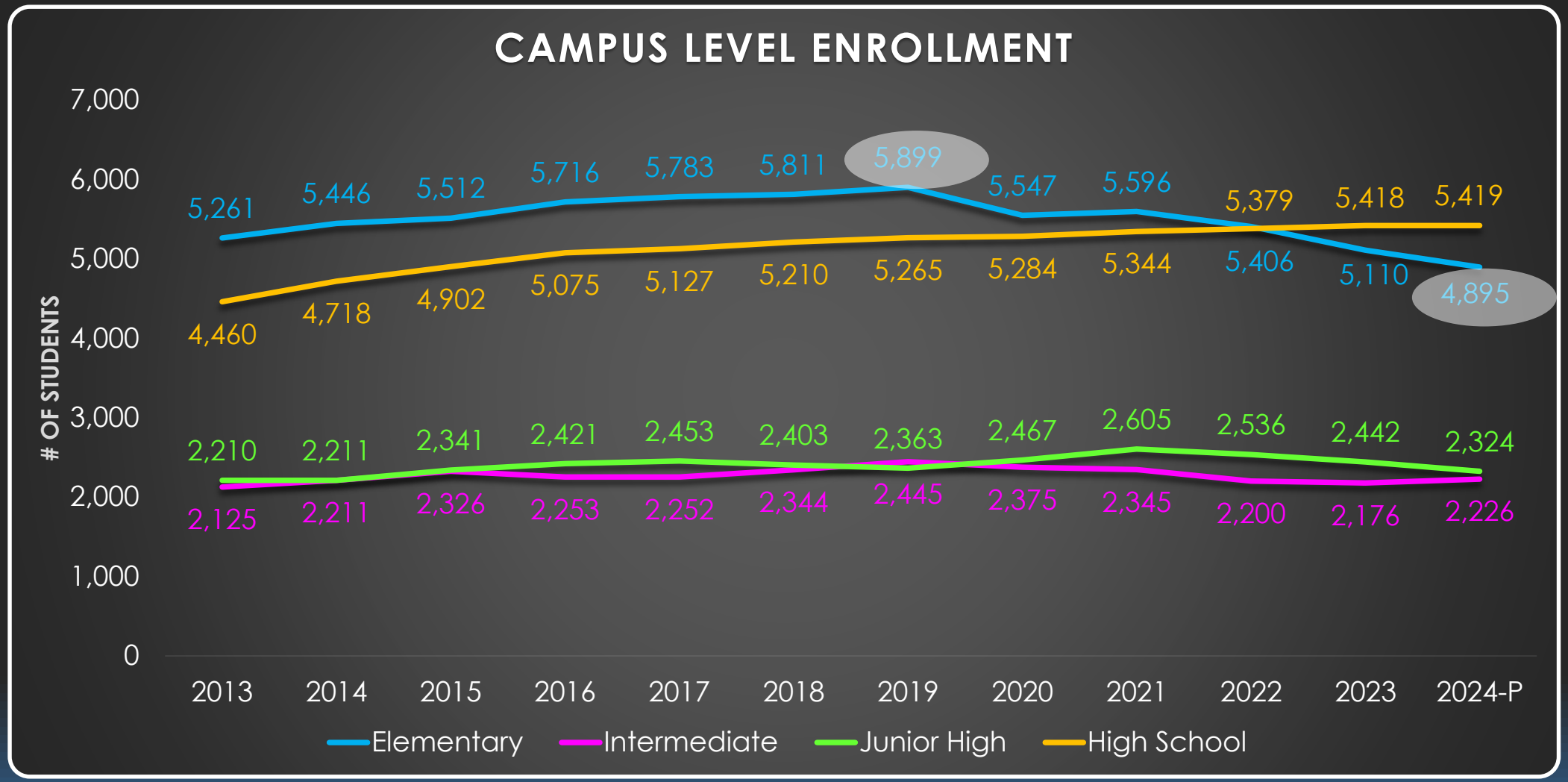
# FORECASTING CONSIDERATIONS

- Enrollment
  - Historical Trends
  - Projections
  - Transfers to Charters and Other ISDs
- Campus Capacity
- Bonding Capacity

# HISTORICAL ENROLLMENT



# HISTORICAL ENROLLMENT BY CAMPUS LEVEL



# ENROLLMENT HISTORY BY LEVEL – OCTOBER

- 2019 to 2023 Enrollment Decrease
  - High School enrollment has remained strong
  - We have added 154 High School students since 2019
  - And Junior High has only lost 39 students since 2019
- Elementary is where we have felt the largest drop in enrollment
  - Specifically, 918 students lost since 2019
  - and 219 students lost at the intermediate level.

# STUDENT TRANSFERS

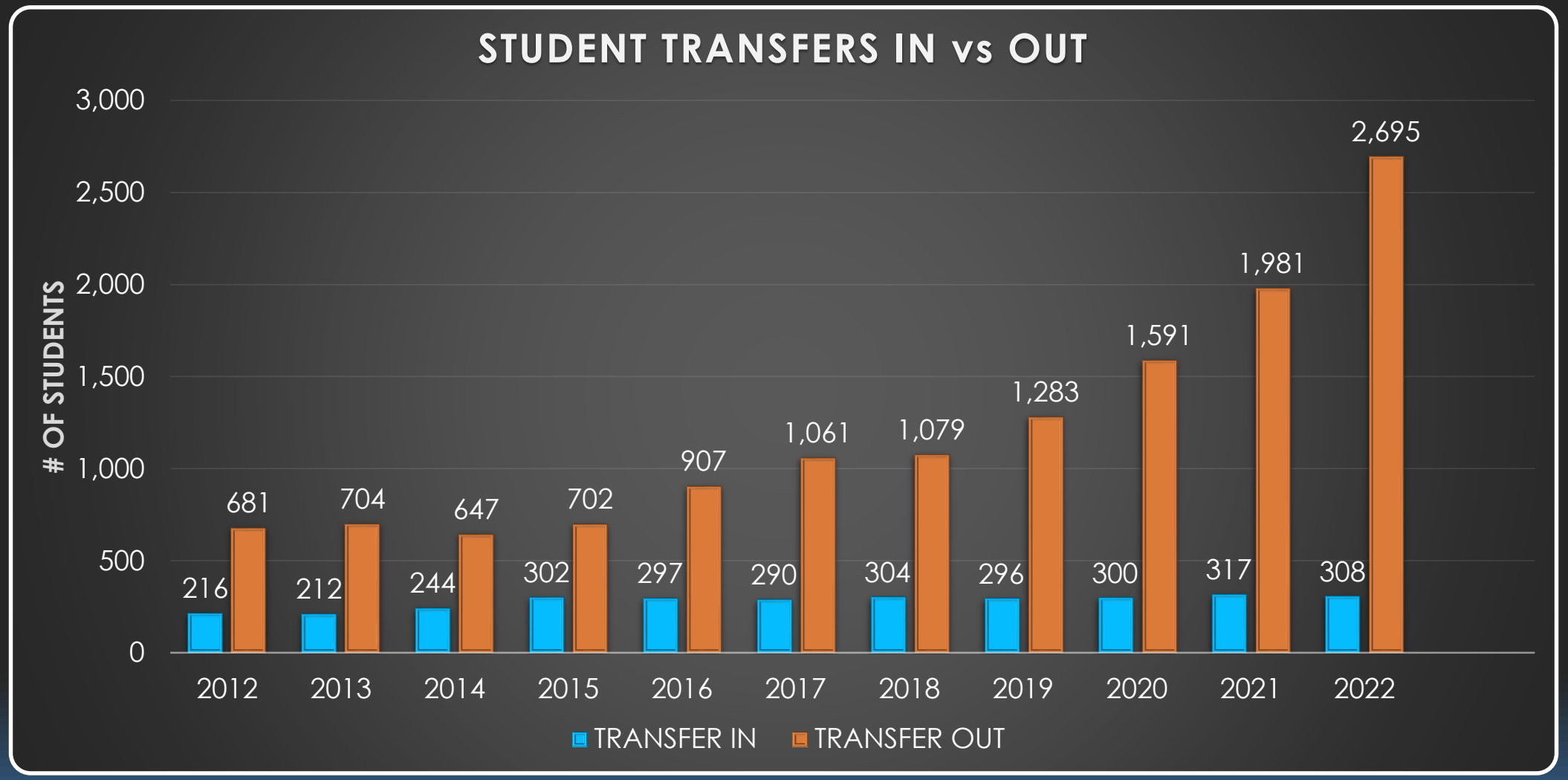
First Year of Founders Charter School →

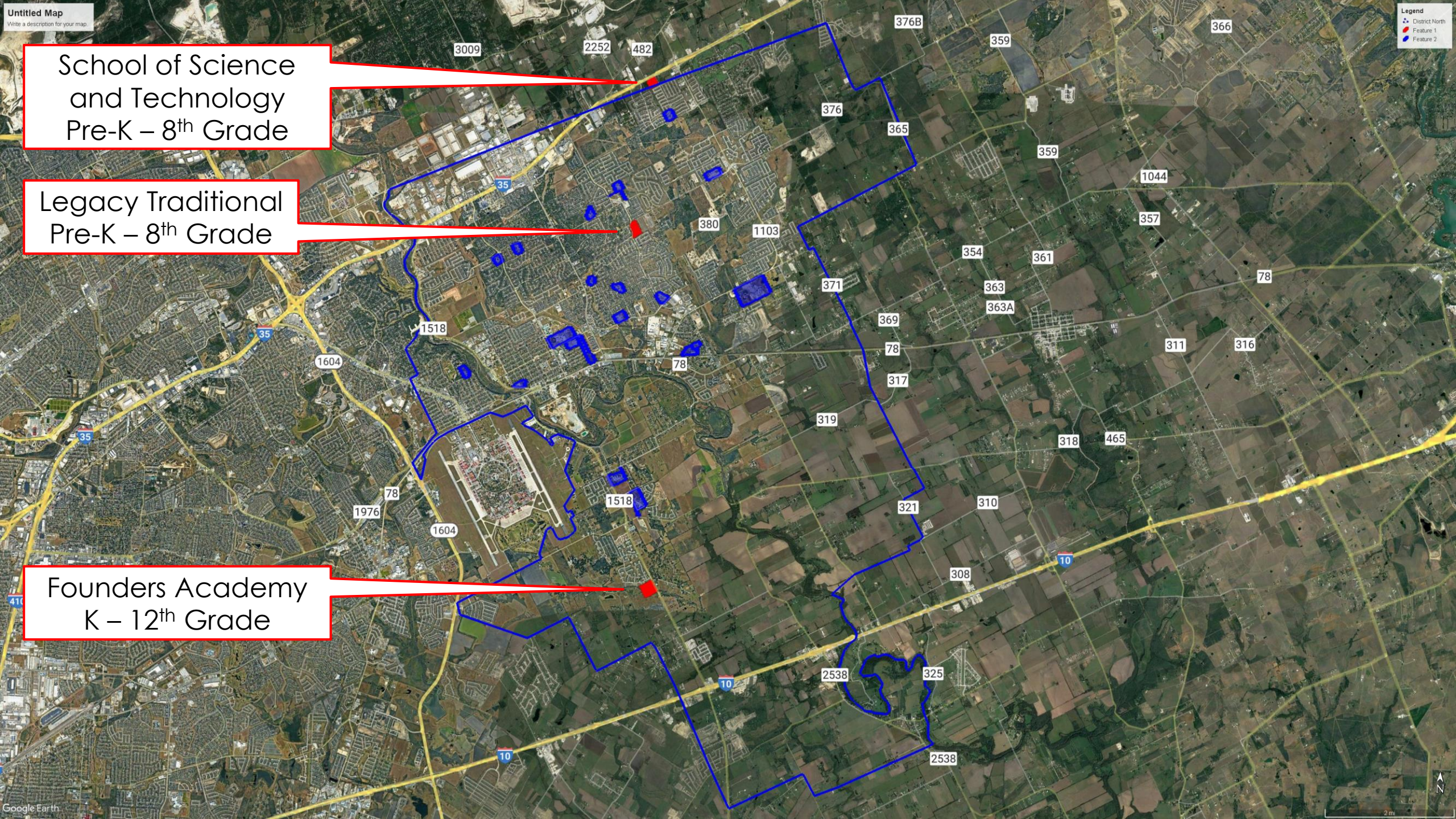
First Year of School of Science and Technology →

First Year of Legacy Traditional School →

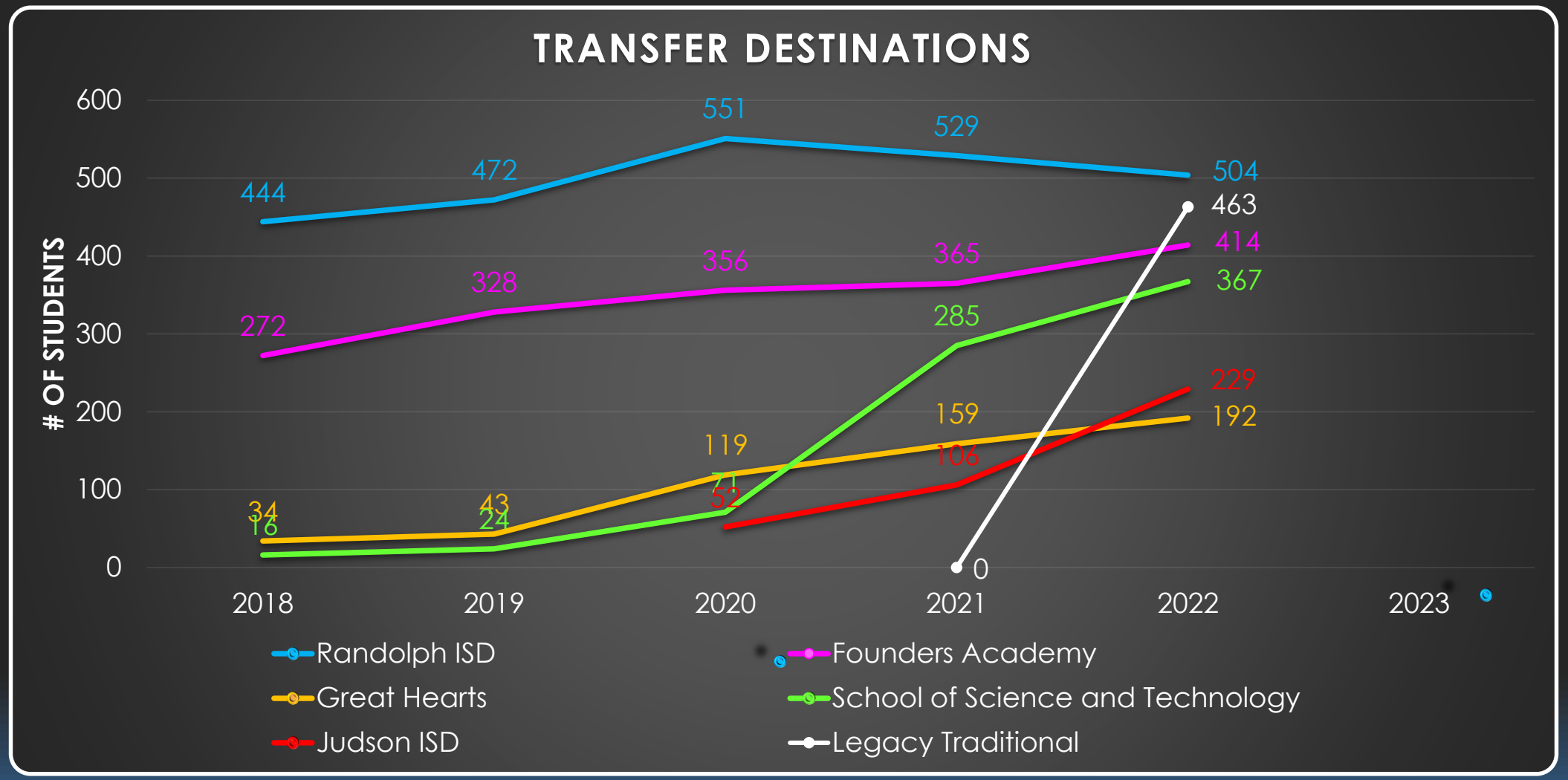
| PEIMS YEAR | TRANSFER IN | TRANSFER OUT | DIFFERENCE |
|---|---|---|---|
| 2012 | 216 | 681 | -465 |
| 2013 | 212 | 704 | -492 |
| 2014 | 244 | 647 | -403 |
| 2015 | 302 | 702 | -400 |
| 2016 | 297 | 907 | -610 |
| 2017 | 290 | 1061 | -771 |
| 2018 | 304 | 1079 | -775 |
| 2019 | 296 | 1283 | -987 |
| 2020 | 300 | 1591 | -1291 |
| 2021 | 317 | 1981 | -1664 |
| 2022 | 308 | 2695 | -2387 |
| 2023 | Data available in March | | |

# STUDENT TRANSFERS IN VS. OUT

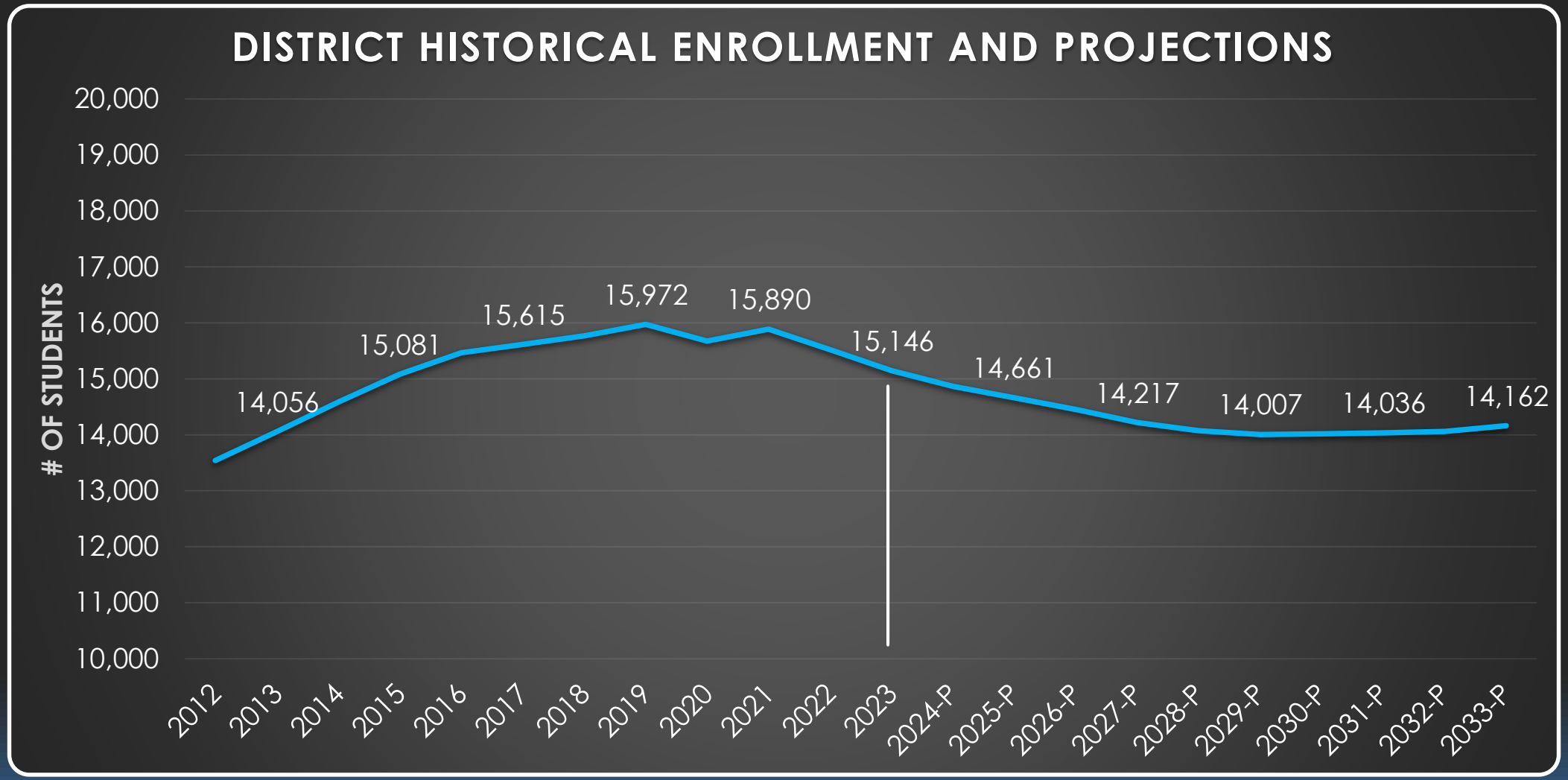



Untitled Map
Write a description for your map.
School of Science and Technology Pre-K – 8th Grade
Legacy Traditional Pre-K – 8th Grade
Founders Academy K – 12th Grade
Legend
District North
Feature 1
Feature 2
3009
2252
482
376B
359
366
376
365
359
1044
380
1103
357
354
361
78
371
363
363A
369
78
1518
1604
78
317
311
316
319
318
465
78
1976
1518
1604
321
310
308
10
2538
325
2538
35
10
Google Earth
N

# MAIN DESTINATIONS FOR TRANSFERS OUT



# SO, HOW MANY STUDENTS WILL WE HAVE IN THE FUTURE?



# ENROLLMENT PROJECTIONS

- Over the next 6 years our District is projected to lose on average 1.3% of our enrollment annually.
  - Resulting in the potential decline in enrollment of another 1,139 students over the same period
  - Larger graduating classes continue to be replaced with smaller Pre-K and Kinder
  - Growth in Charter enrollment is likely to contribute to the smaller elementary class sizes

| PEIMS YEAR | PROJECTED ENROLLMENT | GROWTH (DECLINE) | PERCENTAGE CHANGE |
|---|---|---|---|
| 2023 | 15,146 | -375 | -2.42% |
| 2024-P | 14,864 | -282 | -1.86% |
| 2025-P | 14,661 | -203 | -1.37% |
| 2026-P | 14,451 | -210 | -1.43% |
| 2027-P | 14,217 | -234 | -1. 62% |
| 2028-P | 14,073 | -144 | -1.01% |
| 2029-P | 14,007 | -66 | -0.47% |
| 2030-P | 14,017 | 10 | 0.07% |
| 2031-P | 14,036 | 19 | 0.14% |
| 2032-P | 14,059 | 22 | 0.16% |
| 2033-P | 14,162 | 103 | 0.73% |

# ENROLLMENT PROJECTIONS

- Beginning in 2030 the district is expected to begin adding students
  - Incoming elementary enrollment and graduating classes begin to reach a balance
  - In 2033 we are projected to return to the enrollment we had in 2013

| PEIMS YEAR | PROJECTED ENROLLMENT | GROWTH (DECLINE) | PERCENTAGE CHANGE |
|---|---|---|---|
| 2023 | 15,146 | -375 | -2.44% |
| 2024-P | 14,864 | -282 | -1.86% |
| 2025-P | 14,661 | -203 | -1.37% |
| 2026-P | 14,451 | -210 | -1.43% |
| 2027-P | 14,217 | -234 | -1. 62% |
| 2028-P | 14,073 | -144 | -1.01% |
| 2029-P | 14,007 | -66 | -0.47% |
| 2030-P | 14,017 | 10 | 0.07% |
| 2031-P | 14,036 | 19 | 0.14% |
| 2032-P | 14,059 | 22 | 0.16% |
| 2033-P | 14,162 | 103 | 0.73% |

# WHY HAS IT BECOME SO HARD TO PROJECT ENROLLMENT?

- Prior to COVID and area Charter Schools, SCUC was essentially the only option for parents moving into our growing community.
  - When projecting growth, birth rates and housing growth were the only two major variables we had to consider.
- Beginning 2017 with the first area Charter School, parents began to exercise their choice.
  - with COVID we saw virtual learning enter the game and homeschooling became more prevalent
  - Our community also continued to experience aging in place
- Projecting enrollment is much more difficult with these added variables.

# FORECASTING CONSIDERATIONS

- Enrollment
  - Historical Trends
  - Projections
  - Transfers to Charters and Other ISDs
- Campus Capacity

# UNDERSTANDING CAMPUS CAPACITY

- Design Capacity
  - Capacity of a campus as architecturally designed with every full-size classroom at full capacity
  - Ex. Sippel Elementary has a design capacity of 750 students
- Functional Capacity
  - Design capacity of a campus minus 10% to account for special programs on a campus that reduce the capacity of a full-size classroom
  - Ex. Sippel Elementary has a functional capacity of 675 students
- Maximum Capacity
  - Campus capacity considering the addition of portable classroom buildings to the design capacity and the number of students the common areas of the campus can support
  - Ex. Sippel Elementary has a maximum capacity of 1058 students

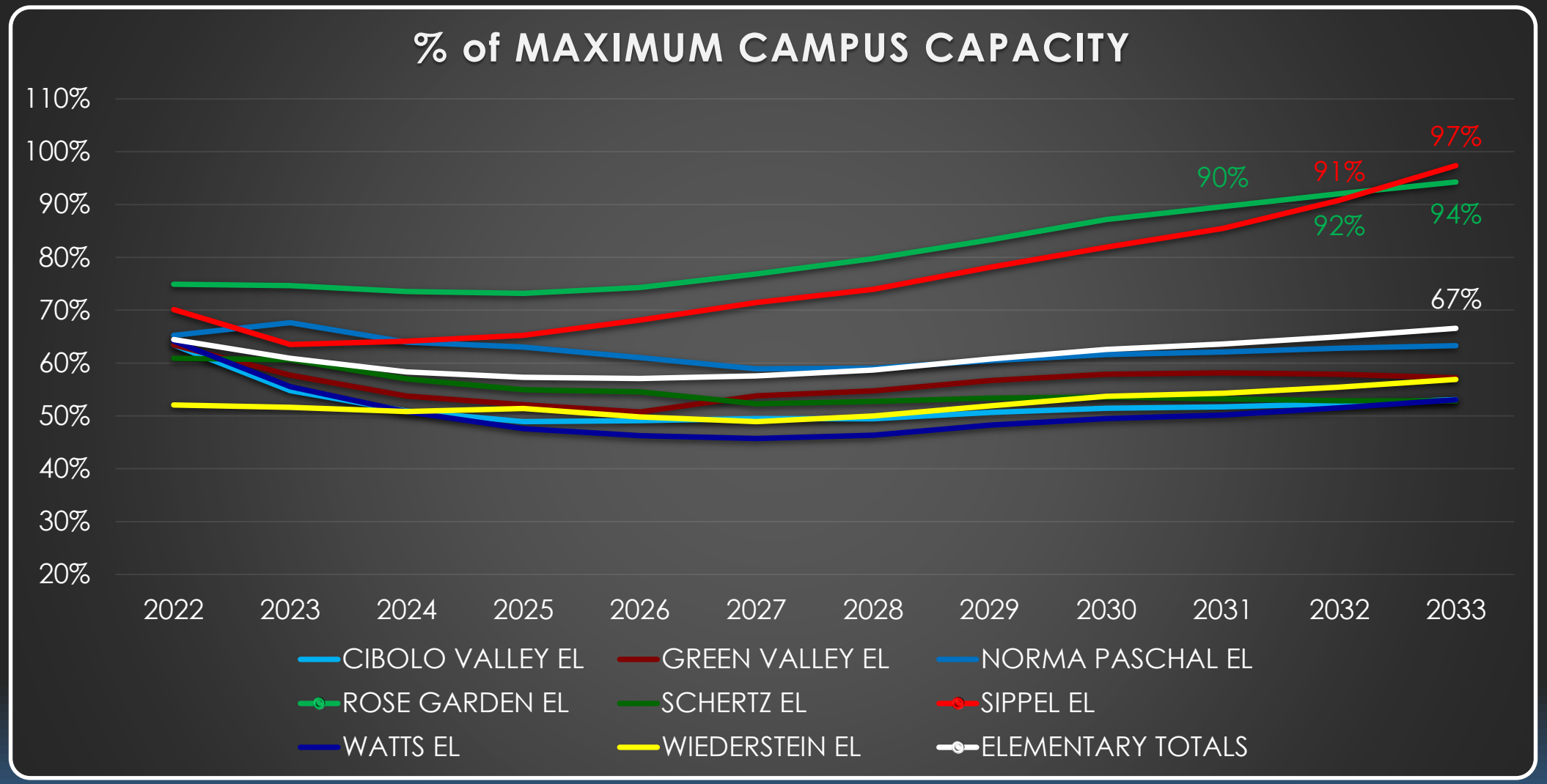
# PLANNING USING OUR MAXIMUM CAPACITY

- We begin considering the use of **CAPACITY RELIEF TOOLS** when a campus reaches **90%** of its maximum capacity. The District has several tools at our disposal
- Tools to **REDUCE/MAINTAIN THE ENROLLMENT** of a campus include:
  - Capping enrollment of the campus to new students
  - Moving special programs to campuses with lower enrollments
- Tools to **BALANCE THE ENROLLMENT** at campuses include:
  - Rezoning the attendance boundaries
- Tools to **INCREASE THE CAPACITY** of the campus/district include:
  - Adding portable classroom buildings
  - Adding to or renovating the existing building
  - Building a new campus to the district

# ELEMENTARY CAPACITIES

| Campus | Functional Capacity | Max Capacity | Previous Year | Current PEIMS | ENROLLMENT PROJECTIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
| CIBOLO VALLEY EL | 891 | 1,200 | 761 | 657 | 611 | 587 | 589 | 594 | 594 | 608 | 617 | 620 | 627 | 637 |
| % Max Capacity | | | 63% | 55% | 51% | 49% | 49% | 49% | 49% | 51% | 51% | 52% | 52% | 53% |
| GREEN VALLEY EL | 673 | 924 | 586 | 533 | 497 | 482 | 469 | 497 | 506 | 524 | 535 | 537 | 535 | 529 |
| % Max Capacity | | | 63% | 58% | 54% | 52% | 51% | 54% | 55% | 57% | 58% | 58% | 58% | 57% |
| NORMA PASCHAL EL | 673 | 924 | 603 | 625 | 591 | 582 | 564 | 544 | 546 | 559 | 569 | 574 | 580 | 585 |
| % Max Capacity | | | 65% | 68% | 64% | 63% | 61% | 59% | 59% | 60% | 62% | 62% | 63% | 63% |
| ROSE GARDEN EL | 891 | 1,200 | 899 | 896 | 882 | 878 | 891 | 923 | 957 | 999 | 1,046 | 1,075 | 1,104 | 1,131 |
| % Max Capacity | | | 75% | 75% | 74% | 73% | 74% | 77% | 80% | 83% | 87% | 90% | 92% | 94% |
| SCHERTZ EL | 675 | 1,102 | 671 | 668 | 628 | 605 | 601 | 576 | 581 | 588 | 591 | 586 | 582 | 582 |
| % Max Capacity | | | 61% | 61% | 57% | 55% | 55% | 52% | 53% | 53% | 54% | 53% | 53% | 53% |
| SIPPEL EL | 675 | 1,058 | 742 | 672 | 679 | 690 | 721 | 756 | 782 | 827 | 867 | 904 | 961 | 1,030 |
| % Max Capacity | | | 70% | 64% | 64% | 65% | 68% | 71% | 74% | 78% | 82% | 85% | 91% | 97% |
| WATTS EL | 673 | 924 | 593 | 513 | 469 | 440 | 428 | 423 | 428 | 446 | 457 | 463 | 476 | 490 |
| % Max Capacity | | | 64% | 56% | 51% | 48% | 46% | 46% | 46% | 48% | 49% | 50% | 52% | 53% |
| WIEDERSTEIN EL | 675 | 1,058 | 551 | 546 | 538 | 544 | 527 | 517 | 529 | 549 | 568 | 574 | 587 | 602 |
| % Max Capacity | | | 52% | 52% | 51% | 51% | 50% | 49% | 50% | 52% | 54% | 54% | 55% | 57% |
| ELEMENTARY TOTALS | 5,826 | 8,390 | 5,406 | 5,110 | 4,895 | 4,808 | 4,790 | 4,830 | 4,922 | 5,099 | 5,250 | 5,335 | 5,453 | 5,587 |
| % Max Capacity | | | 64% | 61% | 58% | 57% | 57% | 58% | 59% | 61% | 63% | 64% | 65% | 67% |
| Elementary Percent Change | | | -3.40% | -5.48% | -4.21% | -1.78% | -0.37% | 0.83% | 1.91% | 3.59% | 2.96% | 1.63% | 2.20% | 2.46% |
| Elementary Absolute Change | | | -190 | -296 | -215 | -87 | -18 | 40 | 92 | 177 | 151 | 85 | 117 | 134 |

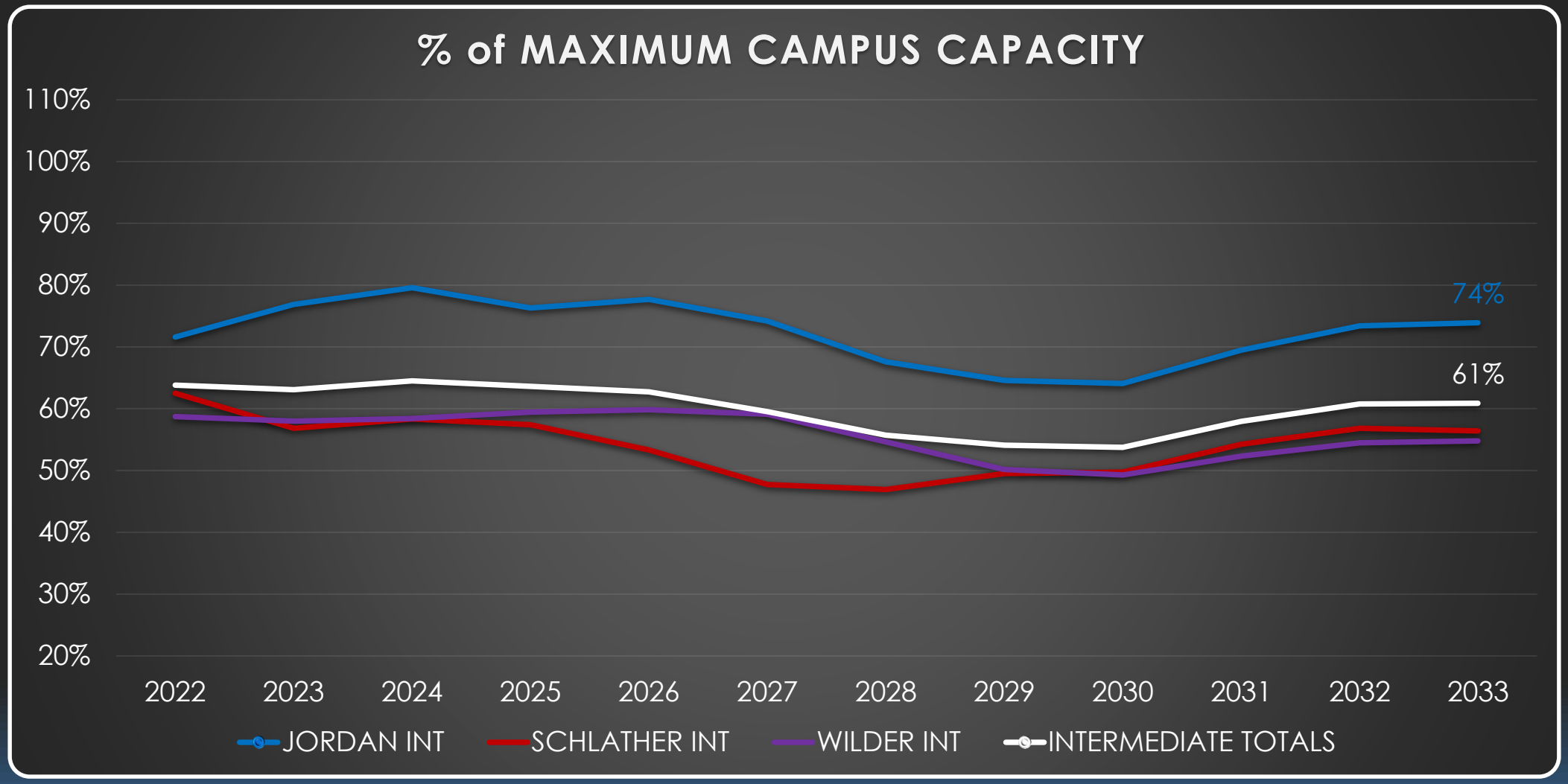
# ELEMENTARY CAPACITIES



# INTERMEDIATE CAPACITIES

| Campus | Functional Capacity | Max Capacity | Previous Year | Current PEIMS | ENROLLMENT PROJECTIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
| JORDAN INT | 810 | 1,000 | 716 | 769 | 796 | 763 | 777 | 742 | 676 | 646 | 641 | 695 | 734 | 739 |
| % Max Capacity | | | 72% | 77% | 80% | 76% | 78% | 74% | 68% | 65% | 64% | 70% | 73% | 74% |
| SCHLATHER INT | 810 | 1,200 | 750 | 682 | 700 | 689 | 640 | 573 | 563 | 594 | 597 | 651 | 682 | 677 |
| % Max Capacity | | | 63% | 57% | 58% | 57% | 53% | 48% | 47% | 50% | 50% | 54% | 57% | 56% |
| WILDER INT | 810 | 1,250 | 734 | 725 | 730 | 743 | 748 | 739 | 683 | 627 | 616 | 654 | 681 | 685 |
| % Max Capacity | | | 59% | 58% | 58% | 59% | 60% | 59% | 55% | 50% | 49% | 52% | 54% | 55% |
| **INTERMEDIATE TOTALS** | | 3,450 | 2,201 | 2,176 | 2,226 | 2,195 | 2,165 | 2,054 | 1,922 | 1,867 | 1,854 | 2,000 | 2,097 | 2,101 |
| **% Max Capacity** | | | 64% | 63% | 65% | 64% | 63% | 60% | 56% | 54% | 54% | 58% | 61% | 61% |
| Intermediate Percent Change | | | -6.13% | -1.09% | 2.30% | -1.39% | -1.37% | -5.13% | -6.43% | -2.86% | -0.70% | 7.87% | 4.85% | 0.19% |
| Intermediate Absolute Change | | | -144 | -24 | 50 | -31 | -30 | -111 | -132 | -55 | -13 | 146 | 97 | 4 |

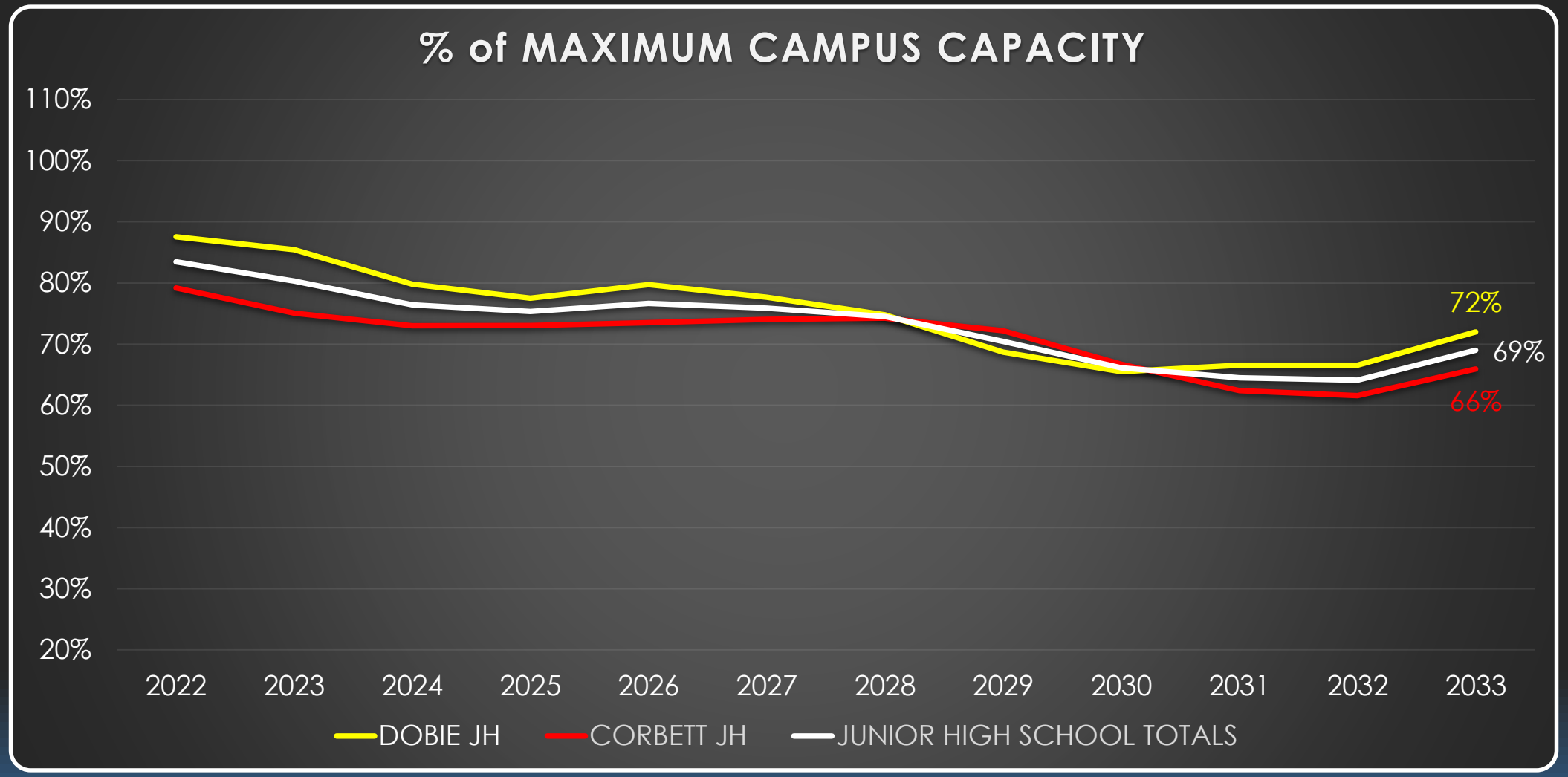
# INTERMEDIATE CAPACITIES



# JUNIOR HIGH CAPACITIES

| Campus | Functional Capacity | Max Capacity | Previous Year | Current PEIMS | ENROLLMENT PROJECTIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
| DOBIE JH | 1,300 | 1,540 | 1,348 | 1,316 | 1,229 | 1,194 | 1,228 | 1,196 | 1,152 | 1,058 | 1,009 | 1,025 | 1,025 | 1,109 |
| % Max Capacity | | | 88% | 85% | 80% | 78% | 80% | 78% | 75% | 69% | 66% | 67% | 67% | 72% |
| CORBETT JH | 1,080 | 1,500 | 1,188 | 1,126 | 1,095 | 1,096 | 1,103 | 1,111 | 1,114 | 1,083 | 1,001 | 936 | 924 | 989 |
| % Max Capacity | | | 79% | 75% | 73% | 73% | 74% | 74% | 74% | 72% | 67% | 62% | 62% | 66% |
| **JUNIOR HIGH SCHOOL TOTALS** | | 3,040 | 2,537 | 2,442 | 2,324 | 2,290 | 2,331 | 2,307 | 2,266 | 2,141 | 2,010 | 1,961 | 1,949 | 2,098 |
| **% Max Capacity** | | | 83% | 80% | 76% | 75% | 77% | 76% | 75% | 70% | 66% | 65% | 64% | 69% |
| Junior High School Percent Change | | | -2.62% | -3.71% | -4.83% | -1.46% | 1.79% | -1.03% | -1.78% | -5.52% | -6.12% | -2.44% | -0.61% | 7.64% |
| Junior High School Absolute Change | | | -68 | -94 | -118 | -34 | 41 | -24 | -41 | -125 | -131 | -49 | -12 | 149 |

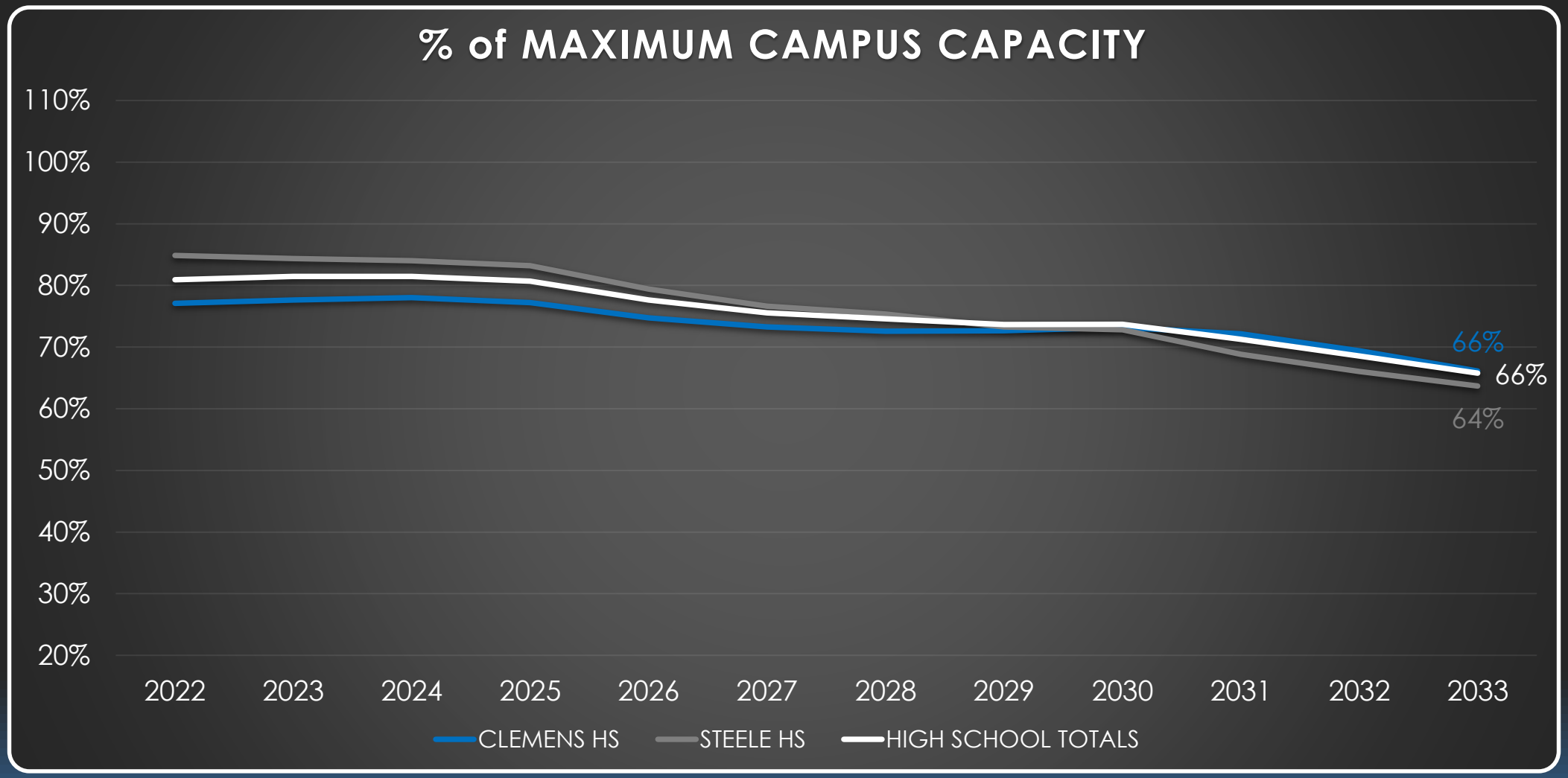
# JUNIOR HIGH CAPACITIES



# HIGH SCHOOL CAPACITIES

| Campus | Functional Capacity | Max Capacity | Previous Year | Current PEIMS | ENROLLMENT PROJECTIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
| CLEMENS HS | 2,700 | 3,300 | 2,544 | 2,563 | 2,576 | 2,550 | 2,469 | 2,419 | 2,397 | 2,400 | 2,418 | 2,383 | 2,292 | 2,183 |
| % Max Capacity | | | 77% | 78% | 78% | 77% | 75% | 73% | 73% | 73% | 73% | 72% | 69% | 66% |
| STEELE HS | 2,160 | 3,200 | 2,716 | 2,700 | 2,688 | 2,663 | 2,541 | 2,452 | 2,411 | 2,345 | 2,330 | 2,202 | 2,113 | 2,038 |
| % Max Capacity | | | 85% | 84% | 84% | 83% | 79% | 77% | 75% | 73% | 73% | 69% | 66% | 64% |
| **HIGH SCHOOL TOTALS** | | 6,650 | 5,381 | 5,418 | 5,419 | 5,368 | 5,165 | 5,026 | 4,963 | 4,900 | 4,903 | 4,740 | 4,560 | 4,376 |
| **% Max Capacity** | | | 81% | 81% | 81% | 81% | 78% | 76% | 75% | 74% | 74% | 71% | 69% | 66% |
| High School Percent Change | | | 0.69% | 0.71% | 0.02% | -0.94% | -3.78% | -2.69% | -1.25% | -1.27% | 0.06% | -3.32% | -3.80% | -4.04% |
| High School Absolute Change | | | 37 | 38 | 1 | -52 | -204 | -137 | -64 | -63 | 3 | -163 | -180 | -183 |

# HIGH SCHOOL CAPACITIES



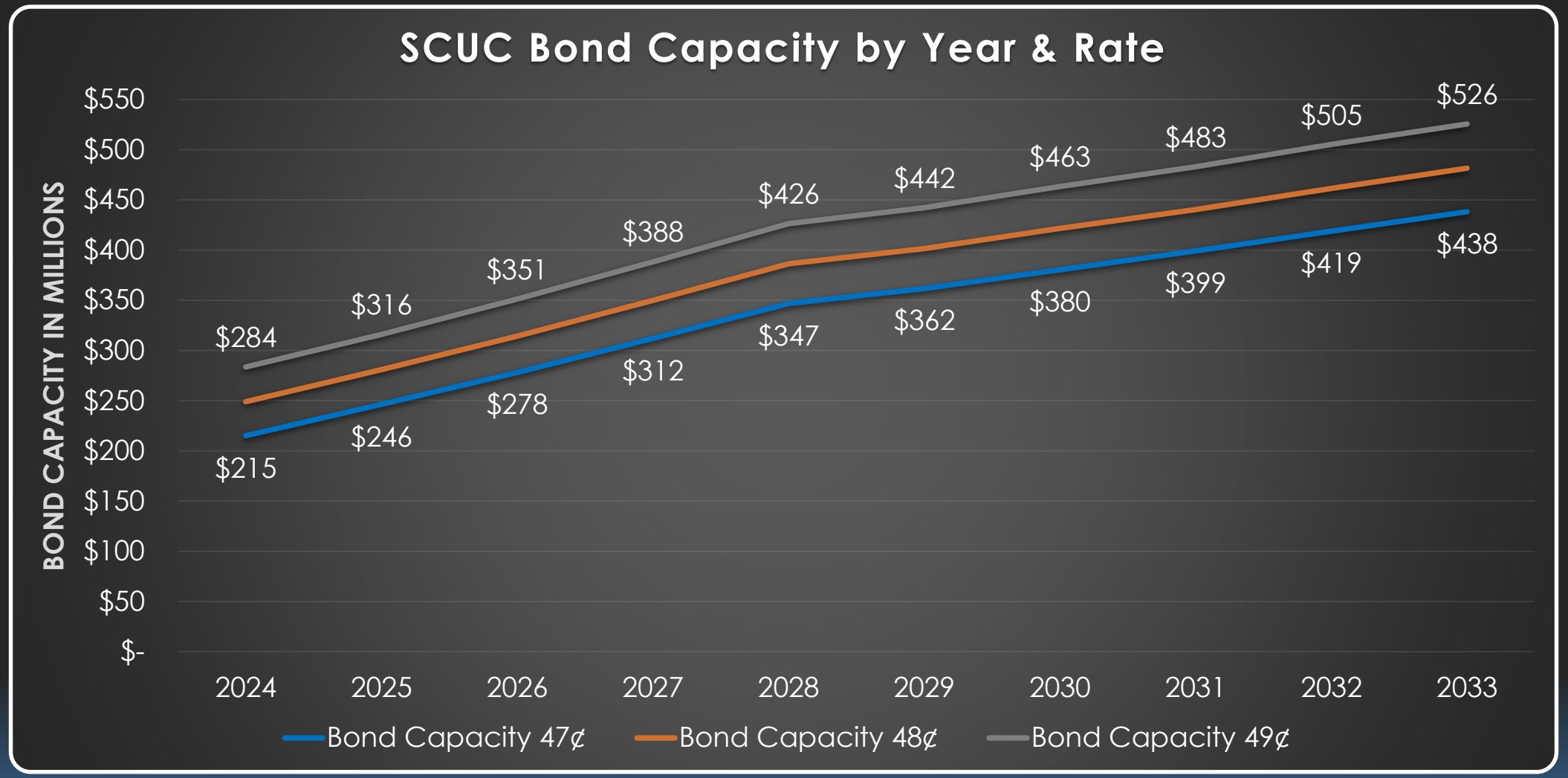
# FORECASTING CONSIDERATIONS

- Enrollment
  - Historical Trends
  - Projections
  - Transfers to Charters and Other ISDs
- Campus Capacity
- Bonding Capacity

# PROJECTING BONDING CAPACITY - SCUC

- Projecting Tax Revenue
  - Assumes NO refinancing for bond savings
    - Defeasing principal
  - Modest property value growth
    - 4.0% annual increase for 2024-2028
    - 2.0% annual increase for 2029-2033
- As debt is restructured and property values increase, we begin to have some bonding capacity
  - Capacity for additional debt is lower at first, more in later years
- Forecasting using three options for I&S Tax Rate
  - **$0.47** per $100 of valuation (Current), **$0.48** per $100 valuation, and **$0.49** per $100 valuation

# PROJECTED AVAILABLE BOND DOLLARS



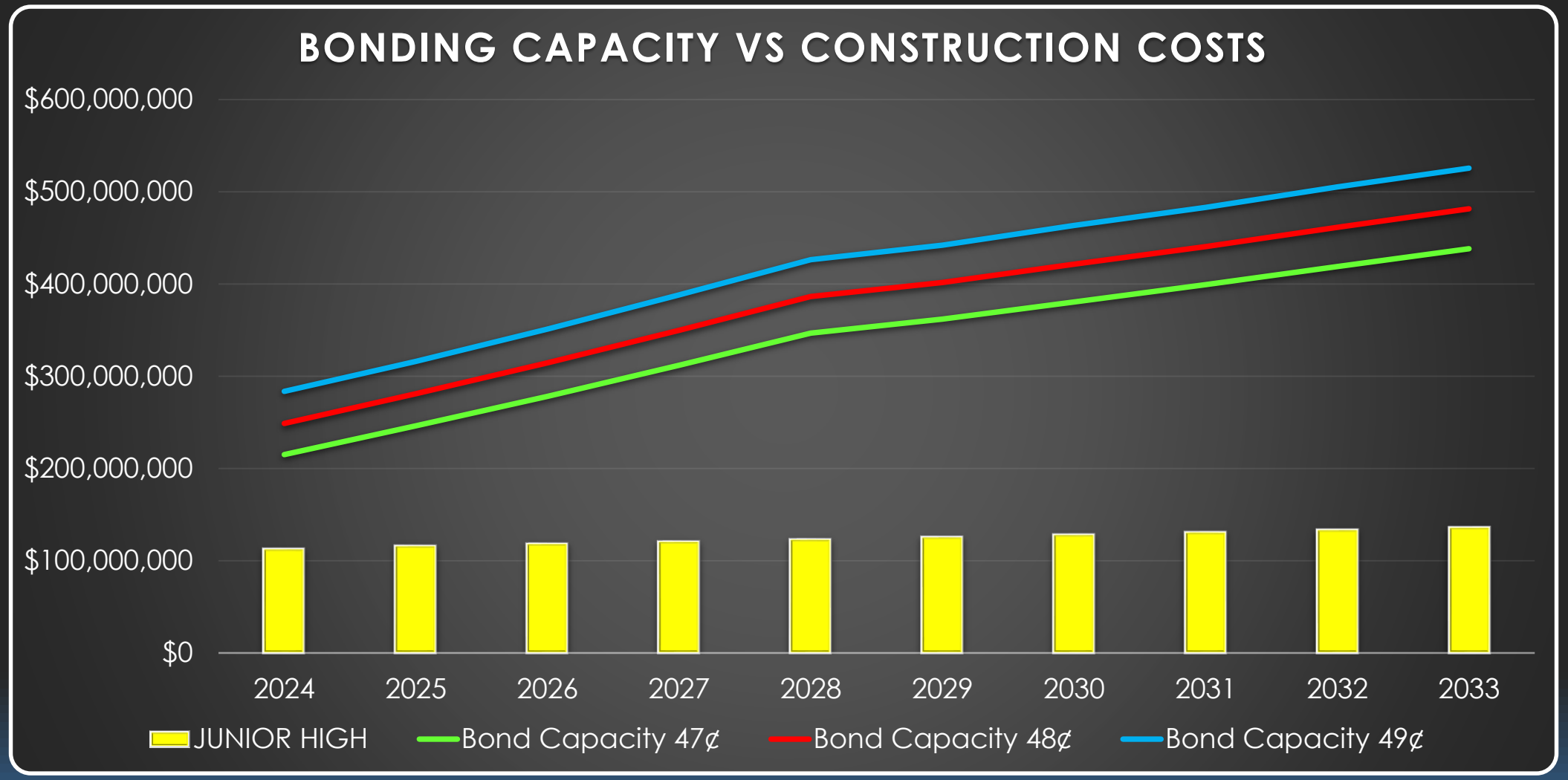
# PROJECTING FACILITY COSTS - SCUC

- Projecting Future Costs of New Facilities
  - Fluctuating materials and labor costs make long-term projections difficult
  - The market has seen huge inflation over the last several years, but seems to have stabilized during 2023
    - 2020-2023 we experienced 7-15% inflation annually
  - Projecting past 2024
    - 3% annual inflation for 2024
    - 2% annual inflation for 2025 and beyond
- Construction Estimate Rules of Thumb – 2024 Dollars
  - High School - $235 Million
  - Junior High School - $113 Million
  - Intermediate/Elementary - $72 Million

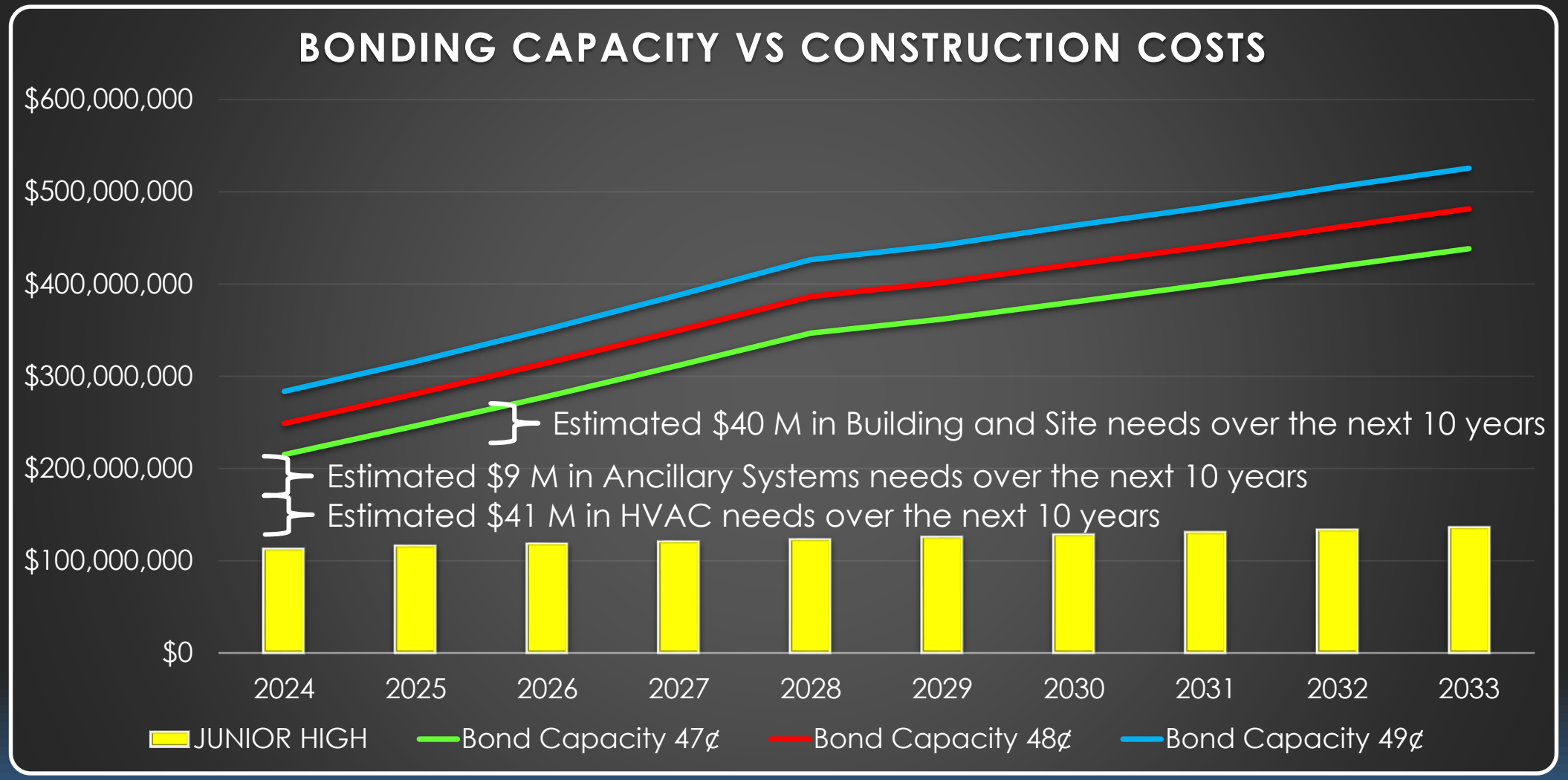
# PROJECTING FACILITY COSTS - SCUC

| YEAR | High School | Junior High | Elementary/ Intermediate |
|---|---|---|---|
| 2024 | $ 235,000,000 | $ 113,000,000 | $ 72,000,000 |
| 2025-P | $ 242,050,000 | $ 116,390,000 | $ 74,160,000 |
| 2026-P | $ 246,891,000 | $ 118,717,800 | $ 75,643,200 |
| 2027-P | $ 251,828,820 | $ 121,092,156 | $ 77,156,064 |
| 2028-P | $ 256,865,396 | $ 123,513,999 | $ 78,699,185 |
| 2029-P | $ 262,002,704 | $ 125,984,279 | $ 80,273,169 |
| 2030-P | $ 267,242,758 | $ 128,503,965 | $ 81,878,632 |
| 2031-P | $ 272,587,614 | $ 131,074,044 | $ 83,516,205 |
| 2032-P | $ 278,039,366 | $ 133,695,525 | $ 85,186,529 |
| 2033-P | $ 283,600,153 | $ 136,369,435 | $ 86,890,260 |
| 2034-P | $ 289,272,156 | $ 139,096,824 | $ 88,628,065 |

# PROJECTED BOND CAPACITIES VS. CONSTRUCTION COSTS



# PROJECTED BOND CAPACITIES VS. CONSTRUCTION COSTS



# TAKE AWAYS….

- Student Enrollment/Projections
  - Prior to COVID-19 SCUC ISD's enrollment growth had slowed to 1% per year
  - COVID and the opening of charter schools has impacted district enrollment, especially at the younger grades
  - This multi-year impact is reducing our enrollment even with new housing
  - An average 1% annual decline in enrollment is forecasted for the next six years
- Capacity Relief Tools
  - We have multiple tools to help relieve our campuses once they surpass 90% of their max capacity and move closer to 100%
- With our projected enrollment declining, our attention must be focused on maintaining the infrastructure of our existing buildings and identifying future programmatic needs for our students
- We also need to consider if 2 Junior Highs continue to meet the needs of our District

# QUESTIONS/COMMENTS

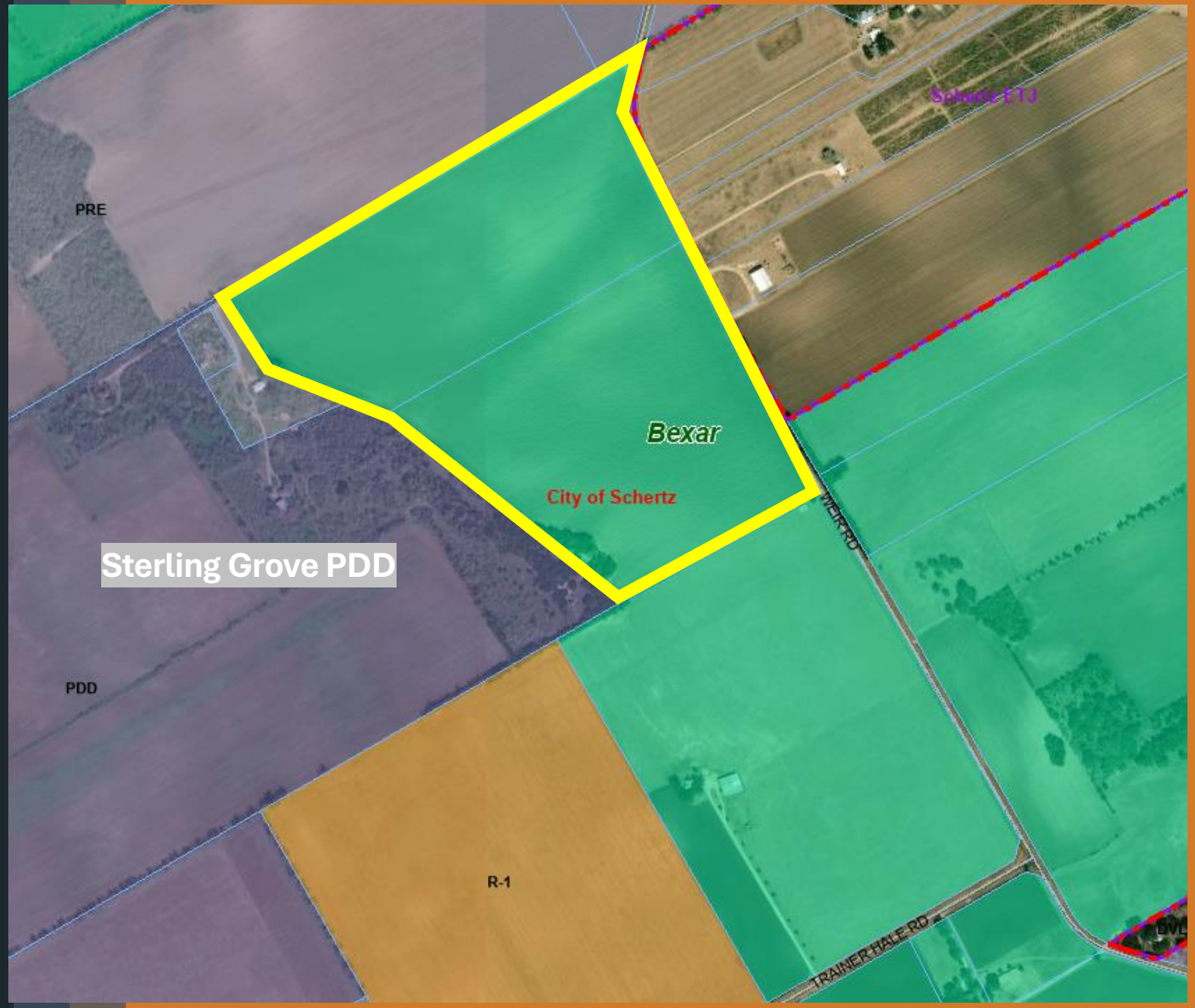


# Ordinance 25-S-002

Proposed Zone Change to R-2 & R-6 along Weir Road

**Daisy Marquez| Planner**

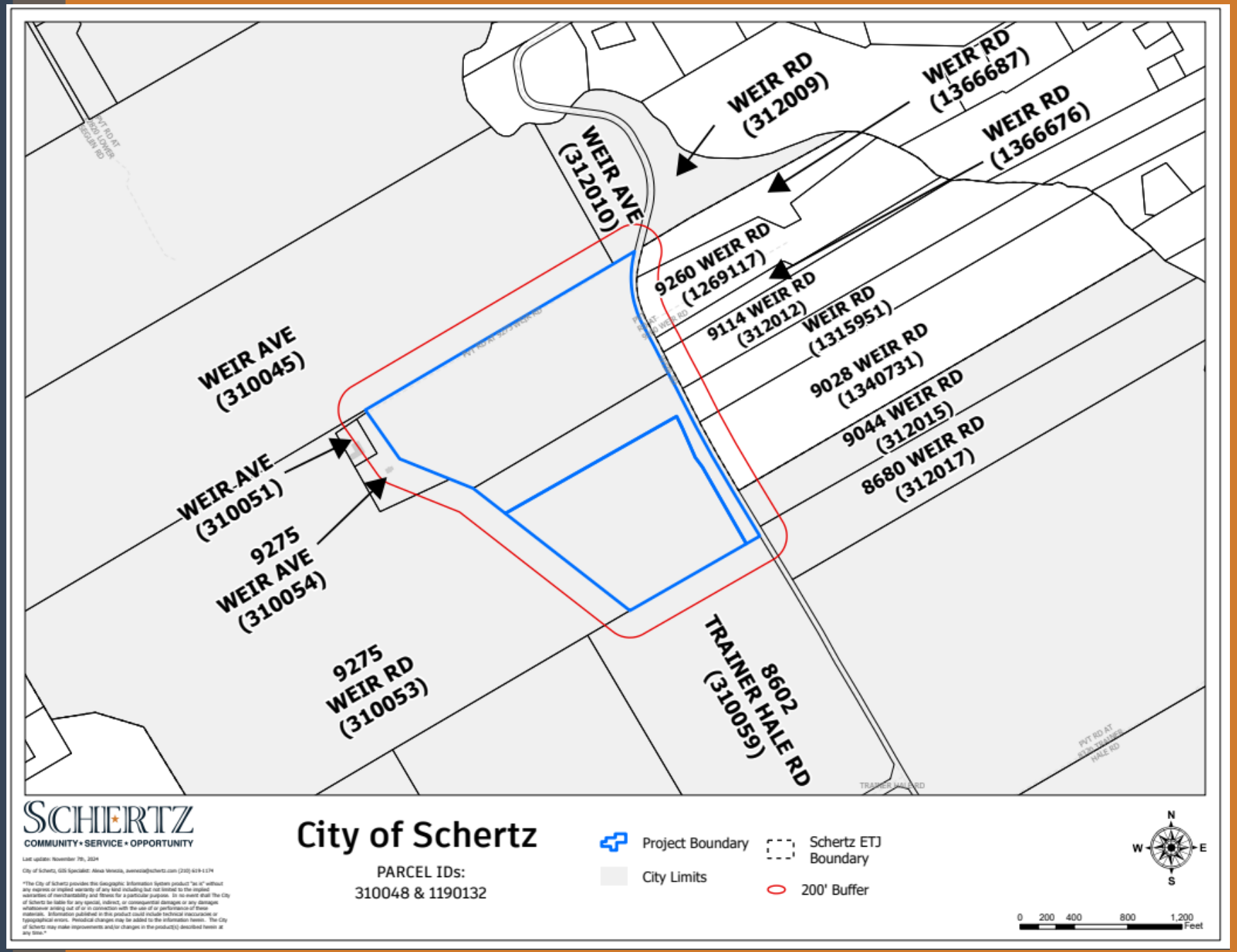
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COMMUNITY. SERVICE. OPPORTUNITY.




| | Zoning | Use |
|---|---|---|
| Subject Property | Agricultural District (AD) | Undeveloped |
| North | Pre-Development District (PRE) | Undeveloped |
| South | Agricultural District (AD) | Undeveloped Agriculture |
| East | Right-of-Way | Weir Road (Principal Arterial) |
| West | Planned Development District (PDD) & Pre-Development District (PRE) | Undeveloped Sterling Grove PDD and Undeveloped Agriculture |

- **85 Acres**
- **Undeveloped**
- **Unplatted**
- **Bexar ID: 310048**
- **Bexar ID: 1190132**

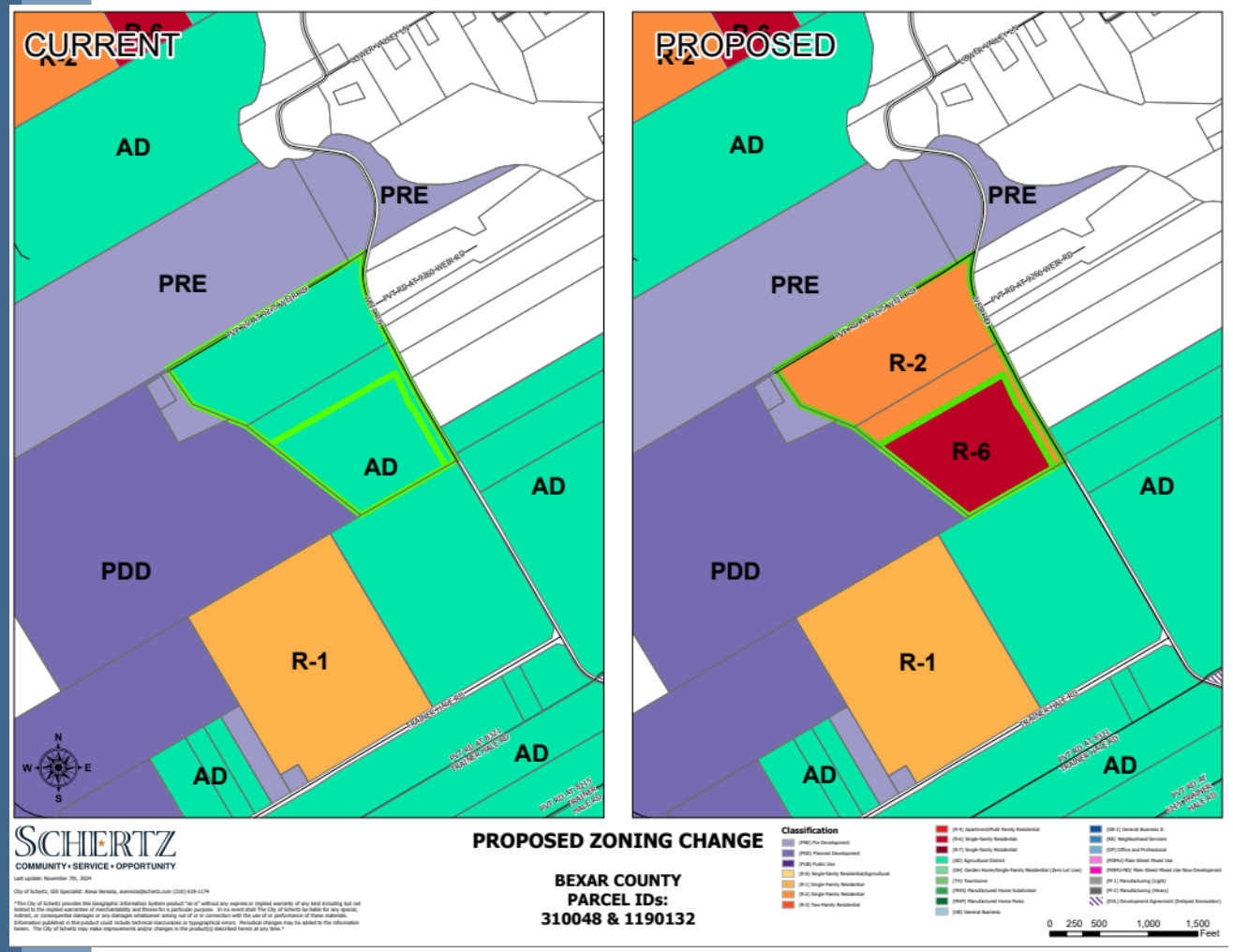
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- 11 public notices were sent on 11.19.24
- As of 12.5.24
  - (3) in favor
  - (0) Neutral
  - (1) in Opposition
- A public hearing notice was published in the "San Antonio Express" on December 18, 2024
- 2 signs were placed by the applicant

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# Background



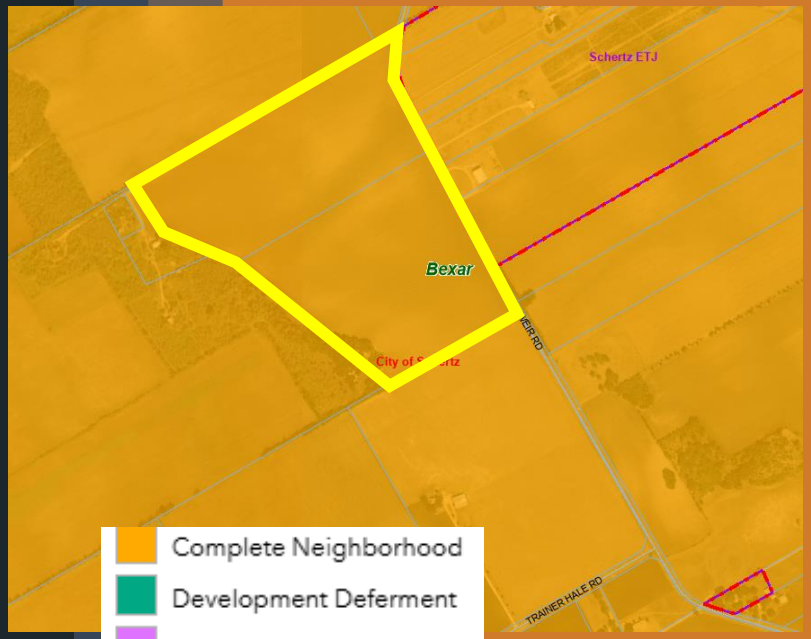

| KRUEGER–MARTIN ZONING TABLE | | |
|---|---|---|
| CONDITION | ZONING | AREA |
| EXISTING | AD | 84.232 |
| PROPOSED TRACT A | R–2 | 54.232 |
| PROPOSED TRACT B | R–6 | 30.000 |

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| | Existing | Proposed | Proposed |
|---|---|---|---|
| | Agricultural District (AD) | Single-Family Residential District (R-2) | Single –Family Residential District (R-6) |
| Permitted Uses | Accessory Building, Residential; Agricultural/Field Crops; Airport, Heliport, or Landing Field; Bed & Breakfast Inn (S); Building Material & Hardware Sales; Cemetery or Mausoleum (S); Church, Temple, Synagogue, Mosque, or Other Place of Worship (S); Convenience Store W/out Gas Pumps (S); Family or Group Home; Heavy Equipment Sales, Service or Rental (S); In Home Daycare (S); Livestock; Municipal Uses; Nursery, Major (S); Nursery, Minor; One-Family Dwelling Detached; Park/Playground/Similar Public Site; Recreational Vehicle Park (S); School, Public or Private; Stable, Commercial; Tool Rental (S); Veterinarian Clinic/Kennel Indoor; Veterinarian Clinic/ Kennel Outdoor; Welding/ Machine Shop (S) | Accessory Building, Residential; Bed & Breakfast Inn (S); Church, Temple, Synagogue, Mosque, or Other Place of Worship (S); Family or Group Home; Gated Community, Golf Course, Municipal Uses; One-Family Dwelling Detached; Park/Playground/ Similar Public Site; School, Public or Private; In Home Daycare (S) | Accessory Building, Residential; Bed & Breakfast Inn (S); Church, Temple, Synagogue, Mosque, or Other Place of Worship (S) ;Family or Group Home; Gated Community, Golf Course, Municipal Uses; One-Family Dwelling Detached; Park/Playground/ Similar Public Site; School, Public or Private; In Home Daycare (S); |
| Width & Depth | 100’x100’ | 70’x120’ | 60’x120’ |
| Area Square Feet | 217,800 sqft | 8,400 sqft | 7,200 sqft |
| Setbacks | Front: 25’, Side: 25’, Rear: 25’ | Front:25’, Side:10’, Rear:20’ | Front:25’, Side:10’, Rear:20’ |
| Maximum Height | 35’ | 35’ | 35’ |
| Maximum Impervious Coverage | 30% | 50% | 50% |

# UDC SECTION 21.5.11.D Criteria for Approval

1. **Whether the proposed zoning change implements the policies of the adopted Comprehensive Land Plan, or any other applicable adopted plans.**




- Does implement the policies of the adopted Comprehensive Land Plan.
  - Complete Neighborhood

- R-6 and R-2 within the same development

# UDC SECTION 21.5.11.D Criteria for Approval

**2. Whether the proposed zoning change promotes the health, safety, and general welfare of the City.**

As part of promoting health, safety, and welfare, the City should encourage development compatible with surrounding uses utilizing standards and transitional uses to alleviate negative impacts.

The proposed R-6 & R-2 acts as a transitional use to the existing undeveloped agricultural land.

# UDC SECTION 21.5.11.D Criteria for Approval

## 3. Whether the uses permitted by the proposed change will be consistent and appropriate with existing uses in the immediate area;

- The proposed (R-2) and (R-6) are appropriate for development in the immediate area.
- The maximum tract size that can be zoned (R-6) is 30 acres.
- (R-6) and (R-2) are intended for detached single-family homes, together with schools, churches, and parks necessary to create basic neighborhood units.

# 3. Continued

## Sterling Grove PDD

**Table One– Dimensional Requirements**

| | | Min Lot Size | | | Min. Yard Setback | | | Min. Off-Street Parking Spaces | Misc. Requirements | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Code** | Classification | Area sf | Width ft | Depth ft | Front ft | Side ft | Rear ft | Parking | Max. Ht. | **Max. Cover** |
| **SFR1** | Single Family | 6,050 | 55 | 110 | 20* | 10 | 15** | 2 | 35 | **60%** |
| **SFR2** | Single Family | 7,150 | 65 | 110 | 20* | 10 | 15** | 2 | 35 | **60%** |
| | | | | | | | | 2 | 35 | **50%** |

ım front yard setback of 20 feet.
feet.

## UDC Requirements

Table 21.5.7.A DIMENSIONAL REQUIREMENTS
RESIDENTIAL ZONING DISTRICTS

| | | Minimum Lot Size And Dimensions | | | Minimum Yard Setback (Ft) | | | | Miscellaneous Lot Requirements | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Code | Zoning District | Area Sq. Ft. | Width Ft. | Depth Ft. | Front Ft. | Side Ft. | Rear Ft. | Minimum Off-Street Parking Spaces | Max Height Ft. | Max Imperv Cover | Key |
| R-1 | Single-Family Residential District-1 | 9,600 | 80 | 120 | 25 | 10 | 20 | 2 | 35 | 50% | h, j, k, l, m, o |
| R-2 | Single-Family Residential District-2 | 8,400 | 70 | 120 | 25 | 10 | 20 | 2 | 35 | 50% | h, j, k, l, m, o |
| R-6 | Single-Family Residential District-6 | 7,200 | 60 | 120 | 25 | 10 | 20 | 2 | 35 | 50% | h, k, l, m, n, o |

The subject property is adjacent to a portion of the Planned Development District (PDD) Sterling Grove.

The proposed zone change is consistent with the surrounding Sterling Grove PDD

# UDC SECTION 21.5.11.D Criteria for Approval

**4. Whether other factors are deemed relevant and important in the consideration of the amendment.**

The Planning and Zoning Commission and City Council have not provided additional criteria for the proposed zone change.

# Recommendation

***Staff Recommendation:***

The proposed zone change meets the intent of the Comprehensive Land Use Plan- Future Land Use Map and is appropriate with the existing uses in the immediate area. Staff recommends approval of Ordinance 25-S-002.

***Planning and Zoning Commission:***

The Planning and Zoning Commission held a public hearing for the item on December 4, 2024, and made a recommendation of approval to City Council with a unanimous vote.

**Agenda No. 7.**

**CITY COUNCIL MEMORANDUM**

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **Planning & Community Development** |
| **Subject:** | **Ordinance 25-S-001 - Conduct a public hearing and consider a request to rezone approximately 26 acres of land, from Single-Family Residential District (R-2) to Single-Family Residential District (R-6), known as a portion of Guadalupe County Property Identification Number 64640, generally located 78 feet South of the intersection of Savannah Drive and Irish Creek Road, City of Schertz, Guadalupe County, Texas.(B.James/L.Wood/D.Marquez).** |

## BACKGROUND

The applicant is requesting to rezone approximately 26 acres of land from Single-Family Residential District (R-2) to Single-Family Residential District (R-6). The property is currently a polo field. The subject property is planned to be part of a larger development that proposes developing within the Accident Potential Zone II (APZ-II). The portion of the property within the APZ-II is not part of the requested rezone.

On November 19, 2024, twenty-two (22) public hearing notices were mailed to the surrounding properties within a 200-foot notification boundary of the subject property. At the time of the staff report, one (1) response in favor, zero (0) responses were neutral, and nineteen (19) responses in opposition have been received. 20.13% opposition was received from the area of the lots or land covered by the proposed zone change or lots or land adjoining the area covered by the proposed zone change and extending 200-feet from that area. The proposed change must receive, in order to take effect, the affirmative vote of at least three-fourths (3/4) of all members of the City Council according to LGC, Local Government Code 211.006 (d). A public hearing notice was published in the "San Antonio Express" on December 18, 2024. Additionally, two (2) signs were placed on the subject property by the applicant. The City of Schertz Planning and Zoning Commission held a public hearing for the item on December 4, 2024.

The City of Schertz Fire, EMS, and Police Departments have been notified of the proposed zone change and have not provided objections. A public hearing notice was also mailed to Schertz-Cibolo-Universal City Independent School District. The most recent SCUC ISD Demographic Report and 10-Year Campus Forecasting Report have been attached to the Staff Report. Joint Base San Antonio-Randolph Air Force Base was also notified of the zone change and provided a response, which is attached.

A previous application for a proposed Planned Development District (PDD) was submitted for the subject parcel and additional land to the west and went to the Planning and Zoning Commission in March 2024 and to the City Council in April 2024. The application received affirmative support from JBSA-Randolph but was denied by City Council. The PDD proposed to not allow residential development within the APZ II and only allow the development of residences within the remaining 26 acres that were outside the APZ II. The creation of the PDD to prevent the development of residences within the APZ II was determined to be a community benefit by Staff and the reason for support of the proposed PDD. The current application for a zone change to Single-Family Residential District (R-6)

is only for the 26 acres of the parcel that are outside the APZ II. The applicant is not proposing to rezone the portion within the APZ II and intends to leave it as Single-Family Residential District (R-2), per the provided zoning exhibit. Ultimately, the proposed zone change does not provide a community benefit due to the exclusion of the remaining acreage within the APZ II, which contributes to Staff's recommendation of denial.

**GOAL**

The applicant is proposing to zone approximately 26 acres of land from Single Family Residential District (R-2) to Single-Family Residential District (R-6).

| ***Table 21.5.7.A Dimensional Requirements Residential Zoning Districts*** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Minimum Lot Size and Dimensions (Ft)** | | | **Minimum Yard Setback (Ft)** | | | **Miscellaneous Lot Requirements** | | |
| | *Code* | *Zoning District* | *Area SqFt* | *Width* | *Depth* | *Front* | *Side* | *Rear* | *Minimum Off-Street Parking Spaces* | *Max Height* | *Max Imperv. Cover* |
| Existing | R-2 | Single-Family Residential District | 8,400 | 70 | 120 | 25 | 10 | 20 | 2 | 35 | 50% |
| Proposed | R-6 | Single-Family Residential District | 7,200 | 60 | 120 | 25 | 10 | 20 | 2 | 35 | 50% |

**COMMUNITY BENEFIT**

It is the City’s desire to promote safe, orderly, efficient development and ensure compliance with the City’s vision of future growth.

**SUMMARY OF RECOMMENDED ACTION**

The subject property is located along Savannah Drive and Irish Creek Road. Savannah Drive is identified as a Residential Collector with 70-feet of Right-of-Way. Any improvements required at Savannah Drive and Irish Creek Road would be determined at the time of platting. The property is located partially within the 1% and 0.2% Annual Chance Flood Hazard.

***When evaluating zone changes, Staff refers to the criteria listed in UDC Section 21.5.4.D. The criteria are listed below:***

**1. Whether the proposed zoning change implements the policies of the adopted Comprehensive Land Plan, or any other applicable adopted plans;**

The subject property is designated as Complete Neighborhood in the Comprehensive Land Use Plan-Future Land Use Map. The Complete Neighborhood Land Use Designation is described as general areas characterized by a mixture of housing options with supporting land uses, such as neighborhood commercial. These areas should promote connectivity and foster a more bikeable and walkable development pattern. When considering the appropriateness of housing density or commercial activity, factors such as roadway classification, conflicts among land uses and buildings,

as well as the undue concentration or diffusion of population should be considered.

Single-Family Residences do meet the intent of the Complete Neighborhood Land Use Designation. Single-Family Residential District (R-6) can be appropriate in the Complete Neighborhood Land Use Designation if it promotes a mixture of housing options, is compatible with roadway classifications, does not produce conflict among land uses, and does not promote the concentration of the population.

However, the proposed Single-Family Residential District (R-6), at the subject location and in the greater immediate area, does not implement the intent of the Complete Neighborhood Land Use Designation. Complete Neighborhood is intended for a mixture of housing options with supporting land uses. To the north of the subject property, Kensington Ranch Estates PDD, Ordinance 05-S-41, was approved in 2005 and the PDD implemented different development standards for lots depending on whether they were located within the APZ II or not. The properties within the APZ II, are large lots at a minimum 10,800 square feet, which is much larger than the Single-Family Residential District (R-1) that requires a minimum of 9,600 square feet, and all other lots were built to a minimum of 7,200 square feet, which is equivalent to the minimum square footage of Single-Family Residential District (R-6). To the east of the subject property, there is a drainage lot, and then there is the existing Ashley Place Subdivision zoned Single-Family Residential District (R-6). To the west of the subject property, there are Single-Family Residences that are outside the Schertz City Limits but within Universal City and are smaller lot homes of approximately 6,000 square feet. The proposed Single-Family Residential District (R-6) replicates what is in the surrounding area, and does not propose a different zoning district that would allow for a mixture of housing types. The existing Single-Family Residential District (R-2) promotes a mixture of housing types as it creates a transition from the existing smaller-lot homes in the surrounding areas. When considering the appropriateness of housing density, factors such as the undue concentration or diffusion of population should be considered. The proposed Single-Family Residential District (R-6) further concentrates population along Savannah Drive, whereas the existing Single-Family Residential District (R-2) allows for a diffusion of the population among the small lot Single-Family Residences in the surrounding area. Additionally, the existing Single-Family Residential District (R-2), creates a further transition from the smaller lots to the Single-Family Residential District (R-2) and commercial properties that are south of the subject property along Maske Rd.

**2. Whether the proposed zoning change promotes the health, safety, and general welfare of the City.**

As part of promoting health, safety, and welfare, the City should encourage development compatible with surrounding uses, utilizing standards and transitional uses to alleviate negative impacts. At the subject property, and considering the existing surrounding uses and the Comprehensive Land Use Plan Land Use Designation, the existing Single-Family Residential District (R-2) better promotes the health, safety, and general welfare of the City than the proposed Single-Family Residential District (R-6). Certainly the reduced number of units that would be developed based on the existing zoning does not exacerbate some of the road capacity and safety concerns of residents as much as the increased units from the proposed zoning.

**3. Whether other uses permitted by the proposed change will be consistent and appropriate with existing uses in the immediate area.**

The existing Single-Family Residential District (R-2) is more compatible and appropriate with the existing uses in the immediate area to promote a mixture of housing options. Single-Family Residential District (R-6) is intended for single-family detached residences on a minimum lot size of

7,200 square feet, together with schools, churches, and parks necessary to create basic neighborhood units. This district is intended to be developed using contemporary building styles and allowing those dwellings to be constructed on relatively small lots with the maximum size tract of R-6 to be 30 acres as per UDC Section 21.5.5.

**4. Whether other factors are deemed relevant and important in the consideration of the amendment.**

Previous zoning discussions at the City Council have established a policy that if a proposed zone change would not result in an inherently better development than what could potentially develop with the current zoning, then the proposed zone change would not be desired.

During the public hearings of the previously requested zone change, the adjacent residential property owners provided significant opposition to higher-density residential development. Additionally, concerns were expressed by residents of the existing traffic along Savannah Drive and the intersections of FM 1518 and Savannah and Schertz Parkway and Savannah, and the potential for new traffic concerns with higher density development.

A published magazine article in "Community Impact Newspaper" and a Universal City City Council Agenda were brought to the attention of Staff by a resident, which demonstrated the subject property as part of a larger conceptual development in Schertz and Universal City ETJ. At this time, the proposed zone change is the only application that has been submitted within the City of Schertz. No other applications have been submitted. The conceptual development does not change the opinion or recommendation by Staff to recommend denial of Ordinance 25-S-001, a proposed zone change to Single-Family Residential District (R-6) on approximately 26 acres.

**RECOMMENDATION**

***Staff Recommendation:***

Staff recommends denial of Ordinance 25-S-001.

***Planning and Zoning Commission:***

The Planning and Zoning Commission held a public hearing on December 4, 2024, for the item and made a recommendation of approval to the City Council with a 4-2 vote, with Chairman Outlaw and Commissioner McMaster voting nay.

---

**Attachments**

Ordinance 25-S-001 With Attachments

Aerial Exhibit

Notification Map

Public Hearing Responses

Opposition Map

SCUCISD Demographic Report

SCUCISD 10 Year Campus Forecasting

JBSA Response

City Council Presentation Slides

**ORDINANCE NO. 25-S-001**

**AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS TO REZONE APPROXIMATELY 26 ACRES OF LAND FROM SINGLE-FAMILY RESIDENTIAL DISTRICT (R-2) TO SINGLE-FAMILY RESIDENTIAL DISTRICT (R-6), KNOWN AS A PORTION OF GUADALUPE COUNTY PROPERTY IDENTIFICATION NUMBER 64640, GENERALLY LOCATED 78 FEET SOUTH OF THE INTERSECTION OF SAVANNAH DRIVE AND IRISH CREEK ROAD, CITY OF SCHERTZ, GUADALUPE COUNTY, TEXAS.**

**WHEREAS,** an application for a request to rezone approximately 26 acres of land from Single-Family Residential District (R-2) to Single-Family Residential District (R-6), a portion of Guadalupe County property identification number 64640, located approximately 78 feet South of the intersection of Savannah Drive and Irish Creek Road, more specifically described in the Exhibit A and Exhibit B attached herein (herein, the "Property") has been filed with the City; and

**WHEREAS,** the City's Unified Development Code Section 21.5.4.D. provides for certain criteria to be considered by the Planning and Zoning Commission in making recommendations to City Council and by City Council in considering final action on a requested zoning (the "Criteria"); and

**WHEREAS,** on December 4, 2024, the Planning and Zoning Commission conducted a public hearing and, after considering the Criteria, made a recommendation to City Council to approve the requested zoning; and

**WHEREAS,** on January 7, 2025, the City Council conducted a public hearing and after considering the Criteria and recommendation by the Planning and Zoning Commission, determined that the requested zoning be approved as provided for herein.

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS THAT:**

Section 1. The Property as shown and more particularly described in the attached Exhibit A and Exhibit B, is hereby zoned to Single-Family Residential District (R-6).

Section 2. The Official Zoning Map of the City of Schertz, described and referred to in Article 2 of the Unified Development Code, shall be revised to reflect the above amendment.

Section 3. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Ordinance for all purposes and are adopted as a part of the judgment and findings of the Council.

Section 4. All ordinances and codes, or parts thereof, which are in conflict or inconsistent with any provision of this Ordinance are hereby repealed to the extent of such conflict, and the provisions of this Ordinance shall be and remain controlling as to the matters resolved herein.

Section 5. This Ordinance shall be construed and enforced in accordance with the laws of the State of Texas and the United States of America.

Section 6. If any provision of this Ordinance or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Ordinance and the application of such provision to other persons and circumstances shall nevertheless be valid, and the City hereby declares that this Ordinance would have been enacted without such invalid provision.

Section 7. It is officially found, determined, and declared that the meeting at which this Ordinance is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this Ordinance, was given, all as required by Chapter 551, as amended, Texas Government Code.

Section 8. This Ordinance shall be effective upon the date of final adoption hereof and any publication required by law.

Section 9. This Ordinance shall be cumulative of all other ordinances of the City of Schertz, and this Ordinance shall not operate to repeal or affect any other ordinances of the City of Schertz except insofar as the provisions thereof might be inconsistent or in conflict with the provisions of this Ordinance, in which event such conflicting provisions, if any, are hereby repealed.

PASSED, APPROVED and ADOPTED on this ____day of _____ 2025.

CITY OF SCHERTZ, TEXAS

_____
Ralph Gutierrez, Mayor

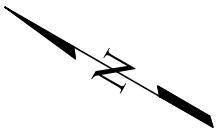
ATTEST:

_____
Sheila Edmondson, City Secretary

(city seal)

Exhibit “A”
Property Description: Legal Metes and Bounds

# Exhibit "A" Property Description: Legal Metes and Bounds

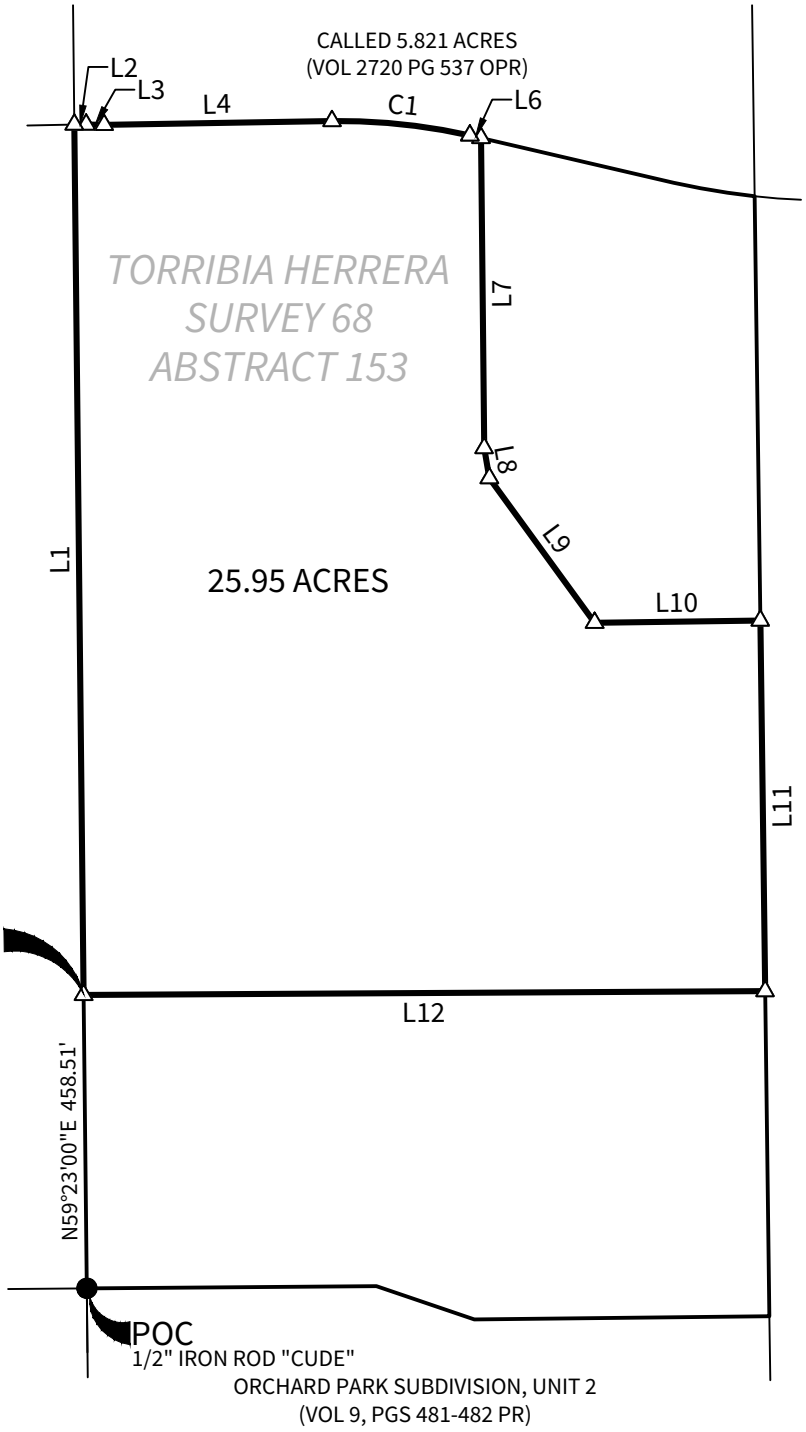


0 150' 300' 600'

SCALE: 1" = 300'

| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| CURVE NO. | RADIUS | DELTA | ARC LENGTH | CHORD BEARING | CHORD DIST. |
| C1 | 900.81' | 13°48'02" | 216.97' | S24°05'12"E | 216.45' |

| LINE TABLE | | |
|---|---|---|
| LINE NO. | BEARING | DISTANCE |
| L1 | N59°23'00"E | 1,359.66' |
| L2 | S30°59'13"E | 18.59' |
| L3 | S28°07'29"E | 28.02' |
| L4 | S30°59'13"E | 356.03' |
| L6 | S16°55'09"E | 17.95' |
| L7 | S59°25'39"W | 484.55' |
| L8 | S50°13'53"W | 47.86' |
| L9 | S23°55'58"W | 279.45' |
| L10 | S30°45'28"E | 258.65' |
| L11 | S59°15'07"W | 578.66' |
| L12 | N30°19'20"W | 1,064.40' |




THIS DOCUMENT WAS PREPARED UNDER 22 TAC §663.21, DOES NOT REFLECT THE RESULTS OF AN ON THE GROUND SURVEY, AND IS NOT TO BE USED TO CONVEY OR ESTABLISH INTERESTS IN REAL PROPERTY EXCEPT THOSE RIGHTS AND INTERESTS IMPLIED OR ESTABLISHED BY THE CREATION OR RECONFIGURATION OF THE BOUNDARY OF THE POLITICAL SUBDIVISION FOR WHICH IT WAS PREPARED.

NOTES:

1. BASIS OF BEARING IS THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (2011), ALL DISTANCES SHOWN HEREON ARE GROUND DISTANCES USING A COMBINED SCALE FACTOR OF 1.00016.
2. SETBACKS OR EASEMENTS PER RESTRICTIONS OR ZONING MAY EXIST.




Chris Walterscheidt

CUDE ENGINEERS
4122 POND HILL RD. ● SUITE 101
SAN ANTONIO, TEXAS 78231
T:210.681.2951 ● F:210.523.7112
WWW.CUDEENGINEERS.COM
TBPELS FIRM #10048500
TBPE FIRM #455

## EXHIBIT OF

25.95 ACRES OF LAND SITUATED IN THE TORRIBIA HERRERA SURVEY NO. 68, ABSTRACT NO. 153, GUADALUPE COUNTY, TEXAS, BEING THE REMAINDER OF A CALLED 28.127 ACRE TRACT AND A CALLED 66.335 ACRE TRACT DESCRIBED IN VOLUME 2419, PAGE 211, OFFICIAL RECORDS OF GUADALUPE COUNTY, TEXAS

PROJECT NO. 04406.000 DATE 10/22/24 BY DLT PM CW PAGE 1 OF 1

P:\04406\000\0-Survey\Drawings\EX-04406.000 - 26.88AC - ZONING.dwg 2024/10/22 10:38am cwalterscheidt

REPRODUCTION OF THE ORIGINAL SIGNED AND SEALED PLAN AND/OR ELECTRONIC MEDIA MAY HAVE BEEN INADVERTENTLY ALTERED. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE SCALE OF THE DOCUMENT AND CONTACTING CUDE ENGINEERS TO VERIFY DISCREPANCIES PRIOR TO CONSTRUCTION.

**LEGAL DESCRIPTION**
**25.95 ACRES OF LAND**

25.95 ACRES OF LAND SITUATED IN THE TORRIBIA HERRERA SURVEY NO. 68, ABSTRACT NO. 153, GUADALUPE COUNTY, TEXAS, BEING THE REMAINDER OF A CALLED 28.127 ACRE TRACT AND A CALLED 66.335 ACRE TRACT DESCRIBED IN VOLUME 2419, PAGE 211, OFFICIAL RECORDS OF GUADALUPE COUNTY, TEXAS; SAID 25.95 ACRES BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

**COMMENCING,** AT A 1/2 INCH IRON ROD WITH CAP MARKED "CUDE" FOUND FOR THE NORTH CORNER OF A THE ORCHARD PARK SUBDIVISION UNIT 2 RECORDED IN VOLUME 9, PAGES 481-482, MAP AND PLAT RECORDS OF GUADALUPE COUNTY, TEXAS;

**THENCE,** N 59°23'00" E, ALONG AND WITH THE SOUTHWEST LINE OF SAID REMAINDER TRACT, A DISTANCE OF 458.51 FEET TO THE **POINT OF BEGINNING** OF THE HEREIN DESCRIBED TRACT, FOR THE SOUTH CORNER OF THIS TRACT;

**THENCE,** N 59°23'00" E, CONTINUING ALONG AND WITH THE SOUTHWEST LINE OF SAID REMAINDER TRACT, A DISTANCE OF 1,359.66 FEET TO A POINT, THE SOUTH CORNER OF THAT CALLED 5.821 ACRE TRACT RECORDED IN VOLUME 2720, PAGE 537 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

**THENCE,** ALONG AND WITH THE SOUTHEAST LINES OF SAID 5.821 ACRE TRACT, THE FOLLOWING FIVE (5) COURSES:

1) S 30°59'13" E, A DISTANCE OF 18.59 FEET TO A POINT;
2) S 28°07'29" E, A DISTANCE OF 28.02 FEET TO A POINT;
3) S 30°59'13" E, A DISTANCE OF 356.03 FEET TO A POINT;
4) SOUTHEASTERLY, ALONG A TANGENT CURVE TO THE RIGHT, WITH A RADIUS OF 900.81 FEET, A CENTRAL ANGLE OF 13°48'02", AN ARC LENGTH OF 216.97 FEET, AND A CHORD BEARING AND DISTANCE OF S 24°05'12" E, 216.45 FEET, TO A POINT;
5) S 16°55'09" E, A DISTANCE OF 17.95 FEET TO A POINT;

**THENCE,** OVER AND ACROSS SAID REMAINDER TRACT, THE FOLLOWING FOUR (4) COURSES:

1) S 59°25'39" W, A DISTANCE OF 484.55 FEET TO A POINT;
2) S 50°13'53" W, A DISTANCE OF 47.86 FEET TO A POINT;
3) S 23°55'58" W, A DISTANCE OF 279.45 FEET TO A POINT;
4) S 30°45'28" E, A DISTANCE OF 258.65 FEET TO A POINT TO A POINT ON THE NORTHWEST LINE OF SAID REMAINDER TRACT;

**THENCE,** S 59°15'07" W, ALONG AND WITH THE NORTHWEST LINE OF SAID REMAINDER TRACT, A DISTANCE OF 578.66 FEET TO A POINT;

**THENCE,** N 30°47'11" W, OVER AND ACROSS SAID REMAINDER TRACT, A DISTANCE OF 1,064.40 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 25.95 ACRES OF LAND, MORE OR LESS.

BASIS OF BEARINGS IS THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (2011). ALL DISTANCES SHOWN HEREON ARE GROUND DISTANCES USING A SCALE FACTOR OF 1.00016.

THIS DOCUMENT WAS PREPARED UNDER 22 TAC §663.21, DOES NOT REFLECT THE RESULTS OF AN ON THE GROUND SURVEY, AND IS NOT TO BE USED TO CONVEY OR ESTABLISH INTERESTS IN REAL PROPERTY EXCEPT THOSE RIGHTS AND INTERESTS IMPLIED OR ESTABLISHED BY THE CREATION OR RECONFIGURATION OF THE BOUNDARY OF THE POLITICAL SUBDIVISION FOR WHICH IT WAS PREPARED.

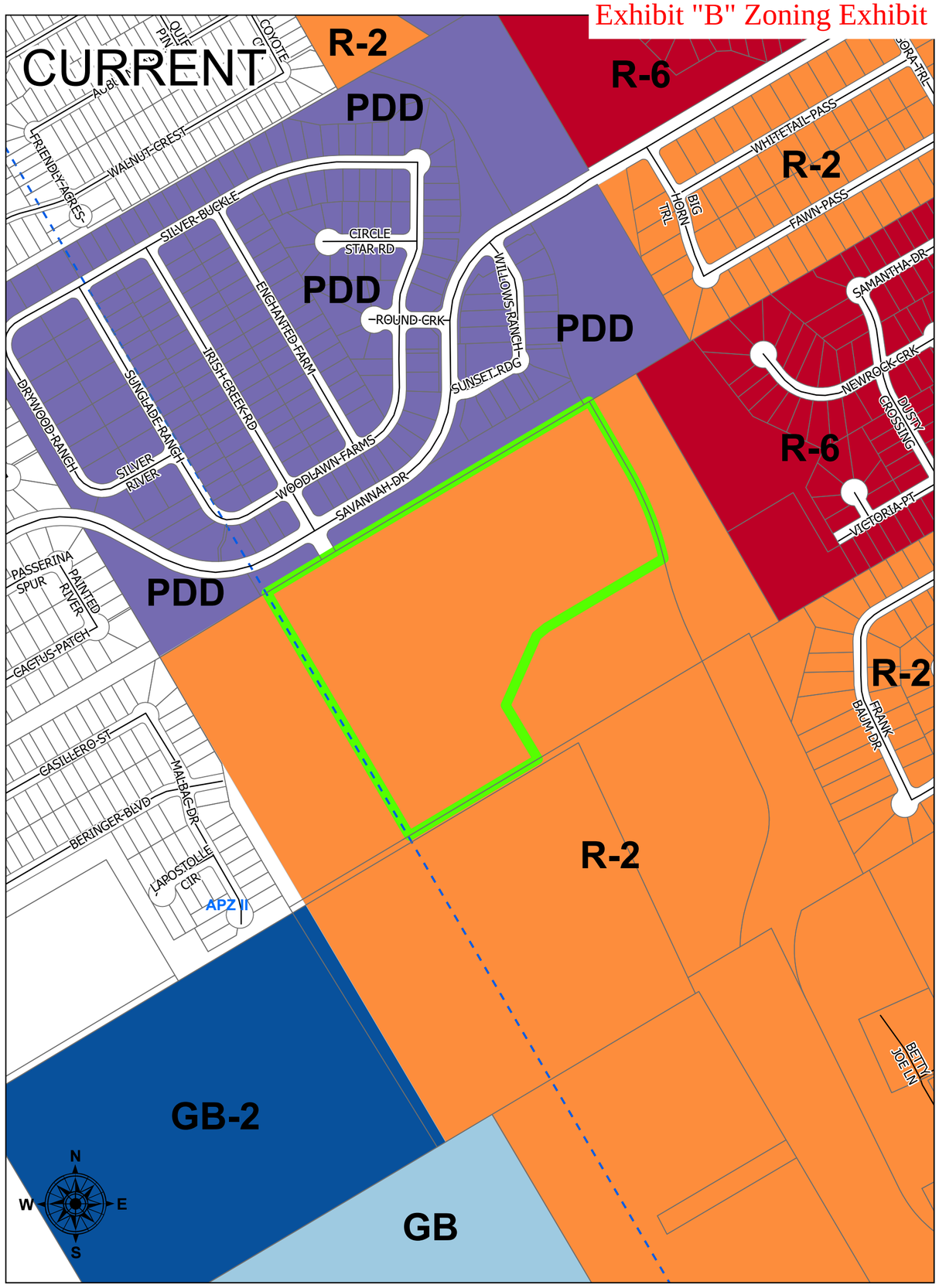
Chris Walterscheidt 10/22/2024

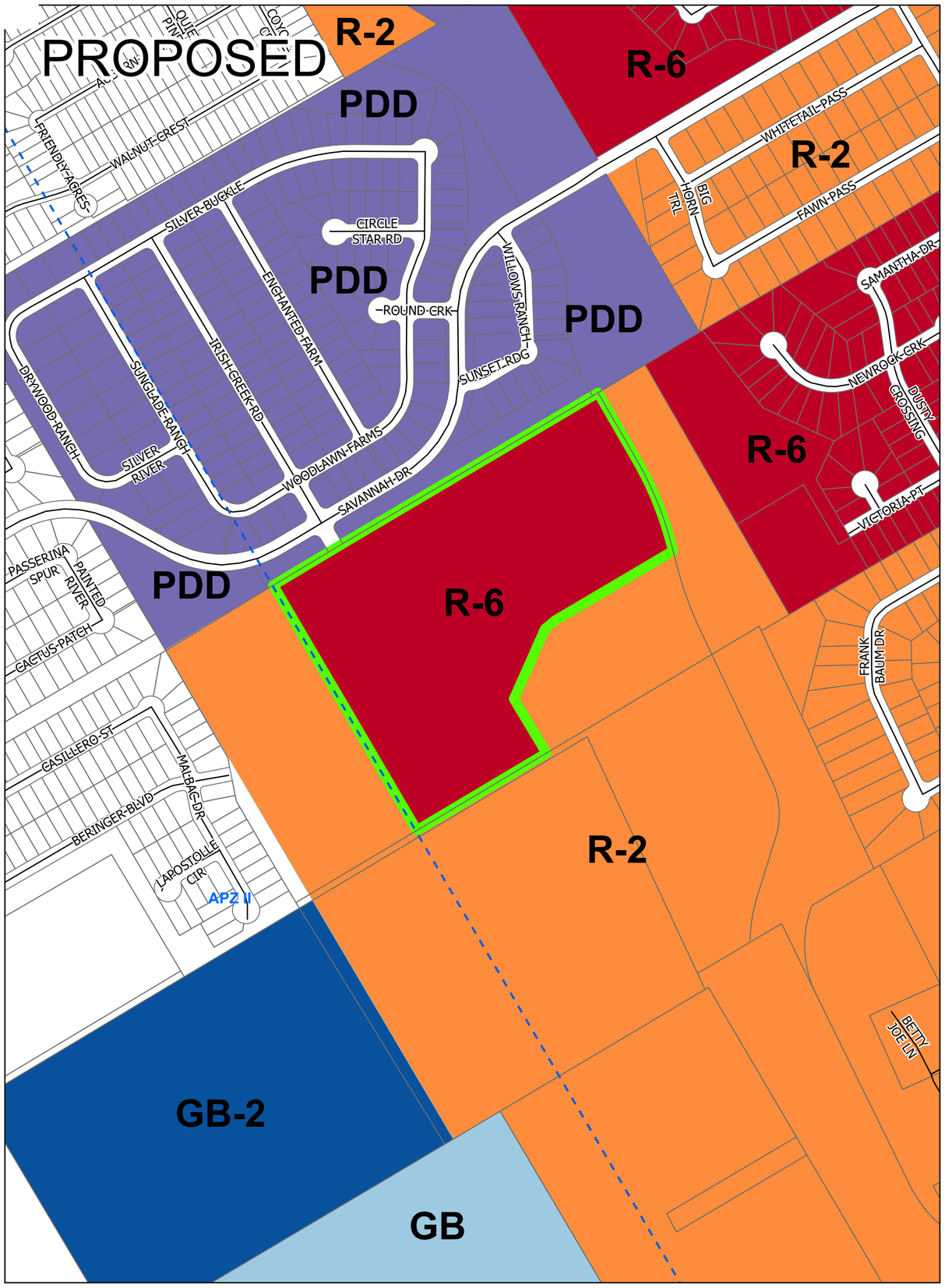
CHRIS WALTERSCHEIDT
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6180
CUDE ENGINEERS
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TEXAS 78231
TBPELS FIRM NO. 10048500
TBPE FIRM NO. 455
JOB NO. 04406.000



Exhibit “B”
Zoning Exhibit

# Exhibit "B" Zoning Exhibit




SCHERTZ
COMMUNITY ★ SERVICE ★ OPPORTUNITY

Last update: November 4th, 2024

City of Schertz, GIS Specialist: Alexa Venezia, avenezia@schertz.com (210) 619-1174

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## PROPOSED ZONING CHANGE

**GUADALUPE COUNTY**
**PARCEL ID:**
**64640**

**Classification**

- (PRE) Pre-Development
- (PDD) Planned Development
- (PUB) Public Use
- (R-A) Single-family Residential/Agricultural
- (R-1) Single-Family Residential
- (R-2) Single-Family Residential
- (R-3) Two-Family Residential
- (R-4) Apartment/Multi-Family Residential
- (R-6) Single-family Residential
- (R-7) Single-family Residential
- (AD) Agricultural District
- (GH) Garden Home/Single-Family Residential (Zero Lot Line)
- (TH) Townhome
- (MHS) Manufactured Home Subdivision
- (MHP) Manufactured Home Parks
- (GB) General Business
- (GB-2) General Business II
- (NS) Neighborhood Services
- (OP) Office and Professional
- (MSMU) Main Street Mixed Use
- (MSMU-ND) Main Street Mixed Use New Development
- (M-1) Manufacturing (Light)
- (M-2) Manufacturing (Heavy)
- (DVL) Development Agreement (Delayed Annexation)

0 200 400 800 1,200 Feet




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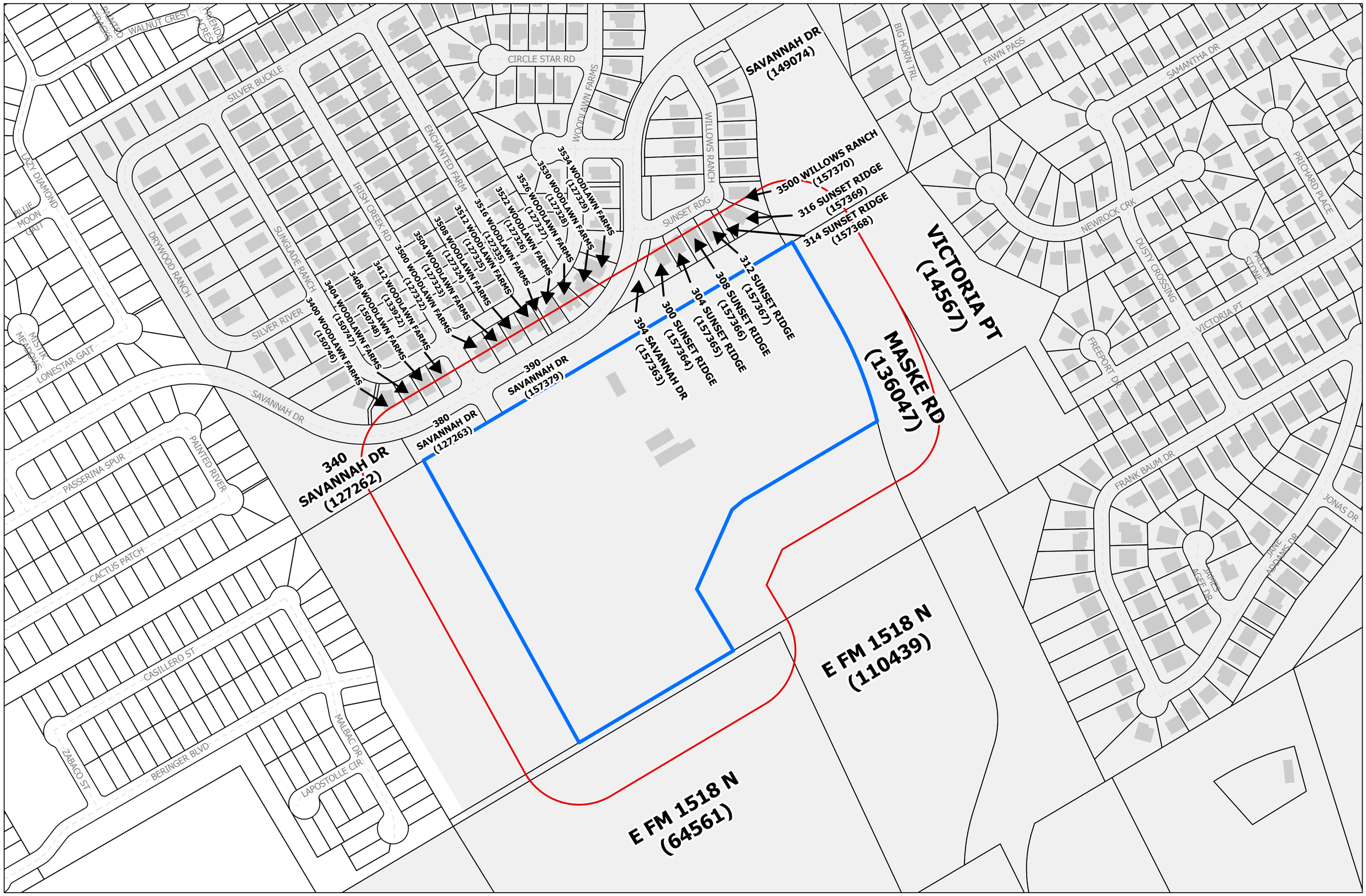
SCHERTZ
COMMUNITY ★ SERVICE ★ OPPORTUNITY

PARCEL ID:
64640

PLZC20240256

- Highways
- Major Roads
- Minor Roads
- Freeway
- Principal Arterial
- Planned Principal Arterial
- Secondary Arterial
- Planned Secondary Arterial
- Secondary Rural Arterial
- Planned Secondary Rural Arterial
- Residential Collector
- Planned Residential Collector
- Planned Commercial Collector B
- Commercial Collector A
- Planned Commercial Collector A
- 1" 2" 3" 4" 6"
- 8" 10" 12" 16" 18"
- 20" 24" 30" 36" Unknown
- Schertz Gravity
- Schertz Pressure
- Neighboring Gravity
- Private Pressure
- Hydrant
- Manholes
- CCMA Lift Station
- Private Lift Station
- Schertz Lift Station
- CCMA Treatment Plant
- Schertz Treatment Plant
- County Boundaries
- Schertz Municipal Boundary
- ETJ

0 100 200 400 600 Feet




SCHERTZ
COMMUNITY ★ SERVICE ★ OPPORTUNITY

# City of Schertz

PARCEL ID:
64640

Project Boundary
City Limits
Schertz ETJ Boundary
200' Buffer

N
W E
S

0 100 200 400 600 Feet

Last update: November 5th, 2024

City of Schertz, GIS Specialist: Alexa Venezia, avenezia@schertz.com (210) 619-1174

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SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

PLANNING & COMMUNITY DEVELOPMENT

## NOTICE OF PUBLIC HEARING

November 19, 2024

Dear Property Owner,

The Schertz Planning and Zoning Commission will conduct a public hearing on **Wednesday, December 4th, 2024** at **6:00 p.m.** located at the Municipal Complex Council Chambers, 1400 Schertz Parkway, Building #4, Schertz, Texas to consider and make a recommendation on the following item:

**PLZC20240256 –** Hold a public hearing and make a recommendation on a request to rezone approximately 26 acres of land, from Single-Family Residential District (R-2) to Single-Family Residential District (R-6), known as a portion of Guadalupe County Property Identification Number 64640, generally located 78 feet South of the intersection of Savannah Drive and Irish Creek Road, City of Schertz, Guadalupe County, Texas.

The Planning and Zoning Commission would like to hear how you feel about this request and invites you to attend the public hearing. You may return the reply form below by mail or personal delivery to Daisy Marquez, Planner, 1400 Schertz Parkway, Schertz, Texas 78154, or by e-mail: planning@schertz.com. If you have any questions, please feel free to call Daisy Marquez, Planner at (210) 619-1782.

Sincerely,

Daisy Marquez, AICP
Planner

---

**Reply Form:**

*City Council will have a reading on the request after the recommendation from the Planning and Zoning Commission. This form is used to calculate the protest in accordance with LGC, Local Government Code 211.006(d).* ***The written protest must be received by City no later than noon (central time) on the Friday before the reading by the City Council.*** *If the name of the person signing this form does not match the name listed as the owner on the appraisal district website, proof of ownership is required in order for this to count towards the protest.*

I am: in favor of ☐ opposed to ☒ neutral to ☐ the request for **PLZC20240256**

COMMENTS: Kensington Ranch HOA Parcels: 157363, 127262, 127263, 15737

NAME: Carolee Ann Hinojosa-East (PLEASE PRINT) SIGNATURE: Carolee Hinojosa-East

President, KR HOA

STREET ADDRESS: _____

DATE: 11/27/24

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

**PLANNING & COMMUNITY DEVELOPMENT**

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Daisy Marquez, AICP
Planner

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I am: in favor of ☐ opposed to ☒ neutral to ☐ the request for **PLZC20240256**

COMMENTS: _____

NAME: Christopher Duffett SIGNATURE _____
(PLEASE PRINT)

STREET ADDRESS: 3400 Woodlawn Farms

DATE: 27 Nov 2024

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

**PLANNING & COMMUNITY DEVELOPMENT**

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November 19, 2024

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Sincerely,

Daisy Marquez, AICP
Planner

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I am: in favor of ☐ opposed to ☒ neutral to ☐ the request for **PLZC20240256**

COMMENTS: our home sits near the corner of Irish Creek (projected entrance) this will only increase congestion in the area. Overcrowding will increase at all schools. Too much to list - pls refer to email sent on 3/11/24 when we went through this the last time. Our concerns are valid.

NAME: Zach & Claudia Keyes SIGNATURE: Claudia Keyes
(PLEASE PRINT)

STREET ADDRESS: 3504 Woodlawn Farms

DATE: 11/27/24

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

**PLANNING & COMMUNITY DEVELOPMENT**

**NOTICE OF PUBLIC HEARING**

November 19, 2024

Dear Property Owner,

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**PLZC20240256** – Hold a public hearing and make a recommendation on a request to rezone approximately 26 acres of land, from Single-Family Residential District (R-2) to Single-Family Residential District (R-6), known as a portion of Guadalupe County Property Identification Number 64640, generally located 78 feet South of the intersection of Savannah Drive and Irish Creek Road, City of Schertz, Guadalupe County, Texas.

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Sincerely,

Daisy Marquez, AICP
Planner

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I am: in favor of ☐ opposed to ☒ neutral to ☐ the request for **PLZC20240256**

COMMENTS: Please donot change to R6. We have so many problems w/traffic, it's dangerous

NAME: Jill Moore (PLEASE PRINT) SIGNATURE Jill A. Moore

STREET ADDRESS: 3534 Woodlawn Farms, Schertz, TX 78154

DATE: Nov. 27, 2024

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

PLANNING & COMMUNITY DEVELOPMENT

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COMMENTS: _____

NAME: Diane NEWKIRK (PLEASE PRINT) SIGNATURE Diane Newkirk

STREET ADDRESS: 3500 Woodlawn Farms

DATE: 11-27-24

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

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COMMENTS: _____

NAME: Richard Muse SIGNATURE Richard Muse
(PLEASE PRINT)

STREET ADDRESS: 3530 Woodlawn Farms, Schertz, TX 78154

DATE: 11-27-24

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

PLANNING & COMMUNITY DEVELOPMENT

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COMMENTS: _____

NAME: Deborah McMahon SIGNATURE: [signature]
(PLEASE PRINT)

STREET ADDRESS: 3526 Woodlawn Farms

DATE: Nov 27/24

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COMMENTS: _____

NAME: Tessa Baran SIGNATURE Baran
(PLEASE PRINT)

STREET ADDRESS: 300 Sunset Ridge

DATE: 11-27-24

**From:** Victor Diaz de Leon Jr. <[redacted]
**Sent:** Wednesday, November 27, 2024 4:51 PM
**To:** Daisy Marquez
**Subject:** PLZC20240256

Please be advised that my wife, Alva and I (Victor) Diaz de Leon, occupants of the house located at 316 Sunset Ridge are in OPPOSITION of the re-zone proposal PLZC20240256 and will be attending the Schertz Planning and Zoning Commission meeting on Wednesday, December 4th, 2024 at 6 PM. We can be reached at [redacted] if you have any questions.

Sent from AT&T Yahoo Mail for iPhone

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

**PLANNING & COMMUNITY DEVELOPMENT**

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COMMENTS: Traffic issues will worsen + Equally important - - What School are Those Kids attending?

NAME: INEZ C. EISAGUIRRE SIGNATURE Inez C. Eisaguirre

(PLEASE PRINT)

STREET ADDRESS: 3512 Woodlawn Farm (@ SAVANNAH)

DATE: 11/26/24

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

PLANNING & COMMUNITY DEVELOPMENT

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I am: in favor of ☐ opposed to ☑ neutral to ☐ the request for **PLZC20240256**

COMMENTS: MORE TRAFFIC ISSUES--- including SCHOOL TRAFFIC.

NAME: GHADIR E. EISAZADEH SIGNATURE: [signature]
(PLEASE PRINT)

STREET ADDRESS: 3512 WOODLAWN FARMS (OFF SALADO).

DATE: 11/06/24.

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

**PLANNING & COMMUNITY DEVELOPMENT**

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COMMENTS: OWN 3304 FM 1518 PROPERTY (NEIGHBOR)

NAME: CLARENCE/HAZEL WEHMAN SIGNATURE Clarence a. Wehman
Hazel R. (PLEASE PRINT) Hazel R. Wehman

STREET ADDRESS: 1320 CIRCLE OAK DR. SCHERTZ, TX 78154

DATE: 11/24/24

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COMMENTS: Oppose

NAME: Deatrah Aguilera (PLEASE PRINT) SIGNATURE Deatrah Aguilera

STREET ADDRESS: 312 Sunset Ridge

DATE: 11-22-24

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

PLANNING & COMMUNITY DEVELOPMENT

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COMMENTS: _____

NAME: ROSALYN WISE (PLEASE PRINT) SIGNATURE: Rosalyn Wise

STREET ADDRESS: 308 SUNSET RIDGE SCHERTZ TX 78154

DATE: NOV 23, 2024

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

PLANNING & COMMUNITY DEVELOPMENT

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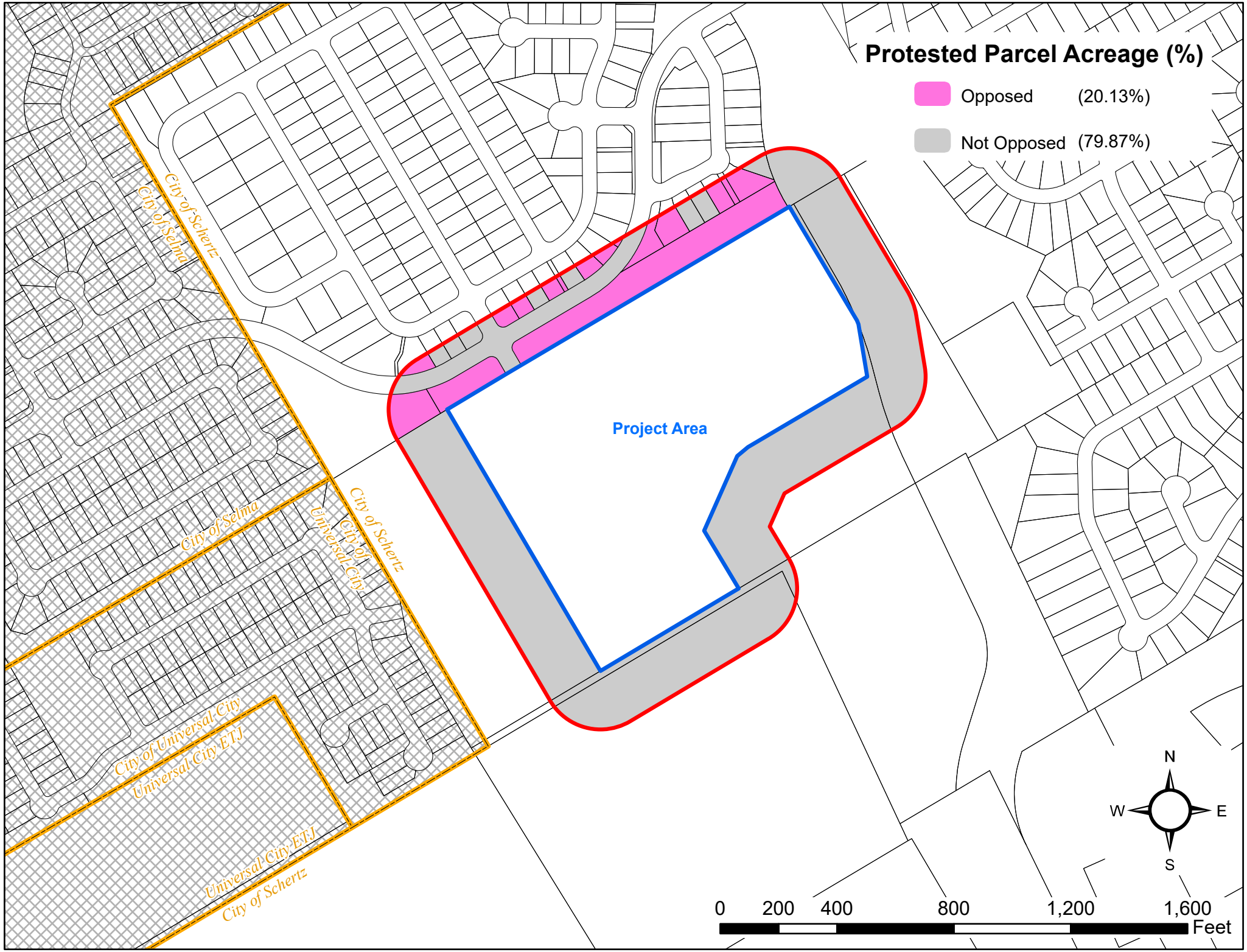
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COMMENTS:

NAME: Michelle Garcia (PLEASE PRINT) SIGNATURE: MGarcia

STREET ADDRESS: 304 Sunset Ridge

DATE: 12/4/2024


Protested Parcel Acreage (%)
Opposed (20.13%)
Not Opposed (79.87%)
Project Area
City of Schertz
City of Selma
City of Selma
City of Schertz
City of Universal City
City of Universal City
Universal City ETJ
Universal City ETJ
City of Schertz
N
W
E
S
0
200
400
800
1,200
1,600
Feet
12/5/2024 9:13 AM

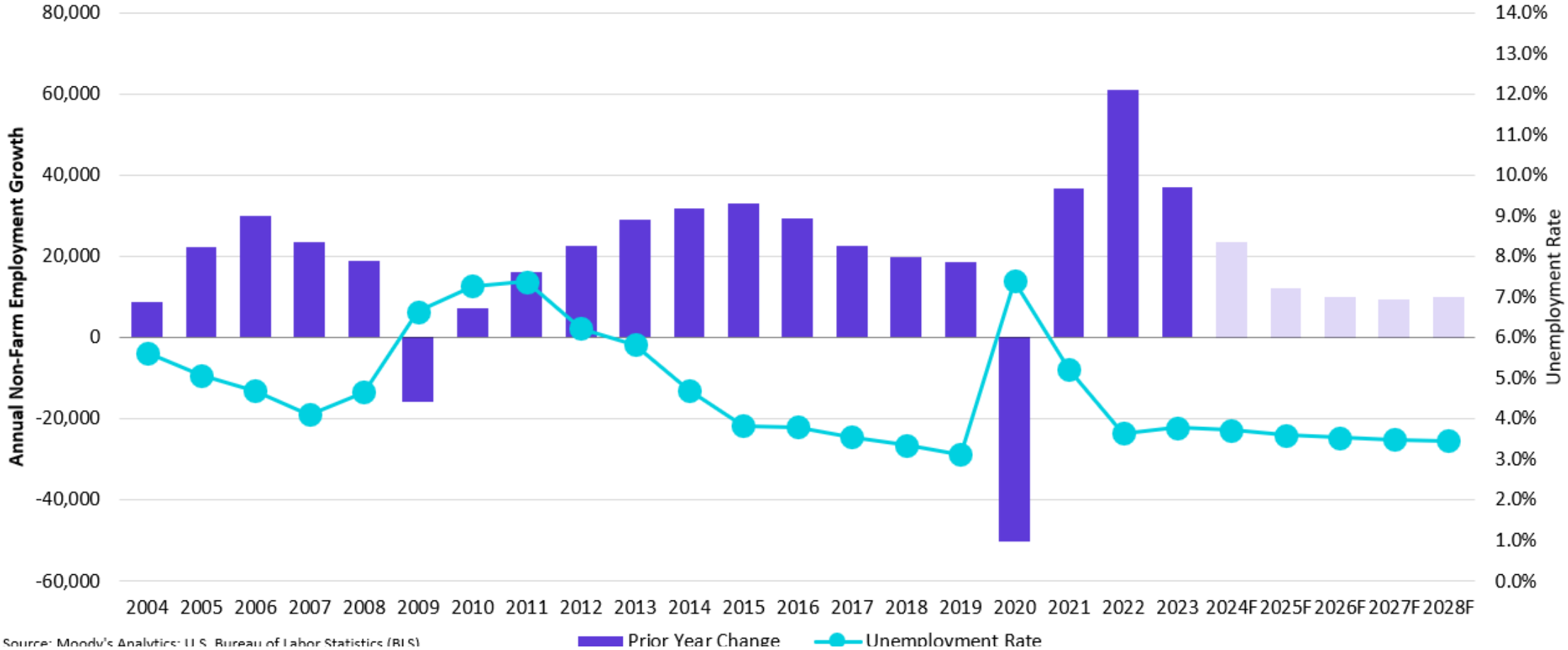
Zonda™
Education




# 1Q24

# Demographic Report

# San Antonio MSA Employment Growth




Source: Moody's Analytics; U.S. Bureau of Labor Statistics (BLS)

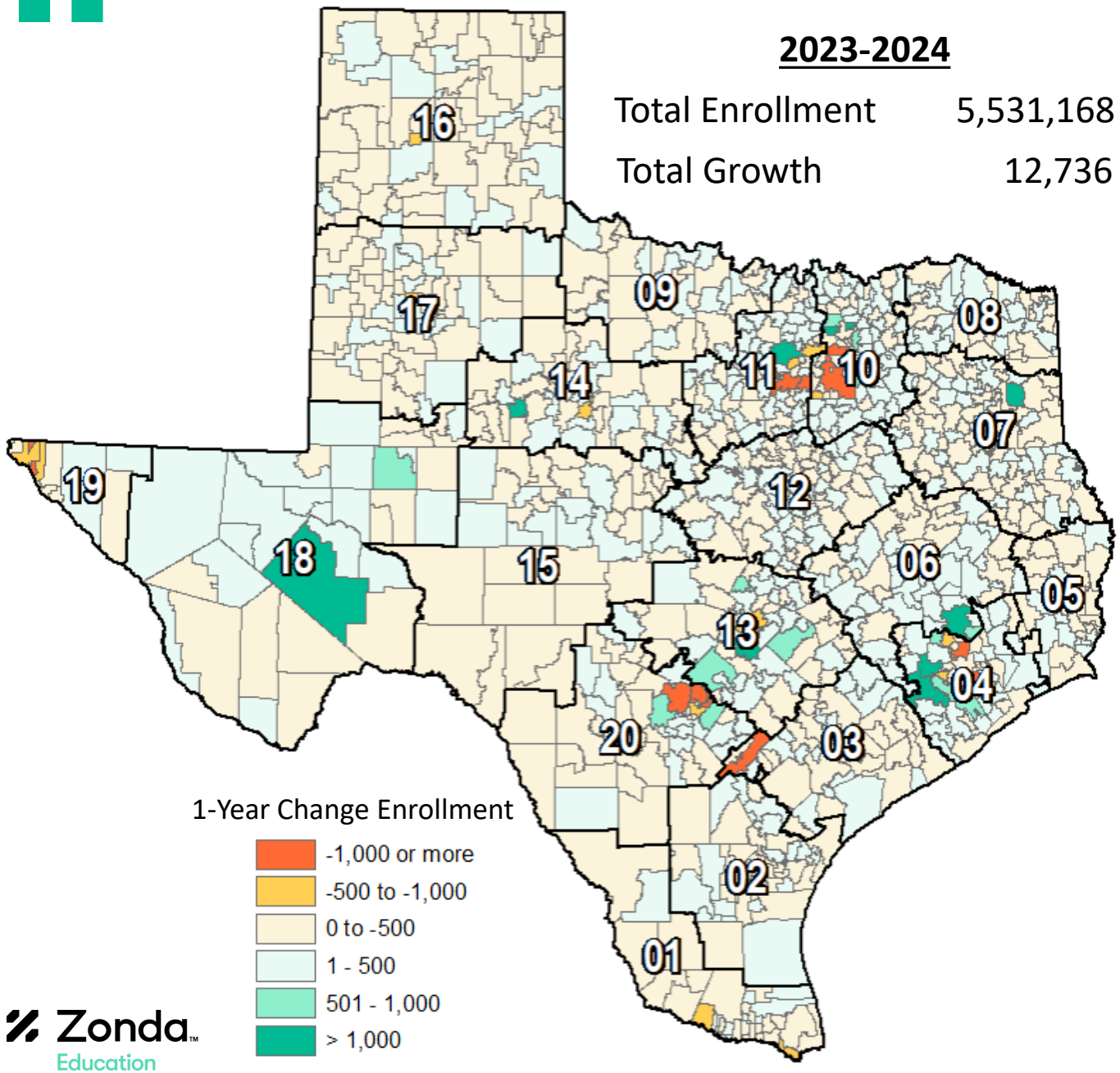
**San Antonio-New Braunfels, TX Metropolitan Statistical Area - Moody's Analytics Five-Year Forecast**

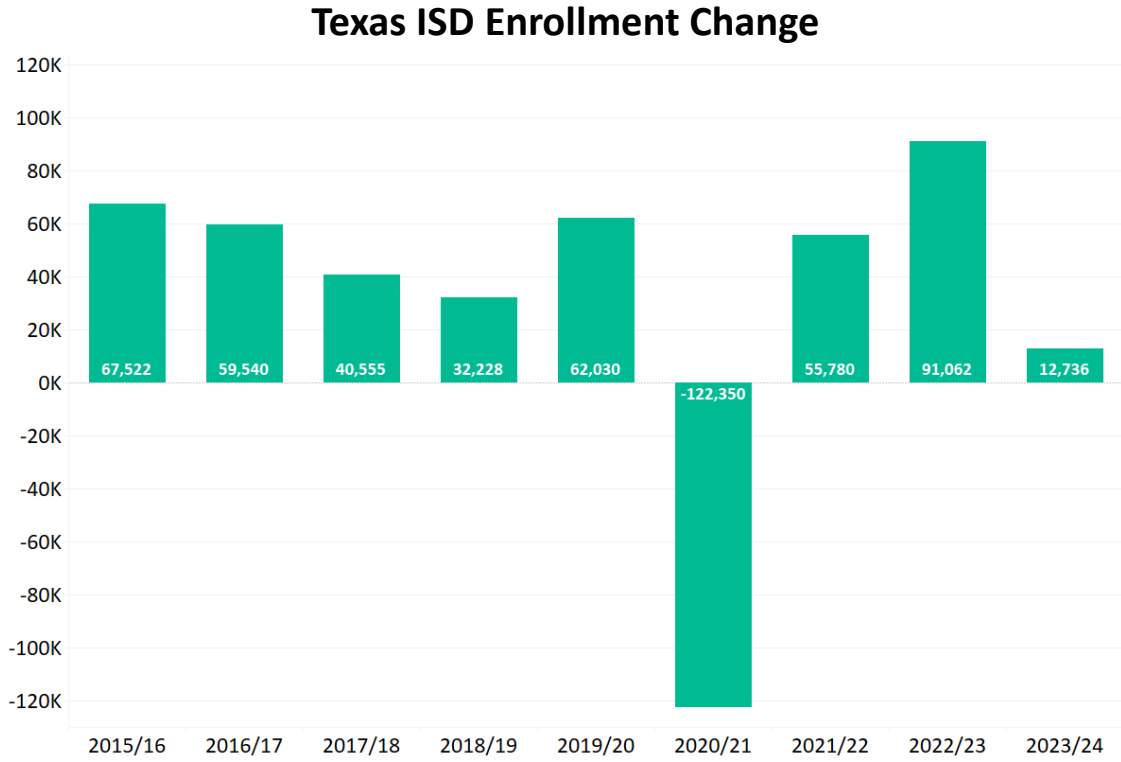
| Category | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024F | 2025F | 2026F | 2027F | 2028F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Non-Farm Employment | 954,342 | 987,300 | 1,016,558 | 1,039,067 | 1,059,033 | 1,077,492 | 1,027,075 | 1,063,783 | 1,124,892 | 1,161,892 | 1,185,282 | 1,197,417 | 1,207,281 | 1,216,665 | 1,226,577 |
| Prior Year Change | 31,767 | 32,958 | 29,258 | 22,508 | 19,967 | 18,458 | (50,417) | 36,708 | 61,108 | 37,000 | 23,390 | 12,135 | 9,864 | 9,384 | 9,912 |
| Annual % Change | 3.4% | 3.5% | 3.0% | 2.2% | 1.9% | 1.7% | -4.7% | 3.6% | 5.7% | 3.3% | 2.0% | 1.0% | 0.8% | 0.8% | 0.8% |
| **Unemployment Rate** | **4.7%** | **3.8%** | **3.8%** | **3.6%** | **3.4%** | **3.1%** | **7.4%** | **5.2%** | **3.6%** | **3.8%** | **3.7%** | **3.6%** | **3.5%** | **3.5%** | **3.5%** |

# State Enrollment Trends

**2023-2024**

| | |
|---|---|
| Total Enrollment | 5,531,168 |
| Total Growth | 12,736 |

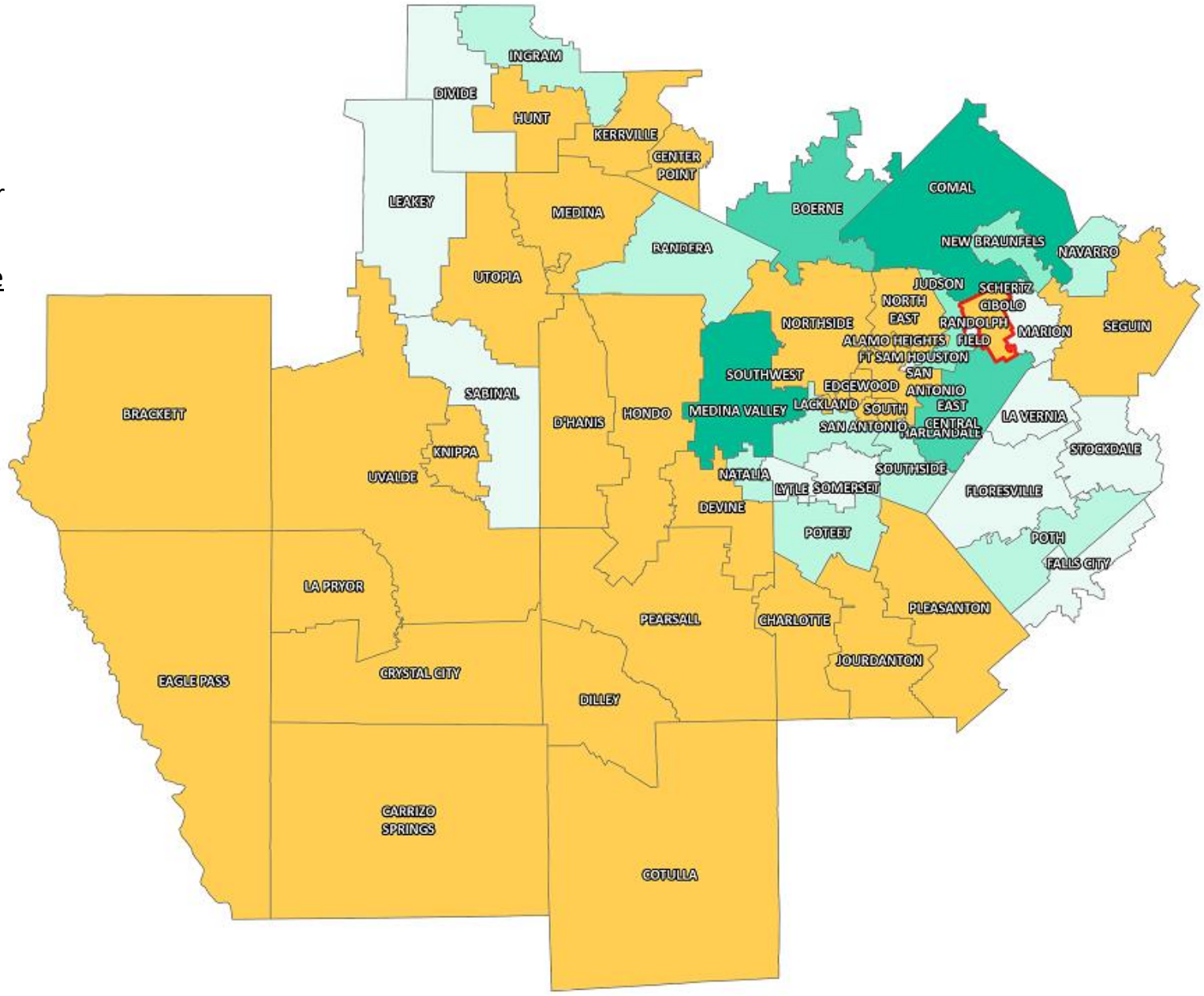



Zonda Education

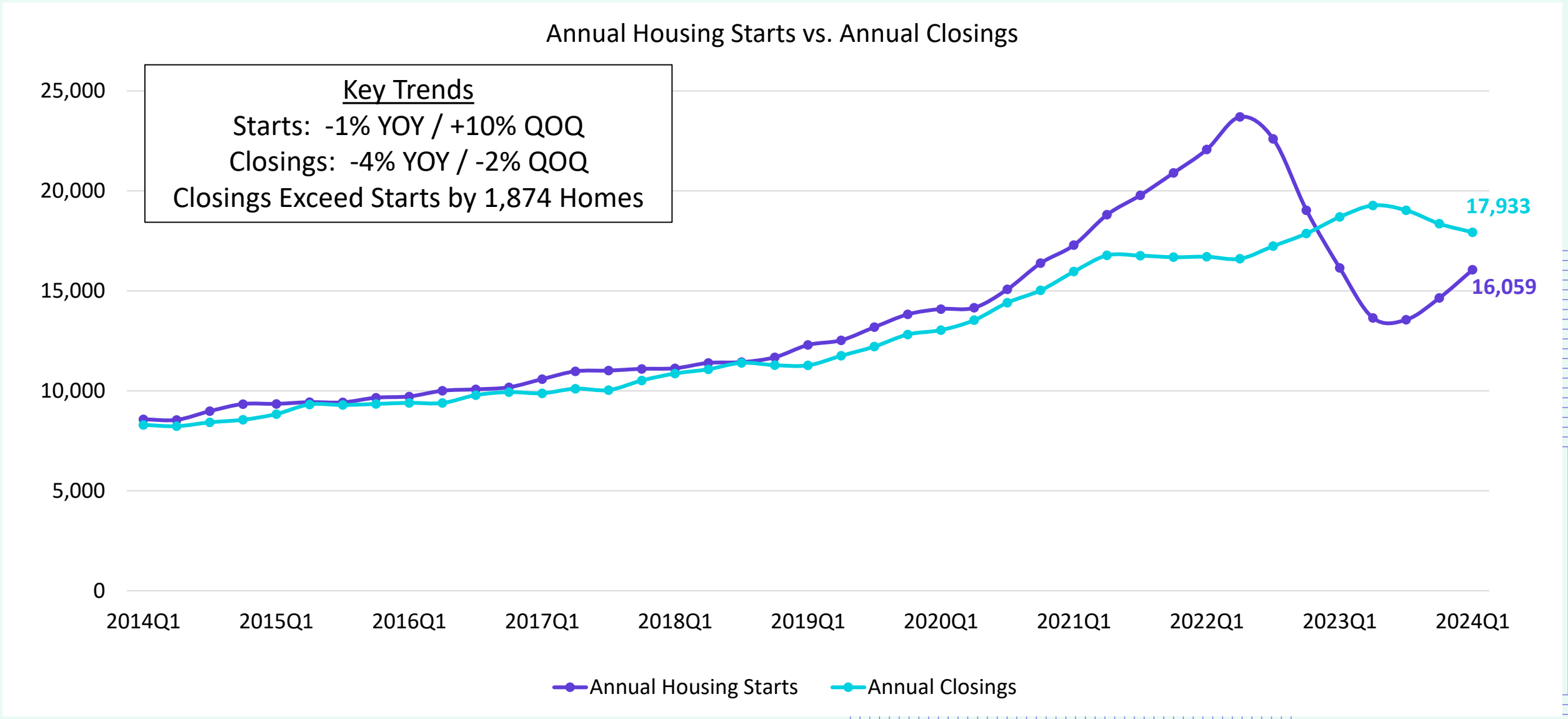
# Region 20 Enrollment Trends

- Schertz-Cibolo-Universal City ISD enrollment declined by 672 students between 2018/19 and 2023/24 (-4.2%).
- SCUCISD enrollment declined by 382 students, or -2.5%, since 2022/23
- Region 20 has seen a 5-year enrollment decrease of 11,586 students (-2.5% growth).
- Student enrollment declined by 4,285 students from 2022/23, in Region 20 (-1% growth).




Zonda Education

# San Antonio New Home Starts & Closings




Source: Zonda

Zonda Education

© 2022 Zonda

# San Antonio New Home Ranking Report

ISD Ranked by Annual Closings – 1Q24

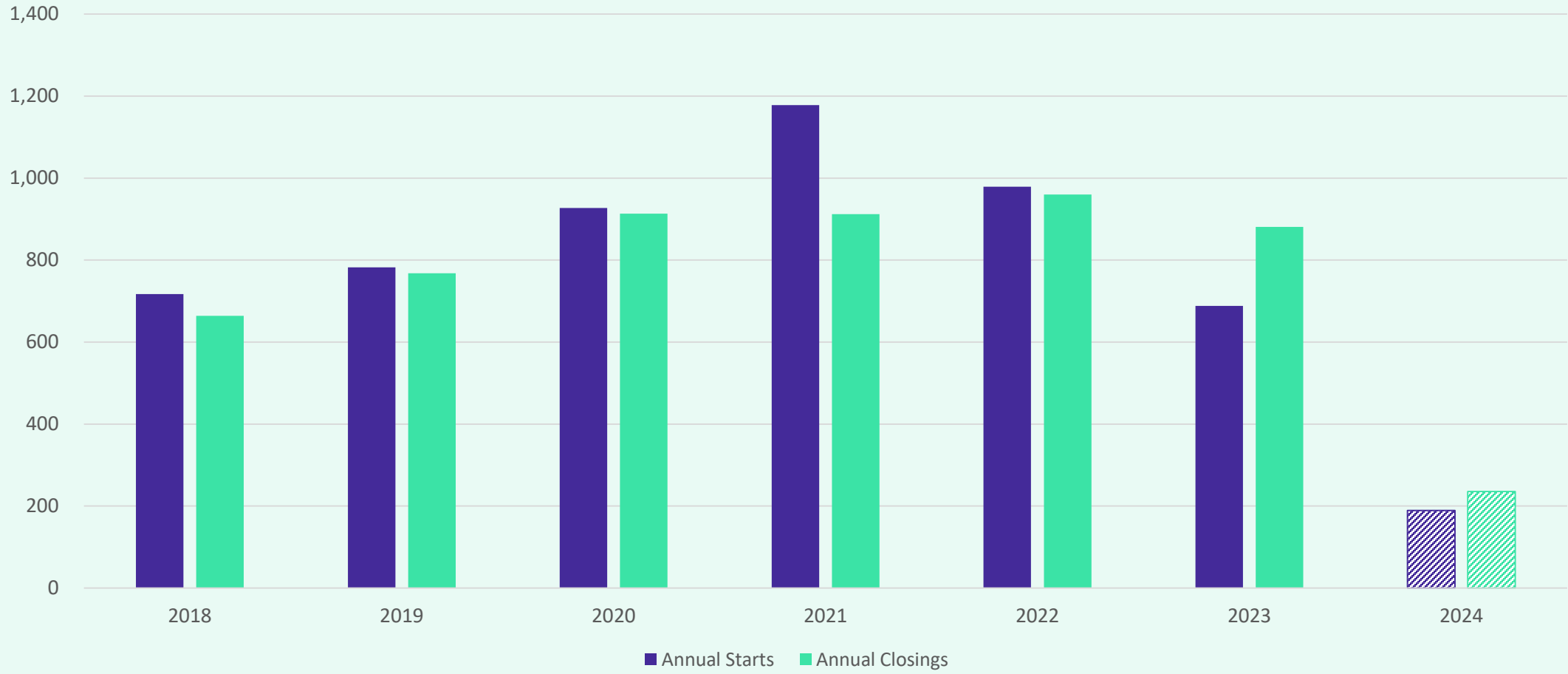
| Rank | District Name | Annual Starts | Annual Closings | Inventory | VDL | Future |
|---|---|---|---|---|---|---|
| 1 | NORTHSIDE ISD (BEXAR) | 3,403 | 3,625 | 2,242 | 6,817 | 22,741 |
| 2 | COMAL ISD | 2,537 | 2,918 | 1,865 | 4,945 | 23,012 |
| 3 | EAST CENTRAL ISD | 1,653 | 2,094 | 964 | 4,679 | 24,881 |
| 4 | MEDINA VALLEY ISD | 2,155 | 2,087 | 1,456 | 4,197 | 28,248 |
| 5 | SOUTHWEST ISD | 1,079 | 1,186 | 646 | 2,295 | 7,897 |
| 6 | JUDSON ISD | 803 | 1,068 | 495 | 701 | 1,120 |
| 7 | SCHERTZ CIBOLO ISD | 717 | 831 | 453 | 1,746 | 6,698 |
| 8 | NAVARRO ISD | 840 | 824 | 529 | 1,443 | 6,317 |
| 9 | BOERNE ISD | 646 | 740 | 518 | 1,138 | 10,321 |
| 10 | NEW BRAUNFELS ISD | 490 | 642 | 306 | 1,262 | 6,275 |
| 11 | SOUTHSIDE ISD | 637 | 547 | 349 | 1,118 | 12,722 |
| 12 | NORTH EAST ISD | 358 | 451 | 234 | 789 | 5,491 |
| 13 | SEGUIN ISD | 347 | 358 | 224 | 669 | 5,600 |
| 14 | SOUTH SAN ANTONIO ISD | 137 | 203 | 132 | 331 | 620 |
| 15 | SAN ANTONIO ISD | 119 | 147 | 171 | 372 | 670 |
| 16 | FLORESVILLE ISD | 147 | 117 | 91 | 147 | 101 |
| 17 | MARION ISD | 157 | 76 | 109 | 202 | 4,495 |
| 18 | LYTLE ISD | 62 | 66 | 41 | 392 | 1,046 |
| 19 | PLEASANTON ISD | 59 | 48 | 22 | 59 | 50 |
| 20 | ALAMO HEIGHTS ISD | 18 | 46 | 35 | 18 | 19 |

** Based on additional Zonda Education housing research*

*** Totals **DO NOT** include Age-restricted communities*

Zonda Education

# District New Home Starts and Closings




| Starts | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|
| 1Q | 175 | 201 | 237 | 294 | 349 | 103 | 189 |
| 2Q | 180 | 176 | 197 | 300 | 393 | 187 | |
| 3Q | 177 | 207 | 261 | 265 | 174 | 241 | |
| 4Q | 185 | 198 | 232 | 319 | 63 | 157 | |
| **Total** | **717** | **782** | **927** | **1,178** | **979** | **688** | **189** |

| Closings | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|
| 1Q | 133 | 138 | 165 | 190 | 181 | 280 | 235 |
| 2Q | 185 | 211 | 249 | 258 | 227 | 247 | |
| 3Q | 185 | 240 | 286 | 268 | 218 | 199 | |
| 4Q | 161 | 179 | 213 | 196 | 334 | 155 | |
| Total | **664** | **768** | **913** | **912** | **960** | **881** | **235** |

# District Housing Overview by Elementary Zone

| Elementary | Annual Starts | Quarter Starts | Annual Closings | Quarter Closings | Under Const. | Inventory | Vacant Dev. Lots | Future |
|---|---|---|---|---|---|---|---|---|
| CIBOLO VALLEY | 81 | 16 | 91 | 32 | 27 | 64 | 324 | 238 |
| GREEN VALLEY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PASCHAL | 3 | 0 | 1 | 0 | 2 | 3 | 42 | 242 |
| ROSE GARDEN | 188 | 43 | 233 | 66 | 77 | 110 | 512 | 3,017 |
| SCHERTZ | 22 | 0 | 50 | 11 | 2 | 11 | 0 | 60 |
| SIPPEL | 180 | 69 | 129 | 58 | 100 | 145 | 533 | 1,719 |
| WATTS | 89 | 21 | 112 | 25 | 21 | 45 | 41 | 580 |
| WIEDERSTEIN | 154 | 40 | 215 | 43 | 37 | 75 | 294 | 842 |
| **Grand Total** | **717** | **189** | **831** | **235** | **266** | **453** | **1,746** | **6,698** |

Highest activity in the category

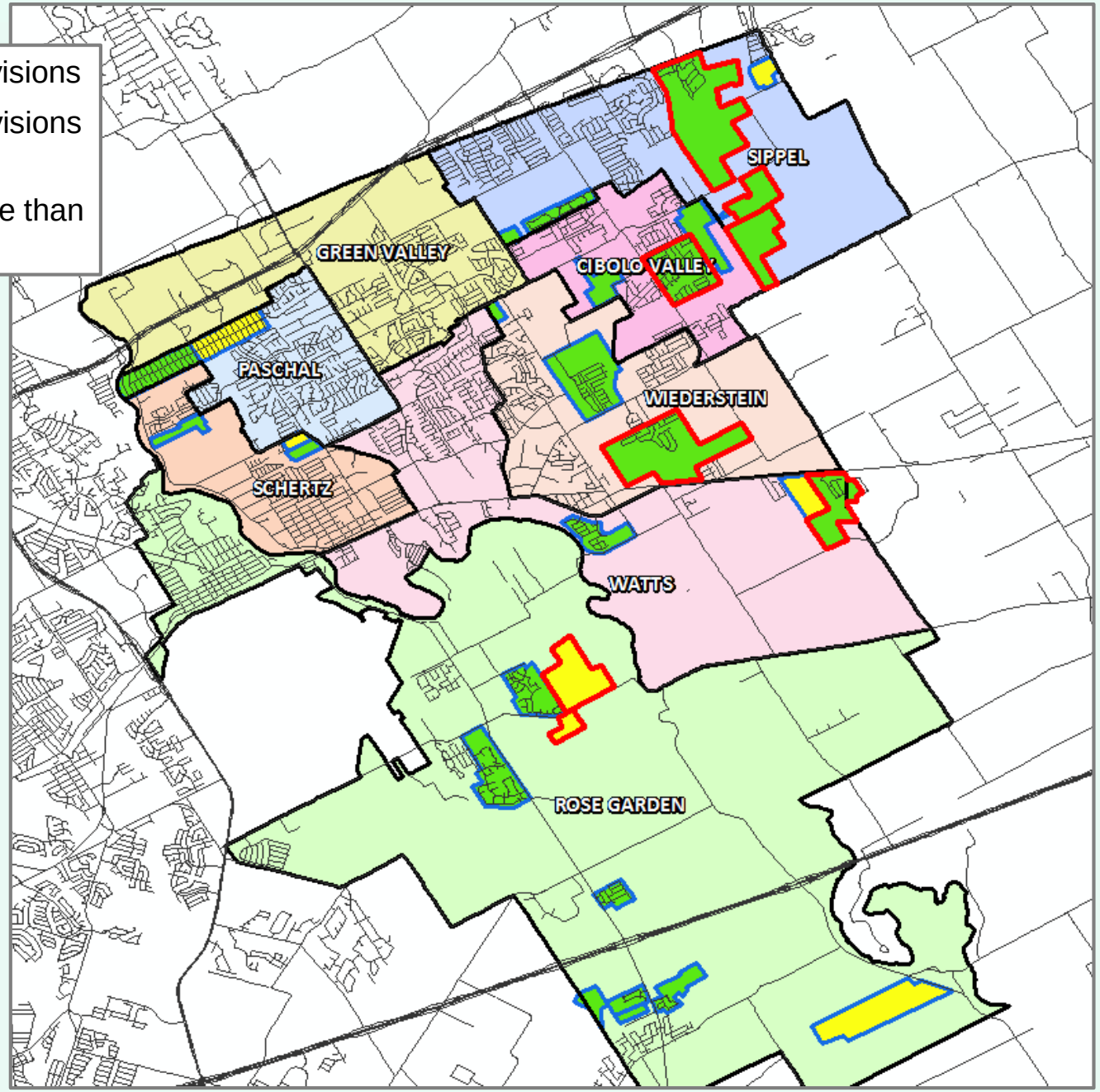
Second highest activity in the category

Third highest activity in the category

Zonda Education

# District Housing Overview

- The district has 23 actively building subdivisions
- Within SCUCISD there are 7 future subdivisions in various stages of planning
- Of these, groundwork is underway on more than 970 lots within 8 subdivisions

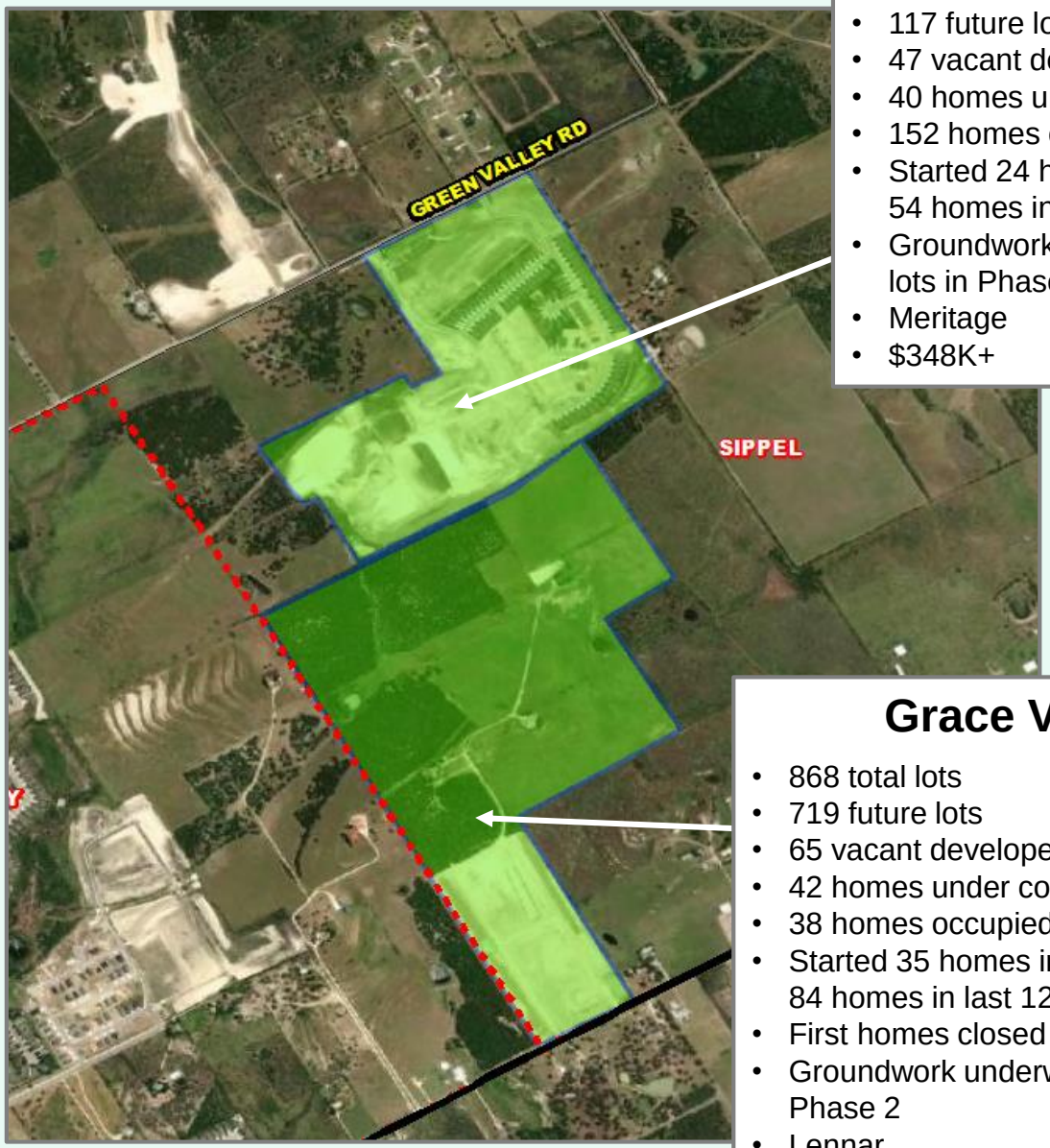



Zonda Education

# Residential Activity

## Legendary Trails

- 361 total lots
- 117 future lots
- 47 vacant developed lots
- 40 homes under construction
- 152 homes occupied
- Started 24 homes in 1Q24, started 54 homes in last 12 months
- Groundwork underway on remaining lots in Phase 3
- Meritage
- $348K+







## Grace Valley

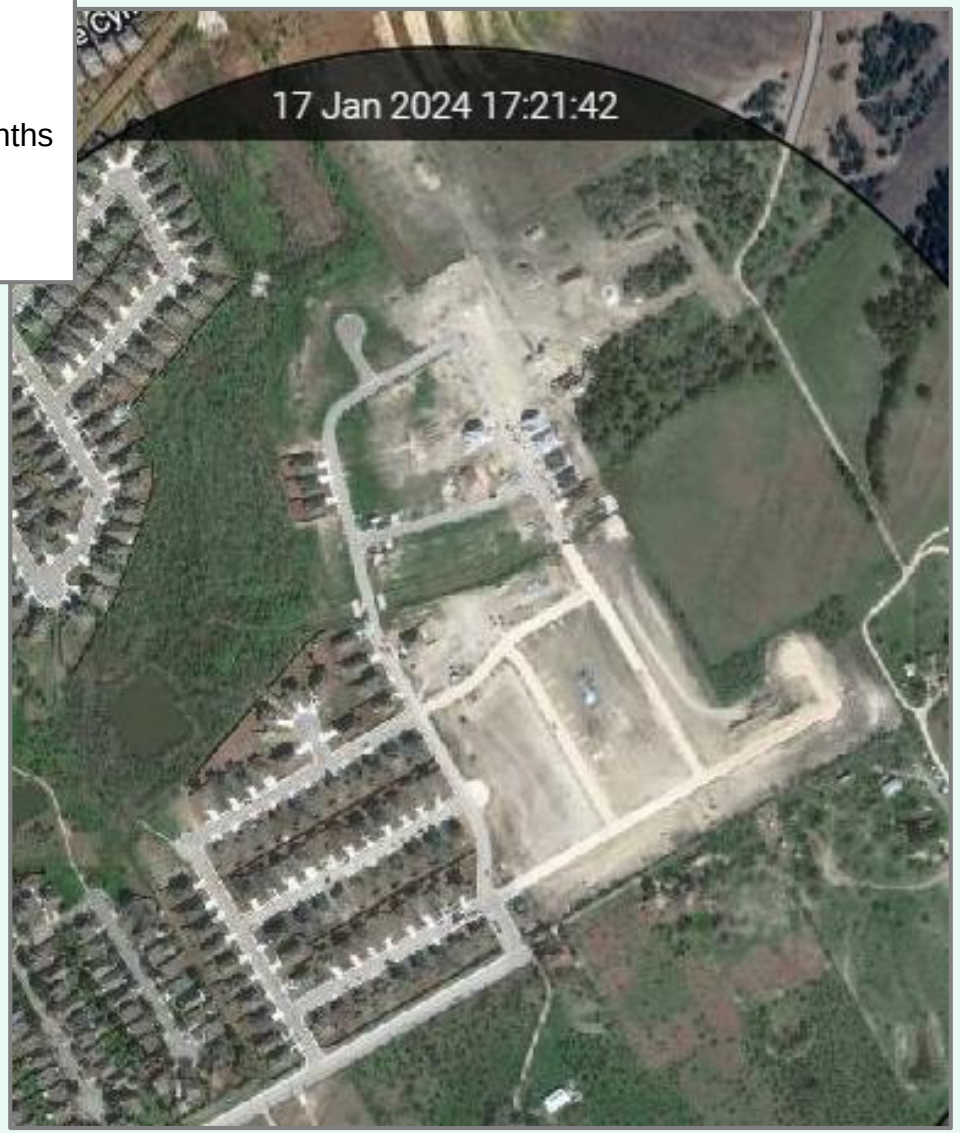
- 868 total lots
- 719 future lots
- 65 vacant developed lots
- 42 homes under construction
- 38 homes occupied
- Started 35 homes in 1Q24, started 84 homes in last 12 months
- First homes closed 4Q23
- Groundwork underway on 162 lots in Phase 2
- Lennar
- $242K - $280K

# Residential Activity

## Saddle Creek Ranch

- 807 total lots
- 35 future lots
- 92 vacant developed lots
- 13 homes under construction
- 639 homes occupied
- Closed 37 homes in last 12 months
- Groundwork underway on remaining lots
- $300K+

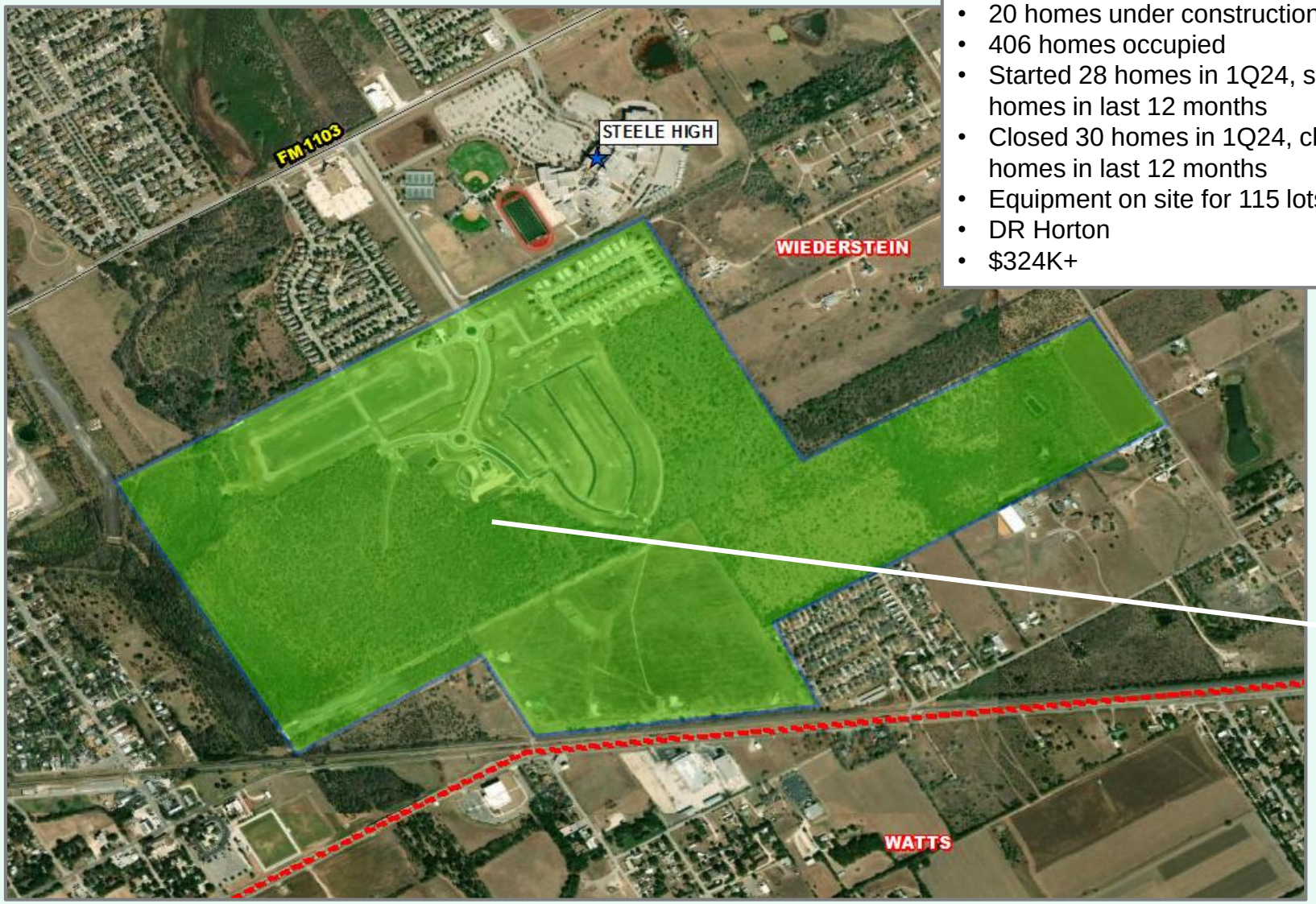


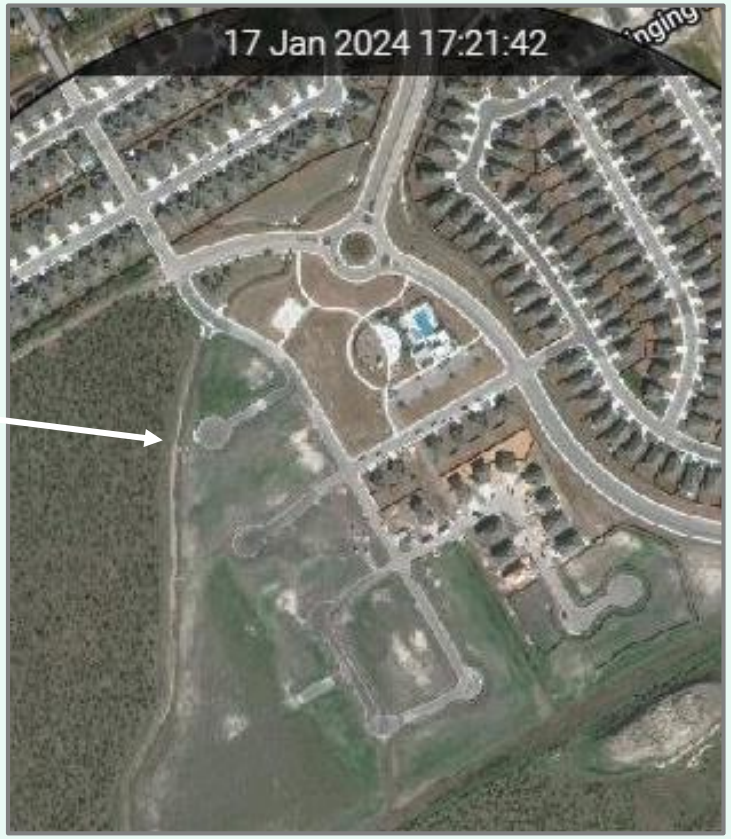



# Residential Activity

## Steele Creek

- 940 total lots
- 387 future lots
- 114 vacant developed lots
- 20 homes under construction
- 406 homes occupied
- Started 28 homes in 1Q24, started 97 homes in last 12 months
- Closed 30 homes in 1Q24, closed 145 homes in last 12 months
- Equipment on site for 115 lots in Phase 6
- DR Horton
- $324K+

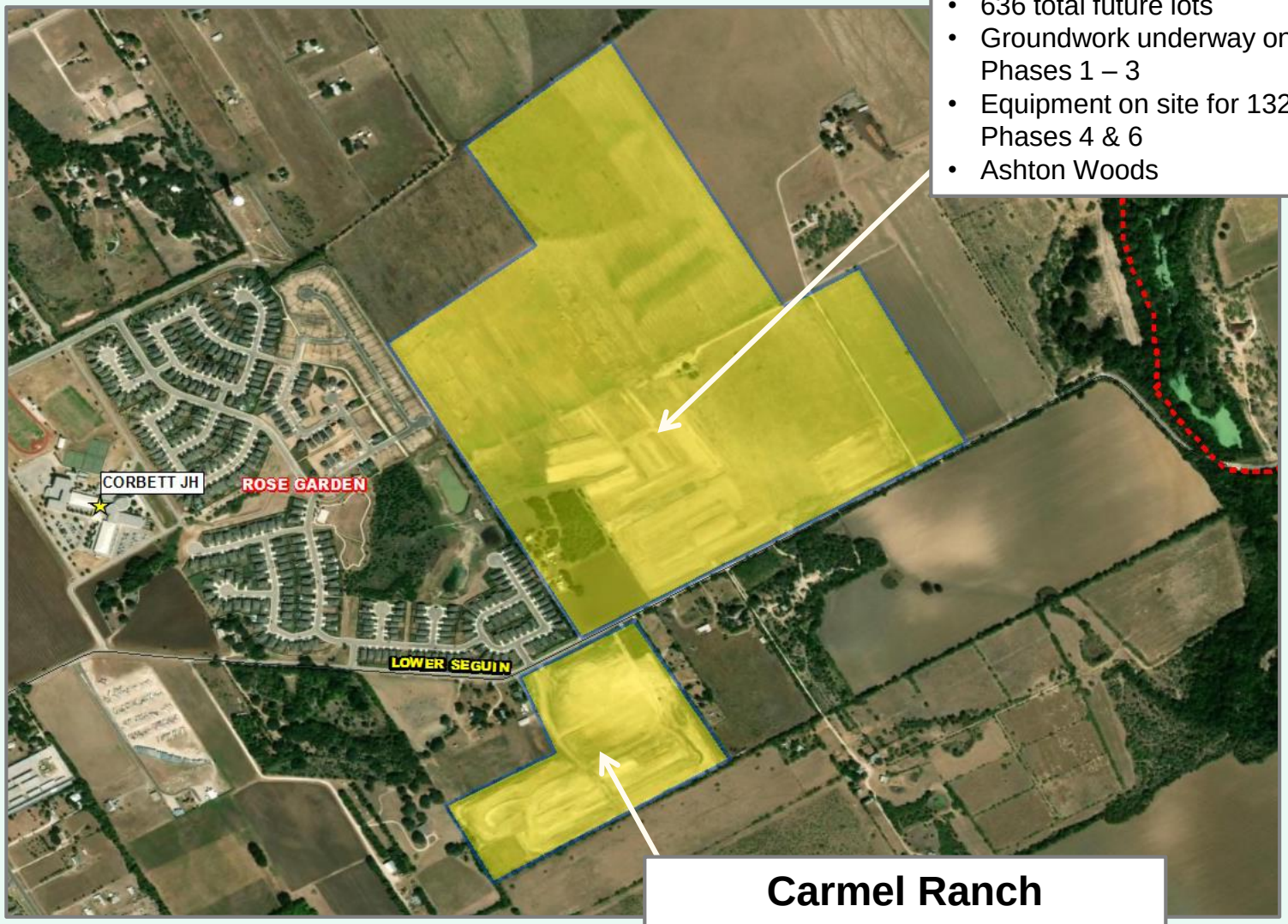


# Residential Activity

## Saddlebrook Ranch

- 636 total future lots
- Groundwork underway on 168 lots in Phases 1 – 3
- Equipment on site for 132 lots in Phases 4 & 6
- Ashton Woods







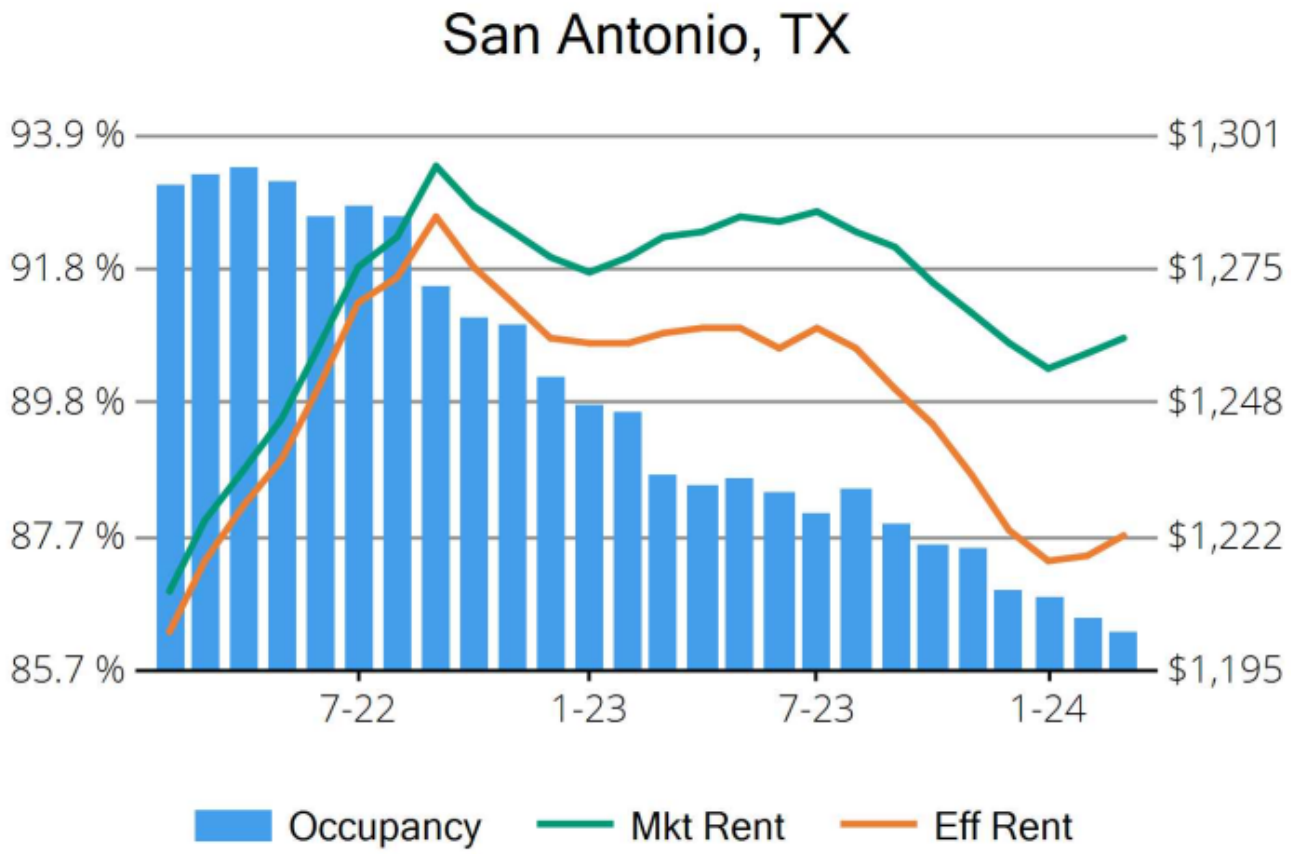
## Carmel Ranch

- 127 total future lots
- Final plat approved Jan 2023
- Groundwork underway on all lots
- Meritage

# Housing Market Trends: Multi-family Market- March 2024

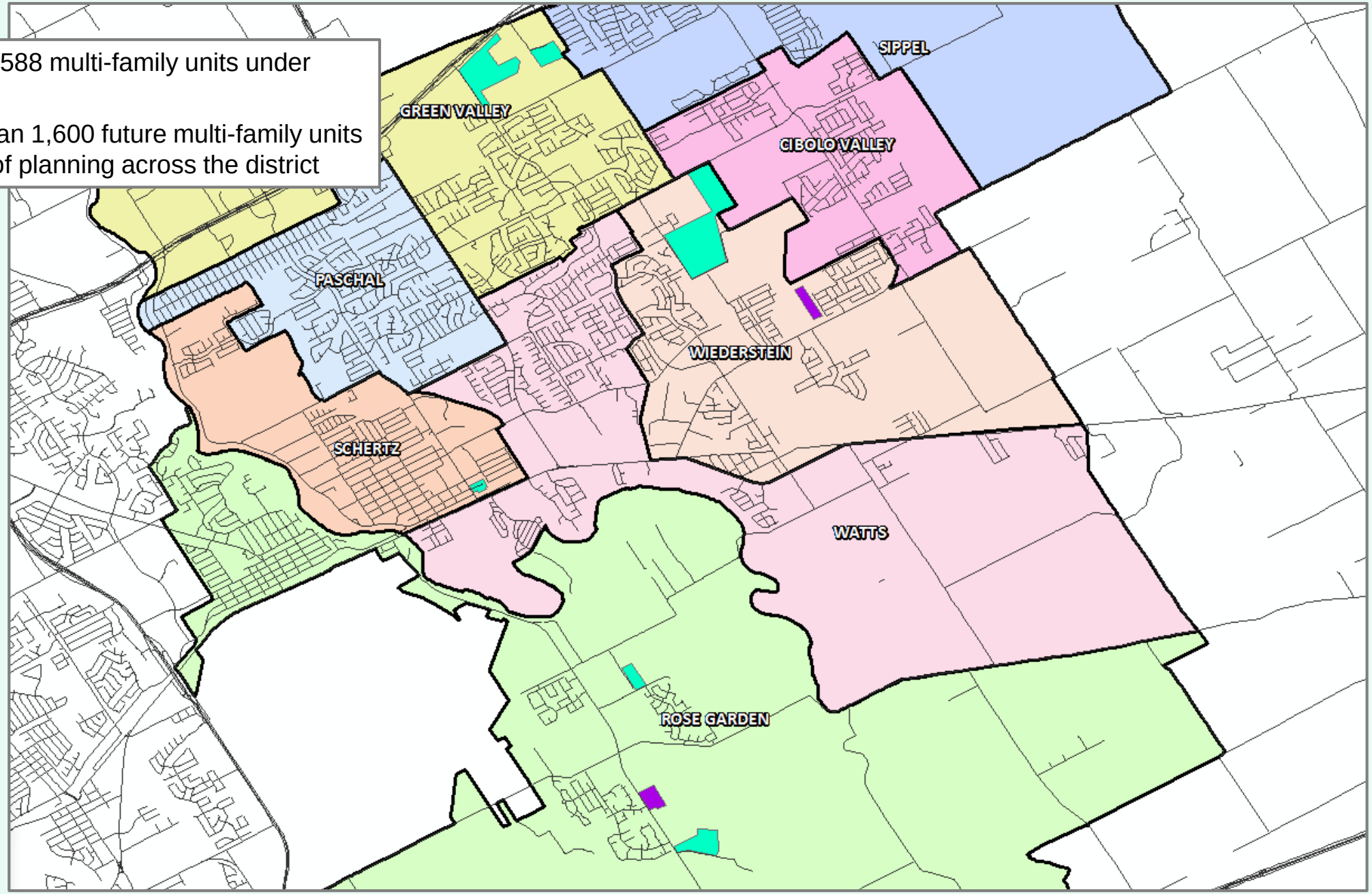
## *Stabilized and Lease-up Properties*

| Conventional Properties | Mar 2024 | Annual Change |
|---|---|---|
| Occupancy | 86.3 | -2.9% |
| Unit Change | 7,058 | |
| Units Absorbed (Annual) | 908 | |
| Average Size (SF) | 860 | +0.6% |
| Asking Rent | $1,261 | -1.7% |
| Asking Rent per SF | $1.47 | -2.3% |
| Effective Rent | $1,222 | -3.3% |
| Effective Rent per SF | $1.42 | -3.9% |
| % Offering Concessions | 42% | +76.9% |
| Avg. Concession Package | 6.5% | +25.5% |



# District Multi-Family Overview

- There are roughly 588 multi-family units under construction
- There are more than 1,600 future multi-family units in various stages of planning across the district




**Multi-Family Developments**

- FUTURE
- UNDER CONSTRUCTION

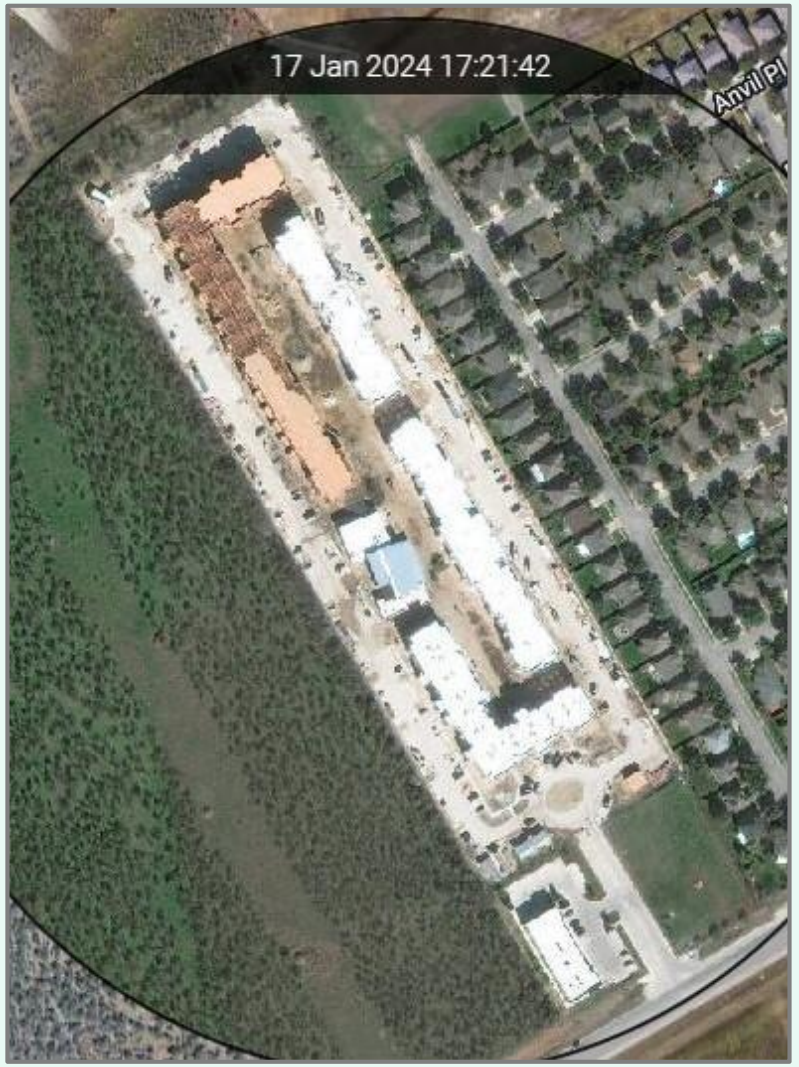
Zonda Education

# Multi-Family Activity

## Cibolo Commons

- 288 apartment units under construction
- Construction went vertical mid 2023
- Estimated lease date Aug 2024



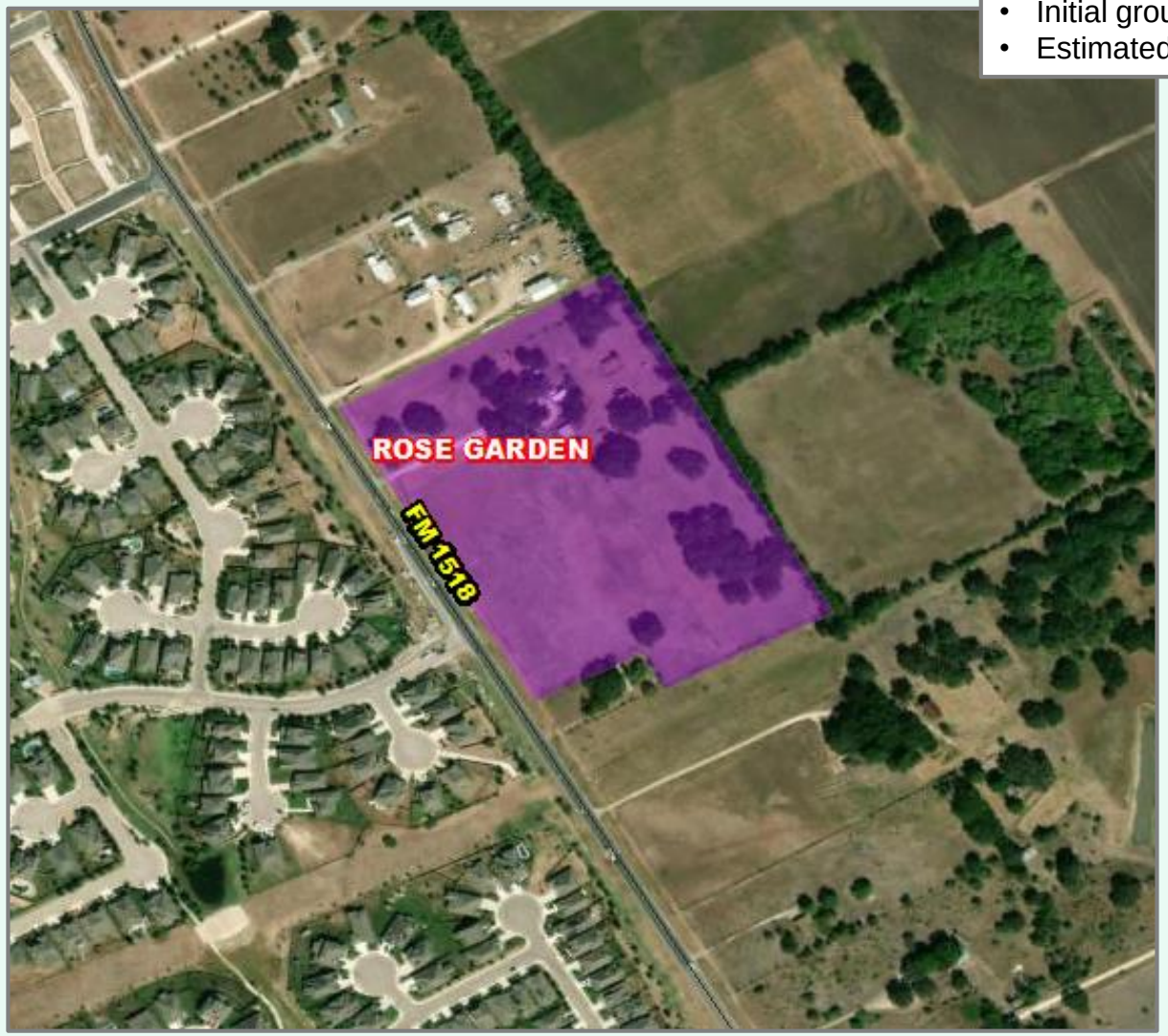




Zonda Education

# Multi-Family Activity

## Aviator 1518

- 300 apartment units under construction
- Initial groundwork underway
- Estimated lease date Fall 2025





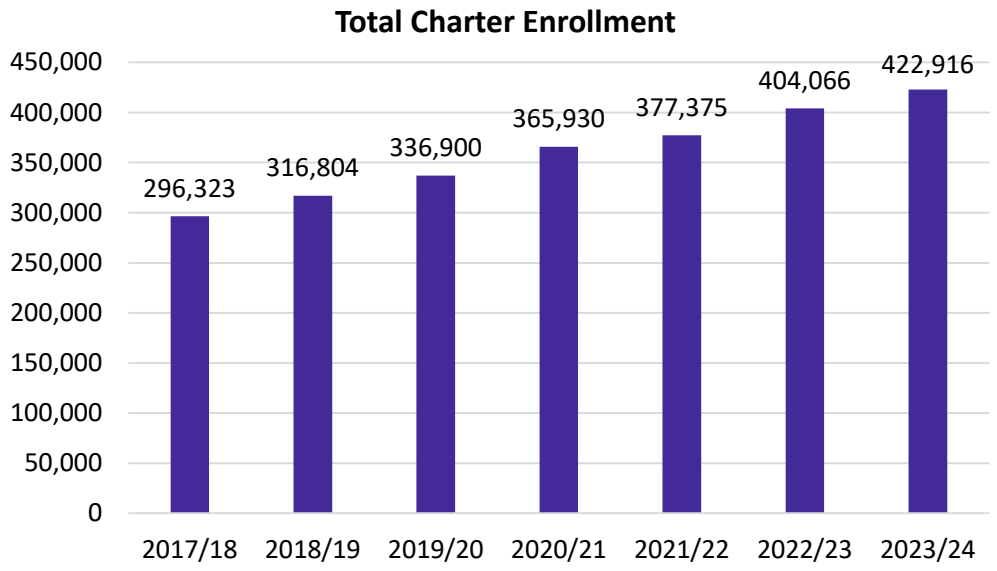

# TEA Transfer Report

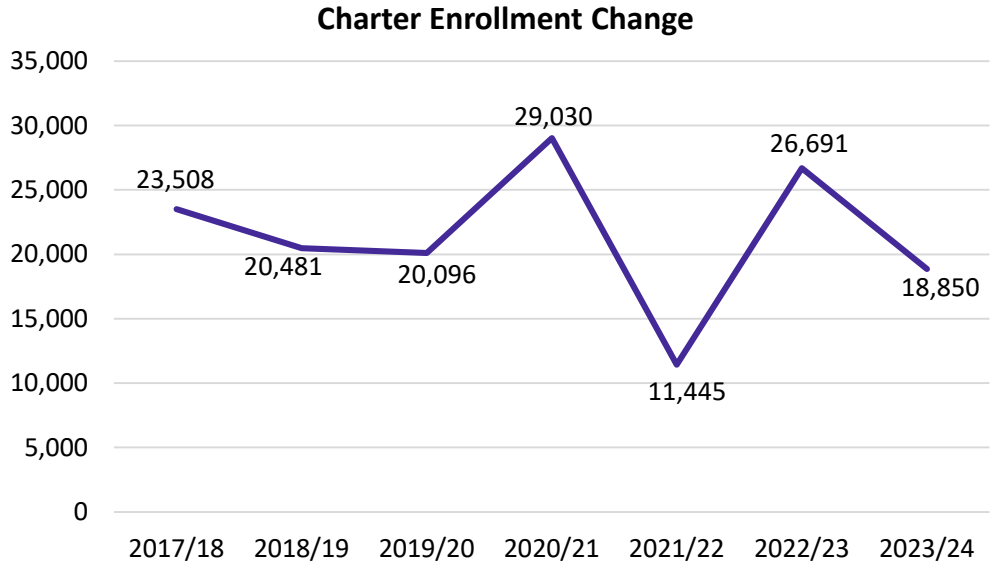
| Transfers In From: | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 5 Year Change |
|---|---|---|---|---|---|---|---|
| Comal ISD | 47 | 48 | 48 | 46 | 47 | 47 | 0 |
| East Central ISD | 15 | 3 | 3 | 16 | 16 | 30 | +15 |
| Judson ISD | 111 | 109 | 93 | 92 | 93 | 83 | -28 |
| Marion ISD | 18 | 28 | 29 | 36 | 27 | 22 | +4 |
| New Braunfels ISD | 32 | 29 | 32 | 37 | 30 | 21 | -11 |
| North East ISD | 47 | 45 | 52 | 52 | 55 | 34 | -13 |
| Seguin ISD | 3 | 3 | 10 | 10 | 3 | 11 | +8 |
| **Total Transfers In*** | **304** | **296** | **300** | **317** | **308** | **275** | **-29** |

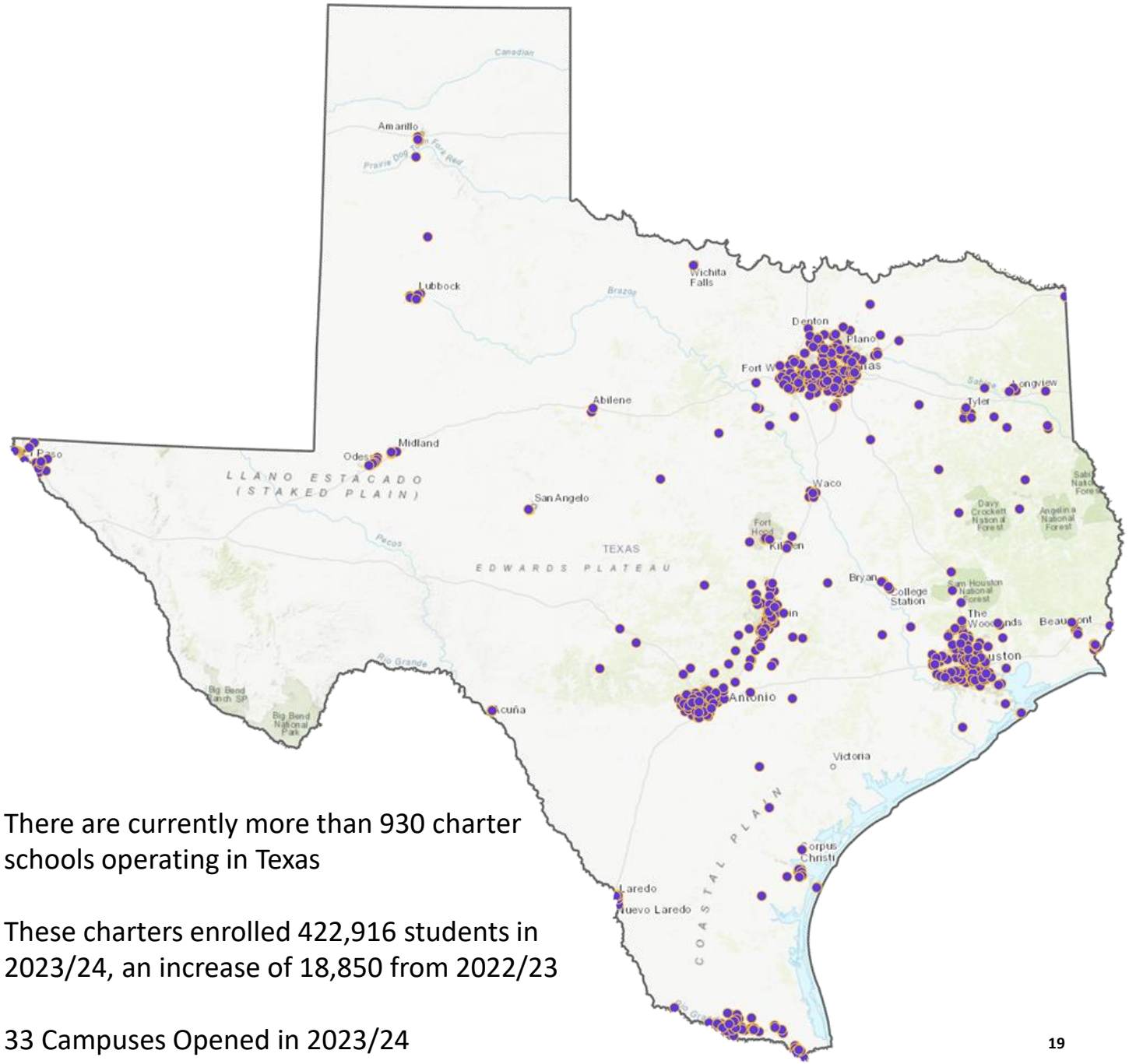
| Transfers Out To: | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 5 Year Change |
|---|---|---|---|---|---|---|---|
| Basis Texas | 19 | 13 | 22 | 50 | 46 | 48 | +29 |
| Comal ISD | 34 | 42 | 60 | 109 | 100 | 112 | +78 |
| East Central ISD | 10 | 11 | 11 | 13 | 13 | 20 | +10 |
| FT Sam Houston ISD | 40 | 45 | 56 | 59 | 53 | 49 | +9 |
| Great Hearts Texas | 34 | 43 | 119 | 159 | 192 | 192 | +158 |
| IDEA Public Schools | 53 | 71 | 91 | 77 | 65 | 465 | +412 |
| Judson ISD | 30 | 57 | 52 | 106 | 229 | 152 | +122 |
| Legacy Traditional Schools | 0 | 0 | 0 | 0 | 463 | 527 | +527 |
| North East ISD | 14 | 19 | 20 | 38 | 42 | 61 | +47 |
| Randolph Field ISD | 444 | 472 | 551 | 529 | 504 | 526 | +82 |
| San Antonio ISD | 18 | 27 | 26 | 14 | 41 | 40 | +22 |
| School of Science and Technology | 16 | 27 | 74 | 288 | 370 | 628 | +612 |
| Texas College Preparatory Academies | 272 | 328 | 356 | 365 | 414 | 309 | +337 |
| **Total Transfers Out*** | **1,079** | **1,283** | **1,591** | **1,981** | **2,695** | **3,312** | **+2,233** |

** Totals include additional districts due to TEA rounding rules*

# Charter Schools




- There are currently more than 930 charter schools operating in Texas
- These charters enrolled 422,916 students in 2023/24, an increase of 18,850 from 2022/23
- 33 Campuses Opened in 2023/24

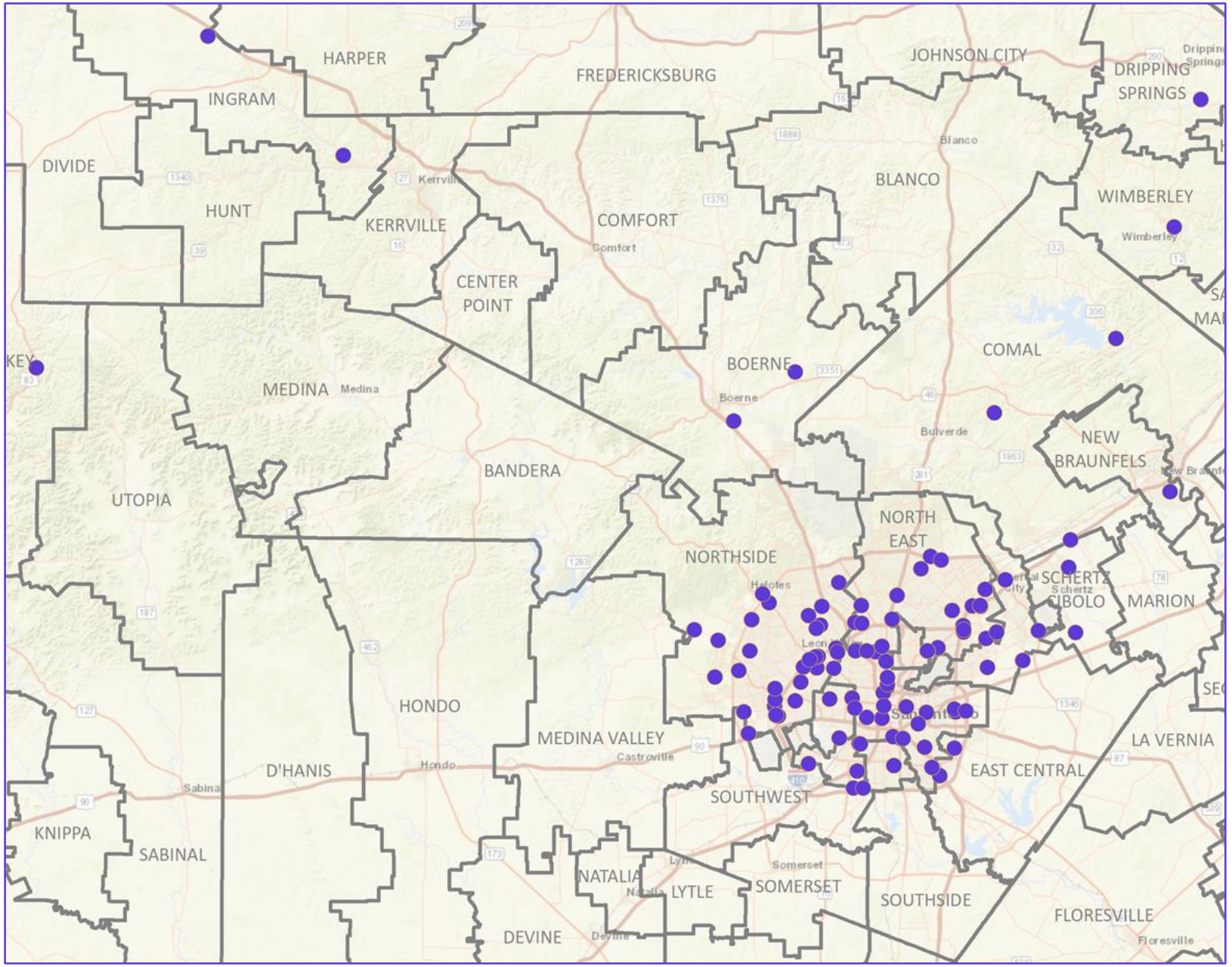
Zonda Education

# Charter Schools: San Antonio

There are currently more than 130 charter school campuses open in the San Antonio Area

These campuses enrolled more than 55,000 students in 2023/24, a rise of nearly 3,500 students over last year

5 separate campuses opened or began reporting enrollment in 2023/24

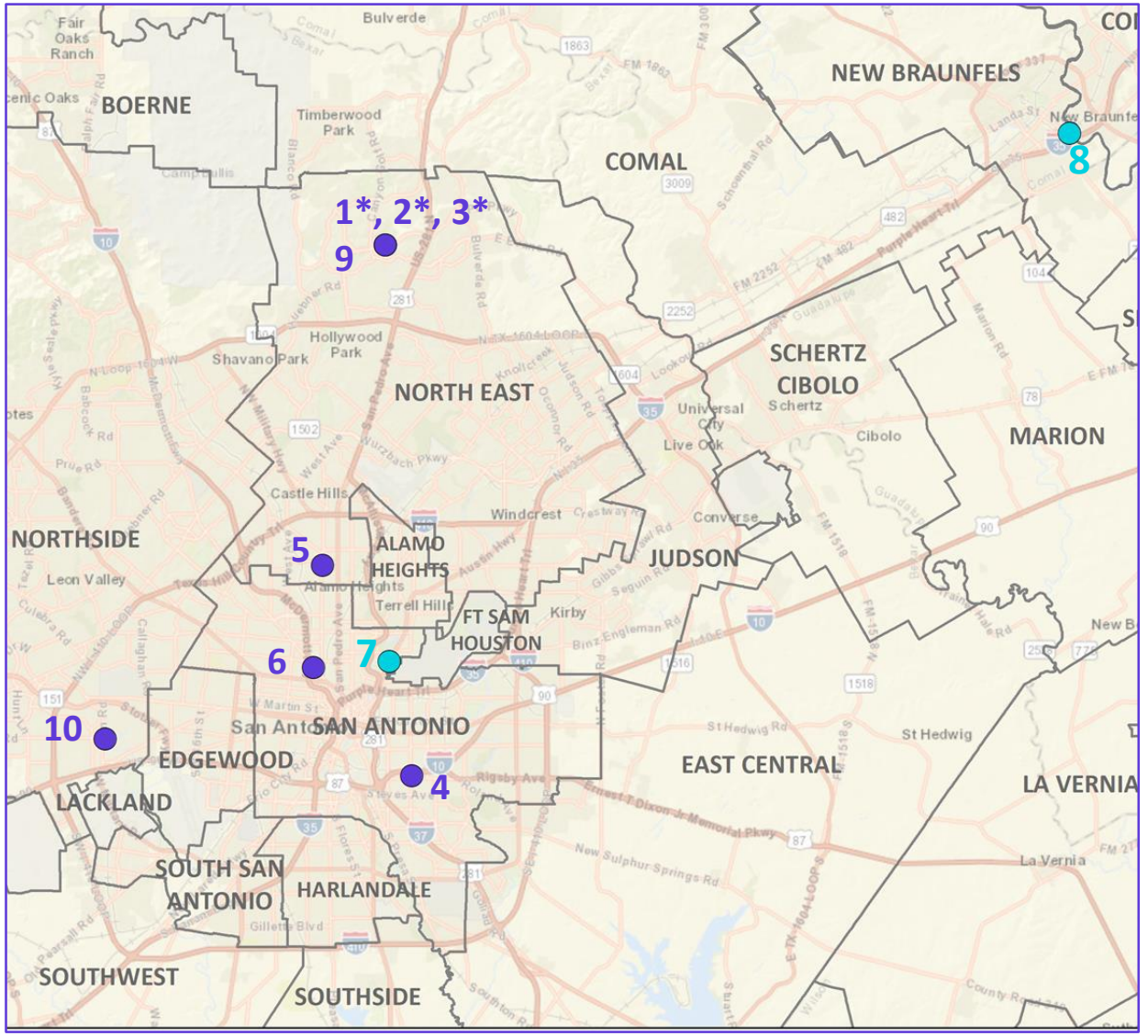



Zonda Education

# Charter Schools: Opening in San Antonio 2024/25

| MAP ID | CAMPUS | GRADES | NOTES |
|---|---|---|---|
| 1 | Somerset Prepatory Academy* | PK4-8 | |
| 2 | George Gervin Academy Expansion Campus 1* | K-12 | |
| 3 | George Gervin Acadrmy Expansion Campus 2* | K-12 | |
| 4 | Compass Rose Opportunity | K-12 | |
| 5 | George Gervin Academy | | |
| 6 | Trimuph Public High Schools - San Antonio | 9-12 | |
| 7 | Celebrate Dyslexia Schools | K-8 | Opening Aug 2024 With K-2, 112 Student Capacity |
| 8 | Innova Mercy Inspire Academy | 7-12 | Day Treatment Center For Students 12-17 |
| 9 | School Of Science And Technology- Sonterra | K-12 | Application Approved, Location TBD |
| 10 | Davinci Academy For Science And The Arts- San Antonio | EE-12 | Application Under Review |

***Undisclosed Address – Approximate Location on Map***




Zonda Education

# Ten Year Forecast by Grade Level

| Year (Oct.) | EE/PK | K | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | 11th | 12th | Total | Total Growth | % Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2019/20 | 413 | 1,048 | 1,036 | 1,093 | 1,125 | 1,184 | 1,211 | 1,234 | 1,183 | 1,180 | 1,419 | 1,340 | 1,282 | 1,224 | 15,972 | 154 | 1.0% |
| 2020/21 | 325 | 951 | 1,019 | 1,040 | 1,077 | 1,135 | 1,143 | 1,232 | 1,248 | 1,219 | 1,293 | 1,394 | 1,305 | 1,292 | 15,673 | -299 | -1.9% |
| 2021/22 | 455 | 935 | 997 | 1,019 | 1,074 | 1,116 | 1,124 | 1,221 | 1,287 | 1,318 | 1,428 | 1,347 | 1,305 | 1,264 | 15,890 | 217 | 1.4% |
| 2022/23 | 436 | 819 | 962 | 998 | 1,077 | 1,114 | 1,067 | 1,133 | 1,230 | 1,306 | 1,478 | 1,371 | 1,247 | 1,283 | 15,521 | -369 | -2.3% |
| 2023/24 | 430 | 788 | 838 | 967 | 997 | 1,090 | 1,079 | 1,097 | 1,178 | 1,264 | 1,435 | 1,459 | 1,238 | 1,286 | 15,146 | -375 | -2.4% |
| 2024/25 | 384 | 747 | 849 | 866 | 1,006 | 1,043 | 1,108 | 1,118 | 1,126 | 1,198 | 1,413 | 1,427 | 1,354 | 1,225 | 14,864 | -282 | -1.9% |
| 2025/26 | 406 | 789 | 795 | 870 | 896 | 1,052 | 1,061 | 1,134 | 1,145 | 1,145 | 1,328 | 1,387 | 1,321 | 1,332 | 14,661 | -203 | -1.4% |
| 2026/27 | 443 | 861 | 840 | 816 | 897 | 933 | 1,072 | 1,093 | 1,167 | 1,164 | 1,269 | 1,316 | 1,274 | 1,306 | 14,451 | -210 | -1.4% |
| 2027/28 | 438 | 850 | 918 | 851 | 841 | 932 | 950 | 1,104 | 1,120 | 1,187 | 1,294 | 1,256 | 1,218 | 1,258 | 14,217 | -234 | -1.6% |
| 2028/29 | 446 | 866 | 907 | 945 | 879 | 879 | 947 | 975 | 1,128 | 1,138 | 1,318 | 1,278 | 1,161 | 1,206 | 14,073 | -144 | -1.0% |
| 2029/30 | 456 | 886 | 919 | 941 | 978 | 919 | 893 | 974 | 994 | 1,147 | 1,265 | 1,304 | 1,180 | 1,151 | 14,007 | -66 | -0.5% |
| 2030/31 | 465 | 904 | 940 | 951 | 970 | 1,020 | 935 | 919 | 1,000 | 1,010 | 1,277 | 1,251 | 1,205 | 1,170 | 14,017 | 10 | 0.1% |
| 2031/32 | 477 | 931 | 960 | 973 | 982 | 1,012 | 1,038 | 962 | 944 | 1,017 | 1,128 | 1,263 | 1,156 | 1,193 | 14,036 | 19 | 0.1% |
| 2032/33 | 489 | 954 | 984 | 995 | 1,006 | 1,025 | 1,029 | 1,068 | 989 | 960 | 1,130 | 1,117 | 1,167 | 1,146 | 14,059 | 22 | 0.2% |
| 2033/34 | 500 | 976 | 1,011 | 1,021 | 1,028 | 1,051 | 1,042 | 1,059 | 1,099 | 999 | 1,066 | 1,120 | 1,034 | 1,156 | 14,162 | 103 | 0.7% |

*Yellow box = largest grade per year*
*Green box = second largest grade per year*

# Ten Year Forecast by Campus

| Campus | Functional Capacity | Max Capacity | Fall | ENROLLMENT PROJECTIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 2027/28 | 2028/29 | 2029/30 | 2030/31 | 2031/32 | 2032/33 | 2033/34 |
| CIBOLO VALLEY EL | 891 | 1,200 | 657 | 611 | 587 | 589 | 594 | 594 | 608 | 617 | 620 | 627 | 637 |
| GREEN VALLEY EL | 673 | 924 | 533 | 497 | 482 | 469 | 497 | 506 | 524 | 535 | 537 | 535 | 529 |
| NORMA PASCHAL EL | 673 | 924 | 625 | 591 | 582 | 564 | 544 | 546 | 559 | 569 | 574 | 580 | 585 |
| ROSE GARDEN EL | 891 | 1,200 | 896 | 882 | 878 | 891 | 923 | 957 | 999 | 1,046 | 1,075 | 1,104 | 1,131 |
| SCHERTZ EL | 675 | 1,102 | 668 | 628 | 605 | 601 | 576 | 581 | 588 | 591 | 586 | 582 | 582 |
| SIPPEL EL | 675 | 1,058 | 672 | 679 | 690 | 721 | 756 | 782 | 827 | 867 | 904 | 961 | 1,030 |
| WATTS EL | 673 | 924 | 513 | 469 | 440 | 428 | 423 | 428 | 446 | 457 | 463 | 476 | 490 |
| WIEDERSTEIN EL | 675 | 1,058 | 546 | 538 | 544 | 527 | 517 | 529 | 549 | 568 | 574 | 587 | 602 |
| **ELEMENTARY TOTALS** | | | 5,110 | 4,895 | 4,808 | 4,790 | 4,830 | 4,922 | 5,099 | 5,250 | 5,335 | 5,453 | 5,587 |
| Elementary Percent Change | | | -5.48% | -4.21% | -1.78% | -0.37% | 0.83% | 1.91% | 3.59% | 2.96% | 1.63% | 2.20% | 2.46% |
| Elementary Absolute Change | | | -296 | -215 | -87 | -18 | 40 | 92 | 177 | 151 | 85 | 117 | 134 |
| JORDAN INT | 810 | 1,000 | 769 | 796 | 763 | 777 | 742 | 676 | 646 | 641 | 695 | 734 | 739 |
| SCHLATHER INT | 810 | 1,200 | 682 | 700 | 689 | 640 | 573 | 563 | 594 | 597 | 651 | 682 | 677 |
| WILDER INT | 810 | 1,250 | 725 | 730 | 743 | 748 | 739 | 683 | 627 | 616 | 654 | 681 | 685 |
| **INTERMEDIATE TOTALS** | | | 2,176 | 2,226 | 2,195 | 2,165 | 2,054 | 1,922 | 1,867 | 1,854 | 2,000 | 2,097 | 2,101 |
| Intermediate Percent Change | | | -1.09% | 2.30% | -1.39% | -1.37% | -5.13% | -6.43% | -2.86% | -0.70% | 7.87% | 4.85% | 0.19% |
| Intermediate Absolute Change | | | -24 | 50 | -31 | -30 | -111 | -132 | -55 | -13 | 146 | 97 | 4 |
| DOBIE JH | 1,300 | 1,540 | 1,316 | 1,229 | 1,194 | 1,228 | 1,196 | 1,152 | 1,058 | 1,009 | 1,025 | 1,025 | 1,109 |
| CORBETT JH | 1,080 | 1,500 | 1,126 | 1,095 | 1,096 | 1,103 | 1,111 | 1,114 | 1,083 | 1,001 | 936 | 924 | 989 |
| **JUNIOR HIGH SCHOOL TOTALS** | | | 2,442 | 2,324 | 2,290 | 2,331 | 2,307 | 2,266 | 2,141 | 2,010 | 1,961 | 1,949 | 2,098 |
| Junior High School Percent Change | | | -3.71% | -4.83% | -1.46% | 1.79% | -1.03% | -1.78% | -5.52% | -6.12% | -2.44% | -0.61% | 7.64% |
| Junior High School Absolute Change | | | -94 | -118 | -34 | 41 | -24 | -41 | -125 | -131 | -49 | -12 | 149 |
| CLEMENS HS | 2,700 | 3,300 | 2,563 | 2,576 | 2,550 | 2,469 | 2,419 | 2,397 | 2,400 | 2,418 | 2,383 | 2,292 | 2,183 |
| STEELE HS | 2,160 | 3,200 | 2,700 | 2,688 | 2,663 | 2,541 | 2,452 | 2,411 | 2,345 | 2,330 | 2,202 | 2,113 | 2,038 |
| ALSELC | | | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 |
| **HIGH SCHOOL TOTALS** | | | 5,418 | 5,419 | 5,368 | 5,165 | 5,026 | 4,963 | 4,900 | 4,903 | 4,740 | 4,560 | 4,376 |
| High School Percent Change | | | 0.73% | 0.02% | -0.94% | -3.78% | -2.69% | -1.25% | -1.27% | 0.06% | -3.32% | -3.80% | -4.04% |
| High School Absolute Change | | | 39 | 1 | -51 | -203 | -139 | -63 | -63 | 3 | -163 | -180 | -184 |
| **DISTRICT TOTALS** | | | **15,146** | **14,864** | **14,661** | **14,451** | **14,217** | **14,073** | **14,007** | **14,017** | **14,036** | **14,059** | **14,162** |
| District Percent Change | | | -2.42% | -1.86% | -1.37% | -1.43% | -1.62% | -1.01% | -0.47% | 0.07% | 0.14% | 0.16% | 0.73% |
| District Absolute Change | | | -375 | -282 | -203 | -210 | -234 | -144 | -66 | 10 | 19 | 22 | 103 |

*Yellow box = exceeds Functional Capacity*

# Key Takeaways




- SCUCISD has roughly 450 homes currently in inventory with nearly 1,750 additional lots available to build on
- Groundwork is underway on more than 970 lots within 8 subdivisions
- Schertz-Cibolo-Universal City ISD is forecasted to enroll more than 14,000 students by 2028/29 and more than 14,160 students by 2033/34

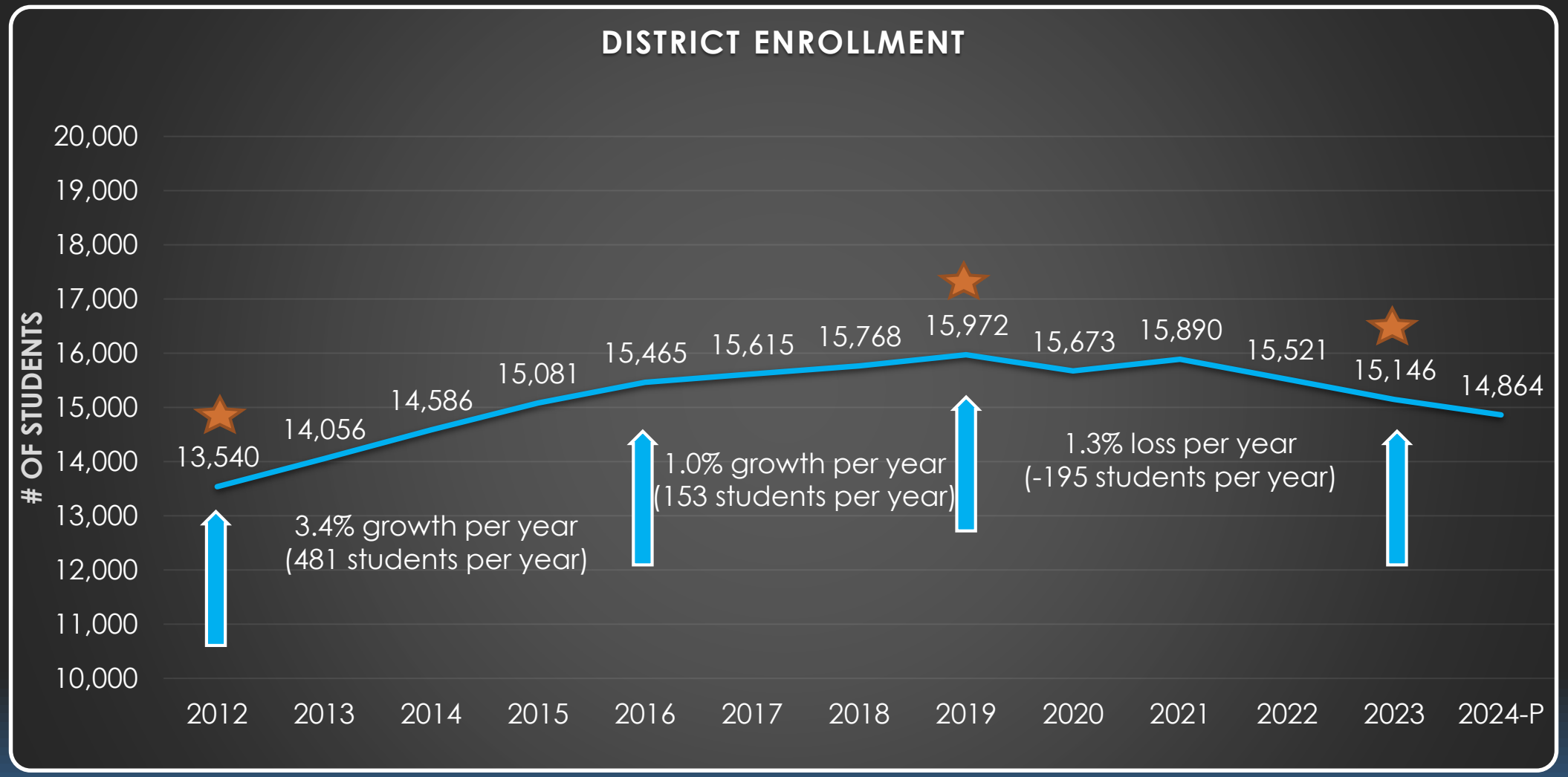
SCHERTZ - CIBOLO - UNIVERSAL CITY ISD

# 10 YEAR CAMPUS FORECASTING

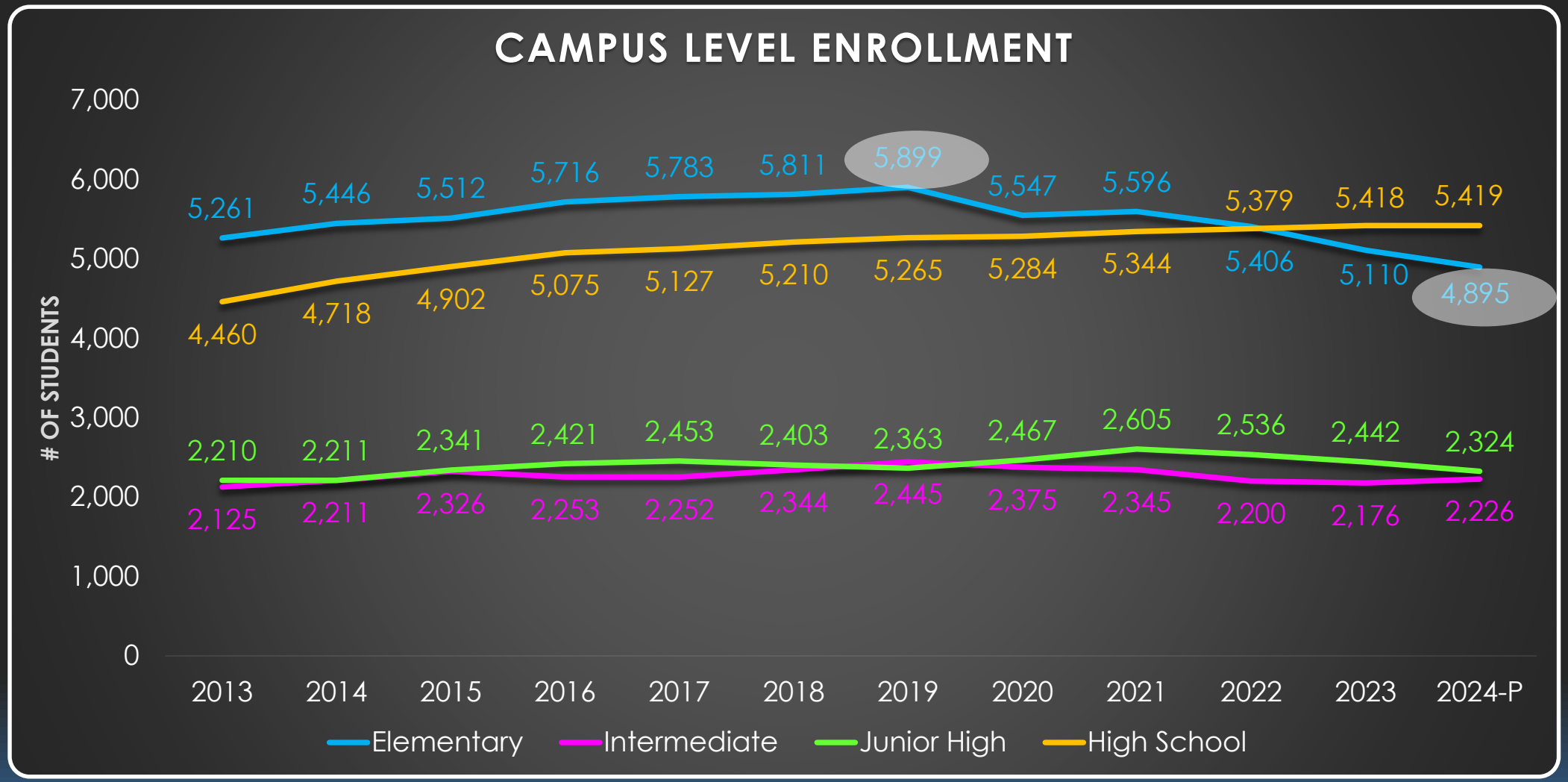
# FORECASTING CONSIDERATIONS

- Enrollment
  - Historical Trends
  - Projections
  - Transfers to Charters and Other ISDs
- Campus Capacity
- Bonding Capacity

# HISTORICAL ENROLLMENT



# HISTORICAL ENROLLMENT BY CAMPUS LEVEL



# ENROLLMENT HISTORY BY LEVEL – OCTOBER

- 2019 to 2023 Enrollment Decrease
  - High School enrollment has remained strong
  - We have added 154 High School students since 2019
  - And Junior High has only lost 39 students since 2019
- Elementary is where we have felt the largest drop in enrollment
  - Specifically, 918 students lost since 2019
  - and 219 students lost at the intermediate level.

# STUDENT TRANSFERS

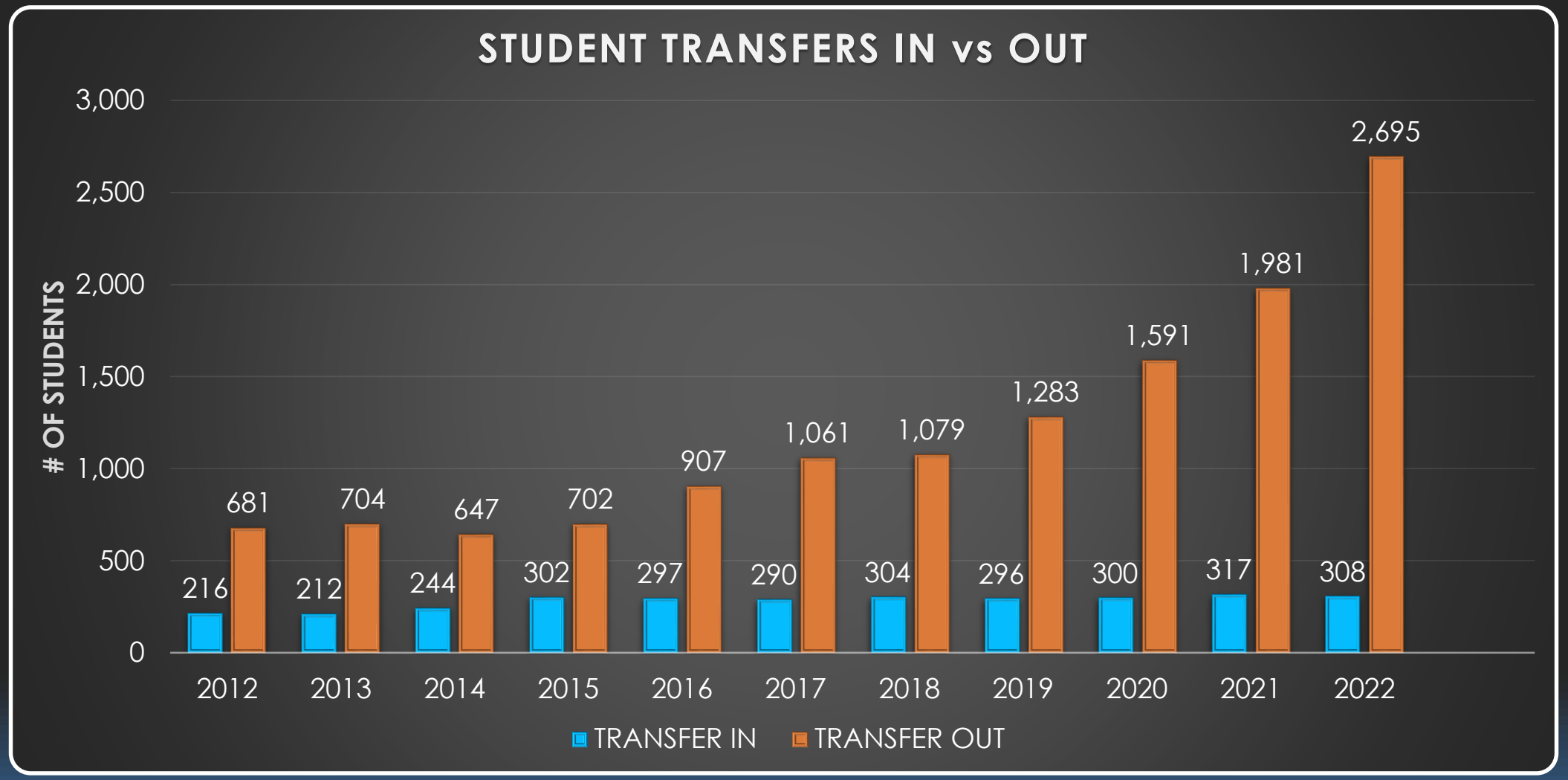
First Year of Founders Charter School →

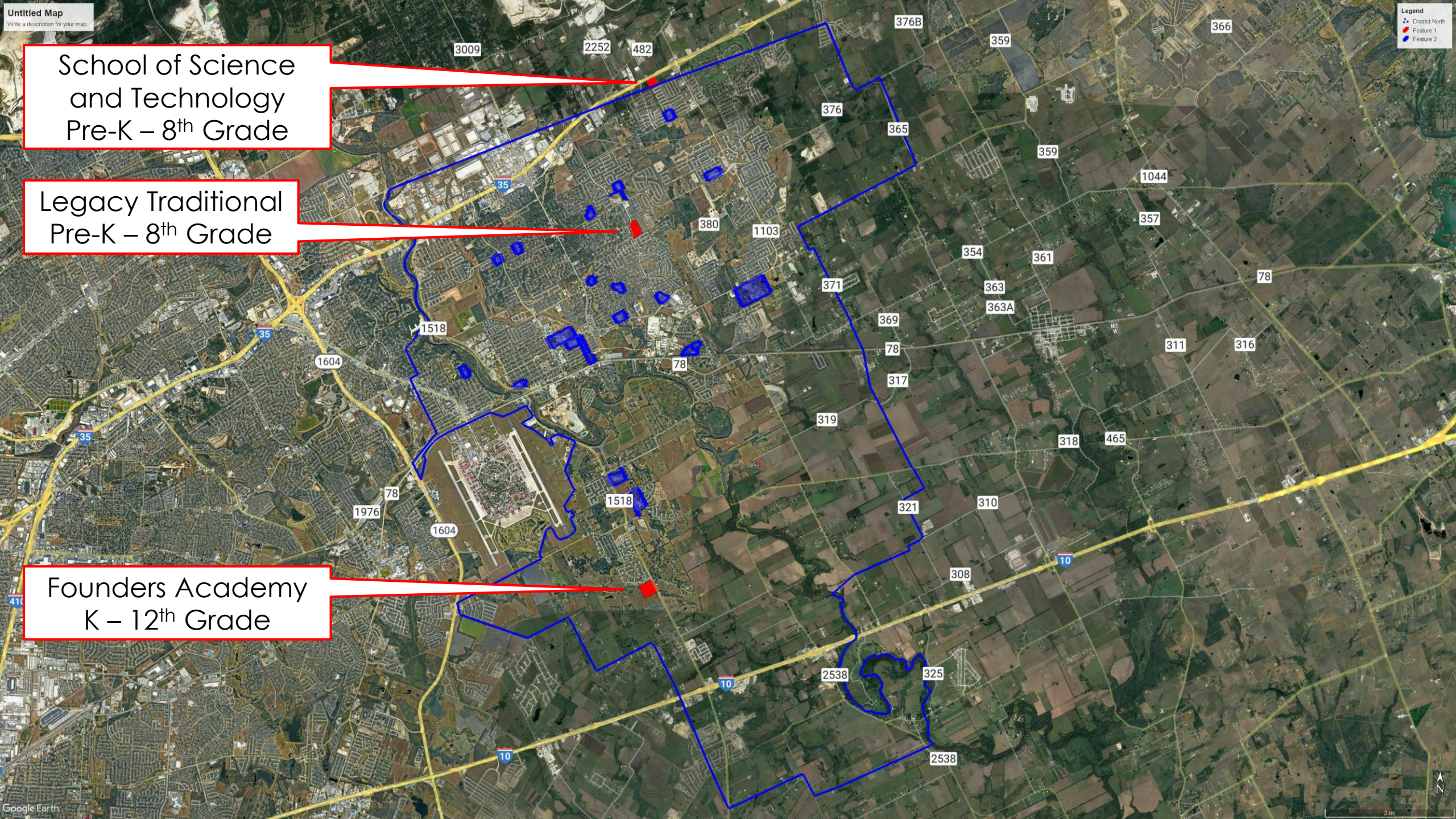
First Year of School of Science and Technology →

First Year of Legacy Traditional School →

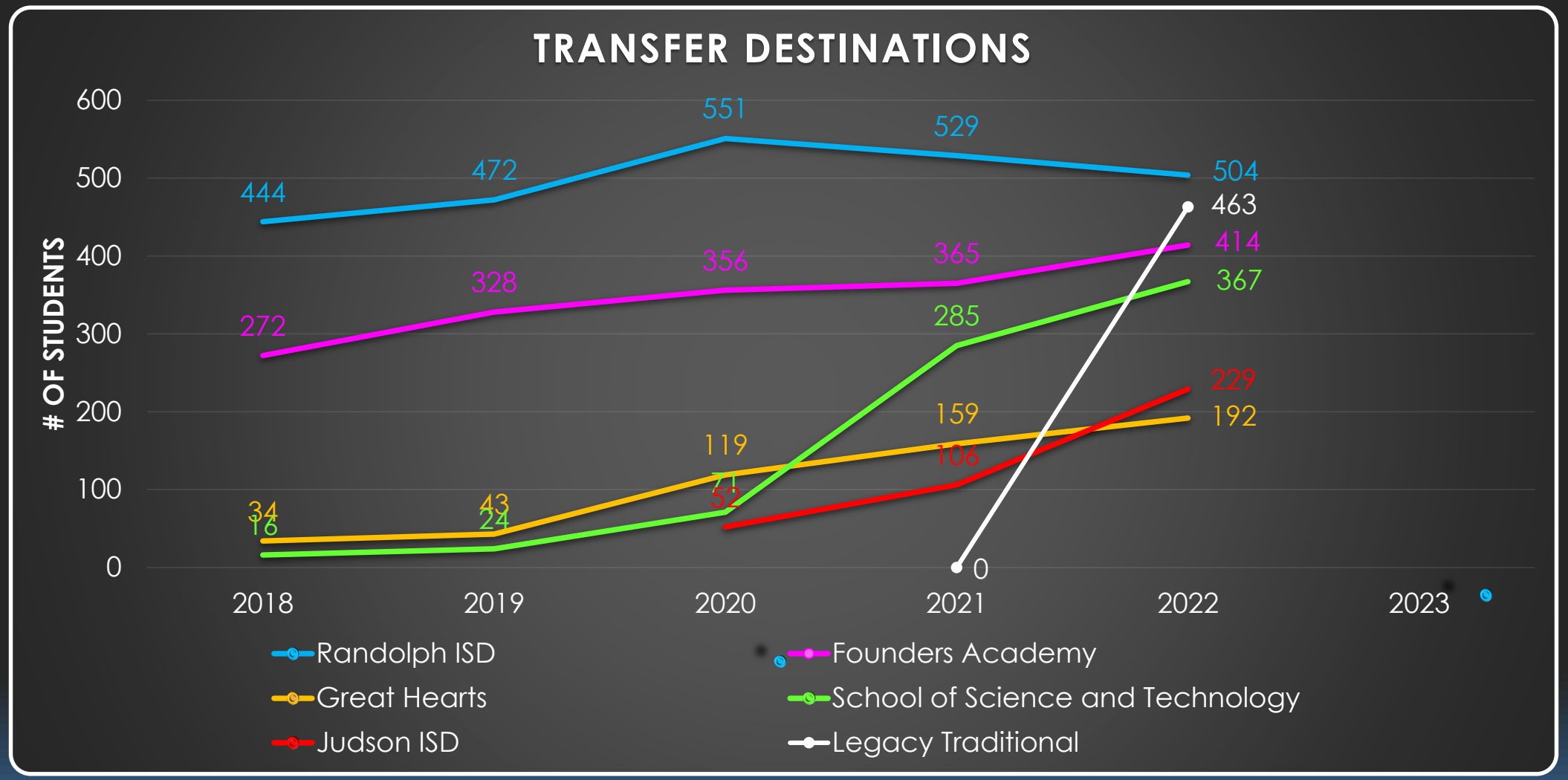
| PEIMS YEAR | TRANSFER IN | TRANSFER OUT | DIFFERENCE |
|---|---|---|---|
| 2012 | 216 | 681 | -465 |
| 2013 | 212 | 704 | -492 |
| 2014 | 244 | 647 | -403 |
| 2015 | 302 | 702 | -400 |
| 2016 | 297 | 907 | -610 |
| 2017 | 290 | 1061 | -771 |
| 2018 | 304 | 1079 | -775 |
| 2019 | 296 | 1283 | -987 |
| 2020 | 300 | 1591 | -1291 |
| 2021 | 317 | 1981 | -1664 |
| 2022 | 308 | 2695 | -2387 |
| 2023 | Data available in March | | |

# STUDENT TRANSFERS IN VS. OUT

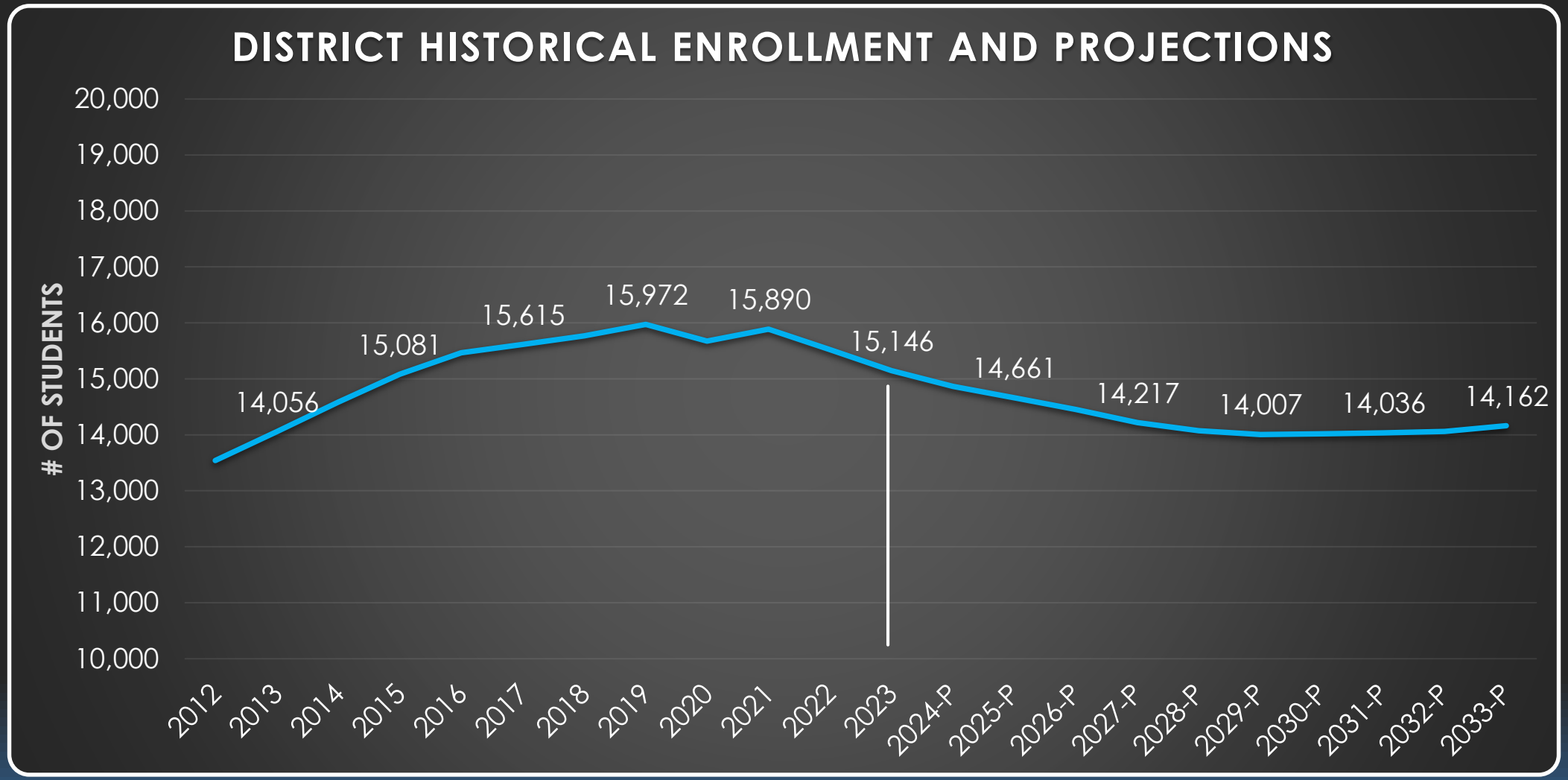



Untitled Map
Write a description for your map.
School of Science and Technology Pre-K – 8th Grade
Legacy Traditional Pre-K – 8th Grade
Founders Academy K – 12th Grade
Legend
District North
Feature 1
Feature 2
3009
2252
482
376B
359
366
376
365
359
1044
380
1103
357
354
361
78
371
363
363A
369
78
1518
1604
78
317
311
316
319
318
465
78
1976
1518
1604
321
310
308
10
2538
325
2538
35
10
Google Earth
N

# MAIN DESTINATIONS FOR TRANSFERS OUT



# SO, HOW MANY STUDENTS WILL WE HAVE IN THE FUTURE?



# ENROLLMENT PROJECTIONS

- Over the next 6 years our District is projected to lose on average 1.3% of our enrollment annually.
  - Resulting in the potential decline in enrollment of another 1,139 students over the same period
  - Larger graduating classes continue to be replaced with smaller Pre-K and Kinder
  - Growth in Charter enrollment is likely to contribute to the smaller elementary class sizes

| PEIMS YEAR | PROJECTED ENROLLMENT | GROWTH (DECLINE) | PERCENTAGE CHANGE |
|---|---|---|---|
| 2023 | 15,146 | -375 | -2.42% |
| 2024-P | 14,864 | -282 | -1.86% |
| 2025-P | 14,661 | -203 | -1.37% |
| 2026-P | 14,451 | -210 | -1.43% |
| 2027-P | 14,217 | -234 | -1. 62% |
| 2028-P | 14,073 | -144 | -1.01% |
| 2029-P | 14,007 | -66 | -0.47% |
| 2030-P | 14,017 | 10 | 0.07% |
| 2031-P | 14,036 | 19 | 0.14% |
| 2032-P | 14,059 | 22 | 0.16% |
| 2033-P | 14,162 | 103 | 0.73% |

# ENROLLMENT PROJECTIONS

- Beginning in 2030 the district is expected to begin adding students
  - Incoming elementary enrollment and graduating classes begin to reach a balance
  - In 2033 we are projected to return to the enrollment we had in 2013

| PEIMS YEAR | PROJECTED ENROLLMENT | GROWTH (DECLINE) | PERCENTAGE CHANGE |
|---|---|---|---|
| 2023 | 15,146 | -375 | -2.44% |
| 2024-P | 14,864 | -282 | -1.86% |
| 2025-P | 14,661 | -203 | -1.37% |
| 2026-P | 14,451 | -210 | -1.43% |
| 2027-P | 14,217 | -234 | -1. 62% |
| 2028-P | 14,073 | -144 | -1.01% |
| 2029-P | 14,007 | -66 | -0.47% |
| 2030-P | 14,017 | 10 | 0.07% |
| 2031-P | 14,036 | 19 | 0.14% |
| 2032-P | 14,059 | 22 | 0.16% |
| 2033-P | 14,162 | 103 | 0.73% |

# WHY HAS IT BECOME SO HARD TO PROJECT ENROLLMENT?

- Prior to COVID and area Charter Schools, SCUC was essentially the only option for parents moving into our growing community.
  - When projecting growth, birth rates and housing growth were the only two major variables we had to consider.
- Beginning 2017 with the first area Charter School, parents began to exercise their choice.
  - with COVID we saw virtual learning enter the game and homeschooling became more prevalent
  - Our community also continued to experience aging in place
- Projecting enrollment is much more difficult with these added variables.

# FORECASTING CONSIDERATIONS

- Enrollment
  - Historical Trends
  - Projections
  - Transfers to Charters and Other ISDs
- Campus Capacity

# UNDERSTANDING CAMPUS CAPACITY

- Design Capacity
  - Capacity of a campus as architecturally designed with every full-size classroom at full capacity
  - Ex. Sippel Elementary has a design capacity of 750 students
- Functional Capacity
  - Design capacity of a campus minus 10% to account for special programs on a campus that reduce the capacity of a full-size classroom
  - Ex. Sippel Elementary has a functional capacity of 675 students
- Maximum Capacity
  - Campus capacity considering the addition of portable classroom buildings to the design capacity and the number of students the common areas of the campus can support
  - Ex. Sippel Elementary has a maximum capacity of 1058 students

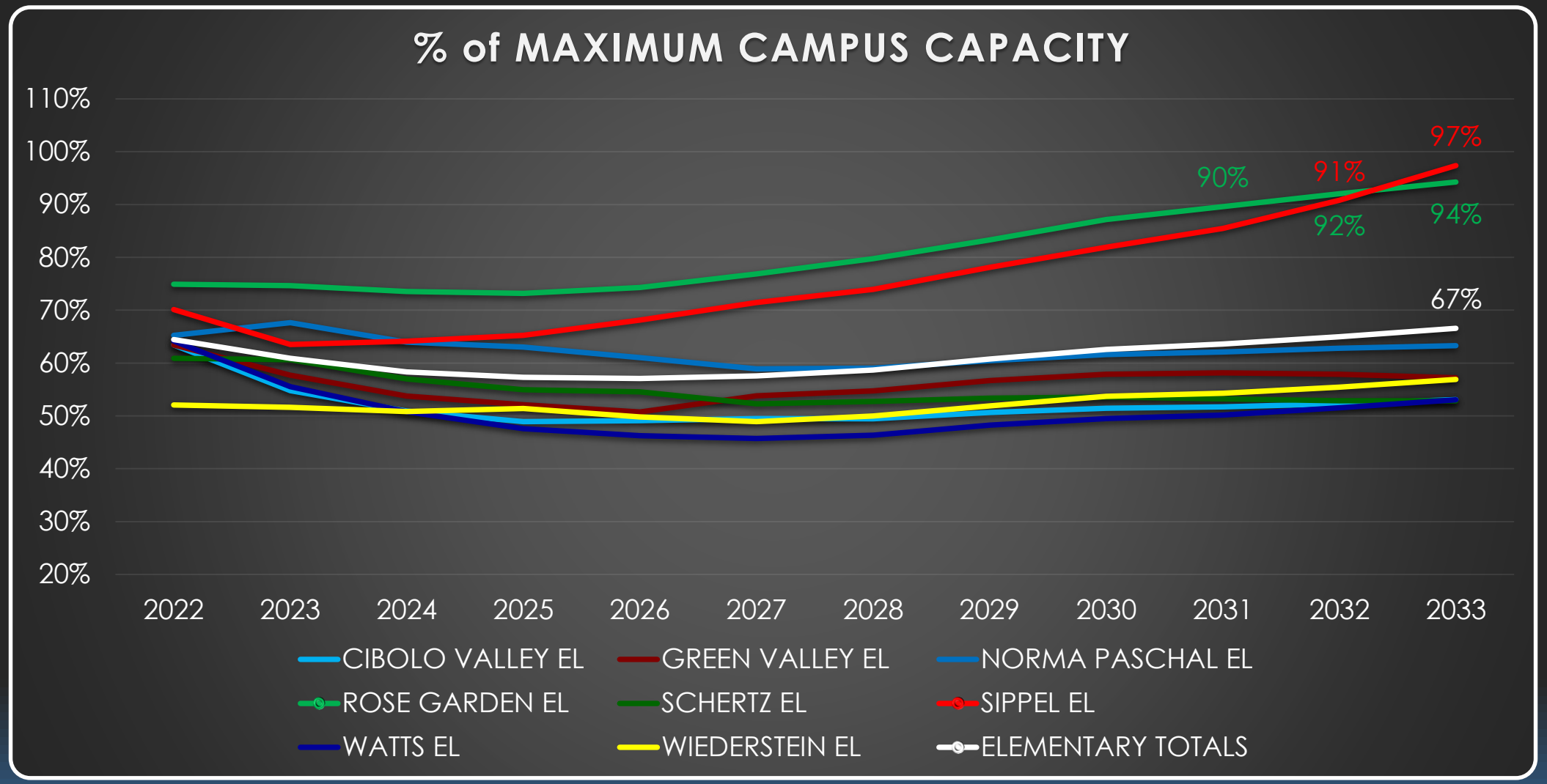
# PLANNING USING OUR MAXIMUM CAPACITY

- We begin considering the use of **CAPACITY RELIEF TOOLS** when a campus reaches **90%** of its maximum capacity. The District has several tools at our disposal
- Tools to **REDUCE/MAINTAIN THE ENROLLMENT** of a campus include:
  - Capping enrollment of the campus to new students
  - Moving special programs to campuses with lower enrollments
- Tools to **BALANCE THE ENROLLMENT** at campuses include:
  - Rezoning the attendance boundaries
- Tools to **INCREASE THE CAPACITY** of the campus/district include:
  - Adding portable classroom buildings
  - Adding to or renovating the existing building
  - Building a new campus to the district

# ELEMENTARY CAPACITIES

| Campus | Functional Capacity | Max Capacity | Previous Year | Current PEIMS | ENROLLMENT PROJECTIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
| CIBOLO VALLEY EL | 891 | 1,200 | 761 | 657 | 611 | 587 | 589 | 594 | 594 | 608 | 617 | 620 | 627 | 637 |
| % Max Capacity | | | 63% | 55% | 51% | 49% | 49% | 49% | 49% | 51% | 51% | 52% | 52% | 53% |
| GREEN VALLEY EL | 673 | 924 | 586 | 533 | 497 | 482 | 469 | 497 | 506 | 524 | 535 | 537 | 535 | 529 |
| % Max Capacity | | | 63% | 58% | 54% | 52% | 51% | 54% | 55% | 57% | 58% | 58% | 58% | 57% |
| NORMA PASCHAL EL | 673 | 924 | 603 | 625 | 591 | 582 | 564 | 544 | 546 | 559 | 569 | 574 | 580 | 585 |
| % Max Capacity | | | 65% | 68% | 64% | 63% | 61% | 59% | 59% | 60% | 62% | 62% | 63% | 63% |
| ROSE GARDEN EL | 891 | 1,200 | 899 | 896 | 882 | 878 | 891 | 923 | 957 | 999 | 1,046 | 1,075 | 1,104 | 1,131 |
| % Max Capacity | | | 75% | 75% | 74% | 73% | 74% | 77% | 80% | 83% | 87% | 90% | 92% | 94% |
| SCHERTZ EL | 675 | 1,102 | 671 | 668 | 628 | 605 | 601 | 576 | 581 | 588 | 591 | 586 | 582 | 582 |
| % Max Capacity | | | 61% | 61% | 57% | 55% | 55% | 52% | 53% | 53% | 54% | 53% | 53% | 53% |
| SIPPEL EL | 675 | 1,058 | 742 | 672 | 679 | 690 | 721 | 756 | 782 | 827 | 867 | 904 | 961 | 1,030 |
| % Max Capacity | | | 70% | 64% | 64% | 65% | 68% | 71% | 74% | 78% | 82% | 85% | 91% | 97% |
| WATTS EL | 673 | 924 | 593 | 513 | 469 | 440 | 428 | 423 | 428 | 446 | 457 | 463 | 476 | 490 |
| % Max Capacity | | | 64% | 56% | 51% | 48% | 46% | 46% | 46% | 48% | 49% | 50% | 52% | 53% |
| WIEDERSTEIN EL | 675 | 1,058 | 551 | 546 | 538 | 544 | 527 | 517 | 529 | 549 | 568 | 574 | 587 | 602 |
| % Max Capacity | | | 52% | 52% | 51% | 51% | 50% | 49% | 50% | 52% | 54% | 54% | 55% | 57% |
| ELEMENTARY TOTALS | 5,826 | 8,390 | 5,406 | 5,110 | 4,895 | 4,808 | 4,790 | 4,830 | 4,922 | 5,099 | 5,250 | 5,335 | 5,453 | 5,587 |
| % Max Capacity | | | 64% | 61% | 58% | 57% | 57% | 58% | 59% | 61% | 63% | 64% | 65% | 67% |
| Elementary Percent Change | | | -3.40% | -5.48% | -4.21% | -1.78% | -0.37% | 0.83% | 1.91% | 3.59% | 2.96% | 1.63% | 2.20% | 2.46% |
| Elementary Absolute Change | | | -190 | -296 | -215 | -87 | -18 | 40 | 92 | 177 | 151 | 85 | 117 | 134 |

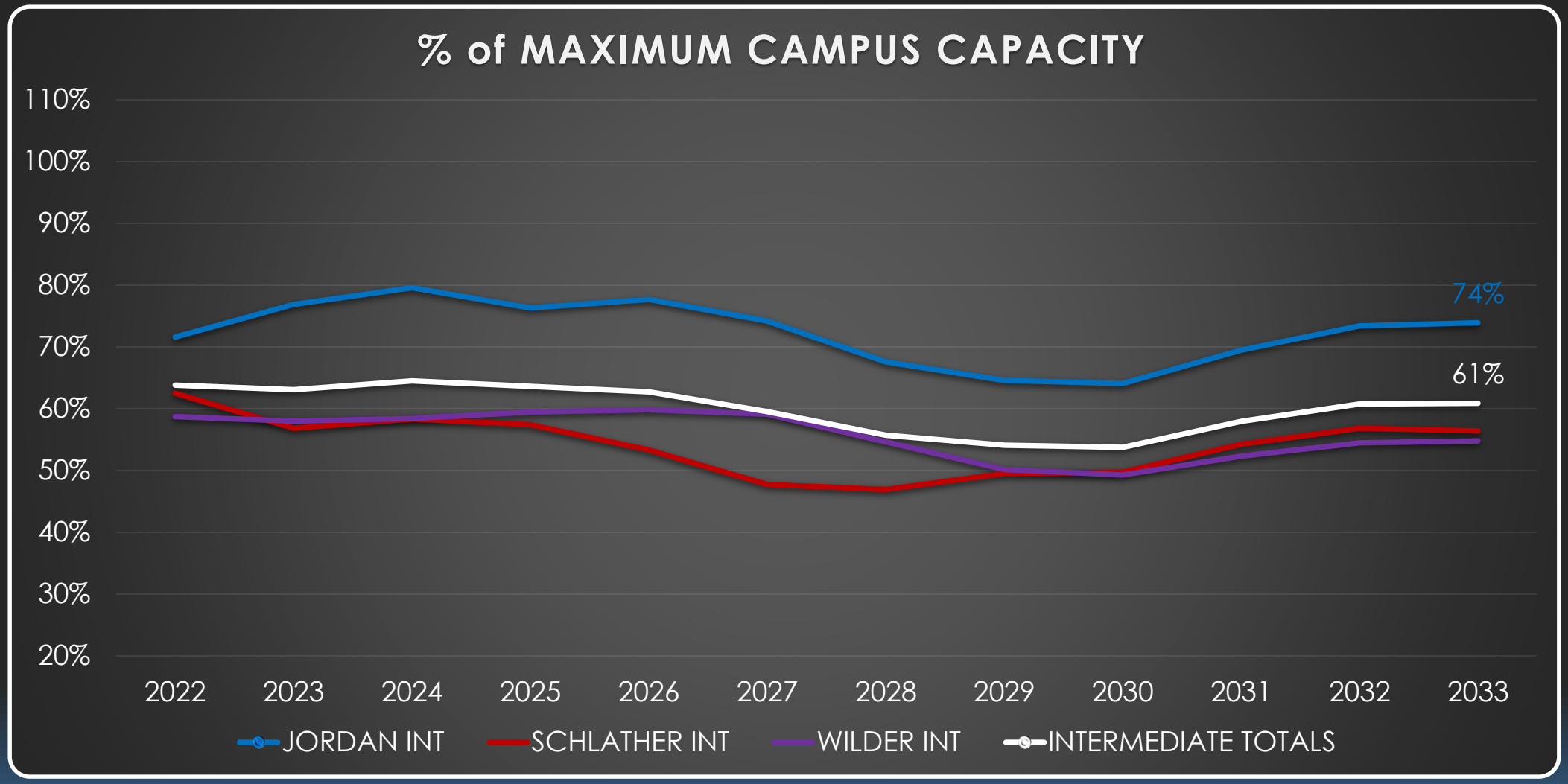
# ELEMENTARY CAPACITIES



# INTERMEDIATE CAPACITIES

| Campus | Functional Capacity | Max Capacity | Previous Year | Current PEIMS | ENROLLMENT PROJECTIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
| JORDAN INT | 810 | 1,000 | 716 | 769 | 796 | 763 | 777 | 742 | 676 | 646 | 641 | 695 | 734 | 739 |
| % Max Capacity | | | 72% | 77% | 80% | 76% | 78% | 74% | 68% | 65% | 64% | 70% | 73% | 74% |
| SCHLATHER INT | 810 | 1,200 | 750 | 682 | 700 | 689 | 640 | 573 | 563 | 594 | 597 | 651 | 682 | 677 |
| % Max Capacity | | | 63% | 57% | 58% | 57% | 53% | 48% | 47% | 50% | 50% | 54% | 57% | 56% |
| WILDER INT | 810 | 1,250 | 734 | 725 | 730 | 743 | 748 | 739 | 683 | 627 | 616 | 654 | 681 | 685 |
| % Max Capacity | | | 59% | 58% | 58% | 59% | 60% | 59% | 55% | 50% | 49% | 52% | 54% | 55% |
| **INTERMEDIATE TOTALS** | | 3,450 | 2,201 | 2,176 | 2,226 | 2,195 | 2,165 | 2,054 | 1,922 | 1,867 | 1,854 | 2,000 | 2,097 | 2,101 |
| **% Max Capacity** | | | 64% | 63% | 65% | 64% | 63% | 60% | 56% | 54% | 54% | 58% | 61% | 61% |
| Intermediate Percent Change | | | -6.13% | -1.09% | 2.30% | -1.39% | -1.37% | -5.13% | -6.43% | -2.86% | -0.70% | 7.87% | 4.85% | 0.19% |
| Intermediate Absolute Change | | | -144 | -24 | 50 | -31 | -30 | -111 | -132 | -55 | -13 | 146 | 97 | 4 |

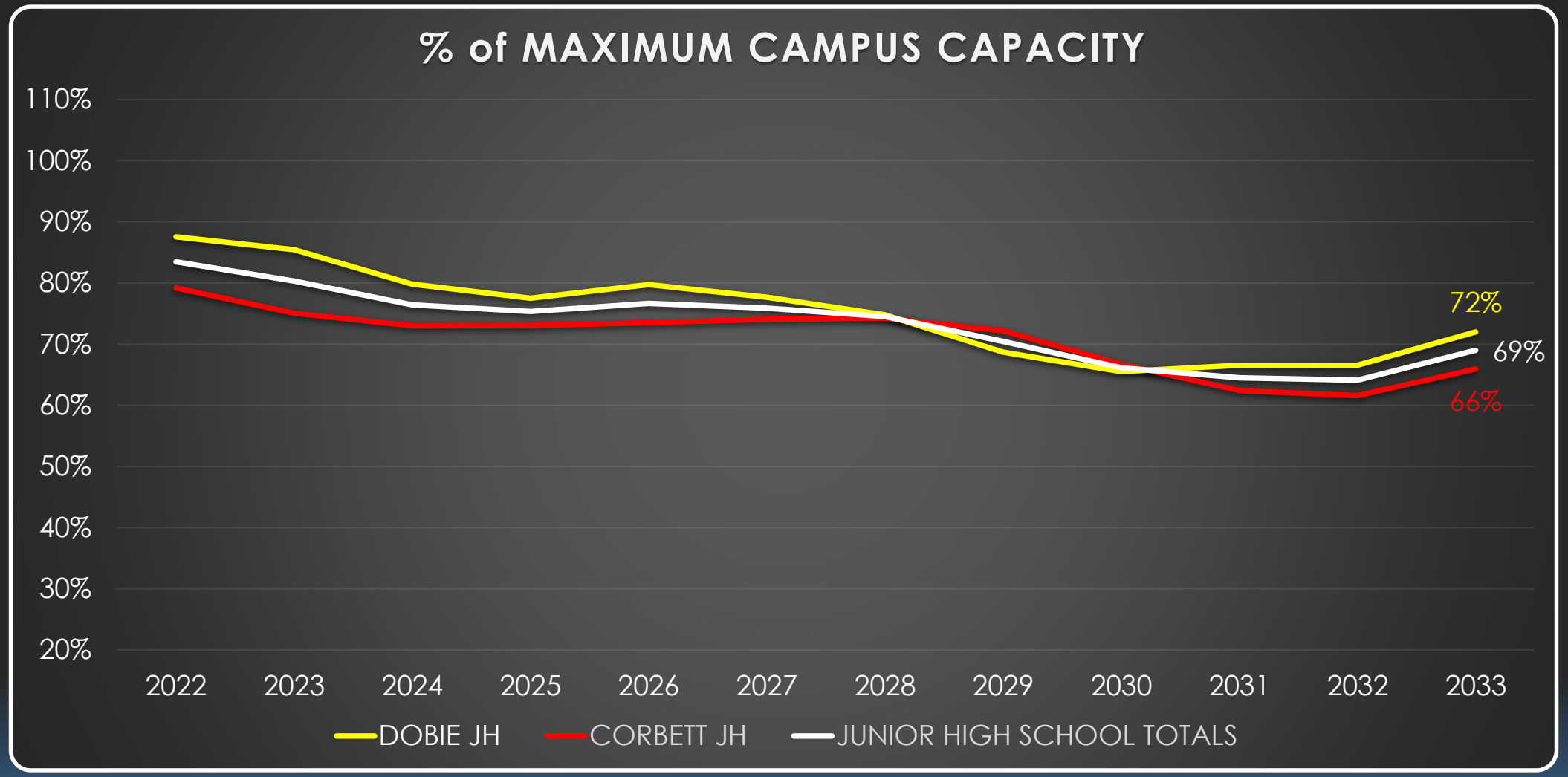
# INTERMEDIATE CAPACITIES



# JUNIOR HIGH CAPACITIES

| Campus | Functional Capacity | Max Capacity | Previous Year | Current PEIMS | ENROLLMENT PROJECTIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
| DOBIE JH | 1,300 | 1,540 | 1,348 | 1,316 | 1,229 | 1,194 | 1,228 | 1,196 | 1,152 | 1,058 | 1,009 | 1,025 | 1,025 | 1,109 |
| % Max Capacity | | | 88% | 85% | 80% | 78% | 80% | 78% | 75% | 69% | 66% | 67% | 67% | 72% |
| CORBETT JH | 1,080 | 1,500 | 1,188 | 1,126 | 1,095 | 1,096 | 1,103 | 1,111 | 1,114 | 1,083 | 1,001 | 936 | 924 | 989 |
| % Max Capacity | | | 79% | 75% | 73% | 73% | 74% | 74% | 74% | 72% | 67% | 62% | 62% | 66% |
| **JUNIOR HIGH SCHOOL TOTALS** | | 3,040 | 2,537 | 2,442 | 2,324 | 2,290 | 2,331 | 2,307 | 2,266 | 2,141 | 2,010 | 1,961 | 1,949 | 2,098 |
| **% Max Capacity** | | | 83% | 80% | 76% | 75% | 77% | 76% | 75% | 70% | 66% | 65% | 64% | 69% |
| Junior High School Percent Change | | | -2.62% | -3.71% | -4.83% | -1.46% | 1.79% | -1.03% | -1.78% | -5.52% | -6.12% | -2.44% | -0.61% | 7.64% |
| Junior High School Absolute Change | | | -68 | -94 | -118 | -34 | 41 | -24 | -41 | -125 | -131 | -49 | -12 | 149 |

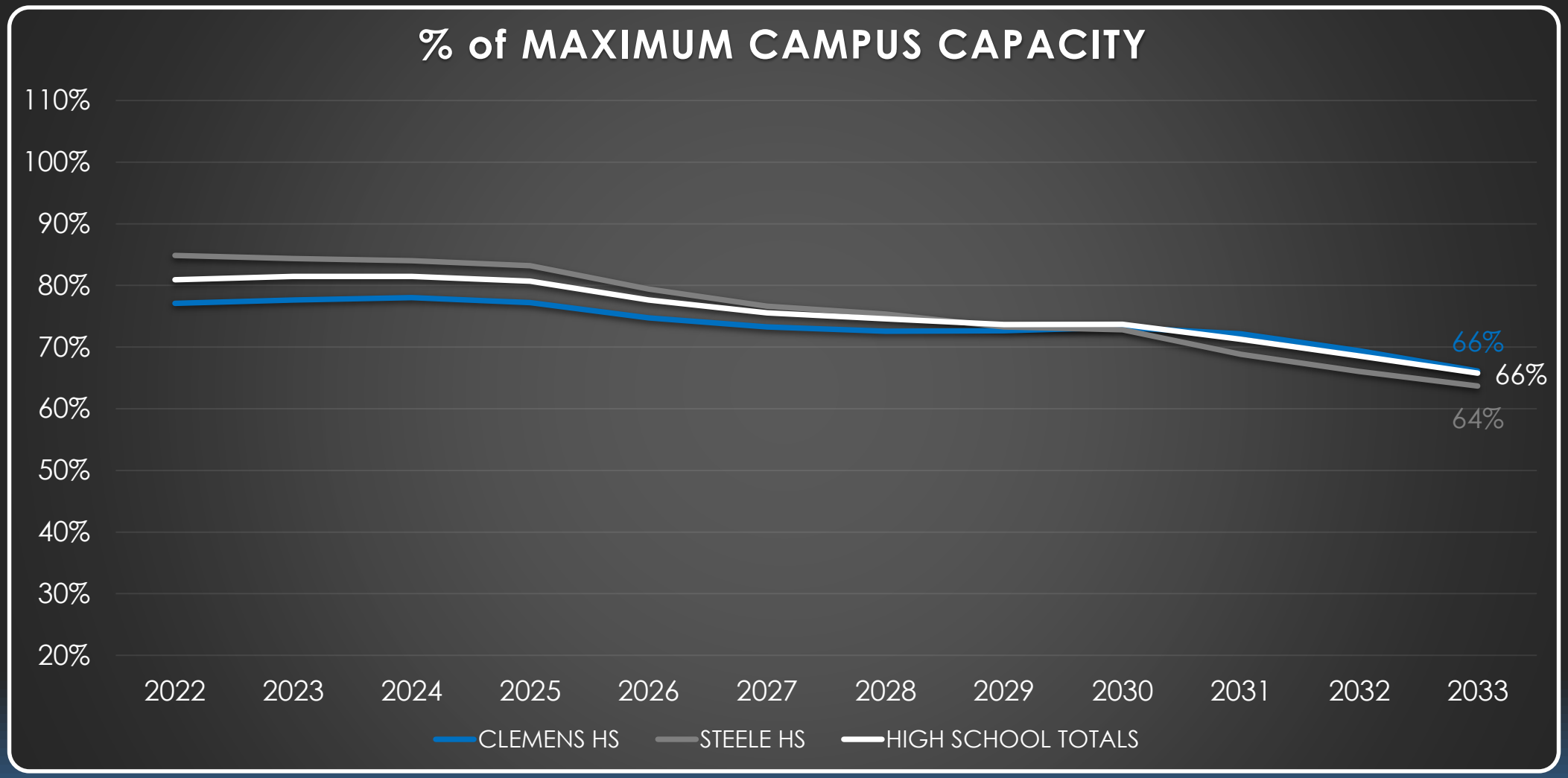
# JUNIOR HIGH CAPACITIES



# HIGH SCHOOL CAPACITIES

| Campus | Functional Capacity | Max Capacity | Previous Year | Current PEIMS | ENROLLMENT PROJECTIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
| CLEMENS HS | 2,700 | 3,300 | 2,544 | 2,563 | 2,576 | 2,550 | 2,469 | 2,419 | 2,397 | 2,400 | 2,418 | 2,383 | 2,292 | 2,183 |
| % Max Capacity | | | 77% | 78% | 78% | 77% | 75% | 73% | 73% | 73% | 73% | 72% | 69% | 66% |
| STEELE HS | 2,160 | 3,200 | 2,716 | 2,700 | 2,688 | 2,663 | 2,541 | 2,452 | 2,411 | 2,345 | 2,330 | 2,202 | 2,113 | 2,038 |
| % Max Capacity | | | 85% | 84% | 84% | 83% | 79% | 77% | 75% | 73% | 73% | 69% | 66% | 64% |
| **HIGH SCHOOL TOTALS** | | 6,650 | 5,381 | 5,418 | 5,419 | 5,368 | 5,165 | 5,026 | 4,963 | 4,900 | 4,903 | 4,740 | 4,560 | 4,376 |
| **% Max Capacity** | | | 81% | 81% | 81% | 81% | 78% | 76% | 75% | 74% | 74% | 71% | 69% | 66% |
| High School Percent Change | | | 0.69% | 0.71% | 0.02% | -0.94% | -3.78% | -2.69% | -1.25% | -1.27% | 0.06% | -3.32% | -3.80% | -4.04% |
| High School Absolute Change | | | 37 | 38 | 1 | -52 | -204 | -137 | -64 | -63 | 3 | -163 | -180 | -183 |

# HIGH SCHOOL CAPACITIES



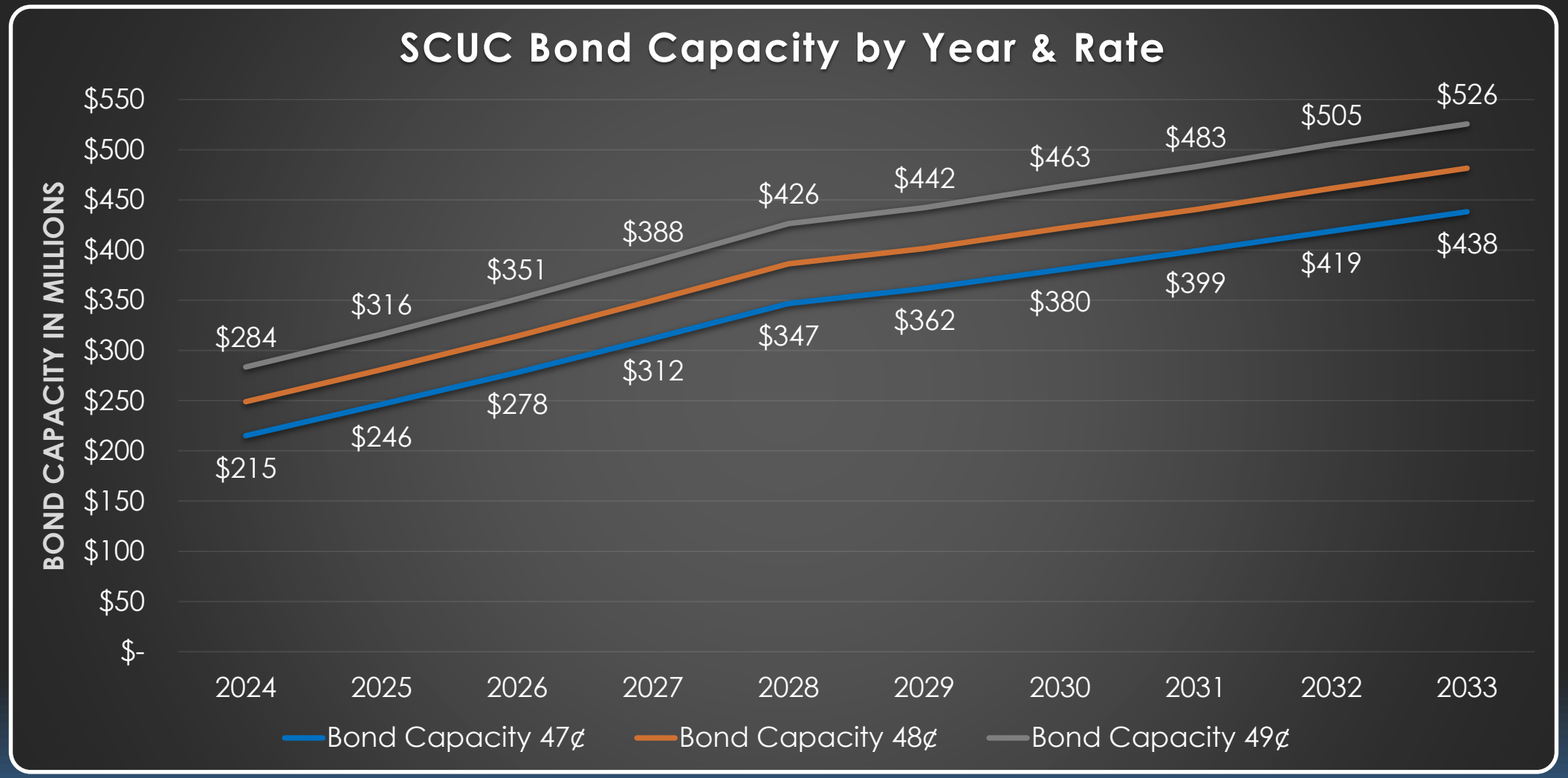
# FORECASTING CONSIDERATIONS

- Enrollment
  - Historical Trends
  - Projections
  - Transfers to Charters and Other ISDs
- Campus Capacity
- Bonding Capacity

# PROJECTING BONDING CAPACITY - SCUC

- Projecting Tax Revenue
  - Assumes NO refinancing for bond savings
    - Defeasing principal
  - Modest property value growth
    - 4.0% annual increase for 2024-2028
    - 2.0% annual increase for 2029-2033
- As debt is restructured and property values increase, we begin to have some bonding capacity
  - Capacity for additional debt is lower at first, more in later years
- Forecasting using three options for I&S Tax Rate
  - **$0.47** per $100 of valuation (Current), **$0.48** per $100 valuation, and **$0.49** per $100 valuation

# PROJECTED AVAILABLE BOND DOLLARS



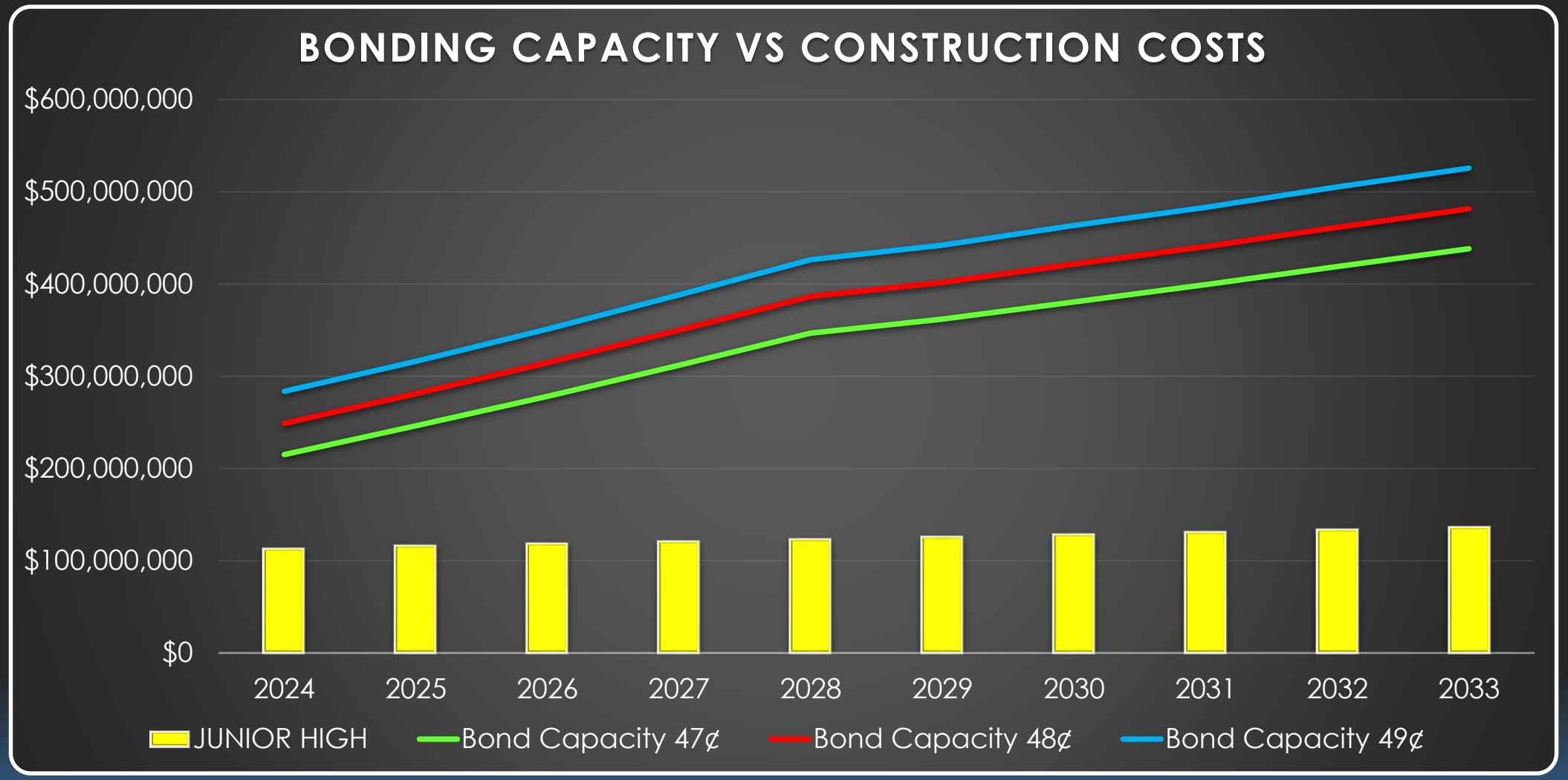
# PROJECTING FACILITY COSTS - SCUC

- Projecting Future Costs of New Facilities
  - Fluctuating materials and labor costs make long-term projections difficult
  - The market has seen huge inflation over the last several years, but seems to have stabilized during 2023
    - 2020-2023 we experienced 7-15% inflation annually
  - Projecting past 2024
    - 3% annual inflation for 2024
    - 2% annual inflation for 2025 and beyond
- Construction Estimate Rules of Thumb – 2024 Dollars
  - High School - $235 Million
  - Junior High School - $113 Million
  - Intermediate/Elementary - $72 Million

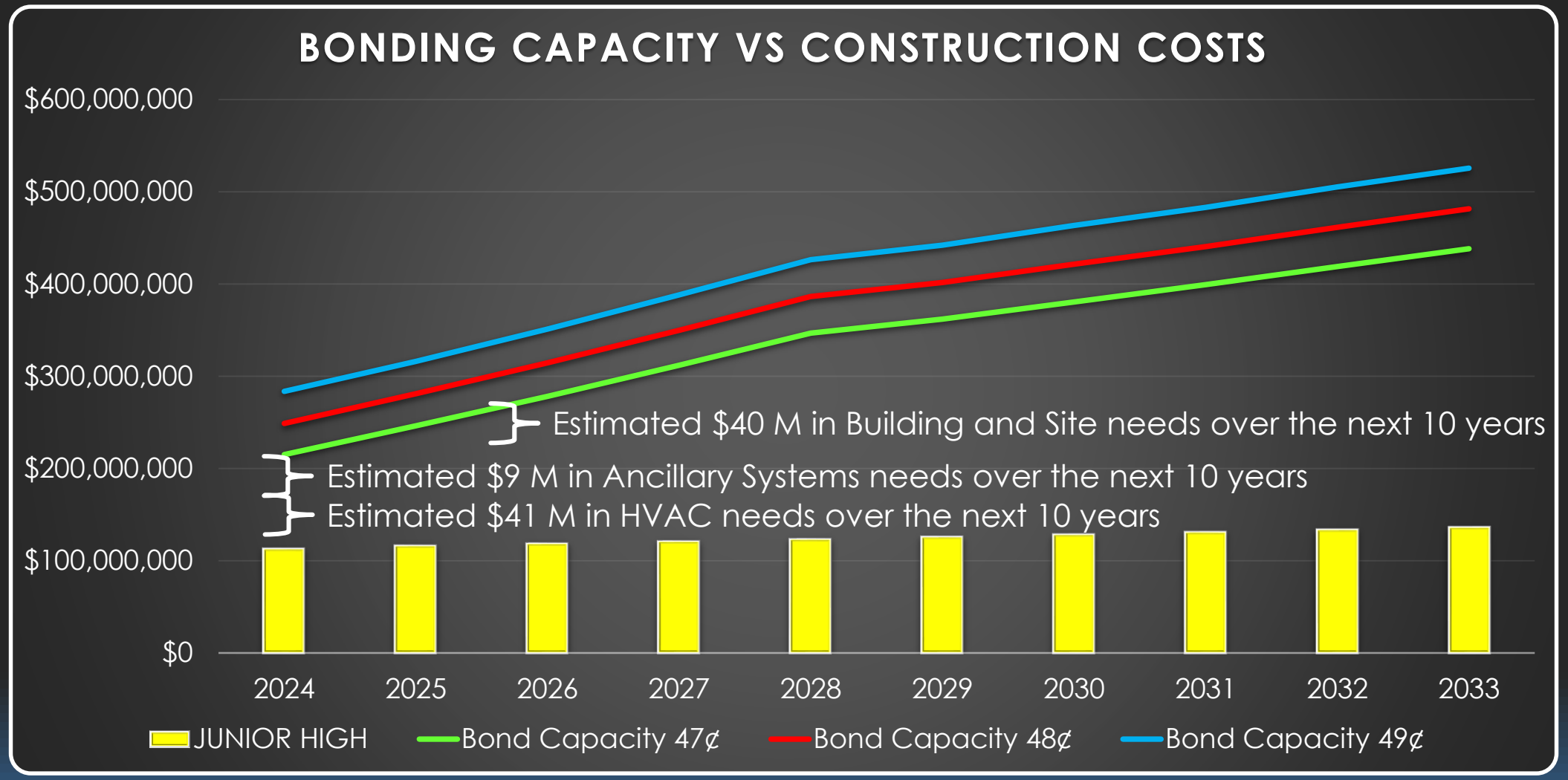
# PROJECTING FACILITY COSTS - SCUC

| YEAR | High School | Junior High | Elementary/ Intermediate |
|---|---|---|---|
| 2024 | $ 235,000,000 | $ 113,000,000 | $ 72,000,000 |
| 2025-P | $ 242,050,000 | $ 116,390,000 | $ 74,160,000 |
| 2026-P | $ 246,891,000 | $ 118,717,800 | $ 75,643,200 |
| 2027-P | $ 251,828,820 | $ 121,092,156 | $ 77,156,064 |
| 2028-P | $ 256,865,396 | $ 123,513,999 | $ 78,699,185 |
| 2029-P | $ 262,002,704 | $ 125,984,279 | $ 80,273,169 |
| 2030-P | $ 267,242,758 | $ 128,503,965 | $ 81,878,632 |
| 2031-P | $ 272,587,614 | $ 131,074,044 | $ 83,516,205 |
| 2032-P | $ 278,039,366 | $ 133,695,525 | $ 85,186,529 |
| 2033-P | $ 283,600,153 | $ 136,369,435 | $ 86,890,260 |
| 2034-P | $ 289,272,156 | $ 139,096,824 | $ 88,628,065 |

# PROJECTED BOND CAPACITIES VS. CONSTRUCTION COSTS



# PROJECTED BOND CAPACITIES VS. CONSTRUCTION COSTS



# TAKE AWAYS….

- Student Enrollment/Projections
  - Prior to COVID-19 SCUC ISD's enrollment growth had slowed to 1% per year
  - COVID and the opening of charter schools has impacted district enrollment, especially at the younger grades
  - This multi-year impact is reducing our enrollment even with new housing
  - An average 1% annual decline in enrollment is forecasted for the next six years
- Capacity Relief Tools
  - We have multiple tools to help relieve our campuses once they surpass 90% of their max capacity and move closer to 100%
- With our projected enrollment declining, our attention must be focused on maintaining the infrastructure of our existing buildings and identifying future programmatic needs for our students
- We also need to consider if 2 Junior Highs continue to meet the needs of our District

# QUESTIONS/COMMENTS



**DEPARTMENT OF THE AIR FORCE**
**502D AIR BASE WING**
**JOINTBASE SAN ANTONIO**

5 December 2024

MEMORANDUM FOR CITY OF SCHERTZ

FROM: 502 ABW/CMI
JBSA Installation Mission Sustainment
2080 Wilson Way
Fort Sam Houston, TX 78234

SUBJECT: Joint Base San Antonio review of City of Schertz Zoning Case MDP Savannah Farms

1. City of Schertz Zoning Case MDP Savannah Farms has been reviewed by JBSA-RND organizations. JBSA does not object with the subject request; however, there are additional comments for consideration in planning and development.

a. Area identified for Zoning change is outside of Accident Potential Zone (APZ) II. The subject tract is below the primary approach/departure for RND runway 15L/33R and will be subject to regular, increasing levels of noise. The approximate eastern 18 acres of the subject land tract are within the 65 dB DNL noise contours as identified in the 2017 Randolph AFB Air Installation Compatible Use Zones Study: https://www.jbsa.mil/Portals/102/Documents/Environmental%20PA/FINAL%20Randolph%20AICUZ%20Study.pdf

   Although local conditions regarding the need for housing may require residential use in these zones, residential use is discouraged in DNL 65-69. The absence of viable alternative development options should be determined, and an evaluation should be conducted locally prior to local approvals indicating that a demonstrated community need for the residential use would not be met if development were prohibited in these zones.

   Where the community determines that these uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 decibels (dB) in DNL 65-69 should be incorporated into building codes and be considered in individual approvals.

   NLR criteria will not eliminate outdoor noise problems. However, building location, site planning, design, and use of berms and barriers can help mitigate outdoor noise exposure particularly from ground level sources. Measures that reduce noise at a site should be used wherever practical in preference to measures that only protect interior spaces.

b. Existing residential development in APZ II is considered as pre-existing, nonconforming land uses. Recommended density for Single family units in APZ II is 2 du/acre.

c. Recommend referencing City of San Antonio MLOD lighting standards at: https://library.municode.com/tx/san_antonio/codes/unified_development_code?nodeId=ARTIIIZO_DIV4OVDI_S35-339.04MILIOVDI, or most current City of San Antonio MLOD ordinance, related to development within 5-miles of a military installation and compliance with applicable City of Schertz lighting ordinances.

d. To mitigate potential interference with existing JBSA operational systems, please coordinate with 502 CS Spectrum Manager prior to use of any Spectrum dependent systems (i.e.: two-way radio communications, or any type of wireless technologies) during construction. If applicable, coordination requested by facility user prior to installation/use of any Spectrum dependent commercial or manufacturing equipment.

e. Any proposed exterior construction plans, construction or alteration projects which include vertical elements (equipment: cranes, towers: communication or water) may require FAA review to verify no hazard to flight navigation prior to issuance of any construction permits.

   FAA CFR Title 14 Part 77 Notice Criteria Tool that can be utilized to aid in FAA notification requirements can be found here: https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm

   Further FAA guidance is also available here: https://www.faa.gov/documentLibrary/media/Form/FAA_Form_7460-1_042023.pdf

f. The FAA recommends criteria of land-use practices in their Advisory Circular 150/5200- 33C, Hazardous Wildlife Attractants on or Near Airports, which is applicable to properties within five miles of JBSA-Randolph. To reduce the exposure to aircraft-wildlife strikes, please use the link below to access this publication and use the information to help reduce wildlife-attractant features near airports. Unwavering consideration for this aviation safety hazard is vital.https://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/doc umentnumber/150_5200-33.

2. The items presented above are efforts to enhance the safety of the community and minimize noise impacts due to the proximity of low flying aircraft. Improperly managed development may create unnecessary risk to both the community and flight operations as well as affect the overall capability of the military at this location.

3. Point of contact for this action is Sean R. Greszler, AICP, 502 ABW/CMI. He can be reached at 210-808- 7549 or by email at sean.greszler.1@us.af.mil or through the 502d ABW Community Initiatives organization email box at 502ABW.ABW.Community_initiative@us.af.mil.

ANDERSON.JOHN.HENRY.1067670600

Digitally signed by ANDERSON.JOHN.HENRY.1067670600
DN: cn=ANDERSON.JOHN.HENRY.1067670600, o=U.S. Government, ou=USAF, email=unknown, c=US
Date: 2024-12-05T19:36:39-0600

JOHN H. ANDERSON, GS-14, USAF
Executive Director, Community and Mission Integration, JBSA & 502 ABW

# Ordinance 25-S-001

Proposed Zone Change to R-6 at Savannah & Irish Creek Rd

**Daisy Marquez| Planner**

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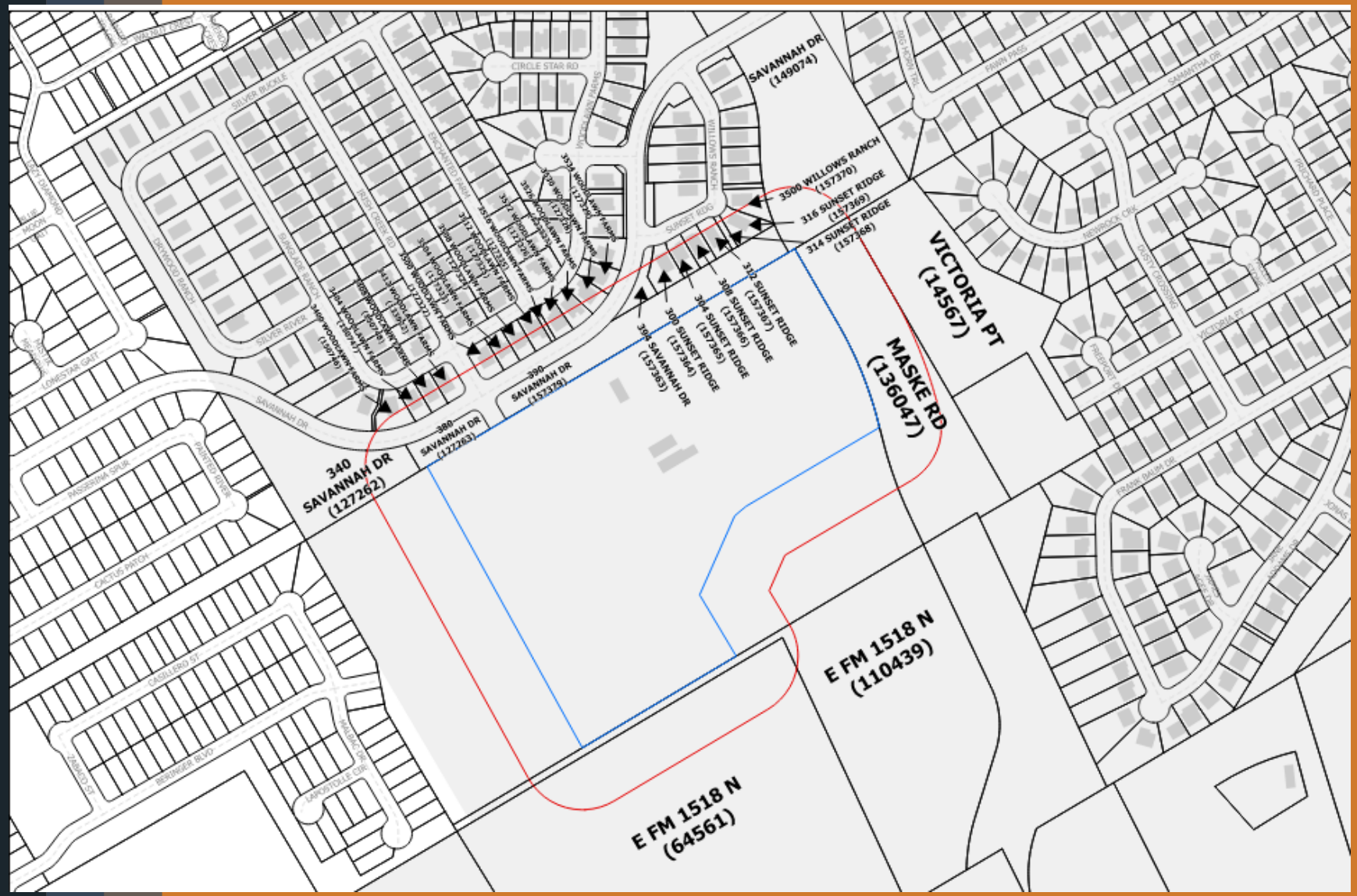



| | Zoning | Use |
|---|---|---|
| Subject Property Existing: | Single-Family Residential District (R-2) | Polo Farm |
| Subject Property Proposed: | Single-Family Residential District (R-6) | Single-Family Residences |
| North | Planned Development District (PDD) | Kensington Ranch Single-Family Residences |
| South | Single-Family Residential District (R-2) | Undeveloped Agriculture |
| East | Single-Family Residential District (R-2) | Drainage |
| West | Single-Family Residential District (R-2) & Universal City | Undeveloped & Single-Family Residences |

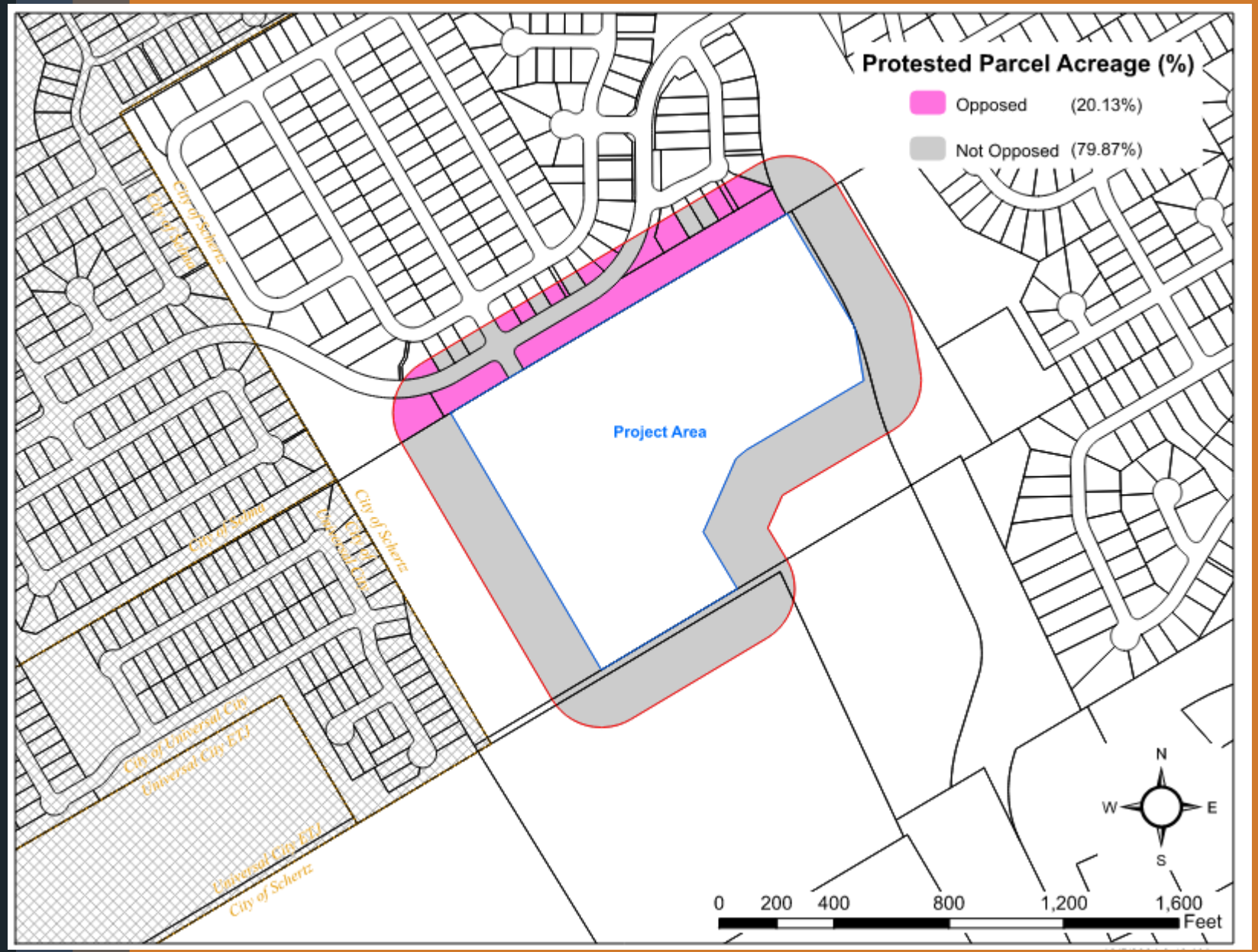
- **26 Acres**
- **A Portion of Guadalupe**

  **Property ID: 64640**

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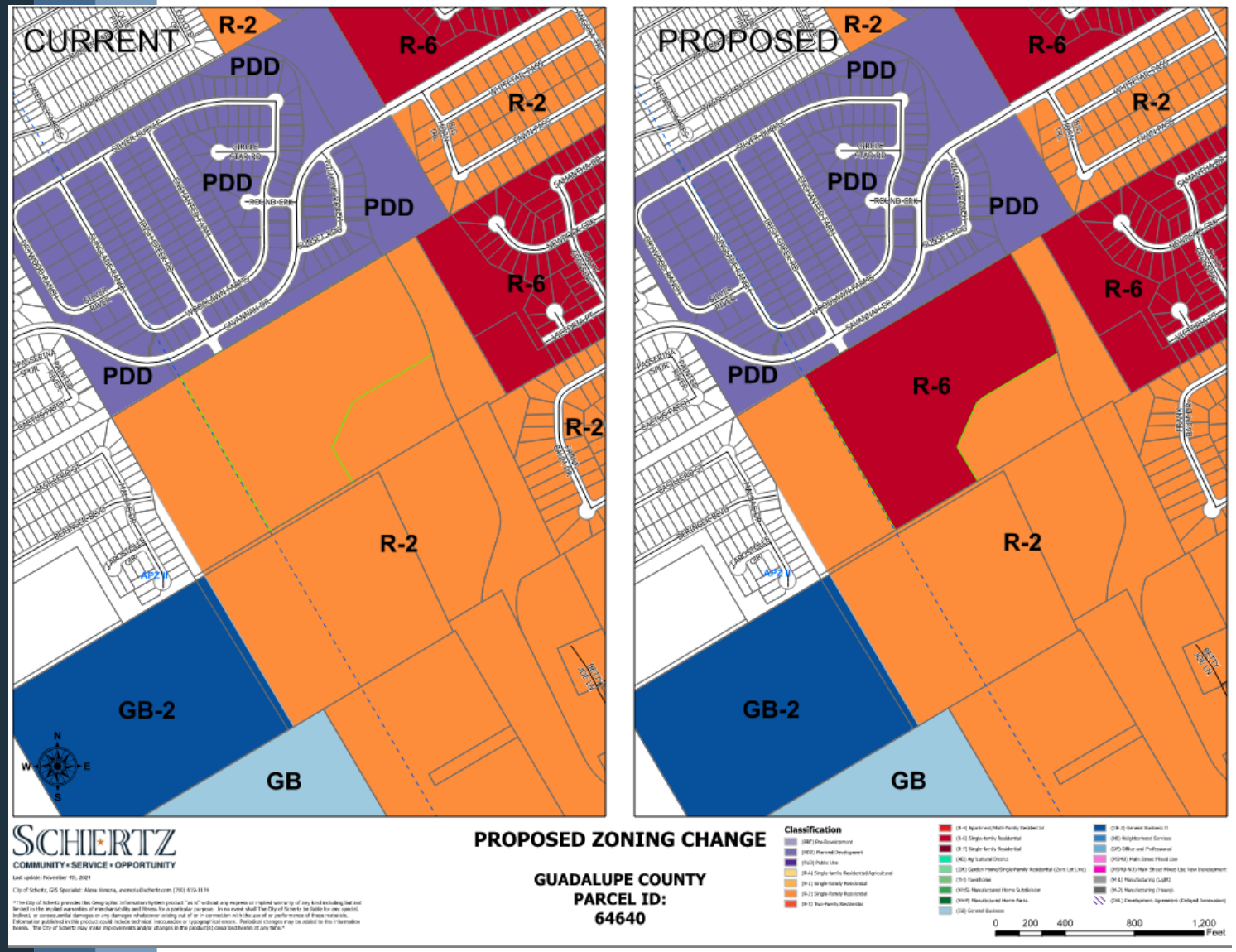

- 22 public notices were sent on 11.19.24
- As of 11.28.24
  - (1) in favor
  - (0) Neutral
  - (19) in Opposition
- A public hearing notice was published “San Antonio Express” on December 18, 2024
- 2 signs were placed by the applicant
- Joint Base San Antonio-Randolph Air Force Base was also notified of the zone change and provided a response.




- LGC, Local Government Code § 211.006(d)
  - Affirmative Action Required
  - The proposed change, must receive, in order to take effect, the affirmative vote of at least three-fourths (3/4) of all members of the City Council according to LGC, Local Government Code 211.006(d).

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# Background




- All of Property Identification Number 64640 is proposed to be developed, but only 26 acres is being affected by the zone change.
- The portion being requested in the rezone is not within the APZ II.

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| | Existing | Proposed |
|---|---|---|
| | Single-Family Residential District (R-2) | Single –Family Residential District (R-6) |
| Permitted Uses | Accessory Building, Residential; Bed & Breakfast Inn (S); Church/ Temple (S);Family or Group Home; Gated Community, Golf Course, Municipal Uses; One-Family Dwelling Detached; Park/Playground/ Similar Public Site; School, Public or Private | Accessory Building, Residential; Bed & Breakfast Inn (S); Church/ Temple (S);Family or Group Home; Gated Community, Golf Course, Municipal Uses; One-Family Dwelling Detached; Park/Playground/ Similar Public Site; School, Public or Private |
| Width & Depth | 70'x120' | 60'x120' |
| Area Square Feet | 8,400 sqft | 7,200 sqft |
| Setbacks | Front:25', Side:10', Rear:20' | Front:25', Side:10', Rear:20' |
| Maximum Height | 35' | 35' |
| Maximum Impervious Coverage | 50% | 50% |




MERITAGE HOMES OF TEXAS, L.L.C.
2722 W. BITTERS RD., SUITE 200
SAN ANTONIO, TEXAS 78231
P:(210) 402.6045 F: (210) 402.7397

# SAVANNAH FARMS / MASTER LAND PLAN OPTION 2

SCHERTZ, TEXAS | OCTOBER 2024

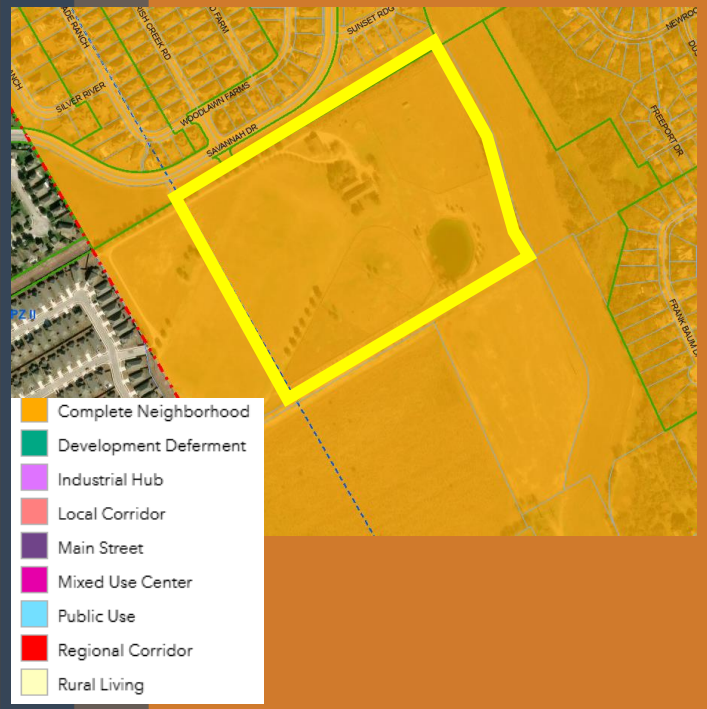
CUDE ENGINEERS
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TEXAS 78231
P:(210) 681.2951 F: (210) 523.7112

# Previous Applications and Proposed Zone Change

- Planned Development District (PDD) Application
  - March 2024 P&Z and April 2024 City Council
  - Proposed to not allow residential development within the APZII and only allow residential development within the 26 acres outside of the APZ II.
  - The creation of the PDD to prevent the development of residence within the APZ II was determined to be a community benefit by Staff.
- Proposed Single-Family Residential (R-6)
  - Only proposing to rezone the 26 acres outside of the APZ II to a higher density
  - Does not provide a community benefit as it excludes the remaining acreage within the APZ II, which contributes to Staff's recommendation of denial.

# UDC SECTION 21.5.11.D Criteria for Approval

**1. Whether the proposed zoning change implements the policies of the adopted Comprehensive Land Plan, or any other applicable adopted plans.**




- Complete Neighborhood Land Use Designation
  - Mixture of housing options with supporting land uses
  - When considering housing density and commercial activity, factor:
    - Roadway classification
    - Conflicts among land uses
    - Undue concentration and diffusion of population
- Single-Family Residences do meet the intent of the Complete Neighborhood Land Use Designation.
- Within the immediate area, R-6 does not implement or meet the intent of Complete Neighborhood.
  - Surrounding small lots existing
  - Concentrates the population on Savannah
- Existing Single-Family Residential District (R-2) does implement the Complete Neighborhood Land Use Designation
  - Promotes Mixture of Housing
  - Transition from existing small lots to commercial on Maske

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| Zoning | Use | Minimum Lot Size | Lot Dimension |
|---|---|---|---|
| Planned Development District (PDD) | Kensington Ranch Estates Single-Family Residences | IN APZ: 10,800 sqft<br>---<br>Outside APZ: 7,200 sqft | Width: 90’<br>Depth: 120’<br>---<br>Width:60’<br>Depth:120’ |

| Zoning | Use | Minimum Lot Size | Lot Dimension |
|---|---|---|---|
| Single-Family Residential District (R-6) | Single-Family Residences (Ashley Place) | 7,200 sq.ft. | Width:60’<br>Depth:120’ |




| Zoning | Use | Minimum Lot Size | Lot Dimension |
|---|---|---|---|
| Single-Family Residential District (R-2) & Universal City | Undeveloped & Single-Family Residences (Orchard Park) | Approximately 6,000 sq.ft. | Approximately:<br>Width: 50’<br>Depth: 120’ |

# UDC SECTION 21.5.11.D Criteria for Approval

**2. Whether the proposed zoning change promotes the health, safety, and general welfare of the City.**




- When considering the surrounding uses and the Comprehensive Land Use Plan, the existing R-2 better promoted the health, safety, and general welfare of the City
  - Existing traffic concerns on Savannah and FM 1518 and Schertz Parkway intersections
  - Existing sight visibility concerns

# UDC SECTION 21.5.11.D Criteria for Approval

**3. Whether the uses permitted by the proposed change will be consistent and appropriate with existing uses in the immediate area;**

- The existing Single-Family Residential District (R-2) is more compatible and appropriate with the existing uses in the immediate area to promote a mixture of housing options.

# UDC SECTION 21.5.11.D Criteria for Approval

## 4. Whether other factors are deemed relevant and important in the consideration of the amendment.

- Previous zoning discussions at the City Council have established a policy that if a proposed zone change would not result in an inherently better development than what could potentially develop with the current zoning, then the proposed zone change would not be desired.

- Significant opposition by residents to higher density
  - Sight Visibility concerns at major intersections along Savannah
  - Existing traffic concerns on Savannah
  - Potential for increased traffic concerns on Savannah

- Published article in “Community Impact News” and Universal City City Council Agenda shows a large conceptual development.
  - Currently no other applications at this time within the City of Schertz.
  - The conceptual plan does not impact Staff opinion and recommendation of denial for Ord. 25-S-0001.

# Recommendation

**Staff Recommendation:**

Staff recommends denial of Ordinance 25-S-001.

**Planning and Zoning Commission:**

The Planning and Zoning Commission held a public hearing on December 4, 2024, for the item and made a recommendation of approval to the City Council with a 4-2 vote, with Chairman Outlaw and Commissioner McMaster voting nay.

**Agenda No. 8.**

**CITY COUNCIL MEMORANDUM**

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **Planning & Community Development** |
| **Subject:** | **Ordinance 25-S-003 - Conduct a public hearing and consider a request to rezone approximately 20 acres of land from General Business District (GB), Agricultural District (AD), and Pre-Development District (PRE) to Middle Density Residential District (R-5), more specifically known as 5524 Eckhardt Road, also known as a portion of Comal County Property Identification Numbers 75449 and 78233, City of Schertz, Comal County, Texas. (B.James/L.Wood/S.Haas)** |

**BACKGROUND**

Per the letter of intent, the applicant is seeking to rezone portions of their property to Middle Density Residential District (R-5).

On November 22, 2024, 16 public hearing notices were mailed to the surrounding properties within a 200-foot notification boundary of the subject property. A notice was also sent to Comal ISD to notify them of the zone change request. At the time of the staff report, zero (0) responses in favor, zero (0) responses neutral, and zero (0) response in opposition have been received.

A public hearing notice was published in the "San Antonio Express" on December 18, 2024. Additionally, one (1) sign was placed on the subject property.

**Subject Property:**

| | **Zoning** | **Land Use** |
|---|---|---|
| **Existing** | General Business District (GB), Agricultural District (AD), and Pre-Development District (PRE) | Undeveloped and Residence |
| **Proposed** | Middle Density Residential District (R-5) | Multifamily Development |

**Adjacent Properties:**

| | **Zoning** | **Land Use** |
|---|---|---|
| **North** | General Business District (GB) | Undeveloped |
| **South** | General Business District (GB) and Agricultural District (AD) | Rural Residence/Ag Use |
| **East** | General Business District (GB) and Pre-Development District (PRE) | Residential, Commercial Use |
| **West** | Right of Way | Eckhardt Road |

**GOAL**

The goal is to rezone the property from General Business District (GB), Agricultural District (AD), and Pre-Development District (PRE) to Middle Density Residential District (R-5).

The UDC was recently amended on October 22, 2024, with City Council's approval of Ordinance 24-S-156. This new text to the UDC established Middle Density Residential District (R-5) which was crafted with the intent to encourage multifamily developments that would be less-dense and thus more compatible with existing single family subdivisions. The table below is a summary of Middle Density Residential District (R-5) compared to the

current existing districts on the property.

| | *Table 21.5.7.A. Dimensional Requirements* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Minimum Lot Size Dimensions (Ft)** | | | **Minimum Yard Setbacks (Ft)** | | | **Misc. Lot Requirements** | | |
| | *Code* | *Zoning District* | *Area Sqft* | *Width* | *Depth* | *Front* | *Side* | *Rear* | *Min. Off-Street Parking* | *Maximum Height* | *Max Imperv Cover* |
| Proposed | R-5 | Middle Density Residential District | 10,890 | - | - | 25 | 10 | 10 | 2 | 35 | 80% |
| | | | | | | | | | | | |
| Existing | GB | General Business District | 10,000 | 100 | 100 | 25 | 0,25(r) | 0,25(r) | Sec. 21.10.4 | 120 | 80% |
| Existing | AD | Agricultural District | 217,800 | 100 | 100 | 25 | 25 | 25 | 2 | 35 | 30% |
| Existing | PRE | Pre-Development District* | - | - | - | - | - | - | - | - | - |
| *Pre-Development District (PRE) has no dimensional and design standards as it is intended as a holding district only. | | | | | | | | | | | |

**COMMUNITY BENEFIT**

It is the City's desire to promote safe, orderly, efficient development and ensure compliance with the City's vision of future growth.

**SUMMARY OF RECOMMENDED ACTION**

When evaluating Zone Change applications, staff uses the Criteria for Approval located in UDC Section 21.5.4.D.

**1. Whether the proposed zoning change implements the policies of the adopted Comprehensive Land Plan, or any other applicable adopted plans;**

The Comprehensive Plan designates this area as "Regional Corridor", which is intended to provide commercial and entertainment areas along major thoroughfares. Multifamily complexes may also be appropriate for Regional Corridor. For this reason, the proposed zone change is consistent with the Comprehensive Plan.

**2. Whether the proposed zoning change promotes the health, safety, and general welfare of the City.**

As part of promoting health, safety, and general welfare, zone change requests should align with the Unified Development Code (UDC) and city policy. The UDC was recently amended on October 22, 2024, with City Council's approval of Ordinance 24-S-156. This new text to the UDC established Middle Density Residential District (R-5) which was crafted with the intent to encourage multifamily developments that would be less-dense and thus more compatible with existing single family subdivisions. The UDC also strives to "ensure the safe, orderly and efficient development and expansion of the City" and to "prevent the overcrowding of land and avoid undue concentration or diffusion of population". This request is consistent with the new policy and the UDC. For these reasons, this request promotes health, safety, and general welfare.

**3. Whether the uses permitted by the proposed change will be consistent and appropriate with existing uses in the immediate area;**

The permitted uses within Middle Density Residential District (R-5) are as follows:

| Middle Density Residential District (R-5) Permitted Uses | |
|---|---|
| Permitted by Right | Permitted with a Specific Use Permit |
| • Accessory Building, Residential<br>• Gated Community<br>• Golf Course and/or Country Club<br>• Multi-Family Apartment Dwelling<br>• Municipal Uses Operated by the City of Schertz<br>• One-Family Dwelling Attached<br>• One-Family Dwelling Detached<br>• Park/Playground/Similar Public Site<br>• School, Public or Private<br>• Two-Family Dwelling | • Church, Temple, Synagogue, Mosque, or Other Place of Worship<br>• New and Unlisted Uses |

The immediate area is largely undeveloped and also consists of residential subdivisions such as Cypress Point, Parklands, and Parklands II. The permitted uses within the Middle Density Residential District (R-5) are primarily residential focused and are consistent and appropriate with the immediate area.

**4. Whether other factors are deemed relevant and important in the consideration of the amendment.**
This applicant previously requested a rezone for Apartment / Multifamily District (R-4) for this property. However, at the November 6, 2024, Planning and Zoning Commission meeting, the applicant indicated that the goal was for a less-dense multifamily development. The Commissioners and Staff both recommended Middle Density Residential District (R-5) as a more compatible zoning request. The applicant withdrew the Apartment / Multifamily District (R-4) request and reapplied with a Middle Residential Density District (R-5) request.

Schertz Fire, EMS, and Police have been notified of the zone change requests and have provided no objection.

**RECOMMENDATION**

***Staff Recommendation***
The request for Middle Density Residential District (R-5) aligns with the Comprehensive Plan, promotes the policies in the City and the UDC, and is consistent with the surrounding land uses. Therefore, staff is recommending approval of Ord. 25-S-003

***Planning and Zoning Commission Recommendation***
The Schertz Planning and Zoning Commission held a public hearing on December 4, 2024, and made a recommendation of approval with a 6-0 vote.

---

**Attachments**

Ordinance 25-S-003 with Attachments

Aerial Exhibit

Zoning Exhibit

Public Hearing Notice Map

City Council Presentation Slides

**ORDINANCE NO. 25-S-003**

**AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS TO REZONE APPROXIMATELY 20 ACRES OF LAND FROM GENERAL BUSINESS DISTRICT (GB), AGRICULTURAL DISTRICT (AD), AND PRE-DEVELOPMENT DISTRICT (PRE) TO MIDDLE DENSITY RESIDENTIAL DISTRICT (R-5), MORE SPECIFICALLY KNOWN AS 5524 ECKHARDT ROAD, ALSO KNOWN AS A PORTION OF COMAL COUNTY PROPERTY IDENTIFICATION NUMBERS 75449 AND 78233, CITY OF SCHERTZ, COMAL COUNTY, TEXAS**

**WHEREAS,** an application for a request to rezone approximately 20 acres of land from General Business District (GB), Agricultural District (AD), and Pre-Development District (PRE) to Middle Density Residential District (R-5), more specifically known as 5524 Eckhardt Road, also known as a portion of Comal County Property Identification Numbers 75449 and 78233, City of Schertz, Comal County, Texas, more specifically described in the Exhibit A and Exhibit B attached herein (herein, the "Property") has been filed with the City; and

**WHEREAS,** the City's Unified Development Code Section 21.5.4.D. provides for certain criteria to be considered by the Planning and Zoning Commission in making recommendations to City Council and by City Council in considering final action on a requested zoning (the "Criteria"); and

**WHEREAS,** on December 4, 2024, the Planning and Zoning Commission conducted a public hearing and, after considering the Criteria, made a recommendation to City Council to approve the requested zoning; and

**WHEREAS,** on January 7, 2025, the City Council conducted a public hearing and after considering the Criteria and recommendation by the Planning and Zoning Commission, determined that the requested zoning be approved as provided for herein.

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS THAT:**

Section 1. The Property as shown and more particularly described in the attached Exhibit A, is hereby zoned Middle Density Residential District (R-5).

Section 2. The Official Zoning Map of the City of Schertz, described and referred to in Article 2 of the Unified Development Code, shall be revised to reflect the above amendment.

Section 3. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Ordinance for all purposes and are adopted as a part of the judgment and findings of the Council.

Section 4. All ordinances and codes, or parts thereof, which are in conflict or inconsistent with any provision of this Ordinance are hereby repealed to the extent of such conflict, and the provisions of this Ordinance shall be and remain controlling as to the matters resolved herein.

Section 5. This Ordinance shall be construed and enforced in accordance with the laws of the State of Texas and the United States of America.

Section 6. If any provision of this Ordinance or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Ordinance and the application of such provision to other persons and circumstances shall nevertheless be valid, and the City hereby declares that this Ordinance would have been enacted without such invalid provision.

Section 7. It is officially found, determined, and declared that the meeting at which this Ordinance is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this Ordinance, was given, all as required by Chapter 551, as amended, Texas Government Code.

Section 8. This Ordinance shall be effective upon the date of final adoption hereof and any publication required by law.

Section 9. This Ordinance shall be cumulative of all other ordinances of the City of Schertz, and this Ordinance shall not operate to repeal or affect any other ordinances of the City of Schertz except insofar as the provisions thereof might be inconsistent or in conflict with the provisions of this Ordinance, in which event such conflicting provisions, if any, are hereby repealed.

PASSED, APPROVED and ADOPTED on this ____day of _____ 2025.

CITY OF SCHERTZ, TEXAS

_____
Ralph Gutierrez, Mayor

ATTEST:

_____
Sheila Edmondson, City Secretary

(city seal)

Exhibit “A”

Property Metes and Bounds

Exhibit "A" Metes and Bounds

D·A·MAWYER
LAND SURVEYING

METES AND BOUNDS DESCRIPTION
FOR A
6.855 ACRE TRACT

BEING 6.855 ACRES OF LAND (CALLED TRACT 1), SITUATED IN THE JOHN NOYES SURVEY NO. 259, ABSTRACT NO. 430, COMAL COUNTY, TEXAS, AND BEING ALL OF THAT SAME CERTAIN CALLED 6.855 ACRE TRACT OF LAND, AS CONVEYED TO BUTTRUM CONSTRUCTION, INC., AND RECORDED IN DOCUMENT NO. 202106033785, OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, AND SAID 6.855 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a ½" iron rod found on the Southeasterly R.O.W. line of Interstate Highway 35, (a Variable Width R.O.W.), being the Northeast corner of a 20.00 acre tract, as conveyed to Buttrum Construction, Inc., and recorded in Document No. 202106061190, of the Official Public Records of Comal County, Texas, also being the Northwest corner of said 6.855 acre tract and the Northwest corner of this herein described tract;

THENCE along the Southeasterly R.O.W. line of said Interstate Highway 35 and the Northwesterly line of said 6.855 acre tract, N 54°20'32" E, a distance of 22.05 feet to a ½" iron rod set with a yellow plastic cap stamped "DAM #5348 PROP. COR." for the Northeast corner of said 6.855 acre tract, also being the Northwest corner of a 1.00 acre tract, called Tract 2, as conveyed to Buttrum Construction, Inc., and recorded in Document No. 202106033785, of the Official Public Records of Comal County, Texas, the Northeast corner of the herein described tract;

THENCE departing the Southeasterly R.O.W. line of said Interstate Highway 35 and along the common line of said 6.855 acre tract and said 1.00 acre tract, S 10°52'03" E, a distance of 379.57 feet to a ½" iron rod set with a yellow plastic cap stamped "DAM #5348 PROP. COR." for the Southwest corner of said 1.00 acre tract and N 54°19'57" E, a distance of 174.73 feet to a ½" iron rod set with a yellow plastic cap stamped "DAM #5348 PROP. COR." for the Southeast corner of said 1.00 acre tract, the Southwest line of a called 0.61 acre tract, as conveyed to Mario Saldana, and recorded in Document No. 201606034689, of the Official Public Records of Comal County, Texas, a Northeasterly corner of said 6.855 acre tract and of the herein described tract;

THENCE along the common line of said 6.855 acre tract with said 0.61 acre tract and a called 8.00 acre tract, as conveyed to Adan Morales, and recorded in Document No. 201806034342, of the Official Public Records of Comal County, Texas, S 25°26'22" E, a distance of 913.88 feet to a ½" iron rod found on the North line of a 69.82 acre tract, as conveyed to Beth Wetz and Brian Keith Wetz, and recorded in Document No. 201406013314, of the Official Public Records of Comal County, Texas, the Southeast corner of said 6.855 acre tract and of the herein described tract;

Exhibit "A" Metes and Bounds

THENCE along the common line of said 6.855 acre tract and 69.82 acre tract, S 54°10'39" W, a distance of 450.41 feet to a ½" iron rod found in the Southeast line of said 20.00 acre tract, also being an interior corner of said 69.82 acre tract, for the Southwest corner of said 6.855 acre tract and of the herein described tract;

THENCE along the common line of said 6.855 acre tract and 20.00 acre tract, N 10°52'34" W, a distance of 1371.54 feet to the POINT OF BEGINNING and containing 6.855 acres of land.

Bearings based on the Texas State Plane Coordinate System, Texas South Central Zone (4204), North American Datum 1983.

Exhibit prepared this the 29th day of November, 2023.

Drew A. Mawyer
Registered Professional Land Surveyor No. 5348
TBPLS Firm Registration #10191500
5151 W. SH 46, NEW BRAUNFELS, TX 78132
BCH058 ECKHARDT –6.855 ACRES



Exhibit "A" Metes and Bounds

D·A·MAWYER
LAND SURVEYING

METES AND BOUNDS DESCRIPTION
FOR A
20.00 ACRE TRACT

BEING 20.00 ACRES OF LAND SITUATED IN THE C.M. GAHAGAN SURVEY NO. 258, ABSTRACT NO. 182 AND THE JOHN NOYES SURVEY NO. 259, ABSTRACT NO. 430, COMAL COUNTY, TEXAS, AND BEING ALL OF THAT SAME CERTAIN CALLED 20.00 ACRE TRACT OF LAND, AS CONVEYED TO BUTTRUM CONSTRUCTION, INC., AND RECORDED IN DOCUMENT NO. 202106061190, OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, AND SAID 20.00 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a mag nail found on a TxDot Type III monument at the Northerly end of the cut back corner of the intersection of Eckhardt Road and Interstate Highway 35, (a Variable Width R.O.W.), being the Northwest corner of this herein described tract of land;

THENCE along the Southeasterly R.O.W. line of said Interstate Highway 35 and the Northwesterly line of said 20.00 acre tract, N 54°20'32" E, a distance of 542.40 feet to a ½" iron rod found for the Northeast corner of said 20.00 acre tract, also being the Northwest corner of a 6.855 acre tract, called Tract 1, as conveyed to Buttrum Construction, Inc., and recorded in Document No. 202106033785, of the Official Public Records of Comal County, Texas, the Northeast corner of the herein described tract;

THENCE departing the Southeasterly R.O.W. line of said Interstate Highway 35 and along the common line of said 20.00 acre tract and said 6.855 acre tract, S 10°52'34" E, at a distance of 1371.54 feet passing a ½" iron rod found for the Southwest corner of said 6.855 acre tract, and continuing on for a total distance of 1471.55 feet to a mag nail set for the Southeast corner of said 20.00 acre tract, also being a point in the North line of a 69.82 acre tract, as conveyed to Beth Wetz and Brian Keith Wetz, and recorded in Document No. 201406013314, of the Official Public Records of Comal County, Texas, the Southeast corner of the herein described tract;

THENCE along the common line of said 20.00 acre tract and 69.82 acre tract, S 54°19'40" W, a distance of 688.36 feet to a ½" iron rod found for the Southwest corner of said 20.00 acre tract, also being a point in the East R.O.W. line of said Eckhardt Road, the Northwest corner of said 69.82 acre tract and the Southwest corner of the herein described tract;

THENCE along the common line of said 20.00 acre tract and said East R.O.W. line of Eckhardt Road, N 08°30'20" W, a distance of 1423.59 feet to a ½" iron rod set with a yellow plastic cap stamped "DAM #5348 PROP. COR." at the Southerly end of a cut back corner of the intersection of Eckhardt Road and Interstate Highway 35, for a Northwesterly corner of said 20.00 acre tract and of the herein described tract;

THENCE along said cut back corner, N 22°46'21" E, a distance of 132.77 feet to the POINT OF BEGINNING and containing 20.00 acres of land.

Bearings based on the Texas State Plane Coordinate System, Texas South Central Zone (4204), North American Datum 1983.

Exhibit prepared this the 29th day of November, 2023.




Drew A. Mawyer
Registered Professional Land Surveyor No. 5348
TBPLS Firm Registration #10191500
5151 W. SH 46, NEW BRAUNFELS, TX 78132
BCH058 ECKHARDT –20.00 ACRES

Exhibit "A" Metes and Bounds

D·A·MAWYER
LAND SURVEYING

METES AND BOUNDS DESCRIPTION
FOR A
1.00 ACRE TRACT

BEING 1.00 ACRE OF LAND (CALLED TRACT 2), SITUATED IN THE JOHN NOYES SURVEY NO. 259, ABSTRACT NO. 430, COMAL COUNTY, TEXAS, AND BEING ALL OF THAT SAME CERTAIN CALLED 1.00 ACRE TRACT OF LAND, AS CONVEYED TO BUTTRUM CONSTRUCTION, INC., AND RECORDED IN DOCUMENT NO. 202106033785, OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, AND SAID 1.00 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a ½" iron rod found on the Southeasterly R.O.W. line of Interstate Highway 35, (a Variable Width R.O.W.), being the Northwest corner of a called 0.61 acre tract, as conveyed to Mario Saldana, and recorded in Document No. 201606034689, of the Official Public Records of Comal County, Texas, the Northeast corner of said 1.00 acre tract and of the herein described tract;

THENCE departing the Southeasterly R.O.W. line of said Interstate Highway 35 and along the common line of said 1.00 acre tract and said 0.61 acre tract, S 25°23'42" E, a distance of 350.18 feet to a ½" iron rod set with a yellow plastic cap stamped "DAM #5348 PROP. COR." for a Northeasterly corner of a 6.855 acre tract, called Tract 1, as conveyed to Buttrum Construction, Inc., and recorded in Document No. 202106033785, of the Official Public Records of Comal County, Texas, the Southeast corner of said 1.00 acre tract and of the herein described tract;

THENCE along the common line of said 1.00 acre tract and said 6.855 acre tract, S 54°19'57" W, a distance of 174.73 feet to a ½" iron rod set with a yellow plastic cap stamped "DAM #5348 PROP. COR." for the Southwest corner of said 1.00 acre tract and N 10°52'03" W, a distance of 379.57 feet to a ½" iron rod set with a yellow plastic cap stamped "DAM #5348 PROP. COR." on the Southeasterly R.O.W. line of said Interstate Highway 35, being the Northeast corner of said 6.855 acre tract, the Northwest corner of said 1.00 acre tract and of the herein described tract;

THENCE along the Southeasterly R.O.W. line of said Interstate Highway 35, N 54°20'05" E, a distance of 77.97 feet to the POINT OF BEGINNING and containing 1.00 acre of land.

Bearings based on the Texas State Plane Coordinate System, Texas South Central Zone (4204), North American Datum 1983.

Exhibit prepared this the 29th day of November, 2023.

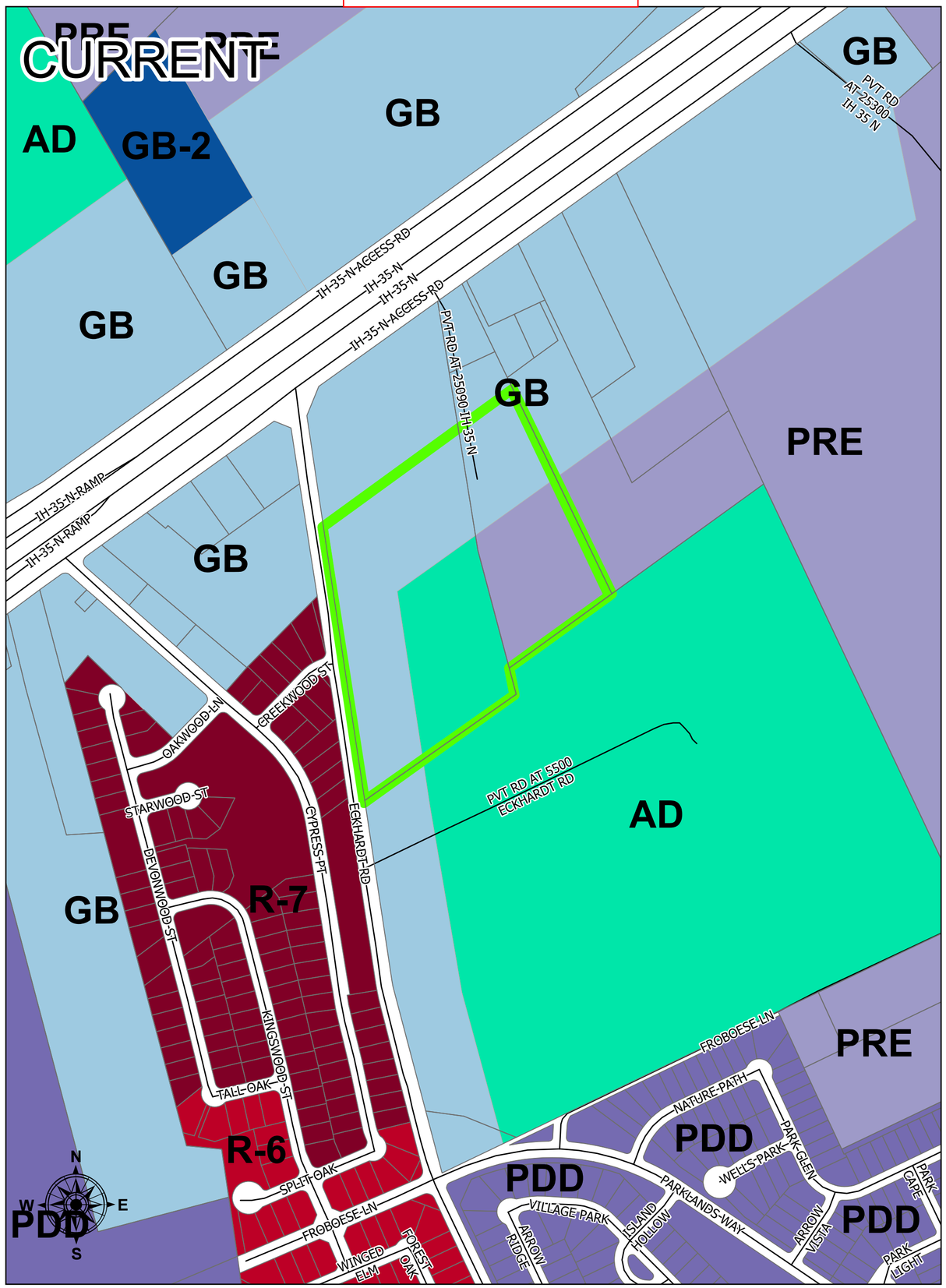
Drew A. Mawyer
Registered Professional Land Surveyor No. 5348
TBPLS Firm Registration #10191500
5151 W. SH 46, NEW BRAUNFELS, TX 78132
BCH058 ECKHARDT –1.00 ACRE

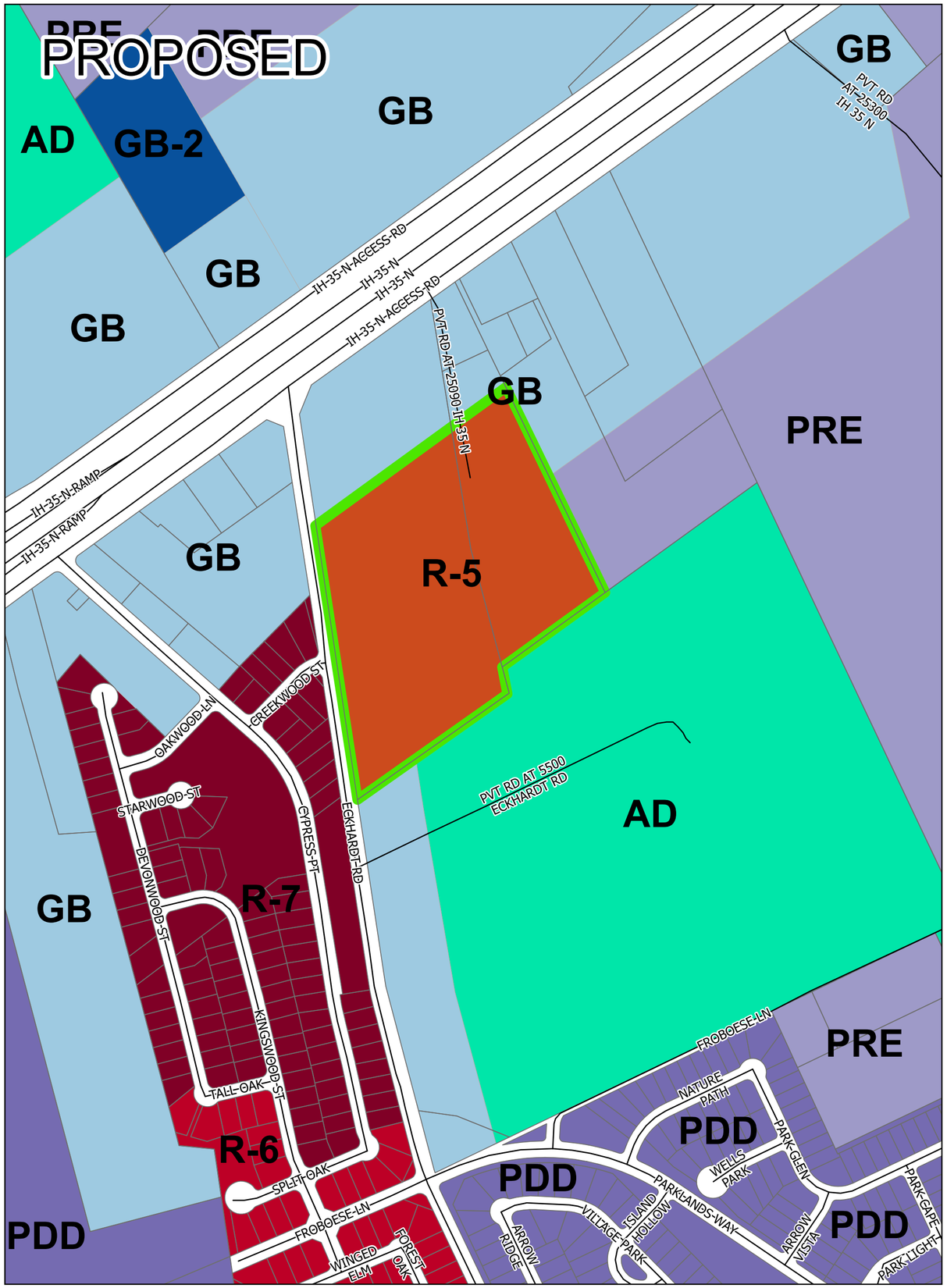


Exhibit “B”

Zoning Exhibit

Exhibit "B" Zoning Exhibit




SCHERTZ
COMMUNITY ★ SERVICE ★ OPPORTUNITY

Last update: November 13th, 2024

City of Schertz, GIS Specialist: Alexa Venezia, avenezia@schertz.com (210) 619-1174

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# PROPOSED ZONING CHANGE

## COMAL COUNTY
## PARCEL IDs:
## 75449 & 78233

**Classification**

- (PRE) Pre-Development
- (PDD) Planned Development
- (PUB) Public Use
- (R-A) Single-family Residential/Agricultural
- (R-1) Single-Family Residential
- (R-2) Single-Family Residential
- (R-3) Two-Family Residential
- (R-4) Apartment/Multi-Family Residential
- (R-5) Middle Density District
- (R-6) Single-family Residential
- (R-7) Single-family Residential
- (AD) Agricultural District
- (GH) Garden Home/Single-Family Residential (Zero Lot Line)
- (TH) Townhome
- (MHS) Manufactured Home Subdivision
- (MHP) Manufactured Home Parks
- (GB) General Business
- (GB-2) General Business II
- (NS) Neighborhood Services
- (OP) Office and Professional
- (MSMU) Main Street Mixed Use
- (MSMU-ND) Main Street Mixed Use New Development
- (M-1) Manufacturing (Light)
- (M-2) Manufacturing (Heavy)
- (DVL) Development Agreement (Delayed Annexation)

0 200 400 800 1,200 Feet




N
W E
S

SCHERTZ
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5524 ECKHARDT RD
PLZC20240285

Highways
Major Roads
Minor Roads

Freeway
Principal Arterial
Planned Principal Arterial
Secondary Arterial
Planned Secondary Arterial
Secondary Rural Arterial

Planned Secondary Rural Arterial
Residential Collector
Planned Residential Collector
Planned Commercial Collector B
Commercial Collector A
Planned Commercial Collector A

1" 2" 3" 4" 6"
8" 10" 12" 16" 18"
20" 24" 30" 36" Unknown

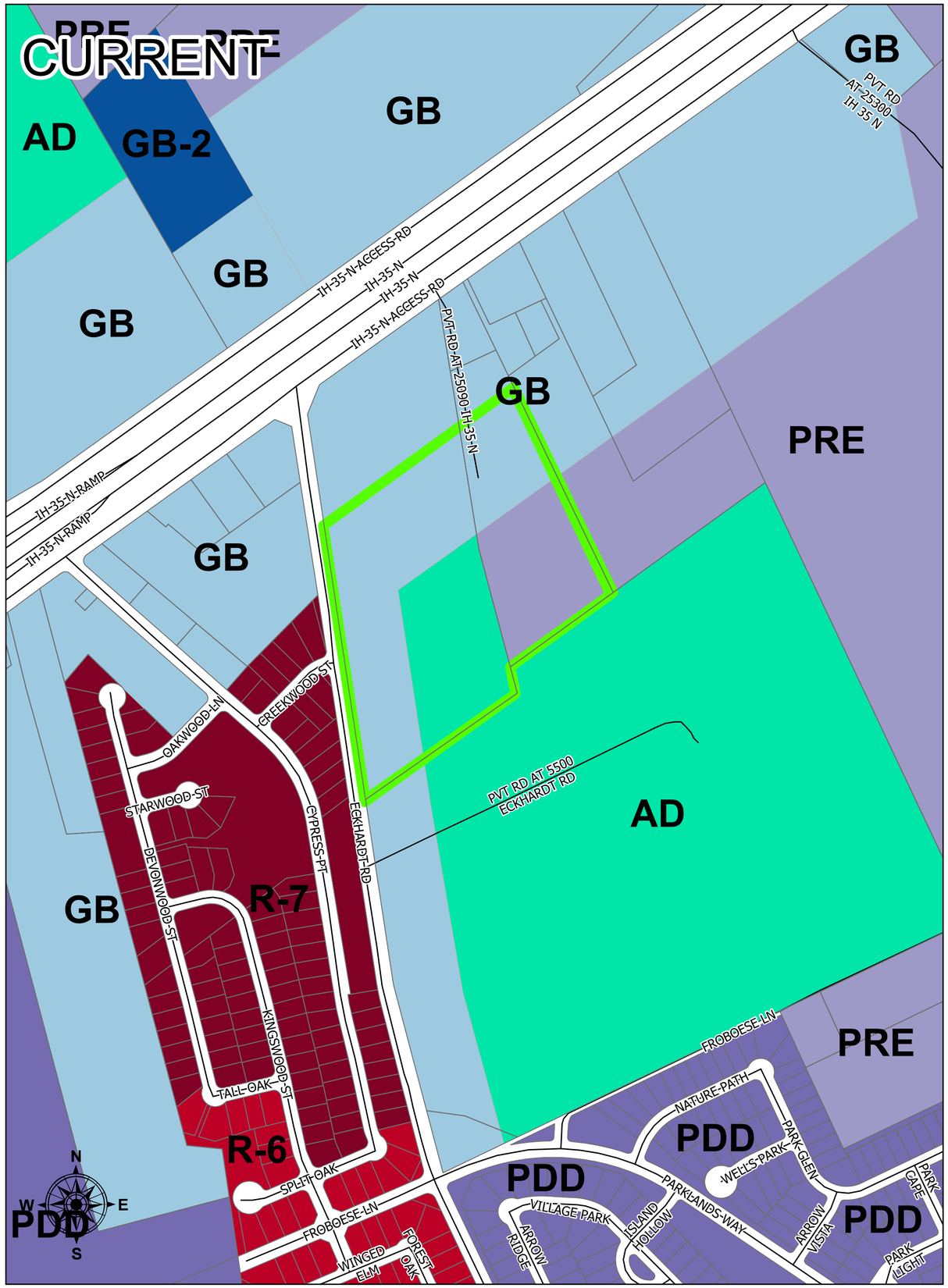
Schertz Gravity
Schertz Pressure
Neighboring Gravity
Private Pressure

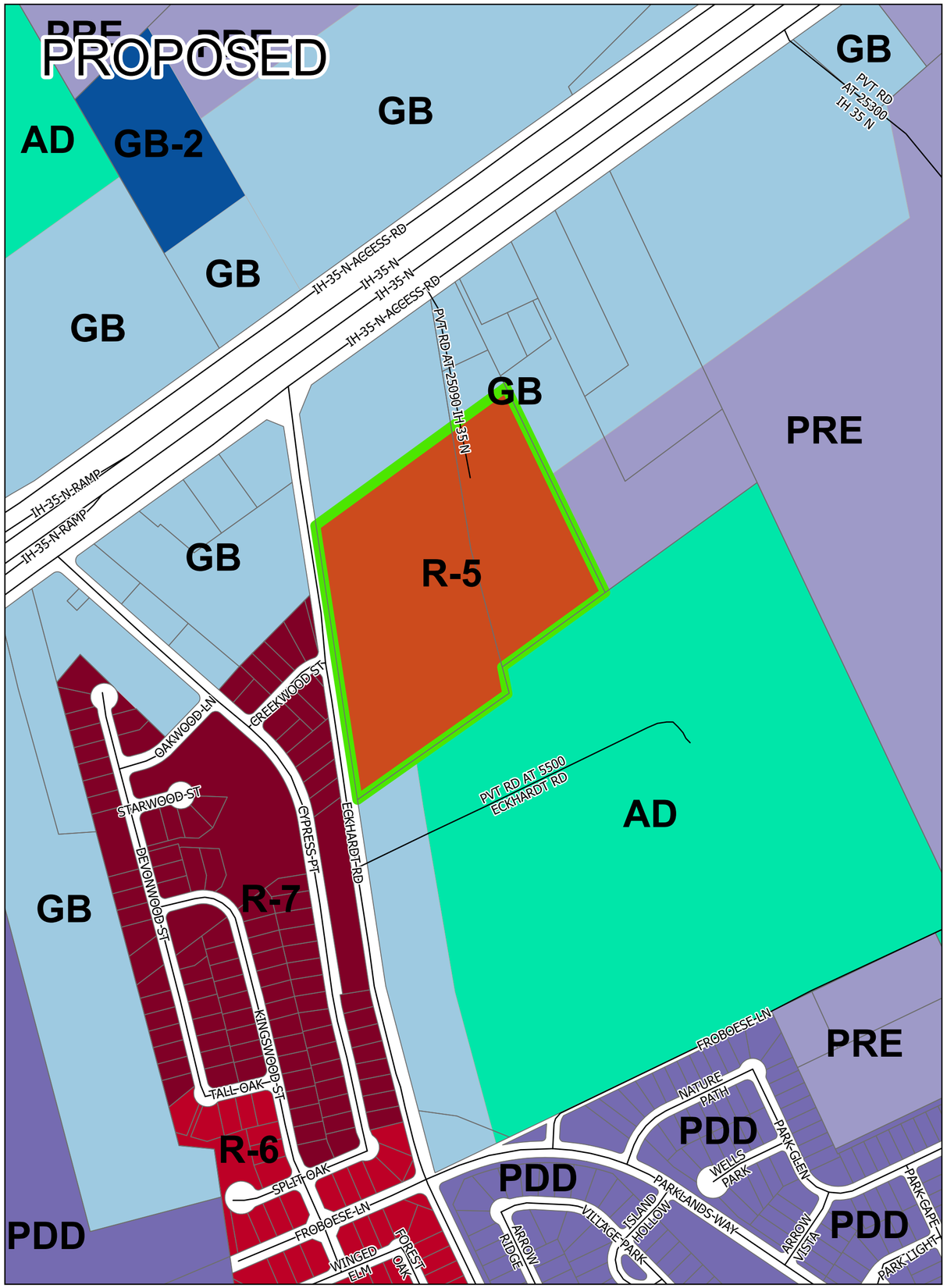
Hydrant
Manholes
PS CCMA Lift Station
PS Private Lift Station

PS Schertz Lift Station
WTP CCMA Treatment Plant
WTP Schertz Treatment Plant

County Boundaries
Schertz Municipal Boundary
ETJ

0 50 100 200 300 Feet




SCHERTZ
COMMUNITY ★ SERVICE ★ OPPORTUNITY

Last update: November 13th, 2024

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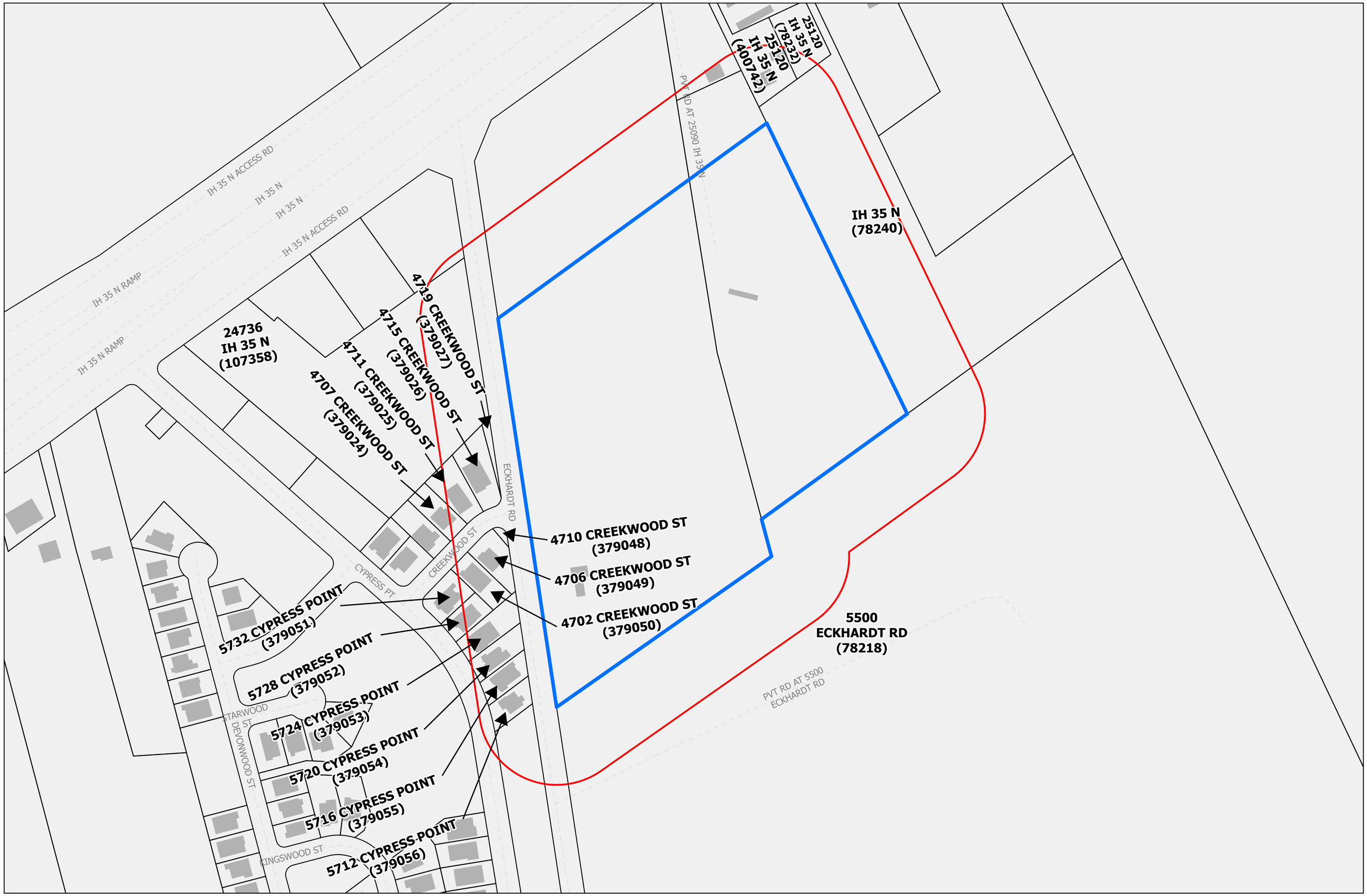
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- (OP) Office and Professional
- (MSMU) Main Street Mixed Use
- (MSMU-ND) Main Street Mixed Use New Development
- (M-1) Manufacturing (Light)
- (M-2) Manufacturing (Heavy)
- (DVL) Development Agreement (Delayed Annexation)

0 200 400 800 1,200 Feet




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# City of Schertz

ECKHARDT ESTATES; LOT 2
(PLZC20240285)

Project Boundary
City Limits
Schertz ETJ Boundary
200' Buffer

N
W
E
S

0 80 160 320 480 Feet

Last update: November 13th, 2024

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# Ord. 25-S-003

Zone Change of 20 acres of land from General Business District (GB), Agricultural District (AD), and Pre-Development District (PRE) to Middle Density Residential District (R-5)

**Samuel Haas| Senior Planner**

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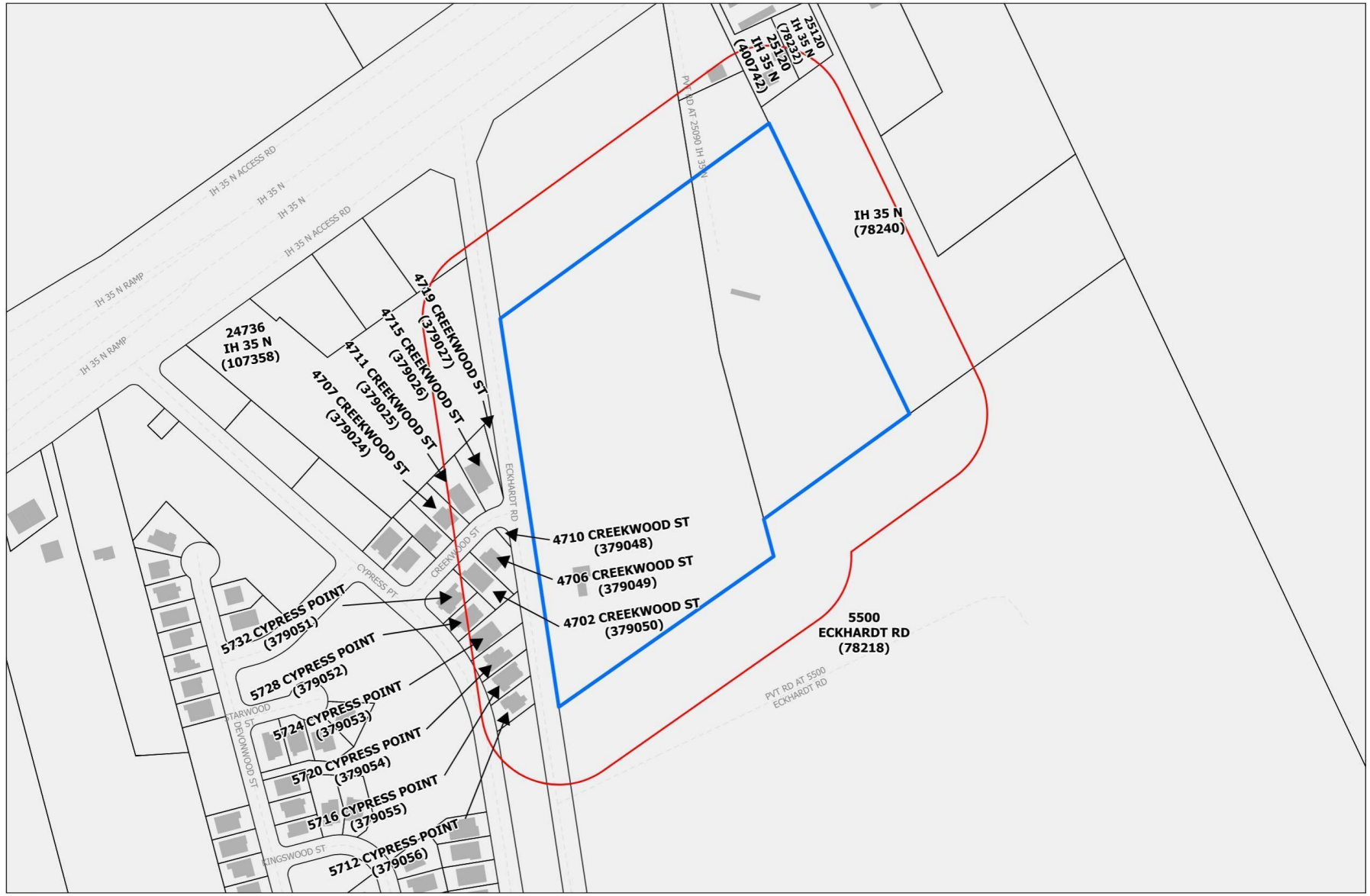
5524 ECKHARDT RD
PLZC20240285

Highways
Major Roads
Minor Roads
Freeway
Principal Arterial
Planned Principal Arterial
Secondary Arterial
Planned Secondary Arterial
Secondary Rural Arterial
Planned Secondary Rural Arterial
Residential Collector
Planned Residential Collector
Planned Commercial Collector B
Commercial Collector A
Planned Commercial Collector A
1" 2" 3" 4" 6"
8" 10" 12" 16" 18"
20" 24" 30" 36" Unknown
Schertz Gravity
Schertz Pressure
Neighboring Gravity
Private Pressure
Hydrant
Manholes
CCMA Lift Station
Private Lift Station
Schertz Lift Station
CCMA Treatment Plant
Schertz Treatment Plant
County Boundaries
Schertz Municipal Boundary
ETJ

0 50 100 200 300 Feet

Approx. 20 ac

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# City of Schertz

ECKHARDT ESTATES; LOT 2
(PLZC20240285)

Project Boundary
City Limits
Schertz ETJ Boundary
200' Buffer

N
W
E
S

0 80 160 320 480 Feet

November 22, 2024:
16 Public Hearing Notices sent

0 in favor
0 opposed
0 neutral

1 Sign placed on property

1 Addt'l PH notice was sent to Comal ISD

December 18, 2024 notice was published in the "SA Express"

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Last update: November 13th, 2024

City of Schertz, GIS Specialist: Alexa Venezia, avenezia@schertz.com (210) 619-1174

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**PROPOSED ZONING CHANGE**

**COMAL COUNTY**
**PARCEL IDs:**
**75449 & 78233**

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- (M-1) Manufacturing (Light)
- (M-2) Manufacturing (Heavy)
- (DVL) Development Agreement (Delayed Annexation)

0 200 400 800 1,200 Feet

# Applicant proposing portions of their property to be rezoned to Middle Density Residential District (R-5)

| Adjacent Properties | Zoning | Land Use |
|---|---|---|
| North | GB | Undeveloped |
| South | GB & AD | Rural Residence/Ag Use |
| East | GB | Commercial & Residential |
| West | ROW | Eckhardt Rd. |

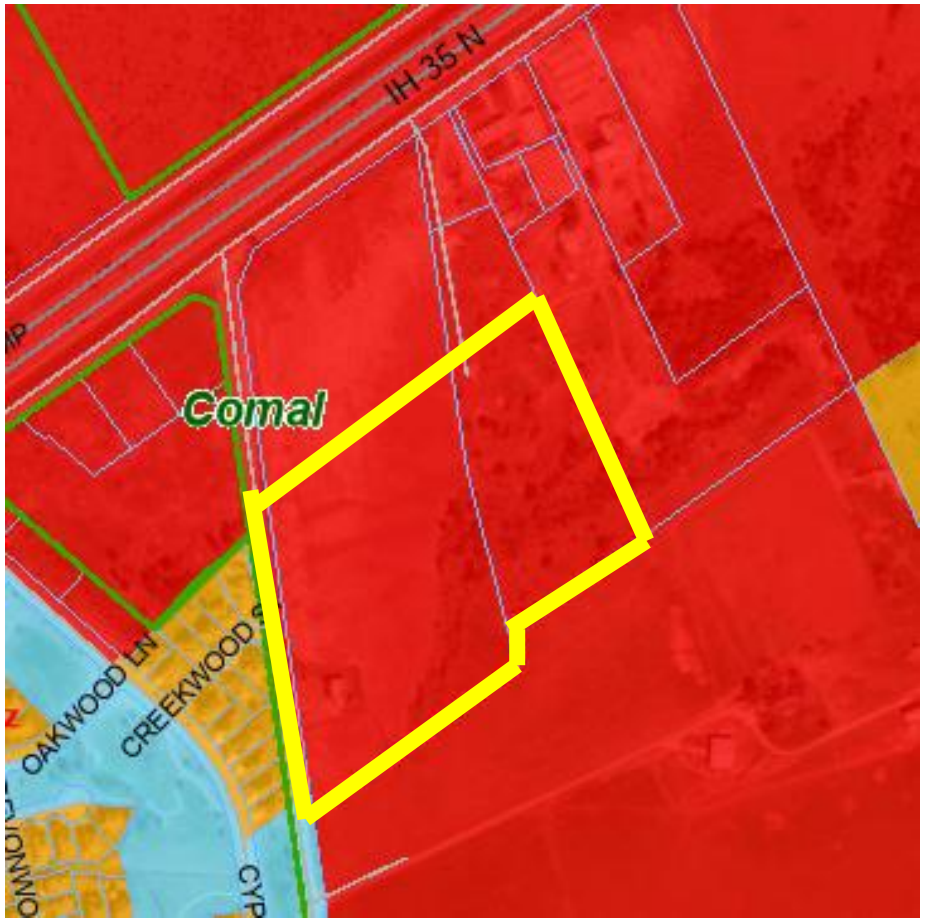
SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

| Middle Density Residential District R-5 | |
|---|---|
| Density | 12 Dwelling Units / acre |
| Min Lot Size | ¼ acre |
| Setbacks | • Front – 25 ft.<br>• Side – 10 ft.<br>• Rear – 10 ft. |
| Max Height | 35 ft. |
| Impervious Coverage | 80% |
| Parking | 1.5 spaces / unit |
| Adhere to all MF Site Design Requirements – Article 9 | |

# UDC SECTION 21.5.4.D Criteria for Approval

**1. Whether the proposed zoning change implements the policies of the adopted Comprehensive Land Plan, or any other applicable adopted plans;**

- The Comprehensive Plan designates this area as "Regional Corridor",
- Intended to provide commercial and entertainment areas along major thoroughfares and multifamily complexes
- For this reason, the proposed zone change is consistent with the Comprehensive Plan.



# UDC SECTION 21.5.4.D Criteria for Approval

**2. Whether the proposed zoning change promotes the health, safety, and general welfare of the City.**

- The UDC was recently amended on October 22, 2024, with City Council's approval of Ordinance 24-S-156.
- This new text to the UDC established Middle Density Residential District (R-5) which was crafted with the intent to encourage multifamily developments that would be less-dense and thus more compatible with existing single-family subdivisions.
- The UDC also strives to "ensure the safe, orderly and efficient development and expansion of the City" and to "prevent the overcrowding of land and avoid undue concentration or diffusion of population“
- This request is consistent with the UDC and thus promotes the health, safety, and general welfare.

# UDC SECTION 21.5.4.D Criteria for Approval

**3. Whether the uses permitted by the proposed change will be consistent and appropriate with existing uses in the immediate area;**

- Uses within Middle Density Residential District (R-5) are consistent and appropriate with the immediate area.

**4. Whether other factors are deemed relevant and important in the consideration of the amendment.**

- This applicant previously requested a rezone for Apartment / Multifamily District (R-4) for this property. However, at the November 6, 2024, Planning and Zoning Commission meeting, the applicant indicated that the goal was for a less-dense multifamily development. The Commissioners and Staff both recommended Middle Density Residential District (R-5) as a more compatible zoning request. The applicant withdrew the Apartment / Multifamily District (R-4) request and reapplied with a Middle Residential Density District (R-5) request.

# Recommendation

**The proposal is consistent with the Comprehensive Plan and surrounding land uses and meets the intent of the UDC.**

**Schertz Fire, EMS, and Police have been notified of the zone change requests and have provided no objection.**

**Therefore, Staff recommends approval of Ord. 25-S-003.**

**The Schertz Planning and Zoning Commission met on December 4, 2024, and made a recommendation to approve the request with a 6-0 vote.**

**Agenda No. 9.**

# CITY COUNCIL MEMORANDUM

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **Planning & Community Development** |
| **Subject:** | **Ordinance 25-S-004 - Conduct a public hearing and consider amendments to Part III of the Schertz Code of Ordinances, Unified Development Code (UDC), to Article 11, Section 21.11.6 Prohibited Signs and Section 21.11.17 Temporary Signs. (B.James/L.Wood/E.Delgado)** |

## BACKGROUND

As per Unified Development Code Section 21.4.7, City Council from time to time, or on its own motion, or at the recommendation of City Staff can recommend amendments, change or modify any portion of the UDC to establish and maintain sound and stable development.

At the November 12, 2024, City Council Workshop Meeting, the Planning Division gave a presentation / workshop regarding updating the Ordinance for blowup signs and flags for advertising. As a follow-up, the Planning Division gave an additional workshop / presentation at the November 19, 2024, City Council meeting to discuss proposed amendments to UDC Article 11, Section 21.11.17 Temporary Signs. Both of these workshops / discussions can be reviewed via YouTube. Based on these two workshops, it was discussed that the current regulations for temporary signs should be modified to increase the maximum height and maximum area in order to allow greater flexibility (larger signage regardless of the property location and adjacent roadway classification) for businesses / customers to utilize temporary signs. In addition, the Unified Development Code should explicitly prohibit wind driven signs such as feather flag signs and inflatable signs.

The Planning and Zoning Commission held a public hearing and made a recommendation of approval at the December 4, 2024, Planning and Zoning Commission meeting. A Public Hearing notice was published in the San Antonio Express on December 18th for the Public Hearing at the January 7, 2025, City Council meeting.

### Proposed Amendments

Staff is proposing modifications to the following UDC Article Section 21.11.17 Temporary Signs:

| Article | UDC Section | Current UDC | Proposed Amendment |
|---|---|---|---|
| 11 | 21.11.6 Prohibited Signs | Currently, the UDC does not directly prohibit wind drive signs / feather flags / inflatable / balloon signs. | Wind driven signs including feather flags and inflatable / balloon signs are prohibited regardless of size. |

| | | | |
|---|---|---|---|
| 11 | 21.11.17.B Maximum Area | Areas with Limited Access:<br>32 sq.ft. per face or ten percent (10%) of the building facade, whichever is less<br>Areas with Unlimited Access:<br>24 sq.ft. per face or seven percent (7%) of the building facade, whichever is less<br>All Other Streets:<br>16 sq.ft. per face or five percent (5%) of the building facade, whichever is less | Thirty Six Square Feet (36 sq.ft.) |
| 11 | 21.11.17.C Maximum Height | Areas with Limited Access: 6 feet<br>Areas with Unlimited Access: 4 feet<br>All Other Streets: 3 feet | Six Feet (6ft.) |

**GOAL**

To amend the Unified Development Code Article 11, Section 21.11.6 Prohibited Signs to explicitly state that wind driven signs including feather flags and inflatable / balloon signs are prohibited regardless of size and Section 21.11.17 Temporary Signs to increase the maximum area and maximum height for temporary signage.

**COMMUNITY BENEFIT**

It is the City's desire to promote safe, orderly, efficient development and ensure compliance with the City's vision of future growth.

**SUMMARY OF RECOMMENDED ACTION**

***When staff evaluates Unified Development Code Amendments, they use section 21.4.7.D Criteria for approval. The criteria are listed below.***

**1. The proposed amendment promotes the health, safety, and general welfare of the City;**

The City Council requests and staff proposes UDC amendments from time to time to proactively better the Unified Development Code that governs development within the City of Schertz. The proposed amendments allow greater flexibility / larger temporary signs regardless of where the business location is and the associated roadway classification. By increasing the maximum height and maximum area for temporary signage it promotes orderly and efficient development. With the proposed amendments, businesses will still be required to obtain a temporary sign permit which also ensures orderly development of the City. Additionally, by providing clarity on prohibited signs it will ensure consistency and efficiency with the sign permitting process throughout the City.

**2. The proposed amendment is consistent with the goals, objectives, and policies of the UDC and the City;**

The proposed amendments are consistent with the goals and desires of the City Council as discussed at the November 19, 2024 City Council workshop. Additionally, increasing the maximum height and maximum area allows greater flexibility, which is consistent with other UDC Amendments that have been approved. Recent UDC amendments have been made to add clarity on requirements and desires of the City Council. By creating a UDC amendment that clearly prohibits feather flags and inflatable signage, it is more clear for business owners and applicants on what is allowed as a temporary sign in the City of Schertz.

**3. The proposed amendment corrects an error, meets the challenge of changing conditions, or is in response to changes in state law; and**

The proposed amendments will meet the changing conditions / desires of the City Council in relation to allowing larger temporary signs. Additionally, the amendment adds clarity on temporary signs that are not desired and more clearly prohibits the use of feather flags and inflatable signs. The Operational Values of the City include being proactive and service-oriented. By implementing the proposed UDC amendment, it will proactively allow businesses to have larger temporary signs and to have consistent height and area maximums for all businesses regardless of the property location.

**4. Other factors which are deemed relevant and important in the consideration of the amendment.**

Staff has ensured all UDC requirements have been met for the proposed Unified Development Code Amendments. The City Council Workshops at the November 12th and November 19th City Council meetings should be reviewed as it provides additional information as to the insight of why these UDC Amendments have been requested and proposed.

## RECOMMENDATION

***Staff Recommendation***

Based on the City Council Workshops that took place on November 12th and November 19th, there is the desire to modify the Temporary Sign maximum height and maximum area to allow for increased sign size for Temporary Signs. The proposed UDC amendment will allow greater flexibility for businesses that would like to utilize temporary signs.

Staff recommends approval of Ordinance 25-S-004, amendment to Part III of the Schertz Code of Ordinances, Unified Development Code (UDC), Article 11, Section 21.11.6 Prohibited Signs and Section 21.11.17 Temporary Signs based on directive from City Council at the November 19th City Council Workshop.

***Planning and Zoning Commission Recommendation***

The Planning and Zoning Commission met on December 4, 2024, held a public hearing, and made a recommendation of approval to City Council with a 6-0 vote.

---

**Attachments**

Ordinance 25-S-004 with Attachments

Proposed UDC Amendment Red Lines

City Council Presentation Slides

**ORDINANCE NO. 25-S-004**

**AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS AMENDING PART III SCHERTZ CODE OF ORDINANCES, THE UNIFIED DEVELOPMENT CODE (UDC) ARTICLE 11 SECTION 21.11.6 PROHIBITED SIGNS AND ARTICLE 11 SECTION 21.11.17 TEMPORARY SIGNS**

**WHEREAS**, pursuant to Ordinance No. 10-S-06, the City of Schertz (the "City") adopted and Amended and Restated the Unified Development Code on April 13, 2010, as further amended (the "Current UDC"); and

**WHEREAS**, City Staff has reviewed the Current UDC and have recommended certain revisions and updates to, and reorganization of, the Current UDC; and

**WHEREAS**, on December 4, 2024, the Planning and Zoning Commission conducted a public hearing and, after considering the Criteria, made a recommendation to City Council of approval; and

**WHEREAS**, on January 7, 2025, the City Council conducted a public hearing and after considering the Criteria and recommendation by the Planning and Zoning Commission, determined that the proposed amendments are appropriate and are in the interest of the public safety, health, and welfare.

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SCHERTZ, TEXAS THAT:**

Section 1. The Current UDC is hereby amended as set forth on Exhibit A hereto.

Section 2. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Ordinance for all purposes and are adopted as a part of the judgment and findings of the Council.

Section 3. All ordinances and codes, or parts thereof, which are in conflict or inconsistent with any provision of this Ordinance are hereby repealed to the extent of such conflict, and the provisions of this Ordinance shall be and remain controlling as to the matters resolved herein.

Section 4. This Ordinance shall be construed and enforced in accordance with the laws of the State of Texas and the United States of America.

Section 5. If any provision of this Ordinance or the application thereof to any person or circumstance shall be held to be invalid, the remainder of this Ordinance and the application of such provision to other persons and circumstances shall nevertheless be valid, and the City hereby declares that this Ordinance would have been enacted without such invalid provision.

Section 6. It is officially found, determined, and declared that the meeting at which this Ordinance is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this Ordinance, was given, all as required by Chapter 551, as amended, Texas Government Code.

Section 7. This Ordinance shall be effective upon the date of final adoption hereof and any publication required by law.

Section 8. This Ordinance shall be cumulative of all other ordinances of the City of Schertz, and this Ordinance shall not operate to repeal or affect any other ordinances of the City of Schertz except insofar as the provisions thereof might be inconsistent or in conflict with the provisions of this Ordinance, in which event such conflicting provisions, if any, are hereby repealed.

PASSED, APPROVED and ADOPTED ON this _____ of _____, 2025.

CITY OF SCHERTZ, TEXAS

_____
Ralph Gutierrez, Mayor

ATTEST:

_____
Sheila Edmondson, City Secretary

(city seal)

Exhibit “A”
Proposed Unified Development Code (UDC) Amendments

## Sec. 21.11.6. Prohibited Signs.

A. *Obscene Signs.* No person shall erect or display on any site a sign in which the dominant theme of material taken as a whole appeals to the prurient interest in sex, and is patently offensive because it affronts current community standards relating to the description or representation of sexual matters, and is utterly without redeeming social literary, artistic, political, and scientific value, according to contemporary community standards.

B. *Obstructing Doors, Windows or Fire Escapes.* No person shall erect or display on any site any sign that prevents free ingress to or egress from any door, window or fire escape.

C. *Obstructing Vision/Sight Triangle.* No person shall erect or display on any site any sign in such a manner as to obstruct free and clear vision of moving vehicles at any location, street intersection, or driveway. All signs placed at any intersection shall prevent such problem by observing a visibility triangle (see definition of visibility triangle).

D. *Interference With Traffic.* No sign shall be permitted which interferes with vehicular or pedestrian traffic as a result of the position, size, shape, movement, color, fashion, manner, or intensity of illumination, or any other characteristics causing such interference. No person shall erect or allow to be displayed any sign in such a manner as to interfere with, obstruct the view of, or be confused with any authorized traffic sign, signal, or device, including, signs making use of the words "stop", "go", "look", "slow", "danger", or any other similar word, phrase, symbol or character. No person shall employ any red, yellow, green, or other colored lamp or light in such a manner as to cause confusion or otherwise interfere with vehicular or pedestrian traffic.

E. *Over Public Property or Public Right-of-Way.* It shall be prohibited to erect or display any type of sign on or over public ROW or other public property, unless the same is erected by the City, County, State or other authorized governmental agency, or with the permission of the City (in its sole discretion), for public purposes.

F. *Signs on Utility Poles.* No person shall erect or display any sign except as specifically authorized by section 21.11.5 on any utility pole located upon any public right-of-way or utility easement.

G. *Private Property.* No sign shall be located on private property without the consent of the owner of the premises, including signs located on trees, light poles or mail boxes.

H. *Dilapidated Signs.* No sign shall be permitted which is deteriorated, dilapidated or in danger of falling or otherwise unsafe.

I. *Signs in Violation.* No sign shall be permitted that does not comply with any applicable provisions of the building code, this UDC, or any other applicable laws, ordinances, codes or regulations of the City.

J. *Home Occupation Signs.* No exterior home occupation signs shall be permitted unless otherwise specifically authorized in another applicable section of this UDC.

K. *Non-Motorized or Portable Signs.* No trailer type, non-motorized signs using wheels and axles as the primary support shall be permitted.

L. *Off Premise Signs.* Except as set forth elsewhere in this Article, all off premise signs not legally existing on February 19, 2008 are prohibited except that the following signs may be permitted provided they otherwise meet the applicable requirements of this Article:

1. Community Service Signs;
2. Garage Sale Signs;
3. Official Government Signs;

4. Historical Markers and Plaques;
5. Political Signs;
6. Real Estate Signs;
7. Temporary Signs;
8. Traffic Signs;

M. *Bandit Signs.*

N. *Painted Signs.* No sign shall be permitted which is painted on the wall of any building or on any part of a building.

O. *Other Signs.* Except as set forth elsewhere in this Article, any signs not specifically permitted by this Article are prohibited within the City and its ETJ.

P. Wind driven signs including feather flags and inflatable / balloon sign are prohibited regardless of size.

## Sec. 21.11.17. Temporary Signs.

A. *General.* Notwithstanding any other provisions of this Article, this section shall be applicable to all temporary signs identified in this Article.

B. *Maximum Area.* The maximum area permitted for temporary signs shall not exceed Thirty Six Square Feet (36 sq.ft.).

C. *Maximum Height.* The maximum height permitted for temporary signs shall not exceed Six Feet (6ft

D. *Minimum Setback.* The minimum setback for all temporary signs shall be fifteen feet (15') from any property line.

E. *Time Limitations.* Temporary freestanding signs shall be permitted for a maximum of 180 days per calendar year. No additional temporary sign permit shall be issued for the same property or business for a period of fourteen (14) days after the expiration of the previous permit. There shall be no limit to the number of temporary sign permits that may be issued for a particular property or business. The cumulative total number of days for which all temporary sign permits issued for a property or business shall not exceed 180 calendar days.

F. *Number of Signs.* No more than two (2) types of temporary signs shall be permitted per business or tenant at any given time.

## Sec. 21.11.6. Prohibited Signs.

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8. Traffic Signs;

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## Sec. 21.11.17. Temporary Signs.

A. *General.* Notwithstanding any other provisions of this Article, this section shall be applicable to all temporary signs identified in this Article.

B. *Maximum Area.* The maximum area permitted for temporary signs shall not exceed Thirty Six Square Feet (36 sq.ft.). ~~the following:~~

| ~~Table 21.11.17A~~<br>~~Maximum Area of Temporary Signs~~ | |
|---|---|
| ~~Areas with Limited Access~~ | ~~32 sq. ft. per face or ten percent (10%) of the building façade, whichever is less~~ |
| ~~Areas with Unlimited Access~~ | ~~24 sq. ft. per face or seven percent (7%) of the building façade, whichever is less~~ |
| ~~All Other Streets~~ | ~~16 sq. ft. per face or five percent (5%) of the building façade, whichever is less~~ |

C. *Maximum Height.* The maximum height permitted for temporary signs shall not exceed Six Feet (6ft.). ~~the following:~~

| ~~Table 21.11.17B~~<br>~~Maximum Height of Temporary Signs~~ | |
|---|---|
| ~~Areas with Limited Access~~ | ~~6 feet~~ |
| ~~Areas with Unlimited Access~~ | ~~4 feet~~ |
| ~~All Other Streets~~ | ~~3 feet~~ |

D. *Minimum Setback.* The minimum setback for all temporary signs shall be fifteen feet (15') from any property line.

E. *Time Limitations.* Temporary freestanding signs shall be permitted for a maximum of 180 days per calendar year. No additional temporary sign permit shall be issued for the same property or business for a period of fourteen (14) days after the expiration of the previous permit. There shall be no limit to the number of temporary sign permits that may be issued for a particular property or business. The cumulative total number of days for which all temporary sign permits issued for a property or business shall not exceed 180 calendar days.

F. *Number of Signs.* No more than two (2) types of temporary signs shall be permitted per business or tenant at any given time.

# Ordinance 25-S-004

UDC Amendment for Article 11 Section 21.11.6 Prohibited Signs and Section 21.11.17 Temporary Signs

**Emily Delgado | Planning Manager**

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# Background

- At the November 12, 2024, City Council Workshop meeting, the Planning Division gave a presentation / workshop regarding updating the UDC for blowup signs and flags for advertising.

- At the November 19, 2024, City Council meeting staff gave an additional workshop / presentation to further discuss proposed UDC amendments.

- Based on these two workshops it was discussed that the current regulations for temporary signs should be modified to increase the maximum height and maximum area. Additionally, there should be clarity on the prohibition for wind driven signs such as feather flag signs and inflatable signs.

- Public Hearing Notice was published on December 18th for the January 7th City Council meeting.

# Types of Temporary Signs:

Wind Sign




"A" Frame Sign



Balloon Sign




Banner Sign




Bandit Sign




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# Current UDC Article 11 Section 21.11.17 Temporary Signs:

- Maximum Area based on street classification:

| | |
|---|---|
| Areas with Limited Access | 32 sq. ft. per face or 10% of the building façade, whichever is less |
| Areas with Unlimited Access | 24 sq. ft. per face or 7% of the building façade, whichever is less |
| All Other Streets | 16 sq. ft. or 5% of the building façade, whichever is less |

- Maximum Height based on street classification:

| | |
|---|---|
| Areas with Limited Access | 6 Feet |
| Areas with Unlimited Access | 4 Feet |
| All Other Streets | 3 Feet |

Examples of Limited Access: IH 35 and IH 10

Examples of Unlimited Access: FM 78, FM 482, FM 1103, FM 1518, FM 2252, FM 3009, Schertz Parkway

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# Current UDC Art. 11 Sect. 21.11.17 Temporary Signs Continued:

- Minimum Setback:
  - Setback for all temporary signs shall be fifteen feet (15') from any property line.
- Time Limitations:
  - Temporary freestanding signs shall be permitted for a maximum of 180 days per calendar year.
  - No additional temporary sign permit shall be issued for the same property or business for a period of fourteen (14) days after the expiration of the previous permit.
  - There shall be no limit to the number of temporary sign permits that may be issued for a particular property or business.
  - The cumulative total number of days for which all temporary sign permits issued for a property or business shall not exceed 180 calendar days.
- Number of Signs:
  - No more than two (2) types of temporary signs shall be permitted per business or tenant at any given time.

# Proposed UDC Amendments:

| Article | UDC Section | Current UDC | Proposed Amendment |
|---|---|---|---|
| 11 | 21.11.6- Prohibited Signs | Currently wind driven / feather flags / inflatable / balloon signs are not in the listed of Prohibited Signs. | Wind driven signs including feather flags and inflatable / balloon signs are prohibited regardless of size. |
| 11 | 21.11.17.B Maximum Area | • Areas with Limited Access: 32 sqft per face or 10% of the building façade, whichever is less.<br>• Areas with Unlimited Access: 24 sqft per face or 7% of the building façade, whichever is less.<br>• All Other Streets: 16 sqft per face or 5% of the building façade, whichever is less. | Thirty-Six Square Feet (36 sq. ft.) |
| 11 | 21.11.17C Maximum Height | • Areas with Limited Access: 6 feet<br>• Areas with Unlimited Access: 4 feet<br>• All Other Streets: 3 feet | Six Feet (6ft.) |

# Proposed UDC Amendments:

### Sec. 21.11.6. Prohibited Signs.

P. Wind driven signs including feather flags and inflatable / balloon sign are prohibited regardless of size.

### Sec. 21.11.17. Temporary Signs.

A. *General.* Notwithstanding any other provisions of this Article, this section shall be applicable to all temporary signs identified in this Article.

B. *Maximum Area.* The maximum area permitted for temporary signs shall not exceed Thirty Six Square Feet (36 sq.ft.). ~~the following:~~

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C. *Maximum Height.* The maximum height permitted for temporary signs shall not exceed Six Feet (6ft.). ~~the following:~~

| ~~Table 21.11.17B~~<br>~~Maximum Height of Temporary Signs~~ | |
|---|---|
| ~~Areas with Limited Access~~ | ~~6 feet~~ |
| ~~Areas with Unlimited Access~~ | ~~4 feet~~ |
| ~~All Other Streets~~ | ~~3 feet~~ |

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# UDC SECTION 21.4.7.D Criteria for Approval

1. **The proposed amendment promotes the health, safety, or general welfare of the City.**

- The proposed amendments
  - allow greater flexibility / larger temporary signs
  - increases the maximum height and maximum area for temporary
  - businesses will still be required to obtain a temporary sign permit which also ensures orderly development of the City
  - increase clarity on prohibited signs

# UDC SECTION 21.4.7.D Criteria for Approval

**2. An amendment to the text is consistent with the goals, objectives and policies of this UDC and the City**

- Consistent with the goals and desires of the City Council as discussed at the November 19 City Council workshop.
- Allows greater flexibility, which is consistent with other UDC Amendments that have been approved.
- UDC amendment that clearly prohibits feather flags and inflatable signage, it is clearer for business owners and applicants on what is allowed as a temporary sign in the City of Schertz.

# UDC SECTION 21.4.7.D Criteria for Approval

**3. The proposed amendment corrects an error, meets the challenge of changing conditions, or is in response to changes in state law;**

- Meets the changing conditions / desires of the City Council
- Adds clarity on temporary signs that are not desired
- More clearly prohibits the use of feather flags and inflatable signs
- Proactively will allow businesses to have larger temporary signs and to have consistent height and area maximums for all businesses regardless of the property location.

# UDC SECTION 21.4.7.D Criteria for Approval

**4. Other factors which are deemed relevant and important in the consideration of the amendment.**

- Staff has ensured all UDC requirements have been met for the proposed Unified Development Code Amendments.

# Recommendation

- **Staff Recommendation:**
  - Staff recommends approval of Ordinance 25-S-004 amendment to Part III of the Schertz Code of Ordinances, Unified Development Code (UDC), Article 11, Section 21.11.6 Prohibited Signs and Section 21.11.17 Temporary Signs

- **Planning & Zoning Commission Recommendation:**
  - The Planning and Zoning Commission met on December 4, 2024, held a public hearing, and made a recommendation of approval to City Council with a 6-0 vote.

# UDC Article 16 Definitions:

- Temporary Sign: Any sign identified by this UDC which is intended to be displayed for seasonal or brief activities including, but not limited to, sales, specials, promotions, holidays, auctions, and/or business grand openings.

- Wind Sign: Any display or series of displays, banners, flags, pennants or other such objects designed and fashioned in such a manner as to move when subjected to wind pressure. Wind signs shall only be permitted as temporary signs.

- "A" Frame Sign: A temporary sign constructed in such a manner as to form an "A" or a tent-like shape, hinged or not hinged at the top with each angular face held at an appropriate distance so as to be adequately secured by a supporting member. These signs may also be referred to as sandwich board signs.

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# UDC Article 16 Definitions:

- Balloon Sign: One or more inflatable devices filled with lighter-than-air gas used as a temporary sign for the purpose of directing attention to any location, event, person, product, good, service, activity, institution or business.

- Banner Sign: A temporary sign constructed of a natural or man-made flexible material including, but not limited to, cloth, canvas, vinyl, or fabric which can be easily folded or rolled that is mounted with or without an enclosing framework that is attached or tethered to the building or structures.

- Pennant: Any long, narrow, usually triangular flag composed primarily of cloth, paper, fabric or other similar non-rigid material which may be used as a temporary sign to announce grand openings and/or special events.

- Bandit Sign: Any temporary ground sign announcing a subdivision, new development or builder. *(Bandit Signs are Prohibited per UDC Section 21.11.6)*

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**Agenda No. 10.**

# CITY COUNCIL MEMORANDUM

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **Planning & Community Development** |
| **Subject:** | **Quarterly Update- City Council Approved Zoning and Specific Use Permit Ordinances in relation to current development status** |

## BACKGROUND

Based on a request by a City Council member, the Planning Division has created a quarterly report to provide additional information on development within the City of Schertz. Specifically, the report identifies the zoning ordinances and specific use permit ordinances that have been heard and approved by City Council. The report provides the ordinance approval date, a description of the request, location of the project, and the current development status. The current development status will provide information on if the project is moving forward and is in the platting or site plan process or if no applications have been submitted in conjunction with that specific ordinances.

Since this is the first time the Planning Division is including this report in the City Council packet, we welcome any feedback or changes for future quarterly reports.

## Attachments

City Council Approved Zoning and SUP Ordinances and current development status January 2025

# January City Council Report: Approved Zoning and SUP Ordinances and Current Development Status

| Ordinance Number | City Council Approval Date | Ordinance Request | Project Name | Project Location | Current Status |
|---|---|---|---|---|---|
| 23-S-04 | 3/28/2023 | Rezone 87 Acres to General Business District II (GB-2) | No project name provided | 12625 E IH 10 | Approved Clearing and Grading Permit. No development plans submitted at this time. |
| 23-S-10 | 5/23/2023 | Rezone 1 Acre to Neighborhood Services District (NS) | FM 3009 Medical Office | | Final Plat Application Under Review |
| 23-S-12 | 6/20/2023 | Specific Use Permit for a Convenience Store with Gas Pumps | Grayton Commercial C-Store | 11185 Ih 10 E // Bexar County Property ID 619232 | Preliminary Plat Certification Application Under Review |
| 23-S-16 | 9/19/2023 | Specific Use Permit for a Convenience Store with Gas Pumps | Tex Stop FM 78 | 1008 and 1020 FM 78 | Minor Plat Certification Application Under Review |
| 23-S-24 | 11/14/2023 | Rezone 2.1 Acres to Planned Developent District (PDD) | Addition of 2.1 Acres to the Heritage Oaks PDD on Schertz Parkway | Guadalupe County Parcel ID 31970, 31971, 31972, 31973, 31980, 31981, 31982, 31983 | Replat Certification Application Under Review |
| 23-S-32 | 1/9/2024 | Specific Use Permit for a Convenience Store with Gas Pumps | Gas Station on IH 35 near the intersection of IH 35 and FM 2252 | Guadalupe County Parcel ID 114083, Comal County Parcel ID 119021 | Preliminary Plat Application Under Review |
| 23-S-33 | 1/9/2024 | Specific Use Permit for a Truck Terminal | Sysco Annex Lot | Near Baugh Lane and Schwab Road, Comal County Parcel ID 464879 | Final Plat Application Administratively Approved |
| 23-S-35 | 1/16/2024 | Rezone 65 Acres to Planned Development District (PDD) | Schertz Gateway PDD | Comal County Parcel ID 75458 and Guadalupe County Parcel ID 64005 near IH 35 and Schwab Road | No applications at this time. |
| 24-S-02 | 2/20/2024 | Specific Use Permit for Automobile Repairs & Service Major | No project name provided | 1205 Borgfeld Road | No applications at this time. |
| 24-S-05 | 3/16/2024 | Rezone 26 Acres to General Business District (GB) | Del Toro Multi-Sport | Bexar County Parcel ID 308363 | No applications at this time. |
| 24-S-09 | 4/16/2024 | Rezone 7.7 Acres to Single Family Residential District (R-1) | Hallies Court at Hallies Cove | 8215 Trainer Hale Road | Preliminary Plat Application Administratively Approved |
| 24-S-11 | 4/16/2024 | Rezone 3.6 Acres to Neighborhood Services District (NS) | Kellum Phase III | 3517 FM 3009 | Site Plan Certification Application Under Review |
| 24-S-18 | 5/21/2024 | Rezone 1.8 Acres to Single-Family Residential / Agricultural (RA) | Burnette Plat | 12396 Schaefer Road | Preliminary Plat Certification Application Under Review |
| 24-S-19 | 5/21/2024 | Rezone 3 Acres to Single-Family Residential / Agricultural (RA) | No project name provided | 11627 Voges Pass, Bexar County Parcel ID 308402 | No applications at this time. |
| 24-S-26 | 6/18/2024 | Specific Use Permit Mixed-Use Self-Storage | FM 3009 Storage SUP | Portion of Guadalupe County Property ID:70506 (FM 3009 & Forest Ridge) | Preliminary Plat Certification Application Under Review |
| 24-S-22 | 7/2/2024 | Rezone 894 Acres to Agricultural District (AD) | Comal and Guadalupe County Annexation Properties Zoning Ordinance / No Development to Occur | Comal and Guadalupe County Annexation Properties Zoning Ordinance / No Development to Occur | No applications at this time. No development to occur. |
| 24-S-24 | 7/2/2024 | Rezone 2,167 Acres to Agricultural District (AD) | Bexar County Annexation Properties Zoning Ordinance / No Development to Occur | Bexar County Annexation Properties Zoning Ordinance / No Development to Occur | No applications at this time. No development to occur. |
| 24-S-140 | 7/16/2024 | Rezone 1 Acre to Single Family Residential / Agricultural (RA) | Johnson Property | 11639 Voges Pass | No applications at this time. |
| 24-S-141 | 7/16/2024 | Rezone 3.6 Acres to Single Family Residential / Agricultural (RA) | No project name provided | 6691 FM 482 (Intersection of Friesenhahn and FM 482) | No applications at this time. |
| 24-S-142 | 7/16/2024 | Specific Use Permit for a Convenience Store with Gas Pumps | Maske Gas Station and Retail | Intersection of Maske Road and E FM 1518, Guadalupe County Parcel ID 64548 | No applications at this time. |
| 24-S-145 | 8/20/2024 | Rezone 3.3 Acres to Single Family Residential District (R-6) | No project name provided | 7444 FM 482 | No applications at this time. |
| 24-S-148 | 9/17/2024 | Rezone 71 Acres to 41 Acres as Single Family Residential District (R-2) and 30 Acres as Single Family Residential District (R-6) | Monterrey Meadows | 12840 Lower Seguin Road | No applications at this time. |

# January City Council Report: Approved Zoning and SUP Ordinances and Current Development Status

| | | | | | |
|---|---|---|---|---|---|
| 24-S-149 | 9/17/2024 | Rezone 79 Acres to Single Family Residential District (R-1) | Poppy Hills Subdivision | 8676 Trainer Hale Road | Master Development Plan Certification Application Under Review |
| 24-S-157 | 11/19/2024 | Rezone 218 Acres to Agricultural District (AD) | Annexation Properties Zoning Ordinance / No Development to Occur | Annexation Properties Zoning Ordinance / No Development to Occur | No applications at this time. No development to occur. |
| 24-S-159 | 12/3/2024 | Rezone 3.014 Acres to Agricultural District (AD) | Annexation Property Zoning Ordinance / No Development to Occur | Comal County Parcel ID 79004 | No applications at this time. No development to occur. |
| 24-S-167 | 12/3/2024 | Rezone 100 Acres to Manufacturing District Light (M-1) and Apartment / Multi-Family Residential (R-4) | Hausman Square | Comal county Parcel IDs 79017, 75463, 79018, 75468, Intersection of IH 35 and Schwab Road | No applications at this time. |
| 24-S-168 | 12/3/2024 | Rezone 1.66 Acres to Main Street Mixed Use (MSMU) | Contreras Rezone to MSMU | 819, 817, 815 Main Street and 810 Exchange Ave | No applications at this time. |
| 24-S-169 | 12/3/2024 | Rezone 0.23 Acres to Main Street Mixed Use (MSMU) | 702 Main Street Zone Change | 702 Main Street | No applications at this time. |
| 24-S-170 | 12/3/2024 | Specific Use Permit for a Mixed Use Self-Storage Development | I-35 & Cibolo Valley Drive SUP | Guadalupe County Parcel ID 185564, Intersection of IH 35 and Cibolo Valley Drive (near existing QT) | No applications at this time. |

**Agenda No. 11.**

**CITY COUNCIL MEMORANDUM**

| | |
|---|---|
| **City Council Meeting:** | **January 07, 2025** |
| **Department:** | **Engineering** |
| **Subject:** | **Information regarding a pending update to the City of Schertz Water and Wastewater Master Plans, Land Use Assumptions, and Capital Improvement Plans that establish the basis for updates to the City's Water and Wastewater Impact Fees.** |

## BACKGROUND

City Staff and a consultant have been preparing an update to the City's water and wastewater capital recovery fees, or impact fees, in order to appropriately fund construction of new facilities and expand existing facilities to serve future development.

The draft report including updated Land Use Assumptions (LUA), Capital Improvement Plans (CIP), and updated calculated maximum assessable water and wastewater impact fees is attached. The report has been provided and a workshop is scheduled for presentation and discussion of the LUA and CIP to the Capital Improvement Advisory Committee (CIAC) January 8, 2024. A public hearing is planned by the CIAC later in January during which time they will generate comments on the LUA, CIP, and proposed impact fee amounts. Those comments will be provided prior to a public hearing in front of Council. Staff will bring a resolution to Council during an upcoming meeting to set a date for the public hearing and consideration of the updated plans and fees.

For ease of reference, the current schedule of water and wastewater impact fees is also attached.

**Attachments**

2024 Water and Wastewater Impact Fee Update Report

Current Water and Wastewater Impact Fees



# City of Schertz 2024 Water & Wastewater Master Plan, CIP, & Impact Fee Update

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TBPE Firm No. 2614

SCHERTZ
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# EXECUTIVE SUMMARY

The City of Schertz (City) contracted Lockwood, Andrews, and Newnam Inc. (LAN) to analyze and update the Water and Wastewater Impact Fees. This report summarizes the process used to calculate the water and wastewater impact fees for the 2020 – 2030 planning period, which was done in accordance with Texas Local Government Code (TLGC) Section 395.

This study included the development of land use assumptions and growth projections, which were used to estimate future water and wastewater demands. Hydraulic models for both the water and wastewater systems were created by LAN based on data obtained from the City and the estimated future demands. The results of these models highlighted areas in both systems with insufficient capacity or would be throughout the planning period. Capital improvement plans for both systems were then developed and broken out into three separate groups: Near Term, 2030, and 2050. Projects included in the 2050 CIP are not eligible to be included in this impact fee update as TLGC Section 395 limits the planning period to 10 years. Estimated costs were developed for each project and can be found in Appendix 29. The 2030 and 2050 costs were multiplied by an average construction inflation factor to ensure estimates accurately captured the project costs in the future. Only the percentage of each project being utilized during the 10-year planning period was included to calculate the total impact fee eligible costs. Additionally, only the projects or portions of projects needed due to growth are included in the total impact fee eligible costs.

The increase in Living Unit Equivalents (LUEs) for the water and wastewater system were determined by comparing the flow results from the two hydraulic models to the existing system flows. The City of Schertz is unique in that the water and wastewater Certificates of Convenience and Necessity (CCN) do not match exactly, so the increase in LUEs for the two systems are slightly different. To obtain the maximum allowable impact fee for both systems, the total impact fee eligible costs were divided by the respective growth in LUEs. The tables below show this process for each system.

**Maximum Allowable Water Impact Fee**

| **Water Impact Fee** | |
|---|---|
| Impact Fee Eligible Costs | $65,943,379 |
| Credit (Calculated: 5.1%) | ($3,365,530) |
| Total Impact Fee Eligible Costs | $62,577,849 |
| Growth in LUEs | 7,100 |
| **Maximum Allowable Water Impact Fee per LUE** | **$8,814** |

Maximum Allowable Wastewater Impact Fee

| Wastewater Impact Fee | |
|---|---|
| Impact Fee Eligible Costs | $53,822,665 |
| Credit (Calculated: 8.6%) | ($4,611,802) |
| Total Impact Fee Eligible Costs | $49,210,863 |
| Growth in LUEs | 7,217 |
| **Maximum Allowable Wastewater Impact Fee per LUE** | **$6,819** |

Part of the update to the impact fees included updating the water meter types and characteristics to correspond with the new meters that the City will now be utilizing. The maximum allowable impact fees by meter type were calculated by multiplying the LUE per meter size by the maximum allowable water and wastewater impact fees shown in the tables above. The table below reflects both the update to the impact fees by meter type and the new meter characteristics.

Maximum Allowable Impact Fee by Meter Size

| Meter Size | Meter Type | Maximum Flow Rate for Continuous Duty (gpm) | Proposed LUE | Maximum Allowable Water Impact Fee | Maximum Allowable Wastewater Impact Fee |
|---|---|---|---|---|---|
| 5/8" | MULTI-JET | 15 | 1.0 | $8,814 | $6,819 |
| 3/4" | MULTI-JET | 20 | 1.3 | $11,810 | $9,137 |
| 1" | MULTI-JET | 30 | 2.0 | $17,627 | $13,638 |
| 2" | ULTRASONIC | 250 | 16.7 | $146,924 | $113,671 |
| 3" | ULTRASONIC | 500 | 33.3 | $293,848 | $227,341 |
| 4" | ULTRASONIC | 1,000 | 66.7 | $587,607 | $454,615 |
| 6" | ULTRASONIC | 1,600 | 106.7 | $940,154 | $727,370 |
| 8" | ULTRASONIC | 2,800 | 186.7 | $1,645,248 | $1,272,880 |
| 10" | ULTRASONIC | 5,500 | 366.7 | $3,231,708 | $2,500,279 |
| 12" | ULTRASONIC | 5,500 | 366.7 | $3,231,708 | $2,500,279 |




12/16/2024

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

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# 1. BACKGROUND & REGULATIONS

Texas Local Government Code (TLGC) Section 395 provides provisions to "generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development". Impact fees cannot be applied to existing customers. The City of Schertz (City) contracted Lockwood, Andrews, and Newnam Inc. (LAN) to analyze and update the Water and Wastewater Impact Fees. This report summarizes the process used to calculate water and wastewater impact fees for the 2020 – 2050 planning period, which was done in accordance with TLGC Section 395.

Within Section 395 there are procedures and regulations for adopting and updating water and wastewater impact fees that require an impact fee analysis be performed before the new or updated impact fees can be imposed. In accordance with Section 395, only the following items are payable by the impact fee:

- Construction Contract Price
- Surveying & Engineering Fees
- Land acquisition costs, including land purchases, court awards and costs, attorney's fees, and expert witness fees.
- Fees actually paid or contracted to be paid to an independent qualified engineer or financial consultant preparing or updating the capital improvements plan who is not an employee of the political subdivision.
- Projected interest charges and other financing costs may be included in determining the amount of impact fees only if the impact fees are used for the payment of principal and interest on bonds, notes, or other obligations issued by or on behalf of the political subdivision to finance the capital improvements or facility expansions identified in the capital improvements plan and are not used to reimburse bond funds expended for facilities that are not identified in the capital improvements plan.

Additionally, Section 395 lists the items that are not payable by the impact fee:

- Construction, acquisition, or expansion of public facilities or assets other than capital improvements or facility expansions identified in the capital improvements plan.
- Repair, operation, or maintenance of existing or new capital improvements or facility expansions.
- Upgrading, updating, expanding, or replacing existing capital improvements to serve existing development in order to meet stricter safety, efficiency, environmental, or regulatory standards.
- Upgrading, updating, expanding, or replacing existing capital improvements to provide better service to existing development.
- Administrative and operating costs of the political subdivision, except the Edwards Underground Water District or a river authority that is authorized elsewhere by state law to charge fees that function as impact fees may use impact fees to pay its administrative and operating costs.
- Principal payments and interest or other finance charges on bonds or other indebtedness, except as allowed by Section 395.012.

With these regulations in mind, LAN updated the City's land use assumptions, developed hydraulic water and wastewater models, identified capital improvement projects and their usage attributable to new development, and calculated the updated water and wastewater impact fees.

# 2. LAND USE ASSUMPTIONS

Land use assumptions are required to be periodically updated in accordance with TLGC Section 395.052. These assumptions form the basis for analyzing existing and future water and wastewater needs based on growth projections. This section describes how LAN performed a land use assessment, developed growth projections, and applied this data to the hydraulic water and wastewater models which are discussed later in this report.

## 2.1 Data Review & Methodology

### 2.1.1 City Provided Data

Data and resources necessary for LAN to assess current and future land uses, development projections, and Water and Wastewater service networks were provided by the City. Sources available up to December 31, 2021 were incorporated in the land use assumptions for this master plan effort. The plan was modified based on residential subdivision development information received from the City on April 8th, 2022. This includes the following:

- GIS Shapefiles
    - Received by LAN in the December 2019 data package from the City
        - Shapefiles in this data package included:
            - Comprehensive Land Use
            - Zoning Ordinances
            - Water and Wastewater infrastructure
            - CCN Service Areas
            - Municipal Boundaries
            - Customer Meters
            - Subdivision Land Use Statistics
- Residential Land Use Forecasts
    - Microsoft excel spreadsheet received by LAN in April 2020 from the City's Director of Planning and Community Development.
- 2018 City of Schertz Comprehensive Land Use Plan Map
- 2017 Roadway Impact Fee Land Use Assumption Report by Freese and Nichols, Inc.

### 2.1.2 AAMPO TAZ Data

Alamo Area Metropolitan Planning Organization (AAMPO) Traffic Analysis Zone (TAZ) demographic databases were used to determine the City's growth projections. TAZs are the geographic units used to inventory existing and future demographic data required for modeling purposes. TAZ data included 2020, 2025, 2035, and 2045 population, number of households, average household size, and employment inventories for the study area. Databases were downloaded from the AAMPO website in the form of GIS shapefiles and concentrated to correctly reflect the City's extent.

It should be noted that TAZ demographic data from 2020 was provided to LAN separately from the 2025-2045 projected demographic data. Because the 2020 data package was a direct result from the official 2020 Census and the projected data was calculated by AAMPO before 2020, LAN identified discrepancies in growth rates between the years 2020 and 2030 for population and employment. For the purpose of this Land Use Assessment, population and employment data between the years 2020 and 2030 was interpolated to reflect consistent growth rate throughout the

planning period. LAN has communicated with AAMPO about the data discrepancies and will update all projections accordingly for future system modeling.

At the request of City staff, the projected growth rate for each 5-year period was increased by 0.1% to be conservative. These adjusted population numbers are presented in subsequent sections.

### 2.1.3 Planning Period

This Comprehensive Land Use Assessment utilizes a 30-year planning period from 2020 to 2050. Because the AAMPO TAZ demographic data is limited to the year 2045, demographics were projected to 2050 by assuming the same compound annual growth rate (CAGR) established in 2045.

## 2.2 Summary of Comprehensive Land Use and Future Development Assumptions

### 2.2.1 2017 Roadway Impact Fee Land Use Assumptions by Freese and Nichols, Inc.

The 2017 Roadway Impact Fee Land Use Assumptions Report identified land use assumptions and recommendations for the City over a 10-year planning period ending in 2027. Upon completion of this 2021 Comprehensive Land Use Assessment, LAN has identified that the following assumptions from the 2017 Report will remain true for the 30-year planning period ending in 2050:

- Territories south of Randolph Air Force Base are impacted by restrictions based on Air Impact Compatible Use Zones (shown on the City's Comprehensive Land Use Plan Map as Attachment 1). Restrictions include limits on residential development densities.
- Continued commercial and residential development pressure in the North from New Braunfels will impact growth around the City.

### 2.2.2 Assumptions Made by LAN

A series of assumptions in relation to the City's land use and future development have been made by LAN after completing this Land Use Assessment. The following assumptions were made to initiate updates to the water master plan and CIP:

- Land uses identified in the 2018 Comprehensive Land Use Plan Map were modified based on updated residential subdivision development information received from the City on April 8th, 2022. It is assumed that these developments will remain in place for the 30-year planning period. The names and location of these updated developments are labeled on Appendix 5 and Appendix 6.
- Land use data available up to April 8th, 2022 were incorporated in the land use assumptions for this master plan effort.
- New growth throughout the 30-year planning period will expand away from the City center, where the highest densities of development currently exist.
- Continued development pressure in the North along the IH-35 corridor and from New Braunfels will result in future residential and commercial development at higher densities throughout the north, than in the south.
- Territories under delayed annexation agreements with the City will be annexed by 2025. The annexation of these territories will expand municipal boundaries.
- Regions within Municipal Boundaries that do not currently lie within City water or wastewater Certificates of Convenience and Necessity (CCN)s identified by the Public Utilities

Commission (PUC) are serviced by other authorities and will remain so throughout the 30-year planning period.

- The existing water and wastewater CCNs will remain in place for the 30-year planning period.

## 2.3 Land Use and Growth Projections

### 2.3.1 2018 Comprehensive Land Use Plan

The City's Comprehensive Land Use Plan Map is included in this report as Appendix 1 and serves as a provisional guideline for future development across the City. The land uses identified in the 2018 map provide a framework that will be reflected by the City's future development decisions. The exception is the area south of Schaeffer Rd and east of FM 1518. Recent land use plan amendments in this area include zoning changes based on data available up to October 1st, 2022.

### 2.3.2 Zoning

The City's existing zoning ordinances are included in this report as Appendix 2. The existing zoning ordinances were published in 2019 and serve as a means for which the 2018 Comprehensive Future Land Use Plan will be implemented. Based on land use data available up to October 1st, 2022 (including residential subdivision development information received from the City), the 2019 zoning designations were updated. It is assumed for the purposes of this study, that the zoning identified in Attachment 2 will remain in place for the 30-year planning period ending in 2050 apart from areas south of Schaeffer Rd and east of FM 1518 and areas just north of Trainer Hale Rd which are already approved for rezoning as of May 26, 2022. All existing and future subdivisions are shown in Appendix 5 & 6.

### 2.3.3 Delayed Annexation Agreements

Zoning ordinances were used to locate territories around the City under delayed annexation agreements. Territories under delayed annexation agreements currently exist within zones of Extra Territorial Jurisdiction (ETJ), which constrain the City's growth. These territories are primarily located throughout the Northeast corner of the City extending toward New Braunfels and in the Southeast between FM 1518 and IH-10.

#### 2.3.3.1 Annexation Schedule

The City's Director of Planning and Community Development provided LAN with timelines for completing existing annexation agreements. The City Plans for the existing annexations to be completed by 2025.

#### 2.3.3.2 Supported Land Uses of Territories to be Annexed

Table 1 summarizes the supported land uses of the territories under delayed annexation agreements. The annexation data provided to LAN was geographically categorized between the north and south. The location of the areas under a delayed annexation agreement is illustrated in Appendix 2 and the supported land uses for future development of these area is presented in Appendix 9 & 10.

Table 1: Land Use of Territories Under Delayed Annexation Agreements

| Delayed Annexation Agreements: Parcel Land Use | Supported Land Uses[1] | Total Parcels | Total Acreage | Single-Family Residential Lots Allowed | Commercial Parcels |
|---|---|---|---|---|---|
| **North Schertz** | Commercial, Single-Family Residential | 43 | 1,037 | 822 | 2 |
| **South Schertz** | Commercial, Single-Family Residential | 86 | 3,110 | 2,000 | 5 |

*[1]For the purpose of this assessment, single-family residential land use includes Agricultural Conservation, Traditional Neighborhood Development (TND), Transit Oriented Development (TOD), and Estate Neighborhood*

### 2.3.4 Population Projections

Table 2 uses AAMPO TAZ demographic data to summarize population projections over the 30-year planning period ending in 2050. Combining these projections with development anticipated as of October 1st, 2022, Projections suggest that population is expected to steadily increase throughout the 30-year planning period at an average compound annual growth rate (CAGR) of 1.%. Appendix 3 presents 2020 (historical) and 2050 (projected) population distribution across the City, reflecting the population increase provided in Table 2.

Table 2: Population Projections

| Population Projections (Cumulative) [1] | Historical | 5-Year | 10-Year | 15-Year | 20-Year | 25-Year | 30-year |
|---|---|---|---|---|---|---|---|
| | **2020** | **2025** | **2030** | **2035** | **2040** | **2045** | **2050** |
| ***Compound Annual Growth Rate*** | **-** | ***1.8%*** | ***2.0%*** | ***2.0%*** | ***1.9%*** | ***1.9%*** | ***1.8%*** |
| **Population** | 45,719 | 49,985 | 55,187 | 60,933 | 66,946 | 73,553 | 80,416 |
| **Total Increase** | (+) | 4,266 | 5,202 | 5,745 | 6,013 | 6,607 | 6,863 |

*[1]Total population accounts for areas of existing Extra Territorial Jurisdiction (ETJ) for which growth is constrained*

### 2.3.5 Residential Land Use

Table 3 uses AAMPO TAZ demographic data to summarize projections for the total number of households over the 30-year planning period. Future residential development across the City is expected to reflect population growth and increased traffic along IH-35. The number of households is expected to increase throughout the 30-year planning period at an average CAGR of 2.2%. 2020 (historical) and 2050 (projected) residential housing distribution across the City are shown in Appendix 4. Because AAMPO TAZ data does not categorize residence type, the housing projections include both single-family and multi-family residences.

Table 3: Housing Projections

| Housing Projections (Cumulative) | Historical | 5-Year | 10-Year | 15-Year | 20-Year | 25-Year | 30-year |
|---|---|---|---|---|---|---|---|
| | **2020** | **2025** | **2030** | **2035** | **2040** | **2045** | **2050** |
| ***Compound Annual Growth Rate[1][2]*** | **-** | ***3.2%*** | ***2.4%*** | ***2.2%*** | ***2.1%*** | ***2.0%*** | ***2.0%*** |
| **Households** | 15,441 | 18,034 | 20,305 | 22,640 | 25,120 | 27,735 | 30,742 |
| **Total Increase** | (+) | 2,593 | 2,271 | 2,335 | 2,480 | 2,615 | 2,737 |

*[1]Total number of households accounts for all categories of residential housing units throughout the City*
*[2]Total number of households accounts for all residential housing units located within areas of existing Extra Territorial Jurisdiction (ETJ) for which growth is constrained*

The City's Director of Planning and Community Development provided LAN with maximum build-out estimates for existing and planned single-family and multi-family residential developments throughout the City. Appendix 5 & 6 shows the location and density of these subdivisions in comparison to the Wastewater and Water Certificates of Convenience and Necessity (CCNs) service areas. Appendix 5 & 6 serves as an exhibit of where the City is allowed to provide services and where their population may be distributed. Table 4 summarizes the maximum build-out estimates. According to this data, approximately 90% of the existing and planned residential developments are single-family residential.

Table 4: Maximum Build-Out Estimates

| Residential Type Land Use Statistics | Single-Family | Multi-Family |
|---|---|---|
| **Number of Households Expected at Maximum Build-Out for Existing and Planned Subdivisions[2]** | 20,102 | 3,339 |

*[2]Total number of households includes subdivisions in areas of existing ETJ for which growth is constrained*

#### 2.3.5.1 Single-Family Residential Development

The Comprehensive Land Use Plan indicates that single-family is the primary type of residential land use throughout the City. Over the 30-year planning period, development pressure along IH-35 and from New Braunfels will impact the distribution of residences across the City. Single-family housing density is expected to be higher in the north throughout this corridor. However, in the southern portion of the City, west of FM 1518, residential development will primarily consist of lower density rural and estate style subdivisions. It is anticipated that additional single-family development will occur east of FM 1518 based on recent requested and authorized zoning changes.

#### 2.3.5.2 Multi-Family Residential Development

Currently, multi-family residential establishments are located centrally in the City and account for a small percentage of the City's residential type land uses. While the number single-family residences will continue to dominate over the 30-year planning period, data provided by the City's Director of Planning and Community Development notes a few new multi-family residential subdivisions have been planned. These developments are primarily located in the northeast between IH-35 and the Schertz City Limits, with one in the southern portion of the City. The location and density of these three developments are included in Appendix 5 & 6.

#### 2.3.5.3 Average Household Size

Table 5 uses AAMPO TAZ demographic data to summarize the average number of persons per household over the 30-year planning period. Because AAMPO TAZ data did not categorize residence type, household size accounts for both single-family and multi-family residences. Table 5 indicates the average household size will remain close to three persons over the 30-year planning period.

Table 5: Household Size Projections

| Average Household Size | Historical | 5-Year | 10-Year | 15-Year | 20-Year | 25-Year | 30-Year |
|---|---|---|---|---|---|---|---|
| | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 |
| **Persons[1][2]** | 3.0 | 2.8 | 2.7 | 2.7 | 2.7 | 2.7 | 2.6 |

*[1]All categories of residential housing throughout the City are accounted for*
*[2]Total number of households includes subdivisions in areas of existing ETJ for which growth is constrained*

### 2.3.6 Commercial Land Use

The Comprehensive Land Use Plan implies that commercial type land uses will continue to exist primarily along major thoroughfares in the north surrounding IH-35, in the south surrounding IH-10, and centrally surrounding FM 3009. The number and location of existing and planned commercial-type parcels were provided by the City in the form of a GIS Shapefile, shown in Appendix 7 & 8. These exhibits show the Wastewater and Water CCN service areas, respectively, to compare where the City is allowed to provide service to where they can expect commercial development. It was determined that AAMPO TAZ data for the number of persons employed throughout the City could reflect the number of commercial-type establishments. The CAGR for employment was used to project the number of commercial establishments over the 30-year planning period. Table 6 summarizes the employment projections, CAGR, and anticipated number of commercial establishments. Increased traffic and population among the IH-35 corridor could result in a higher demand for commercial property development in the North.

Table 6: Employment & Commercial Property Projections

| Employment Projections (Cumulative) | Historical[1] | 5-Year | 10-Year | 15-Year | 20-Year | 25-Year | 30-year |
|---|---|---|---|---|---|---|---|
| | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 |
| ***Compound Annual Growth Rate[2]*** | **-** | ***0.8%*** | ***0.8%*** | ***3.0%*** | ***2.4%*** | ***2.2%*** | ***2.2%*** |
| **Persons Employed** | 21,437 | 22,363 | 23,288 | 24,213 | 27,305 | 30,397 | 33,839 |
| **Commercial Parcels** | 313 | 327 | 340 | 394 | 445 | 495 | 551 |
| **Total Increase in Commercial Parcels** | (+) | 14 | 14 | 54 | 50 | 50 | 56 |

*[1]Employment and commercial projections include areas of existing Extra Territorial Jurisdiction (ETJ), for which growth is constrained*

## 2.4 CCNs Service Area Updates

The City's existing Water and Wastewater certificates of convenience and necessity (CCNs) identified by the Public Utility Commission (PUC) were reviewed to identify areas the City is currently serving as well as resolve where the City may be servicing outside their PUC identified CCN boundaries.

Per correspondence on August 11, 2021, it was decided that the current water and wastewater CCN service areas would remain unchanged for the 30-year planning period. This conservative approach would allow the City to monitor potential CCN changes as development occurs and to adapt using the 5-year impact fee cycle in lieu of wholesale CCN change assumptions for the next 30 years.

The City is aware that some regions within their municipal City Limits currently exist outside their water and wastewater CCN service areas and will remain under the service of their existing providers throughout the 30-year planning period. Likewise, regions annexed into the City during the 30-year planning period will not be added to the City's water and wastewater CCN service areas if they are not currently located within the service areas. The existing water and wastewater CCN service areas can be seen in Appendix 9 & 10. These exhibits present the land use categories used in the development of population projection allocations, calculations of future demands, and wastewater loading development.

## 2.5 Future System Modeling

To develop future conditions for water and wastewater system modeling the existing system models will be modified to reflect the assumptions made in this report. Assumptions and projections made for City growth, land uses, and development are used to establish and allocate future demands and supply requirements for the required planning period. In general, the expansion of Municipal Boundaries throughout the planning period will result in City-wide growth and the extension of water and wastewater service networks. Projected residential and commercial development throughout the planning period will produce increased water and wastewater flows.

# 3. WATER SYSTEM EVALUATION & CIP

## 3.1 Modeling & Evaluating the Existing Water System

This section provides an overview of the existing system model evaluation and the assessment of the results against the TCEQ requirements for system storage capacity, supply, service capacity, and minimum pressure requirements for public water systems.

### 3.1.1 Updates to Existing System Model

LAN built a hydraulic model of the City's existing water distribution system in Bentley's WaterGEMS software using data provided by the City. The model and the Technical Memo with model build details and preliminary model verification results for the existing system were presented to the City at a review meeting on September 10, 2020.

After the existing water system review meeting on September 10, 2020, the following items were updated in the hydraulic model to better reflect existing conditions:

- Wholesale Customer Demands
- Residential Water Usage Patterns
- Live Oak Pressure Reducing Valve Settings
- Removal of Waterlines Not in Service

#### 3.1.1.1 Wholesale Customer Demands

Meter usage data from the City of Selma and City of Cibolo was provided to LAN by the City and were used to identify average and peak day demands at the wholesale customers' meters. Average day demands and peak day demands were input into the existing system model at each customer meter location and are summarized in Table 7 and Table 8, respectively.

**Table 7: Average Day Wholesale Customer Meter Demands**

| City of Selma | | |
|---|---|---|
| EST | 360 | gpm |
| GST | 70 | gpm |
| **City of Cibolo** | | |
| Mesa | 10 | gpm |
| Ripps-Kreusler | 6 | gpm |
| Cibolo Crossing | 8 | gpm |

Table 8: Peak Day Wholesale Customer Meter Demands

| City of Selma | | |
|---|---|---|
| EST | 610 | gpm |
| GST | 330 | gpm |
| **City of Cibolo** | | |
| Mesa | 20 | gpm |
| Ripps-Kreusler | 14 | gpm |
| Cibolo Crossing | 14 | gpm |

### 3.1.1.2 Residential Water Usage Patterns

During the review of the existing system model with the City, it was noted that the residential water usage patterns did not reflect the observed peak hour usage for the Schertz water system. With only monthly flow monitoring data available from the City, updated representative average day and peak day water usage patterns for residential customers was developed using an American Water Works Association report.

The updated water usage patterns were developed using the 1993 American Water Works Association (AWWA) Residential Water Use Patterns report using data. The City of Norman, Oklahoma was selected to best represent residential water use patterns for the City of Schertz because of similarities in annual precipitation, average seasonal temperatures, and land use. The AWWA report provided separate usage pattern for both single and multi-family land use types and these patterns were used to update the residential and apartment demands in the existing system model.

The average day water usage patterns for Single-Family and Multi-Family use were developed using the Norman info provided in the 1993 report. The average to peak multipliers, used to develop the peak day water usage patterns for Single-Family and Multi-Family use, were calculated using the 36 months of billing data provided to LAN by the City. These average to peak multipliers are:

- Single-Family = 3.2
- Multi-Family = 2.6

The Single-Family and Multi-Family average day and peak day diurnal curves used in the existing system model are illustrated in Figure 1 and Figure 2, respectively.

Figure 1: Average & Peak Day Diurnal Patterns for Single-Family Residential Meters

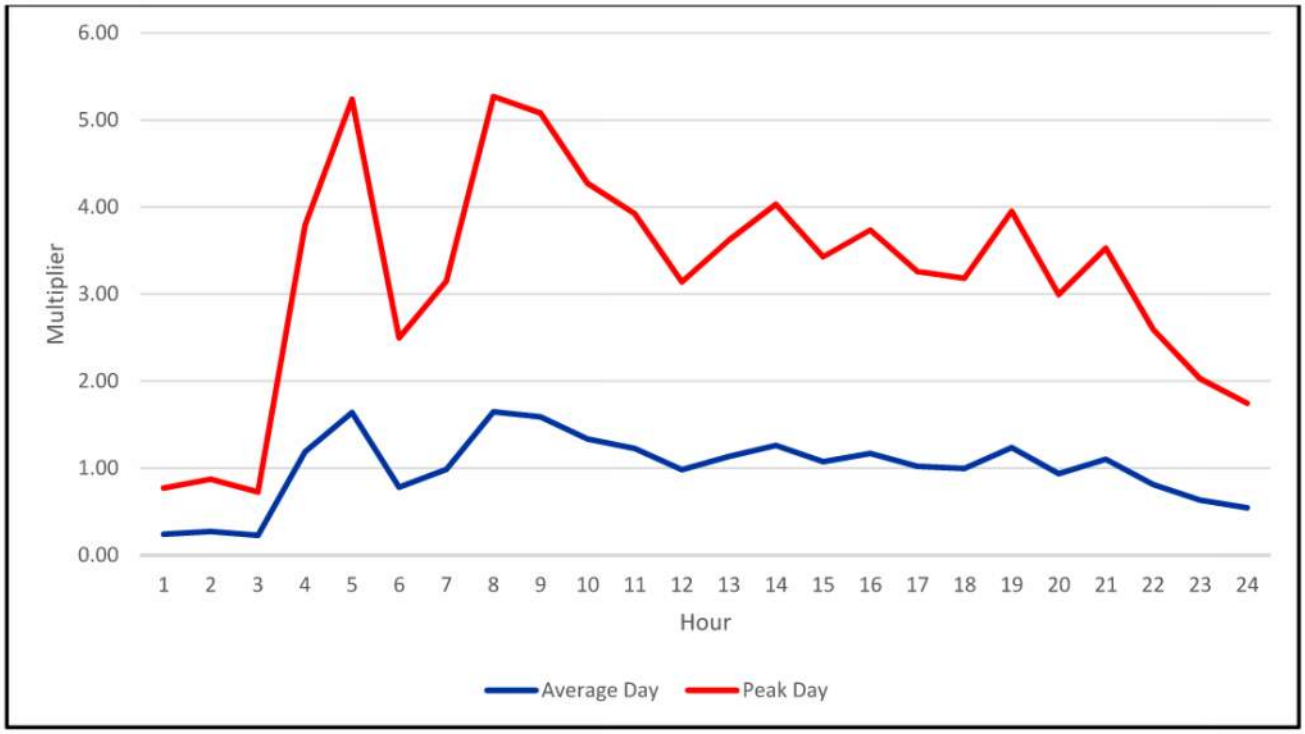
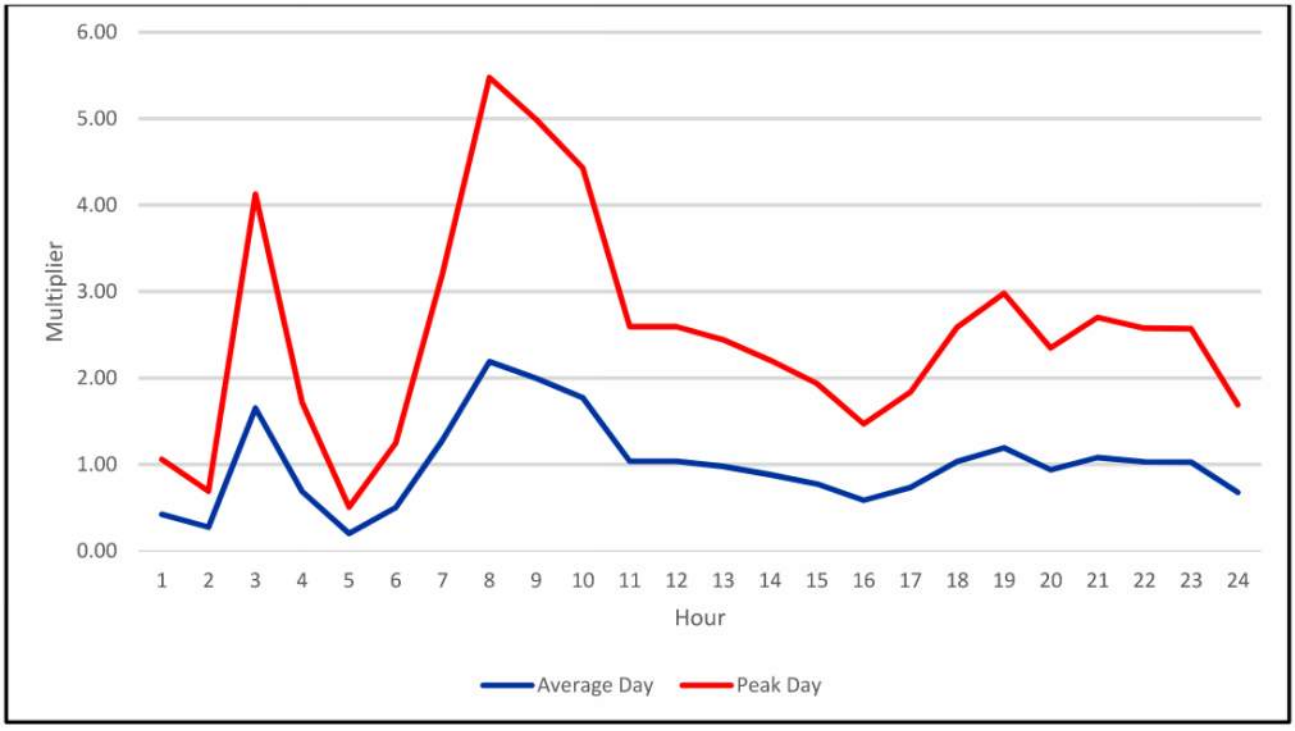



Figure 2: Average & Peak Day Diurnal Patterns for Multi-Family Residential Meters

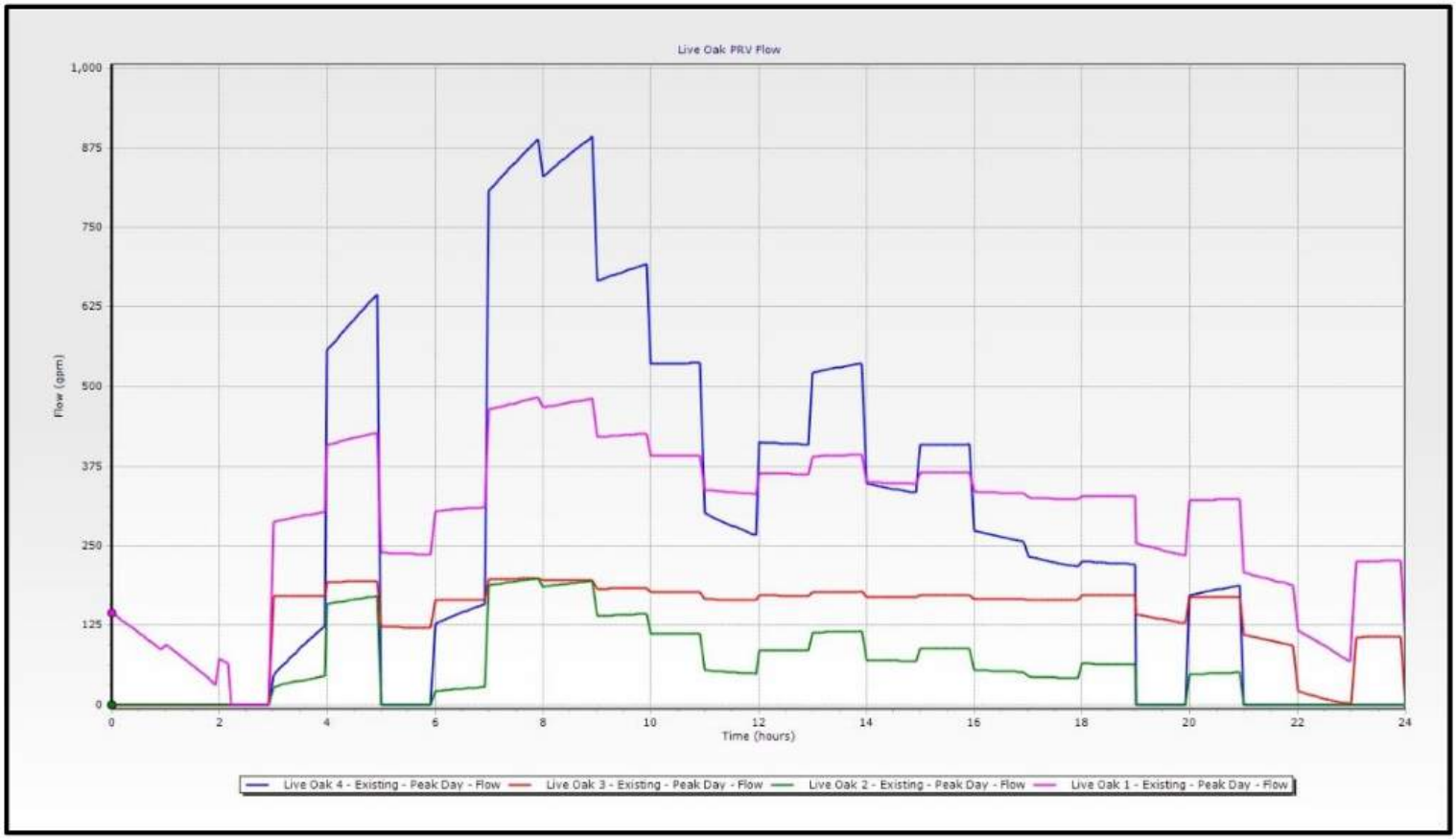


#### 3.1.1.3 Live Oak Pressure Reducing Valve Settings

Comments provided by the City describe that the PRVs separating the Live Oak and I-35 pressure planes do not open under typical average day conditions but do open under peak day conditions. The City indicated that under peak day conditions these valves open around 4:30 am and stay open until around midnight. To simulate these conditions, the assumption was made that, all PRVs were given the same pressure setting.

On the Live Oak side of the pressure plane boundary, under peak day conditions, and with all the valves closed, observed pressures at the PRVs averaged 67-psi. Therefore, a pressure setting of 67-psi was tested in the model to see if the PRVs would open during the simulation in the window of time provided by the City. The PRV located near the corner of Mare Way and Schertz Parkway is at a lower elevation of 713-ft (approximately 14 feet lower than the other PRVs). It was assumed that it was unlikely to open in tandem with the other four PRVs on this pressure plane boundary. The results showed all PRVs were open during a window of time similar to the one provided by the City, except the PRV located near the corner of Mare Way and Schertz Parkway as assumed. Flow through the four PRVs that opened throughout a 24-hour EPS peak day scenario at a pressure setting of 67-psi is shown in Figure 3. The PRVs shown in Figure 3 are primarily open between 4:30 am and midnight. The PRV located near the corner of Mare Way and Schertz Parkway was not shown because it did not open at any time during the 24-hour EPS peak day scenario.

Figure 3: Live Oak PRV Flows



#### 3.1.1.4 Removal of Waterlines Not in Service

The waterlines shown in Figure 4 were removed from the existing system model. While the lines are planned, the City reported that these waterline segments designated as “Active” in the waterline shapefile, were not yet in service. They will be included in the future conditions model.

Figure 4: Extent of Waterline Segment Removed from Existing System Model




### 3.1.2 Public Water System Evaluation Criteria

To evaluate the City’s existing system model, criteria were developed in accordance with Texas Commission on Environmental Quality (TCEQ) Public Drinking Water Rules and Regulations for Public Water Systems found in the Texas Administrative Code (TAC) Chapter 290.D. The TCEQ Rules and Regulations provide minimum capacity requirements for public water systems. The rules and regulations effective January 3, 2019 are applied in this analysis.

Several of the evaluation criteria are calculated based on the number of connections in the existing system model. The City of Schertz reports 16,434 connections in the existing water system as of December 15, 2020.

The City operates their existing water system as three pressure planes, Scenic Hills, I-35, and Live Oak. For the purposes of this evaluation the system will be assessed as one contiguous network because of the interactions between the existing pressure planes.

Extended period simulations were performed using Bentley's WaterGEMS software which provided the tools and results necessary to assess the existing system model according to the TCEQ criteria for the following:

- 24-hour Average Day Flow (ADF)
- 24-hour Peak Day Flow (PDF)
- 48-hour Peak Daily Plus Fire Flow Analysis

The key criteria for the City's existing system are summarized in Table 9. Detailed results for the evaluation criteria are discussed in the order as they appear in Table 9 throughout this section.

**Table 9: TAC Criteria for the Evaluation of the City's Existing System**

| Category | Memo Section | Rule | Description | Results |
|---|---|---|---|---|
| System Storage and Supply | 3.2.1 | *290.45.a* & *290.45.f* | Sources of water supply can supply maximum daily demands during extended peak usage. | Field Verification Needed |
| | 3.2.2 | *290.45.e.3* & *290.45.e.1* | Minimum water system capacity requirements shall be determined by calculating the requirements based upon the number of retail customer service connections of that wholesale water supplier, if any, fire flow capacities, if required by §290.46(x) and (y) of this title and adding that amount to the maximum amount of water obligated or pledged under all wholesale contracts.<br><br>Wholesalers must provide enough service pumping capacity to meet or exceed combined maximum daily commitments specified in obligations. | Field Verification Needed |
| | 3.2.3 | *290.45.b.1.D.i-iii* | System must have a minimum total storage capacity of 200 gpm gallons per connection. | **Meets Minimum Criteria** |
| | 3.2.4 | *290.45.b.1.D.iv* | System must have a minimum total elevated storage capacity of 100 gallons per connection. | **Meets Minimum Criteria** |
| System Service Capacity | 3.2.5 | *290.45.b.1.D.iii* & *290.45.b.1.D.i* | System must have a minimum total pump/well capacity of 0.6 gpm per connection. | **Meets Minimum Criteria** |
| System Minimum Pressure Requirements | 3.2.6 | *290.44.d* | System must maintain a minimum pressure of 35-psi under normal conditions. | Field Verification Needed |
| | 3.2.7 | *290.44.d* | System must maintain a minimum pressure of 20-psi under combined fire and drinking water flow conditions. | Field Verification Needed |

#### 3.1.2.1 Supply & Storage

*TAC 290.45.a*

*"Sources of supply, both ground and surface, shall have a safe yield capable of supplying the maximum daily demands of the distribution system during extended periods of peak usage and critical hydrologic conditions. The pipelines and pumping capacities to treatment plants or distribution systems shall be adequate for such water delivery. Minimum capacities required are specified in §290.45 (relating to Minimum Water System Capacity Requirements)."*

A 24-hour extended period simulation (EPS) scenario, beginning at midnight, was run for the existing system under peak day conditions. Over the 24-hour simulation, it was observed that both the I-35 elevated storage tank (EST) and the Live Oak ground storage tank (GST) water supply did not recover to at least the same percent full as it was set to at the beginning of the simulation. Figure 5 shows the I-35 EST and Live Oak GST capacities over the 24-hour simulation.

In Figure 5, the I-35 EST begins the simulation at 98% capacity and ends the simulation at 20% capacity. Likewise, the Live Oak GST begins the simulation at 83% capacity and ends the simulation at 56% capacity. Because the tanks did not recover by the end of the 24-hour simulation, the run time was lengthened to 48-hours to assess if the tanks recovered by peak hour (5:00 am) and if the decline in tank level continued throughout the second day. Figure 6 shows that neither tank recovers and the Live Oak GST almost drains completely by hour 48. The observed results indicate that the existing system model's water supply would be incapable of supplying peak day demands for an extended period as stated in TAC 290.45.a. The City has not indicated issues filling the Live Oak EST or GST as severely as seen in the existing system model. These results will be discussed in more detail with City staff during the existing system evaluation meeting to reconcile.

Figure 5: Live Oak GST & I-35 EST Percent Full Over 24 Hours

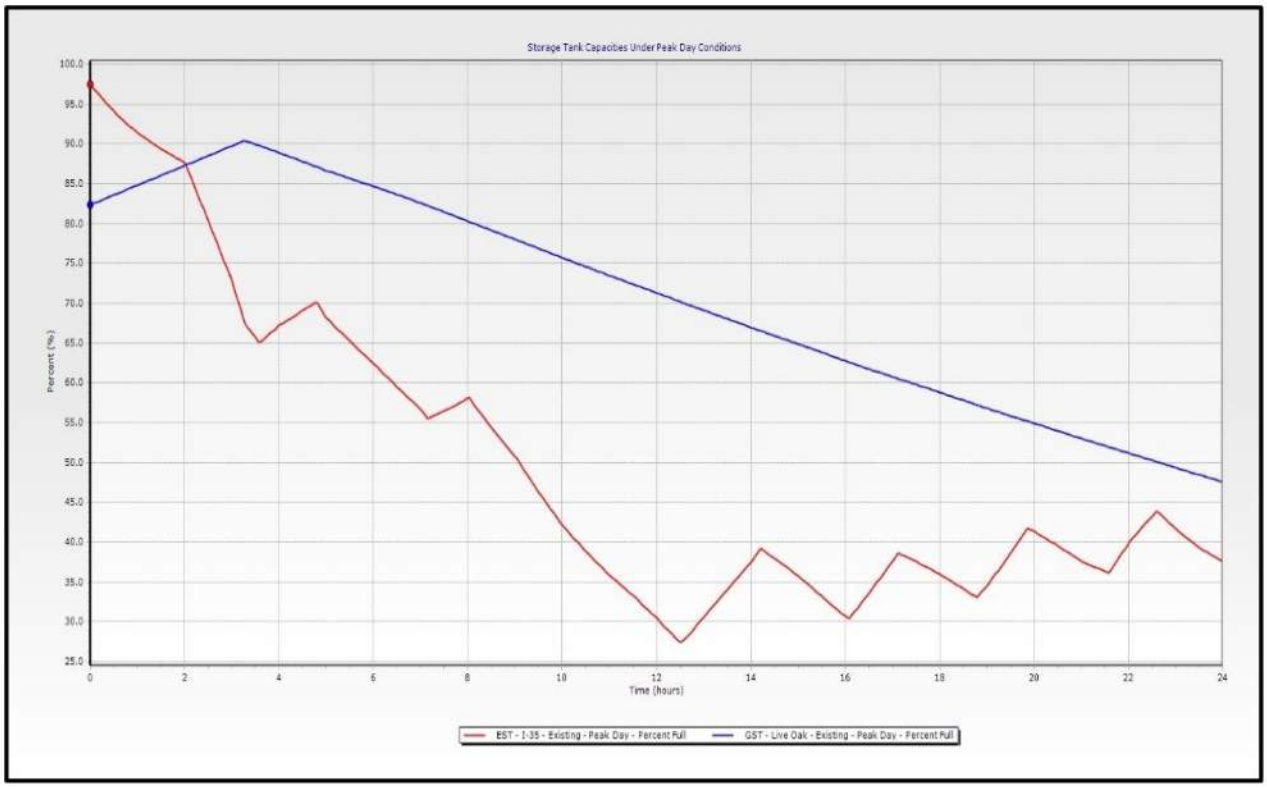



Figure 6: Live Oak GST & I-35 EST Percent Full Over 48 Hours



### 3.1.2.2 Wholesale Supplier Requirements

*TAC 290.45.e*

*"The following requirements apply to systems which supply wholesale treated water to other public water supplies: Wholesalers must provide enough production, treatment, and service pumping capacity to meet or exceed the combined maximum daily commitments specified in their various obligations."*

*"… minimum water system capacity requirements shall be determined by calculating the requirements based upon the number of retail customer service connections of that wholesale water supplier, if any, fire flow capacities required by chapter 290.46, and adding that amount to the maximum amount of water obligated or pledged under all wholesale contracts, if required."*

The minimum required water supply is of 0.6 gpm per connections. For Schertz's 16,434 connections this minimum water supply is approximately 9,860 gpm. The combination of water supplies is 10,400 gpm as shown in Table 10.

- Schertz-Seguin Local Government Corporation (SSLGC) is the main supply of water to the existing system. Based on monthly flow monitoring data provided by the City, the maximum daily supply (under peak day conditions) for Schertz from SSLGC is approximately 6,800 gpm.
- Schertz Wells - There are two Schertz wells which can supply up to 1,800 gpm each. The wells supply water directly to the Nacogdoches EST under peak day conditions.

Table 10 summarizes the system's maximum supply which **meets the minimum required capacity** for existing conditions.

**Table 10: Well Capacities**

| Water Supply | Capacity |
|---|---|
| SSLGC | 6,800 gpm |
| Nacogdoches 1 | 1,800 gpm |
| Nacogdoches 2 | 1,800 gpm |
| **Total Peak Day Supply** | **10,400 gpm** |

The City of Schertz provides water to two wholesale customers, the City of Cibolo and the City of Selma. The wholesale contracts with Cibolo and Selma do not specify maximum daily commitments.

- Cibolo - from their wholesale water contracts with the City of Cibolo, the City of Schertz is to supply a combined total of 750 acre-feet of potable water per year, this includes 350 acre-feet of potable water per year designated to the Keli Heights Subdivision. 750 acre-feet per year is approximately 465 gpm.
- Selma - from their wholesale water contract with the City of Selma, the City of Schertz is to supply a total of 800 acre-feet of potable water per year. 800 acre-feet per year is approximately 496 gpm.

Table 11 summarizes contracted commitments to wholesale customers.

Table 11: Wholesale Water Commitments

| Wholesale Customer | Commitment (acre-feet/year) | Commitment (gpm) |
|---|---|---|
| City of Cibolo | 750 | 465 |
| City of Selma | 800 | 496 |

Under peak day conditions, the existing water system's current available supply of 10,400 gpm (from Table 10) cannot meet the minimum required supply to the City (9,860 gpm) and its wholesale customers (961 gpm, from Table 11) which totals 10,821 gpm.

### 3.1.2.3 Total Storage Capacity

*TAC 290.45.b*

*"For more than 250 connections, the system must have a total storage capacity of at least 200 gallons per connection."*

The minimum required storage capacity, at 200 gallons per connection, for the existing water system is 3,286,800 gallons. There are eight storage tanks within the existing water system: four elevated storage tanks and four ground storage tanks. The combined total capacity of the storage tanks is 8,500,000 gallons, meeting the minimum storage capacity requirement. Table 12 summarizes storage tank capacities.

Table 12: Storage Tank Capacities

| Tank | Capacity Gallons |
|---|---|
| Northcliffe EST | 1,000,000 |
| Nacogdoches EST | 500,000 |
| Live Oak EST | 1,500,000 |
| I-35 EST | 1,000,000 |
| Deer Haven GST | 1,500,000 |
| Live Oak GST | 1,500,000 |
| Ware Seguin GST | 500,000 |
| Northcliffe GST | 1,000,000 |
| **Total Storage Capacity** | **8,500,000** |

### 3.1.2.4 Elevated Storage Tank Capacity

*TAC 290.45.b*

*"For more than 250 connections, the system must meet the following requirements: Have an elevated storage tank capacity of 100 gallons per connection or a pressure tank capacity of 20 gallons per connection. An elevated storage capacity of 100 gallons per connection is required for systems with more than 2,500 connections."*

Based upon the number of connections in the existing water system, the minimum required EST capacity, at 100 gallons per connection, is 1,643,400 gallons. There are four ESTs within

the existing water system with a combined storage capacity of 4,000,000 gallons, meeting the minimum required EST capacity. Table 13 summarizes the existing water system elevated storage tank maximum capacities.

Table 13: Elevated Storage Tank Capacities

| Tank | Capacity (Gallons) |
|---|---|
| Northcliffe EST | 1,000,000 |
| Nacogdoches EST | 500,000 |
| Live Oak EST | 1,500,000 |
| I-35 EST | 1,000,000 |
| **Total Elevated Storage Capacity** | **4,000,000** |

### 3.1.2.5 Pumping Capacity

*TAC 290.45.b*

*"For systems which provide an elevated storage capacity of 200 gallons per connection, two service pumps with a minimum combined capacity of 0.6 gpm per connection are required at each pump station or pressure plane. If only wells and elevated storage are provided, service pumps are not required."*

Based upon the number of connections in the existing water system, the minimum required elevated storage capacity of 200 gallons per connection is 3,286,800 gallons. Schertz currently has 4,000,000 gallons of elevated storage within their system. Therefore, the minimum pumping capacity for the City is 0.6 gpm per connection based on the requirements.

The minimum required combined pumping capacity for the existing water system, at 0.6 gpm per connection, is 9,860 gpm. There are four pump stations within the existing water system housing a total of 13 pumps. Table 14 summarizes the capacities of the 13 existing water system pumps. The maximum total pumping capacity of the pumps is 23,600 gpm, meeting the minimum required capacity. The firm pump capacity (with the largest pump out of service is 20,800 gpm which also meets the minimum capacity.

Table 14: Pump Capacities

| Location | Pump Details |
|---|---|
| Northcliffe 1 | 2,100 gpm, 232 TDH |
| Northcliffe 2 | 2,100 gpm, 232 TDH |
| Live Oak - HS4 | 2,800 gpm, 299 TDH *Goulds* |
| Live Oak - HS3 | 2,800 gpm, 295 TDH *Fairbanks Morse* |
| Live Oak - HS2 | 2,400 gpm, 295 TDH *Fairbanks Morse* |
| Live Oak - HS1 | 2,400 gpm, 295 TDH *Fairbanks Morse* |
| Live Oak - LS3 | 2,200 gpm, 145 TDH *Goulds* |
| Live Oak - LS2 | LS - 2,200 gpm, 145 TDH |
| Live Oak - LS1 | LS - 2,200 gpm, 145 TDH |
| Ware Seguin 2 | 600 gpm, 123 TDH |
| Ware Seguin 1 | 600 gpm, 123 TDH |
| Deer Haven 1 | 600 gpm, 172 TDH |
| Deer Haven 2 | 600 gpm, 172 TDH |
| **Maximum Pumping Capacity** | **23,600 gpm** |

### 3.1.2.6 System Minimum Pressures

*TAC 290.44.d*

*"… capable of providing a minimum pressure of at least 35-psi at all points within the distribution network"*

In coordination with the City, LAN made assumptions about the existing water system for the hydraulic model where data was limited. While the model indicates operations concerns in the water system, these should be field verified by the City. The existing system under peak day and average day conditions was evaluated in the model using a 24-hour EPS to observe system wide minimum pressures. The TCEQ required minimum pressure of 35-psi at all points within the distribution network applies to normal operating conditions (e.g. no fire flow or line breaks) and is used as the benchmark for assessing the observed pressures for peak day and average day conditions in the existing system model.

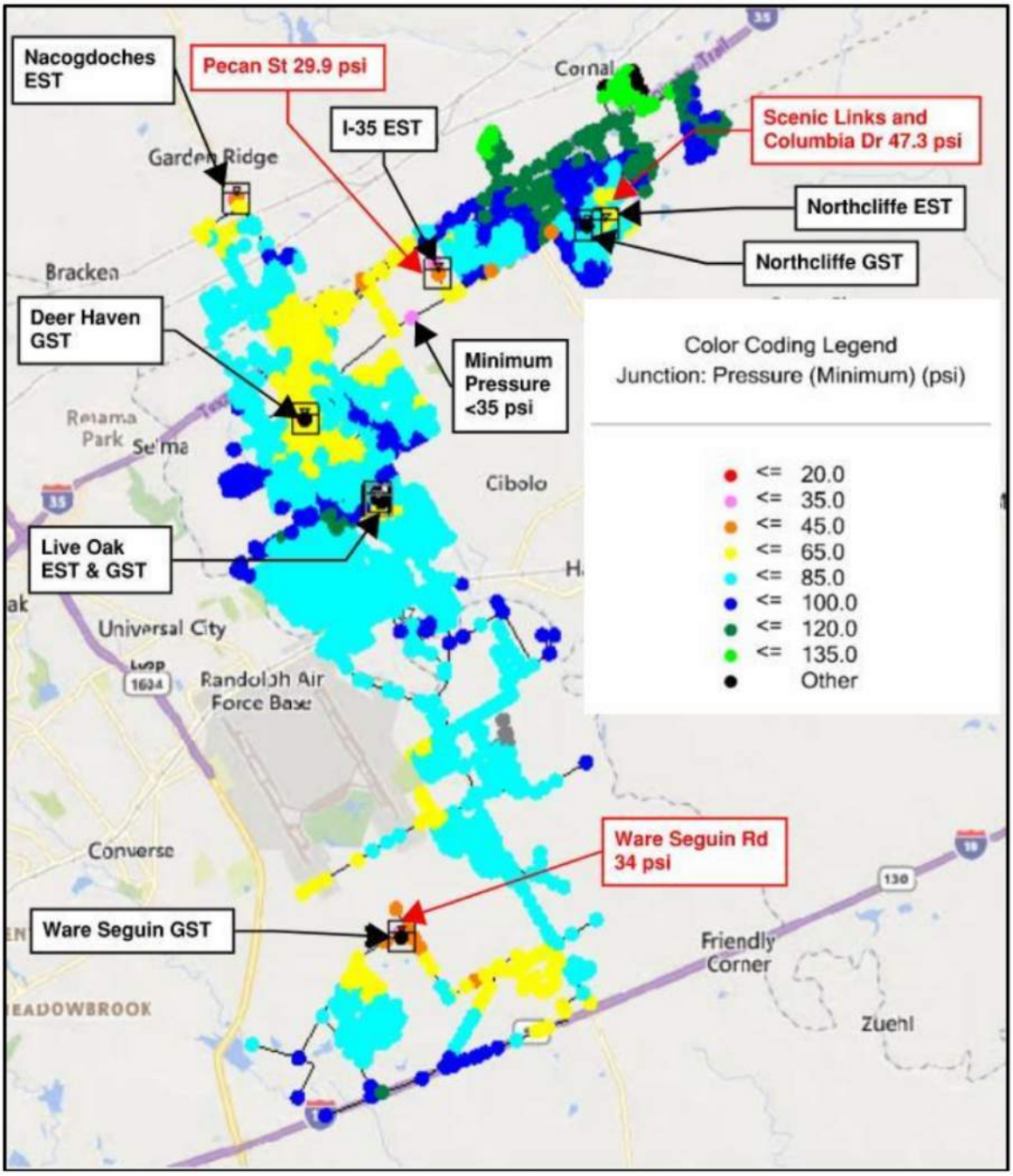
Average Day Conditions

Without detailed pressure readings across the service area, the existing system model can be used to approximate a system pressure. While the majority of the system does meet the minimum 35-psi, the results from the existing system model indicate pressure concerns under average day conditions in some areas. Observed minimum system pressures under average day conditions are summarized in Table 15. Figure 7 illustrates the observed minimum system pressures across the existing system model under average day conditions.

**Table 15: Average Day Minimum Pressures Observed in Each Pressure Plane**

| Pressure Plane | Min. Pressure (psi) | Location | Time Step |
|---|---|---|---|
| Scenic Hills | 47 | Scenic Links and Columbia Dr | 4 am |
| I-35 | 30 | Pecan St, East of I-35 EST | 12 pm |
| Live Oak | 34 | Near Ware Seguin Plant | 11 pm |

Figure 7: Average Day Conditions Minimum Pressures




While minimum pressures in the existing system model indicated flows approximately 1-psi below the minimum required pressure of 35-psi at the intersection of Ware Seguin Road and the Ware Seguin Plant and at high elevations adjacent to the I-35 EST, the pressures were significantly above the emergency operations threshold of 20-psi. This is a small deviation and indicates additional data collection, and analysis should be conducted by the City for verification of operations.

The Ware Seguin Plant low pressures occur near the end of the model day and could be related to the storage/capacity issues referenced above. The I-35 EST area low pressures occur near mid-day and could be related to demand patterns used in place of detailed Schertz demand data.

Peak Day Conditions

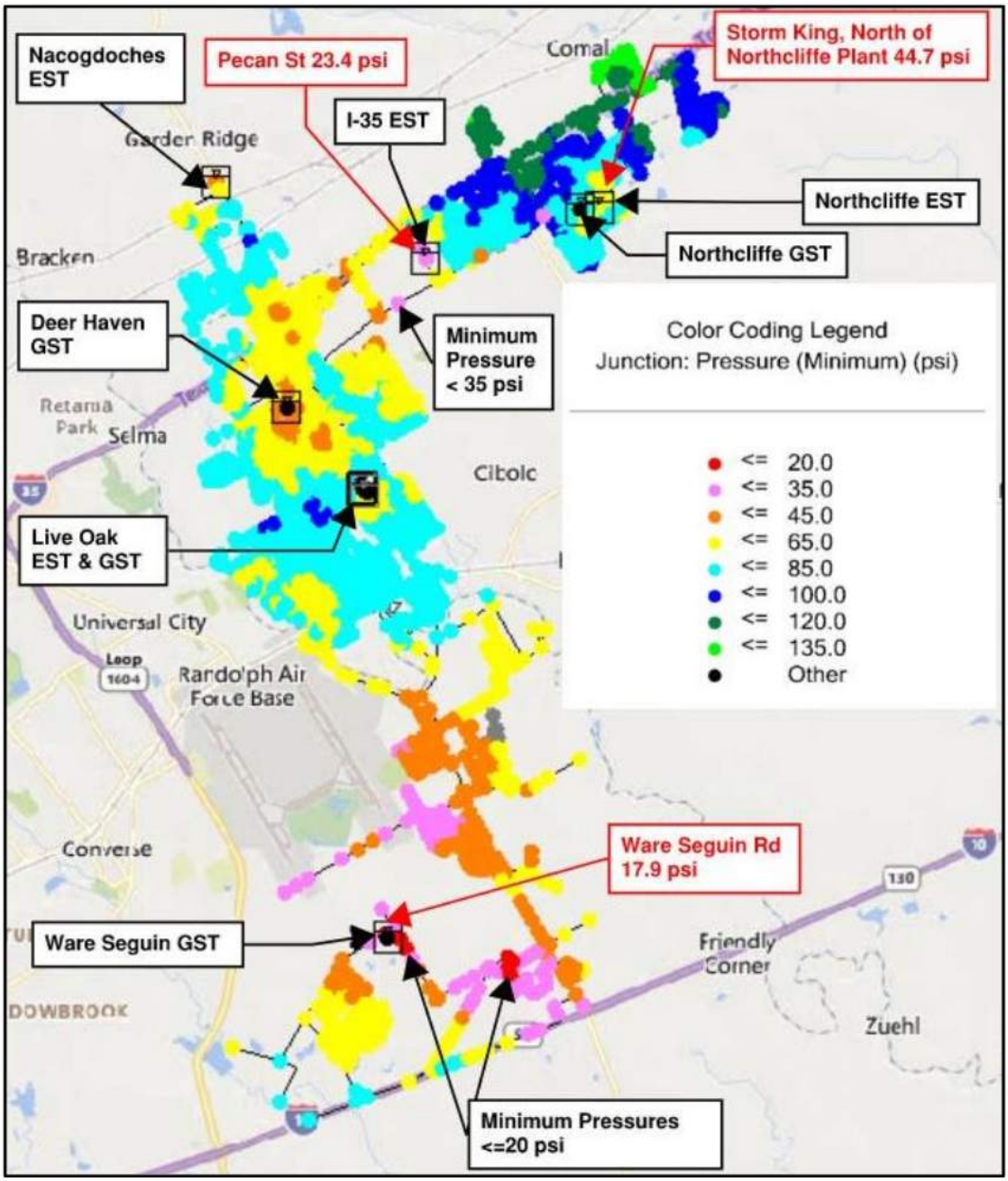
Under peak day conditions, the majority of the system does meet the minimum 35-psi. This is illustrated on Figure 8 which summarizes the observed minimum system pressures across the existing water system under peak day demand conditions. However, there were locations in the existing system model where pressures below the minimum requirement were observed, along Ware Seguin Road and near the I-35 EST at Pecan Street. The I-35 EST area low pressures occur near mid-day and could be related to demand patterns used in place of detailed Schertz demand data. These locations are noted on Figure 8.

Pressures were below the required 35-psi minimum, as well as the below the 20-psi emergency operations minimum along Ware Seguin Road and surrounding the Ware Seguin Plant. There are two factors driving the low pressure at this location, first its elevation is higher than the surrounding area by approximately 40-ft and, second, at 5 am when this low pressure occurs, the peak residential demand overlaps with irrigation demand from the HOA meters in the residential subdivisions immediately to the northeast and southwest. These low-pressure results indicate additional data collection, and analysis should be prioritized. Observed minimum system pressures under peak day conditions are summarized in Table 16.

**Table 16: Peak Day Minimum Pressures Observed in Each Pressure Plane**

| Pressure Plane | Min. Pressure (psi) | Location | Time Step |
|---|---|---|---|
| Scenic Hills | 45 | Storm King, North of Northcliffe Plant | 7 am |
| I-35 | 23 | Pecan St, East of I-35 EST | 12 pm |
| Live Oak | 18 | Near Ware Seguin Plant | 5 am |

Figure 8: Peak Day Conditions Minimum Pressures




### 3.1.2.7 Fire Flows

*TAC 290.44.d.*

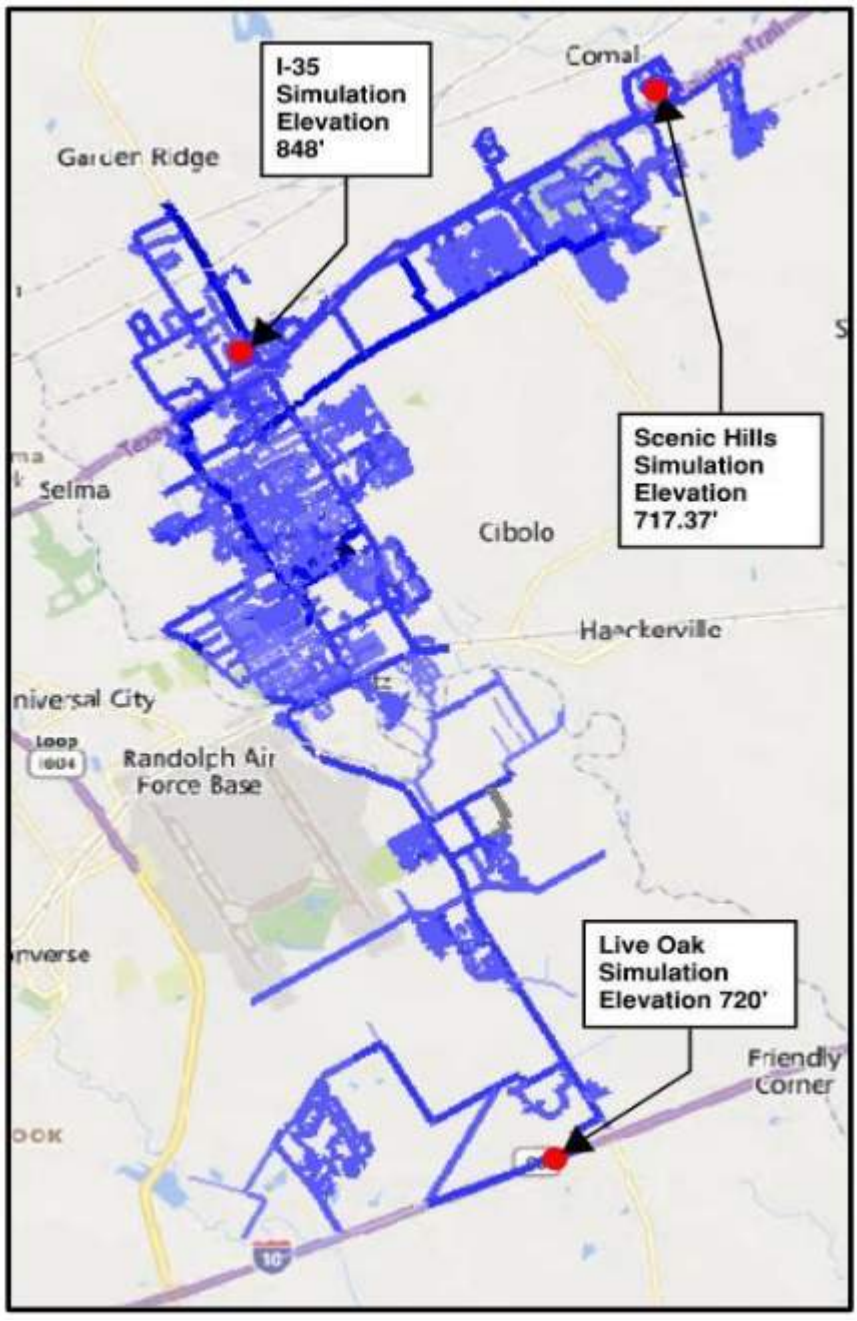
*"When the system is intended to provide firefighting capability, it must also be designed to maintain a minimum pressure of 20-psi under combined fire and drinking water flow conditions."*

For conservative modeling purposes, the existing water system was evaluated for three separate peak day plus fire flow scenarios (one in each pressure plane) to observe any potential interaction between the pressure planes. Fire Flow simulations were run at a commercial meter selected to provide "worst case" scenarios within each pressure plane. These specific locations for fire flows

in each pressure plane were selected because its commercial meter was at a higher elevation than other commercial meter locations in the pressure plane and were not close in proximity to an elevated storage tank or pump station. A representative Fire Flow demand of 3,500 gpm was placed at the selected meter during the corresponding simulation. Simulating worst case scenario fire flow conditions for each pressure plane provides an analysis of how the pressure planes interact while under critical conditions.

The selected locations for each simulation are shown in Figure 9. Fire Flow simulations were set to occur from 7 am to 10 am under peak day conditions. This creates a “worst case” condition where the fire flow occurs during peak hour.

Figure 9: Fire Flow Simulation Locations



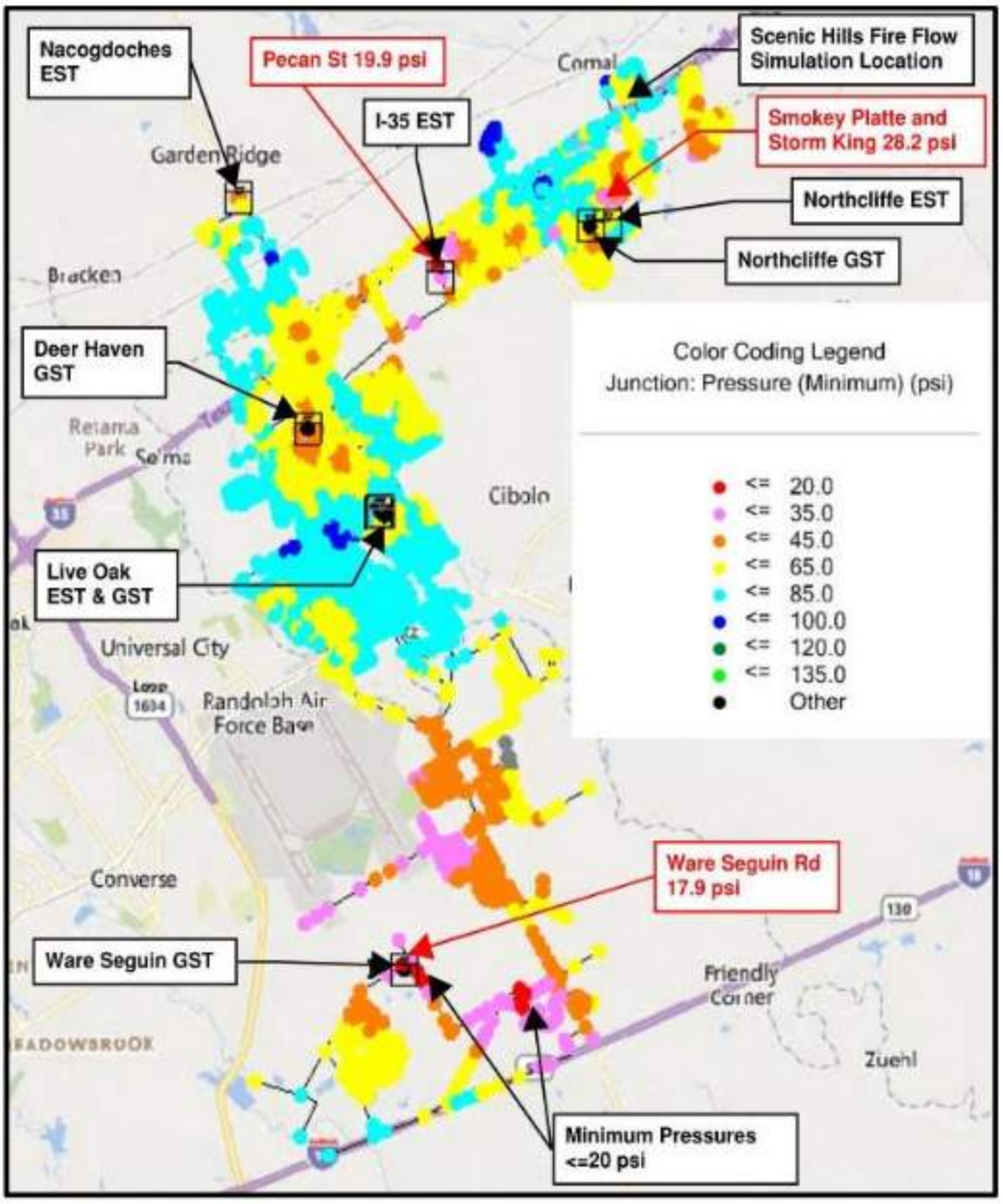
The Scenic Hills Fire Flow simulation was placed off I-35 at a commercial meter south of Baugh Lane. For the Scenic Hills Peak Day plus Fire Flow simulation, the majority of the system does meet the minimum 20-psi. However, there were locations in the existing system model where pressures below the minimum requirement were observed. The observed system minimum pressures fell below the minimum required pressure of 20-psi at high elevations along Ware Seguin Road, surrounding the Ware Seguin Plant, and at high elevations adjacent to the I-35 EST. These locations are noted on Figure 10 which summarizes the observed minimum system pressures across the existing system model under Peak Day plus Fire Flow conditions. This minimum pressure is a small deviation and systematically observed through non-fire flow conditions. It indicates additional data collection, and analysis is needed.

Observed minimum system pressures for the Scenic Hills Peak Day plus Fire Flow simulation are summarized in Table 17.

**Table 17: Peak Day Plus Fire Flow Scenic Hills Simulation**

| Pressure Plane | Min. Pressure (psi) | Location | Time Step |
|---|---|---|---|
| Scenic Hills | 28 | Smokey Platte and Storm King | 7 am |
| I-35 | 20 | Pecan St, East of I-35 EST | 5 pm |
| Live Oak | 18 | Near Ware Seguin Plant | 5 am |

Figure 10: Scenic Hills Fire Flow Simulation

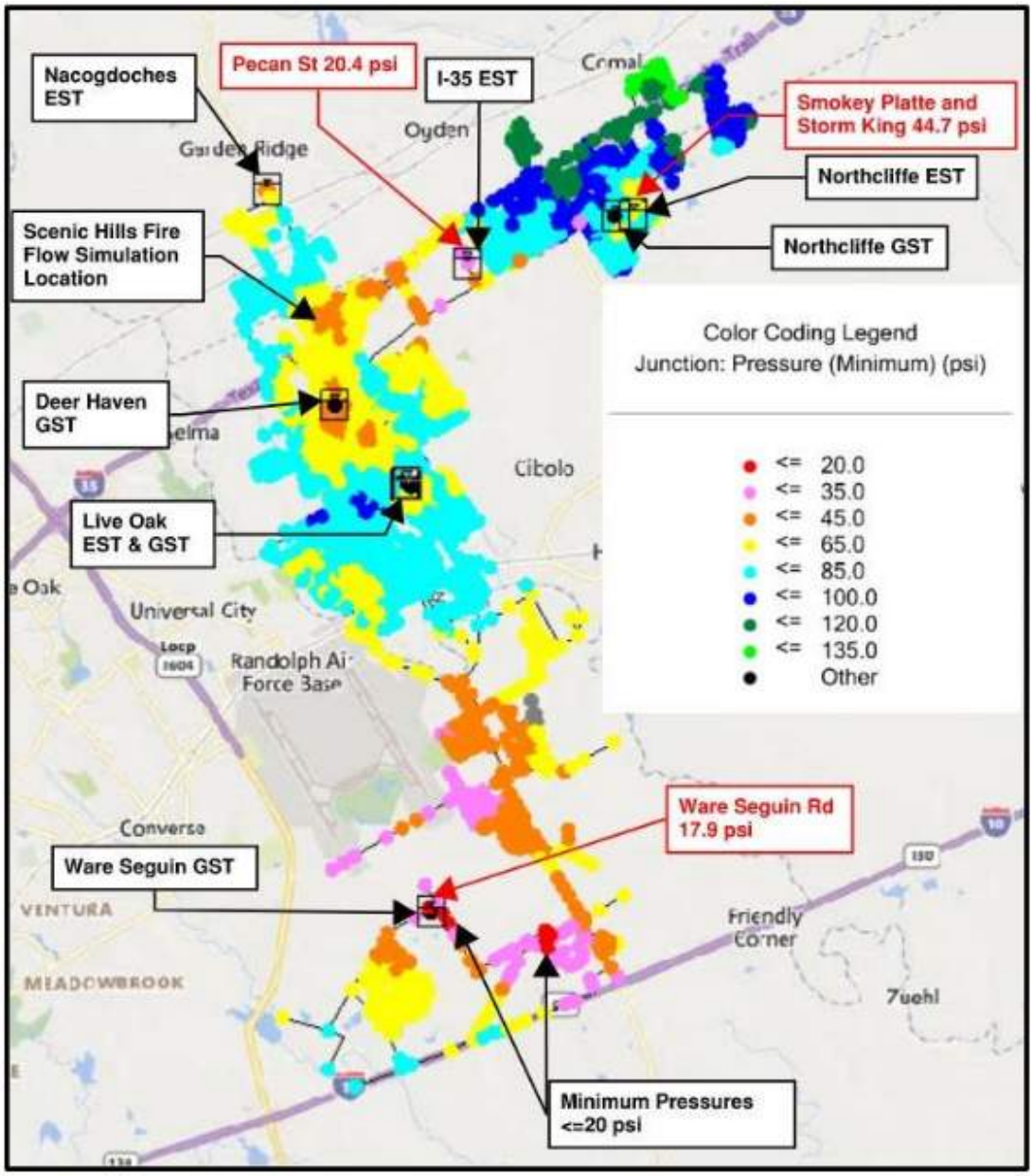



The I-35 Fire Flow simulation was placed near the intersection of I-35 and FM 3009 at a commercial meter adjacent to Corridor Parkway. For the I-35 Peak Day plus Fire Flow simulation, the majority of the system does meet the minimum 20-psi. However, there were locations in the existing system model where pressures below the minimum requirement were observed. The observed system minimum pressures fell below the minimum required pressure of 20-psi at high elevations along Ware Seguin Road and surrounding the Ware Seguin Plant. These locations are noted on Figure 11 which summarizes the observed minimum system pressures across the existing system model under Peak Day plus Fire Flow conditions. This minimum pressure is a small deviation and systematically observed through non-fire flow conditions. It indicates additional data collection, and analysis is needed. Observed minimum system pressures for the I-35 Peak Day plus Fire Flow simulation are summarized in Table 18.

Table 18: Peak Day Plus Fire Flow I-35 Simulation

| Pressure Plane | Min. Pressure (psi) | Location | Time Step |
|---|---|---|---|
| Scenic Hills | 45 | Storm King and Smokey Platte, North of Northcliffe | 7 am |
| I-35 | 20 | Pecan St, East of I-35 EST | 1 pm |
| Live Oak | 18 | Near Ware Seguin Plant | 5 am |

Figure 11: I-35 Fire Flow Simulation

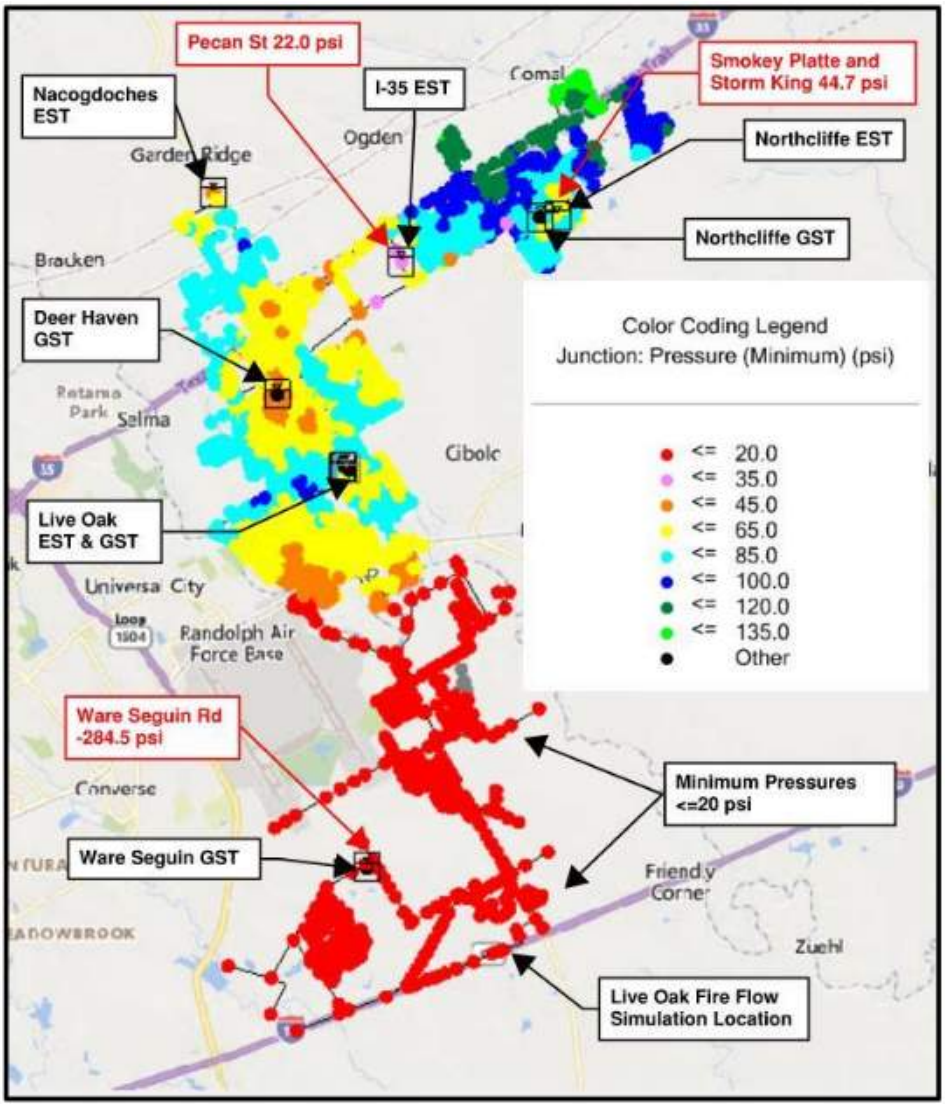


The Live Oak Fire Flow simulation was located at a commercial meter approximately 0.6 miles west of the intersection of I-10 and FM 1518. For the Live Oak Peak Day plus Fire Flow simulation, the majority of the I-35 and Scenic Hills Pressure Planes do meet the minimum 20-psi. However, the observed system minimum pressures fell below the minimum required pressure of 20-psi across the majority of the Live Oak Pressure Plane south of FM 78. These locations are noted on Figure 12 which summarizes the observed minimum system pressures across the existing system model under Peak Day plus Fire Flow conditions. These results indicate additional data collection, and analysis is needed. Observed minimum system pressures for the I-35 Peak Day plus Fire Flow simulation are summarized in Table 19.

**Table 19: Peak Day Plus Fire Flow Live Oak Simulation**

| Pressure Plane | Min. Pressure (psi) | Location | Time Step |
|---|---|---|---|
| Scenic Hills | 45 | Storm King and Smokey Platte, North of Northcliffe | 7 am |
| I-35 | 22 | Old Wiederstein Rd, Southwest of I-35 EST | 1 pm |
| Live Oak | Negative Pressures | Near Ware Seguin Plant | 8 am |

Figure 12: Live Oak FIre Flow Simulation




### 3.1.3 Recommendations

For the TAC Criteria where the model did not demonstrate that the minimum criteria was met, it is recommended that the City take steps to verify the behavior of the water system in the field. This section presents the steps the City can take to verify the model observations.

#### 3.1.3.1 System Storage & Supply

Although the system meets the minimum total storage capacity, the existing system model results indicated that the system cannot supply peak day demands for an extended period of time. It is recommended that the City perform pressure and flow monitoring at all pump stations and ESTs concurrently for two weeks during a peak day period (e.g., Mid-August) to verify behavior of the water system under these conditions.

It is LAN's understanding that a second supply connection from the SSLGC will be connected to the proposed Corbett EST (located near the east dead end of Ray Corbett Dr.). This additional supply location and EST will be assessed in the Future System Evaluation effort. These future

conditions results will be considered when developing the final recommendations for storage and supply of the City's water system.

#### 3.1.3.2 System Minimum Pressure Requirements

Because pressures below the minimum requirements for the average day, peak day, and peak day plus fire scenarios were observed in the existing system model, it is recommended that the City perform pressure monitoring at the locations were these low pressures were observed at the same time that the peak day period flow and pressure monitoring at the pump stations and ESTs is being performed.

It is recommended that the data recording equipment used be set to record pressure and flow readings at least every 15-minutes.

### 3.1.4 Summary

The results from this existing system evaluation were used to develop preliminary infrastructure and operational recommendations for near-term and future system improvements. These recommendations, in conjunction with currently planned improvements, are assessed in the future system evaluation and used in the development of the Capital Improvements Plan. Preliminary recommendation alternatives under consideration are (but not limited to):

- Increase in water supply
- Increased pumping capacity
- Increased storage capacity
- Changes to pump operating pressure controls or schedules

## 3.2 Future Water System Evaluation & CIP

The following information, criteria, and constraints were used to identify and develop proposed water system improvement projects.

- City direction for projects already in planning, design, and construction
- Minimum pipe size of 8-inches
- Minimum normal system pressure of 45 psi

### 3.2.1 Near Term System Evaluation

Before proceeding to model future scenarios, the system was analyzed to identify improvements needed to solve present day system issues. This analysis is referred to as 'near-term' system improvements and accounts for projects which are currently under design or construction and other projects identified in the analysis to resolve existing system deficiencies.

The near-term system water model was developed based on the existing conditions model previously developed. Projects which are currently in various stages of design and construction were provided by the City and implemented into the model. After implementing City-identified projects the model was run in average day, peak day, and fire flow conditions to identify additional improvements needed.

#### 3.2.1.1 Fire Flow Analysis

Fire flow analysis of the existing system was performed in the development of the "Existing Water System Model Evaluation" memo published January 2021. Projects to resolve fire flow deficiencies in the existing system were identified in the near-term system evaluation and are included in the recommended Near-Term CIPs and proposed Pipe Replacement Program.

#### 3.2.1.2 Pipe Replacement Program

In addition to the recommended CIPs identified in the model evaluation, the City also desires to replace undersized (≤6") and asbestos-cement (AC) distribution pipes within their system. The undersized distribution pipes are unable to provide fire flow and reduce the system capacity. Undersized pipes are recommended to be upsized to 8" PVC, and the AC pipes greater than or equal to 8" should be replaced with PVC pipes of the same size. Based on the pipe attributes in the hydraulic model, there are approximately 280,460 LF of AC pipe in the system and an additional 175,380 LF of undersized pipe in the system. These pipe replacement programs can be established with a goal to replace a certain amount of pipe per year. A 20-year program would include an average replacement rate of 22,800 LF per year.

#### 3.2.1.3 Near Term CIP Projects

Recommended near-term CIPs are listed in Table 20 and illustrated in Appendix 11.

Table 20: Near Term Water CIP Project Summary

| CIP Number | Description | Notes |
|---|---|---|
| **System Improvement Projects** | | |
| NT-W1 | Bubbling Springs 6" WL Replacement | City identified maintenance project. |
| NT-W2 | Corbett Pump Station & 3.0 MG GST | Per "Corbett 3.0 MG GST Project" Preliminary Engineering Report (2021), currently underway. |
| NT-W3 | Ware Seguin Pump Station Operational Improvement | Potentially zero cost project to improve pump station performance in this service area. |
| NT-W4 | 12" from Ware Seguin to Lower Seguin | Currently underway. |
| NT-W5 | Fred Couples to Schwab | Complete. |
| NT-W6 | Schwab to Eckhardt | Currently in design. |
| NT-W7 | Graytown to Pfeil | Currently underway. |
| NT-W8 | FM 78 Water Line Replacement | Needed for fire flow. |
| NT-W9 | Moonlight Meadow Dr & Lost Meadow Dr WL Replacement | Needed for fire flow. |
| NT-W10 | Robinhood Way WL Replacement | Needed for fire flow. |
| NT-W11 | Undersized Pipe Replacement Program | Replacement of pipes ≤6". |
| NT-W12 | Asbestos Cement Pipe Replacement Program | Replacement of AC pipes. |

### 3.2.2 2030 System Evaluation

The 2030 planning scenario is the first future scenario that was modeled. To develop the 2030 model, the near-term model was updated to include the water demands associated with 2030 project land use. The City identified projects that were not needed until 2030 were implemented in the 2030 model and additional projects were identified to meet the 2030 system needs. The model was run in average day, peak day, and fire flow conditions to identify additional improvements needed. A TCEQ capacity analysis was completed to confirm the system would meet TCEQ criteria with the recommended 2030 projects implemented.

#### 3.2.2.1 TCEQ capacity Analysis

An evaluation of the City's system was performed to determine if the system met the Texas Commission on Environmental Quality's (TCEQ's) minimum pumpage and storage requirements as outlined in Chapter §290.45 of the Texas Administrative Code. A summary of the applicable TCEQ minimum requirements is included below. TCEQ's requirements are based on the raw number of connections, which have been approximated based on the number of connections in the model and City GIS data.

TCEQ Minimum Requirements:

1. Well Pump Capacity: Two (2) or more wells having a total capacity of 0.6 GPM per connection.
2. Elevated Storage Capacity: Elevated storage capacity of 100 gallons per connection.
3. Elevated Storage Credit: If elevated storage capacity of 200 gallons per connection is provided, reduced service pumping requirements can be applied as discussed below.
4. Pressure Tank Capacity: For future systems, if elevated storage is not provided, a pressure tank capacity of 20 gallons per connection is required.
5. Total Storage Capacity (elevated and ground storage): Total storage capacity of 200 gallons per connection, inclusive of the 100-gallon minimum requirement listed above.
6. Service Pump Capacity:
   - 6.1 A minimum of two (2) pumps with a combined capacity of 2.0 GPM per connection, except for systems meeting one of the two requirements below.
     - 6.1.1 For systems that meet the elevated storage credit requirement listed above, a minimum of two (2) pumps with a combined capacity of 0.6 GPM per connection are required for each pump station or pressure plane.
     - 6.1.2 If only wells and elevated storage are provided, service pumps are not required.

The City's existing system is divided into three (3) pressure planes – IH-35, Scenic Hills, and Live Oak. For the TCEQ Capacity Analysis, IH-35 and Scenic Hills pressure planes have been grouped together as they receive water from the same supply point. The 2030 system meets all TCEQ capacity requirements. The number of projected connections for each pressure plane based on current number of connections and projected growth in the system is provided in Table 21, and TCEQ capacity results are summarized in Table 22 and Table 23.

Table 21: Projected 2030 Number of Connections per Pressure Plane

| Pressure Plane | Existing Number of Connections | 2030 Number of Connections |
|---|---|---|
| IH-35 + Scenic Hills | 9,913 | 11,966 |
| Live Oak | 6,118 | 7,385 |
| **Total** | **16,031** | **19,351** |

Note: The capacity analysis in Table 22 and Table 23 below assume that all near-term and recommended 2030 projects are complete and in-service.

Table 22: 2030 TCEQ Capacity Analysis for IH-35 & Scenic Hills Pressure Planes

| | IH-35 + Scenic Hills Plane Evaluation | | | | |
|---|---|---|---|---|---|
| | TCEQ Requirements | | | System Check | |
| **Total Supply Capacity [gpm]** | 0.6 | gpm/conn | 7,180 | 8,100 | MEETS TCEQ REQUIREMENTS |
| **Elevated Storage Capacity [gal]** | 100 | gal/conn | 1,196,000 | 3,500,000 | MEETS TCEQ REQUIREMENTS |
| **Elevated Storage Credit [gal]** | 200 | gal/conn | 2,393,200 | 3,500,000 | MEETS TCEQ REQUIREMENTS |
| **Total Storage Capacity [gal]** | 200 | gal/conn | 2,393,200 | 13,500,000 | MEETS TCEQ REQUIREMENTS |
| **Service Pump Capacity [gpm]** | 0.6 | gpm/conn | 7,180 | 11,600 | MEETS TCEQ REQUIREMENTS |

Table 23: 2030 TCEQ Capacity Analysis for Live Oak Pressure Plane

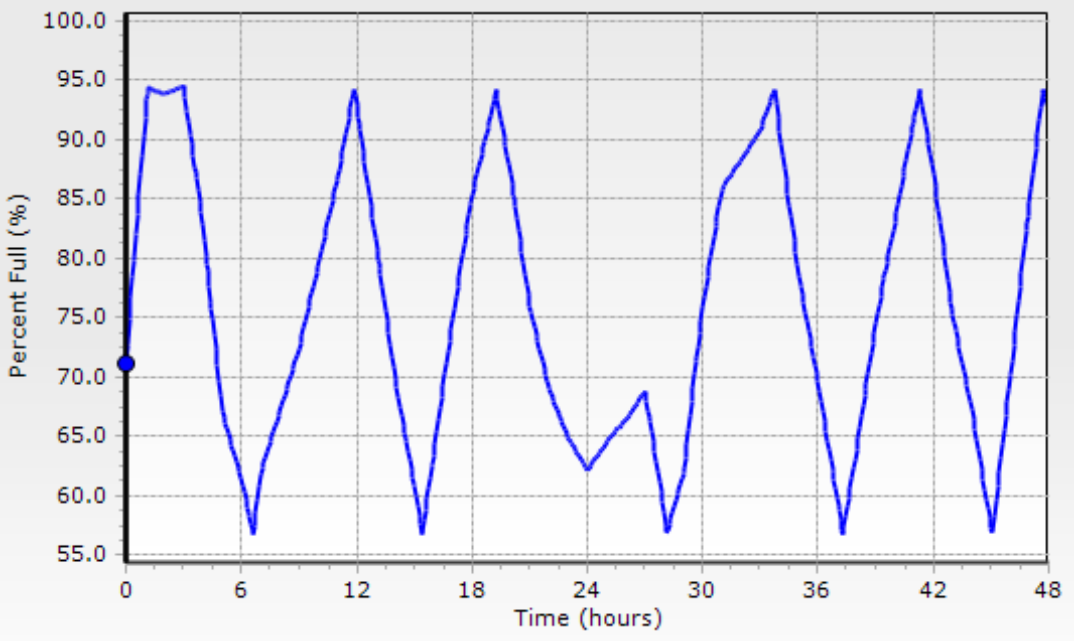
| | Live Oak Pressure Plane Evaluation | | | | |
|---|---|---|---|---|---|
| | TCEQ Requirements | | | System Check | |
| **Total Supply Capacity [gpm]** | 0.6 | gpm/conn | 4,431 | 8,855 | MEETS TCEQ REQUIREMENTS |
| **Elevated Storage Capacity [gal]** | 100 | gal/conn | 738,500 | 2,500,000 | MEETS TCEQ REQUIREMENTS |
| **Elevated Storage Credit [gal]** | 200 | gal/conn | 1,477,000 | 2,500,000 | MEETS TCEQ REQUIREMENTS |
| **Total Storage Capacity [gal]** | 200 | gal/conn | 1,477,000 | 7,500,000 | MEETS TCEQ REQUIREMENTS |
| **Service Pump Capacity [GPM]** | 0.6 | gpm/conn | 4,431 | 12,600 | MEETS TCEQ REQUIREMENTS |

#### 3.2.2.2 System Storage

The City's system includes five (5) elevated storage tanks (ESTs). Tank levels through the 2030 peak day scenario are illustrated in the following figures.

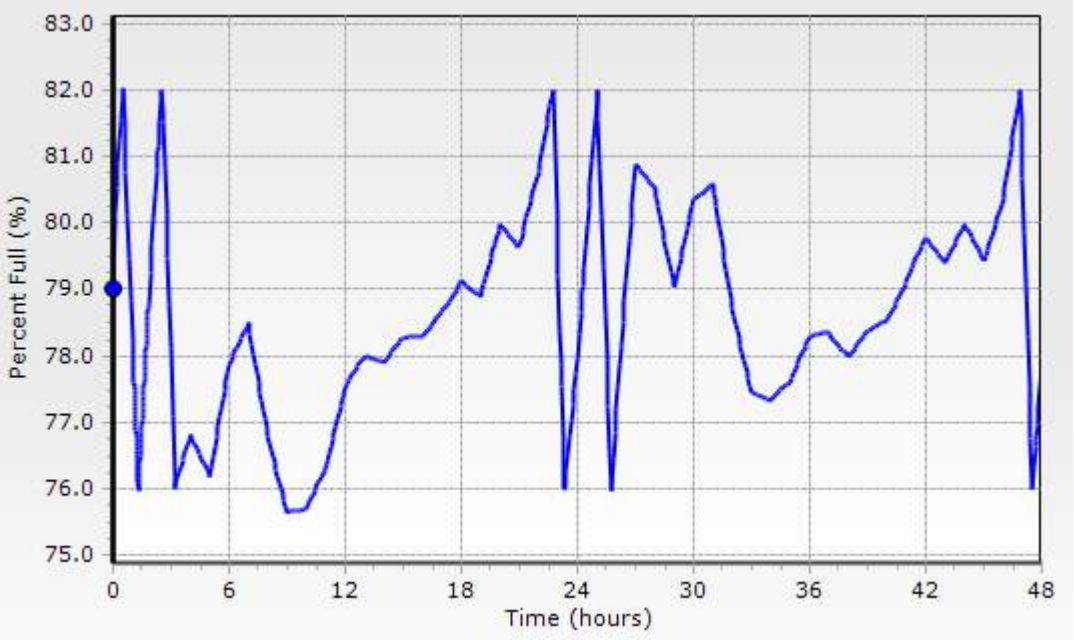
The Corbett EST is filled by the new Corbett pump station and is able to easily fill when the pump station is running. The lower water level can easily be manipulated based on the pump controls.

Figure 13: 2030 Peak Day Corbett EST Levels



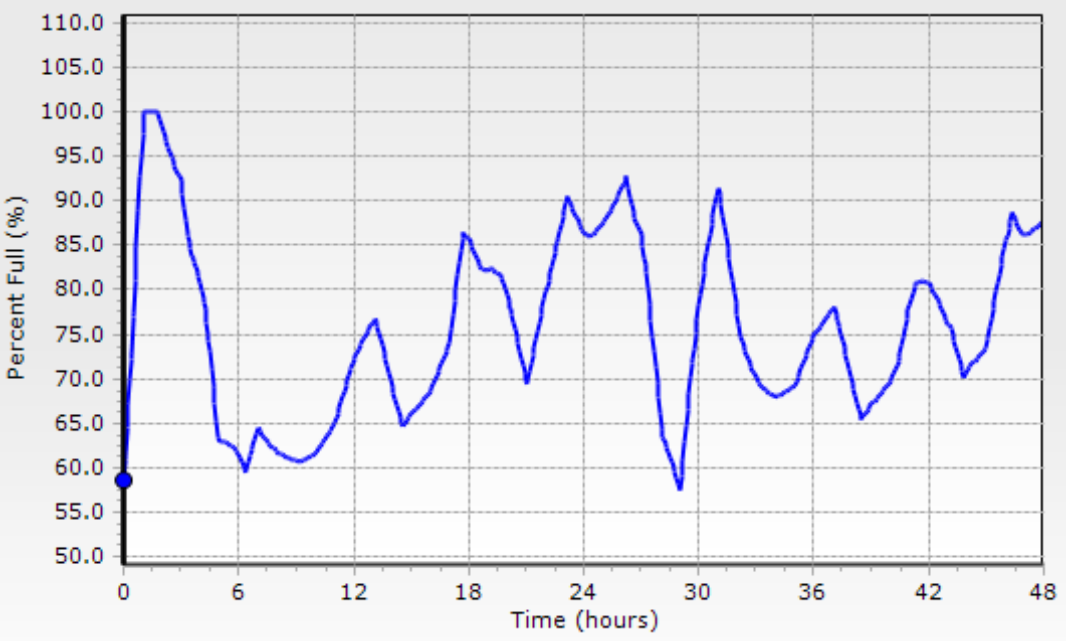

The Live Oak EST drains slightly during peak demand times of the day but is able to recover.

Figure 14: 2030 Peak Day Live Oak EST Levels



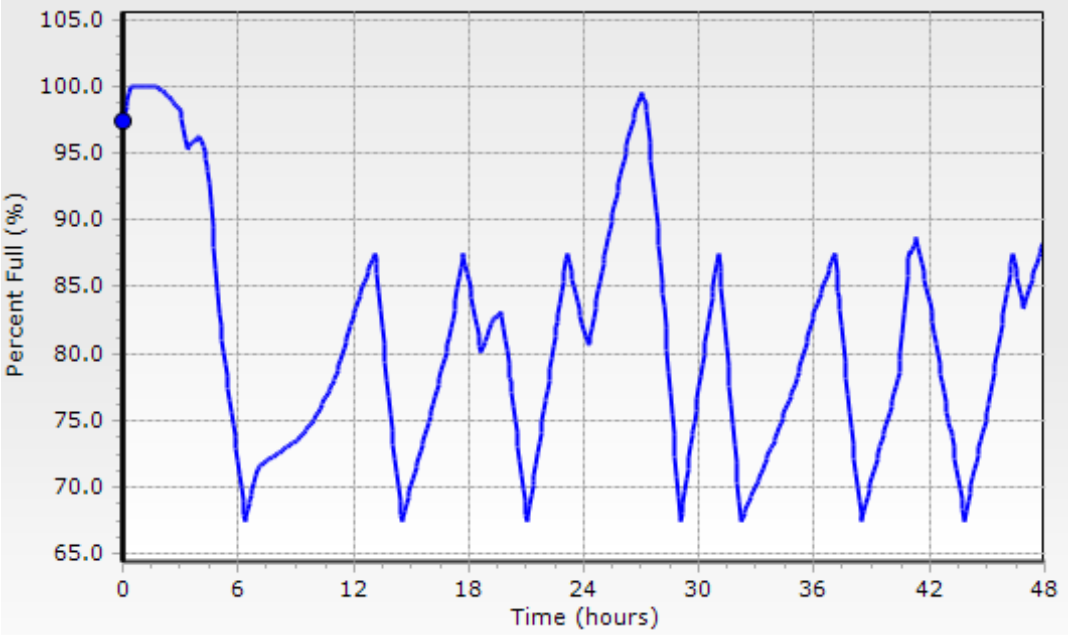
The Nacogdoches EST level fluctuates throughout the peak day simulation but is able to be filled with the well.

Figure 15: 2030 Peak Day Nacogdoches EST Levels



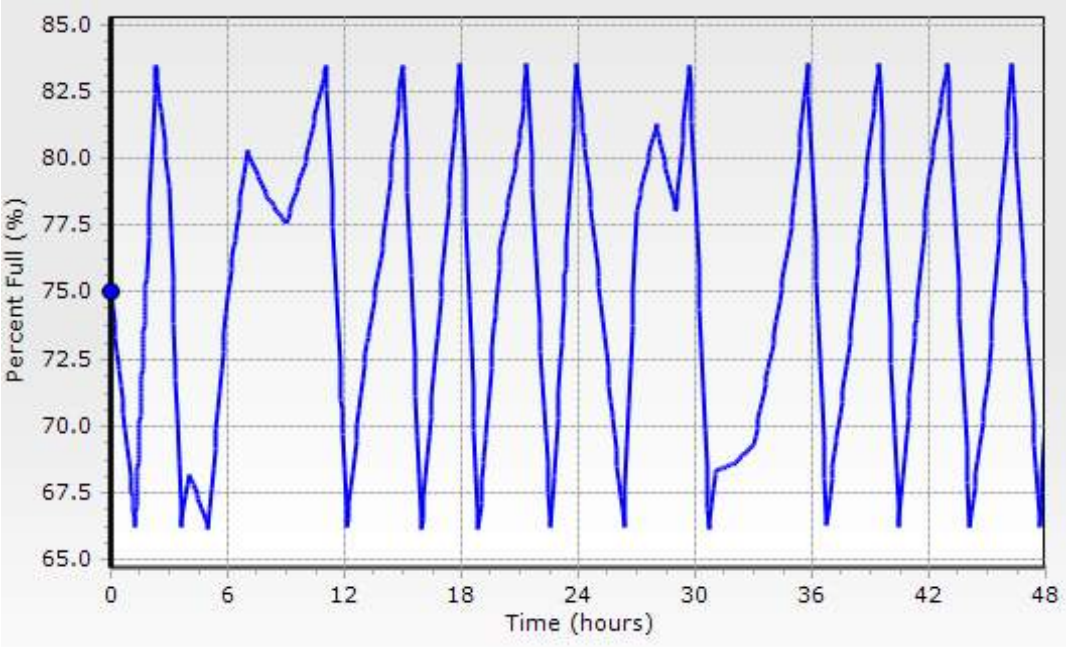

The IH-35 EST drains during the peak day simulation but is able to recover to initial levels around hour 27.

Figure 16: 2030 Peak Day IH-35 EST Levels



The Northcliffe EST levels fluctuate frequently throughout the day but can easily recover to initial levels.

Figure 17: 2030 Peak Day Northcliffe EST Levels




### 3.2.2.3 Fire Flow Analysis

The 2030 water system was evaluated to determine the best locations to simulate fire flow conditions for residential and commercial users. For residential fire flow, a 1,500 gpm fire flow demand was modeled. For commercial fire flow, a 3,500 gpm fire flow demand was modeled. For all fire flow analyses, a minimum system pressure of 20 psi is required per TCEQ. The fire flow nodes were selected at extremities of the system to represent the most conservative locations to achieve acceptable fire flow. The fire flow node locations are illustrated in Appendix 12. All modeled locations passed fire flow with the recommended 2030 system improvements.

### 3.2.2.4 2030 CIP Projects

Recommended CIPs for 2030 are listed in Table 24 and illustrated in Appendix 13.

Table 24: 2030 Water CIP Project Summary

| CIP Number | Description | Notes |
|---|---|---|
| **Growth Projects** | | |
| 2030-W1 | New 12" loop east of FM 3009, north of IH-35 (approximately 6,060 LF) | Serves new service area. |
| 2030-W2 | Raf Burnette Rd 12” WL Improvements | Serves new service area. |
| 2030-W3 | 8” WL from Ray Corbett Dr to Lower Seguin Rd | Serves new service area. |
| 2030-W4 | Trainer Hale Rd 2” WL Replacement & 8” WL Improvement | Upgrades distribution system to current min. pipe size (8") to serve new service area. |
| 2030-W5 | Boenig Dr S 6” WL Replacement & 8” WL Improvement | Needed to meet growth in area and provide fire flow. |
| 2030-W6 | Live Oak to IH-35 24" Transmission Main | In progress, pending easement acquisition. Needed to meet growth and provide redundancy. |
| 2030-W7 | Ware Seguin Pump Station Expansion Phase 1 | Needed to meet new growth in Ware Seguin area. |
| 2030-W8 | IH-10 8” WL Improvements | Needed to meet growth in area. |
| **System Improvement Projects** | | |
| 2030-W9 | PRV Installation for Proposed Southwest Pressure Plane | Avoids high pressures and improves performance of Ware Seguin Pump Station. |
| 2030-W10 | River Rd 6” WL Replacement | Removes system bottleneck. |
| 2030-W11 | Undersized Pipe Replacement Program | Replacement of pipes ≤6”. |
| 2030-W12 | Asbestos Cement Pipe Replacement Program | Replacement of AC pipes. |

#### 3.2.2.5 2030 SSLGC Supply Need

As part of the modeling effort, the water supply needed from the Schertz-Seguin Limited Government Corporation (SSLGC) was evaluated. Schertz is currently contracted for 5,801 gpm (8,351 acre-ft per year). An additional 3,799 gpm SSLGC water supply capacity for a total of 9,600 gpm is recommended to meet the 2030 projected system demands.

### 3.2.3 2050 System Evaluation

The 2050 planning scenario is the final future scenario that was modeled. To develop the 2050 model, the 2030 model was updated to include the water demands associated with 2050 project land use. The model was run in average day, peak day, and fire flow conditions to identify improvements needed. A TCEQ capacity analysis was completed to confirm the system would meet TCEQ criteria with the recommended 2050 projects implemented.

#### 3.2.3.1 TCEQ Capacity Analysis

The TCEQ capacity analysis was also performed for supply, storage, and pumping with recommended improvements through 2050 implemented. The 2050 system meets all TCEQ capacity requirements. The number of projected connections for each pressure plane based on

current number of connections and projected growth in the system is provided in Table 25, and TCEQ capacity results are summarized in Table 26 and Table 27.

Table 25: Projected 2050 Number of Connections per Pressure Plane

| Pressure Plane | Number of Connections for TCEQ Capacity Analysis |
|---|---|
| IH-35 + Scenic Hills | 16,846 |
| Live Oak | 10,397 |
| **Total** | **27,243** |

Note: The capacity analysis in Table 26 and Table 27 assume that all near-term, recommended 2030, and recommended 2050 projects are complete and in-service.

Table 26: 2050 TCEQ Capacity Analysis for IH-35 & Scenic Hills Pressure Planes

| | IH-35 + Scenic Hills Plane Evaluation | | | | |
|---|---|---|---|---|---|
| | TCEQ Requirements | | | System Check | |
| **Total Supply Capacity [gpm]** | 0.6 | gpm/conn | 10,108 | 13,300 | MEETS TCEQ REQUIREMENTS |
| **Elevated Storage Capacity [gal]** | 100 | gal/conn | 1,684,600 | 3,500,000 | MEETS TCEQ REQUIREMENTS |
| **Elevated Storage Credit [gal]** | 200 | gal/conn | 3,369,200 | 3,500,000 | MEETS TCEQ REQUIREMENTS |
| **Total Storage Capacity [gal]** | 200 | gal/conn | 3,369,200 | 16,500,000 | MEETS TCEQ REQUIREMENTS |
| **Service Pump Capacity [gpm]** | 0.6 | gpm/conn | 10,108 | 13,300 | MEETS TCEQ REQUIREMENTS |

Table 27: 2050 TCEQ Capacity Analysis for Live Oak Pressure Plane

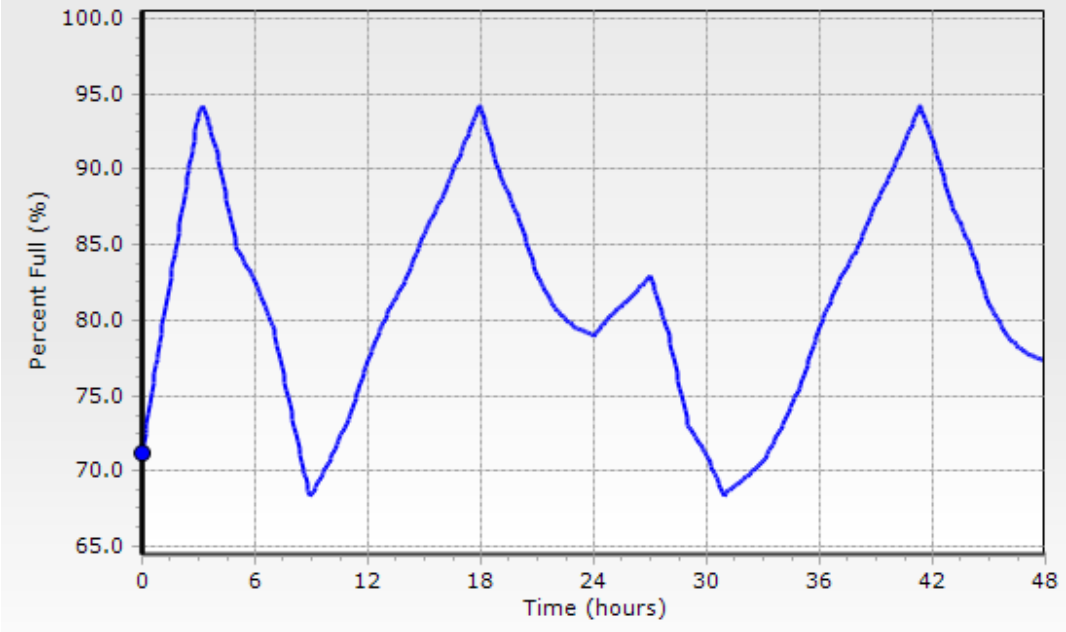
| | Live Oak Pressure Plane Evaluation | | | | |
|---|---|---|---|---|---|
| | TCEQ Requirements | | | System Check | |
| **Total Supply Capacity [gpm]** | 0.6 | gpm/conn | 6,239 | 9,400 | MEETS TCEQ REQUIREMENTS |
| **Elevated Storage Capacity [gal]** | 100 | gal/conn | 1,039,700 | 2,500,000 | MEETS TCEQ REQUIREMENTS |
| **Elevated Storage Credit [gal]** | 200 | gal/conn | 2,079,400 | 2,500,000 | MEETS TCEQ REQUIREMENTS |
| **Total Storage Capacity [gal]** | 200 | gal/conn | 2,079,400 | 7,500,000 | MEETS TCEQ REQUIREMENTS |
| **Service Pump Capacity [GPM]** | 0.6 | gpm/conn | 6,239 | 13,000 | MEETS TCEQ REQUIREMENTS |

#### 3.2.3.2 System Storage

The City's system includes five (5) elevated storage tanks (ESTs). Tank levels through the 2050 peak day scenario are illustrated in the following figures.

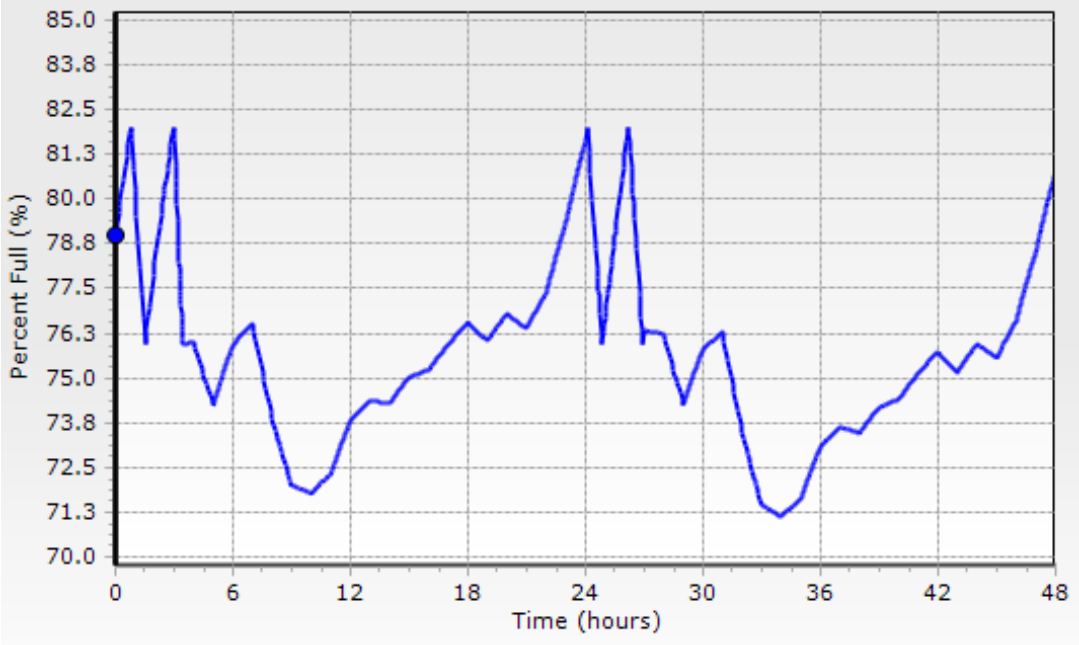
The Corbett EST is filled by the Corbett pump station and is able to easily fill when the pump station is running. The lower water level can easily be manipulated based on the pump controls.

Figure 18: 2050 Peak Day Corbett EST Levels



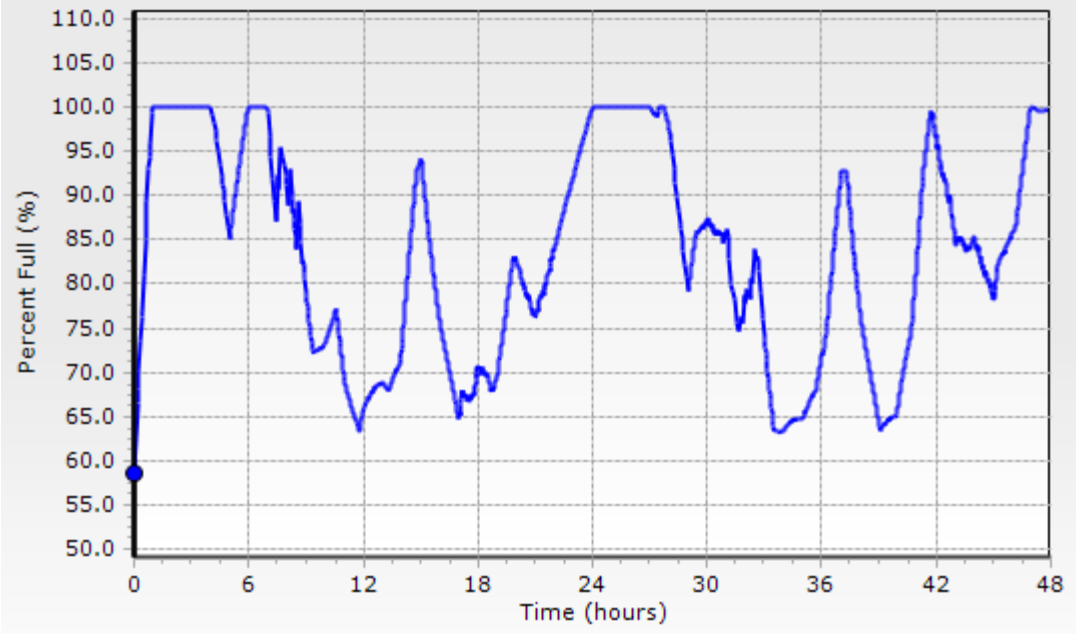

The Live Oak EST levels drop in the peak demand times but are able to recover to initial levels within 24 hours.

Figure 19: 2050 Peak Day LIve Oak EST Levels



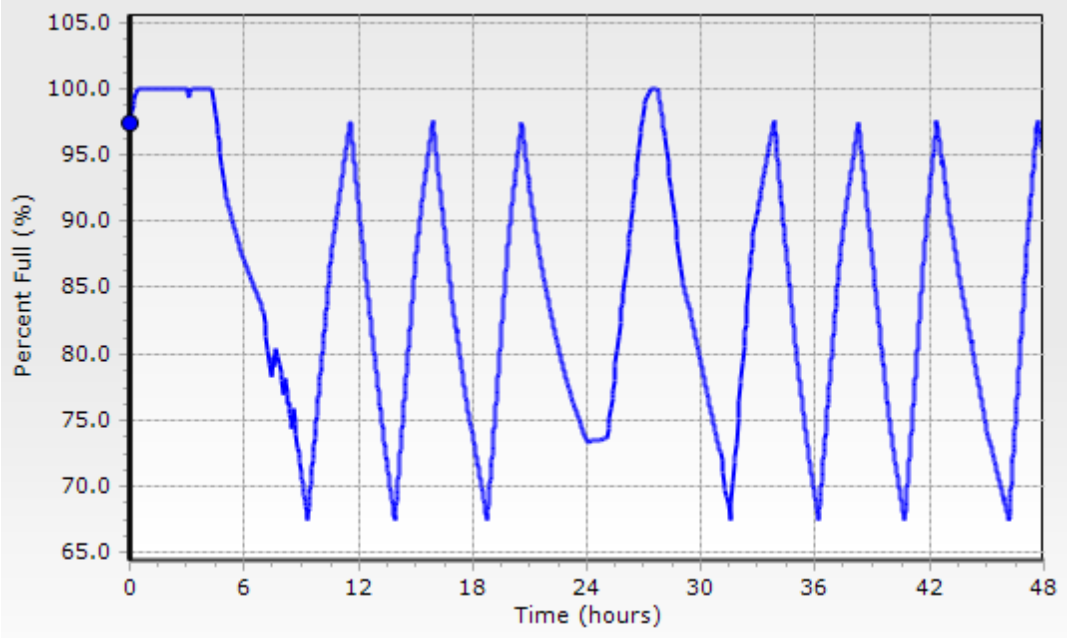

The Nacogdoches EST levels fluctuate throughout the peak day simulation but are able to easily recover.

Figure 20: 2050 Peak Day Nacogdoches EST Levels



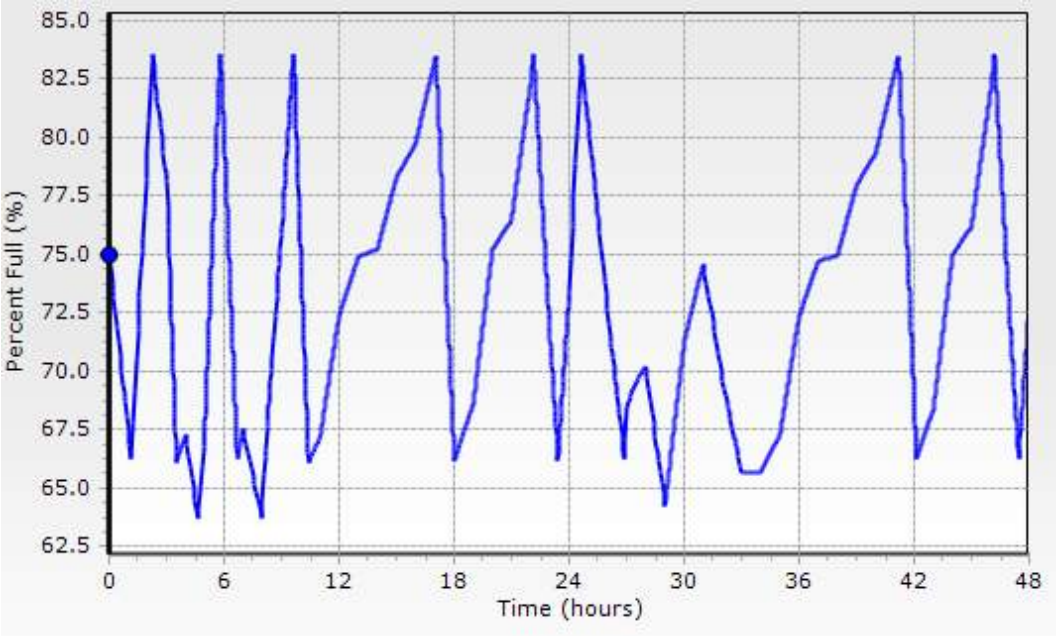

The IH-35 EST is fed by the new 2050 IH-35 pump station and is easily able to fill based on running the proposed pump station.

Figure 21: 2050 Peak Day IH-35 EST Levls




The Northcliffe EST level fluctuates frequently throughout the peak day simulation but is able to easily recover.

Figure 22: 2050 Peak Day Nortcliffe EST Levels




### 3.2.3.3 Fire Flow Analysis

The 2050 water system was evaluated to determine the best locations to simulate fire flow conditions for residential and commercial users. For residential fire flow, a 1,500-gpm fire flow demand was modeled. For commercial fire flow, a 3,500-gpm fire flow demand was modeled. For all fire flow analyses, a minimum system pressure of 20 psi is required per TCEQ. The fire flow nodes included all nodes included in the 2030 analysis with some additional nodes extending into new 2050 service areas. The fire flow node locations are illustrated in Appendix 14. All modeled locations passed fire flow with the recommended 2050 system improvements.

### 3.2.3.4 2050 CIP Projects

Recommended CIPs for 2050 are listed in Table 28 and illustrated in Appendix 15.

Table 28: 2050 Water CIP Project Summary

| CIP Number | Description | Notes |
|---|---|---|
| **Growth Projects** | | |
| 2050-W1 | Corbett Pump Station Expansion | Prevents low pressures throughout southern part of system |
| 2050-W2 | FM 2252 8” WL Improvements | Serves new service area |
| 2050-W3 | Ware Seguin Pump Station Improvements Phase 2 | Prevents low pressures in Ware Seguin area |
| 2050-W4 | Beck St 6” WL Replacement | Upgrades distribution system to current min. pipe size (8") to serve new service area |
| 2050-W5 | Raf Burnette Rd 8” WL Improvements | Needed to meet growth in area |
| 2050-W6 | IH-35 Pump Station & 3.0 MG GST | Needed to meet growth in area |
| 2050-W7 | IH-10 and FM 1518 8” Improvements | Needed to meet growth in area |
| **System Improvement Projects** | | |
| 2050-W8 | Lower Seguin Rd 8” WL Replacement | Needed for fire flow |

#### 3.2.3.5 2050 SSLGC Supply Needs

Additional water supply from SSLGC is needed for the 2050 planning scenario. A total of 16,965 gpm of SSLGC supply is recommended to meet the 2050 projected system demands.

### 3.2.4 Summary

The recommendations provided in this section were a collaborative effort with City staff and LAN to identify and model water system improvements to resolve near-term problems as well as meet the needs due to projected growth for the 2030 and 2050 planning periods. The water model should be maintained and updated as new projects are implemented and can be adjusted to address changes in development schedules.

# 4. WASTEWATER SYSTEM EVALUATION & CIP

A wastewater system model was created in Bentley Sewer GEMS by LAN using data provided by the City. LAN presented the model to the City during a meeting on September 10, 2020. Updates to the model were then made according to the comments from the City.

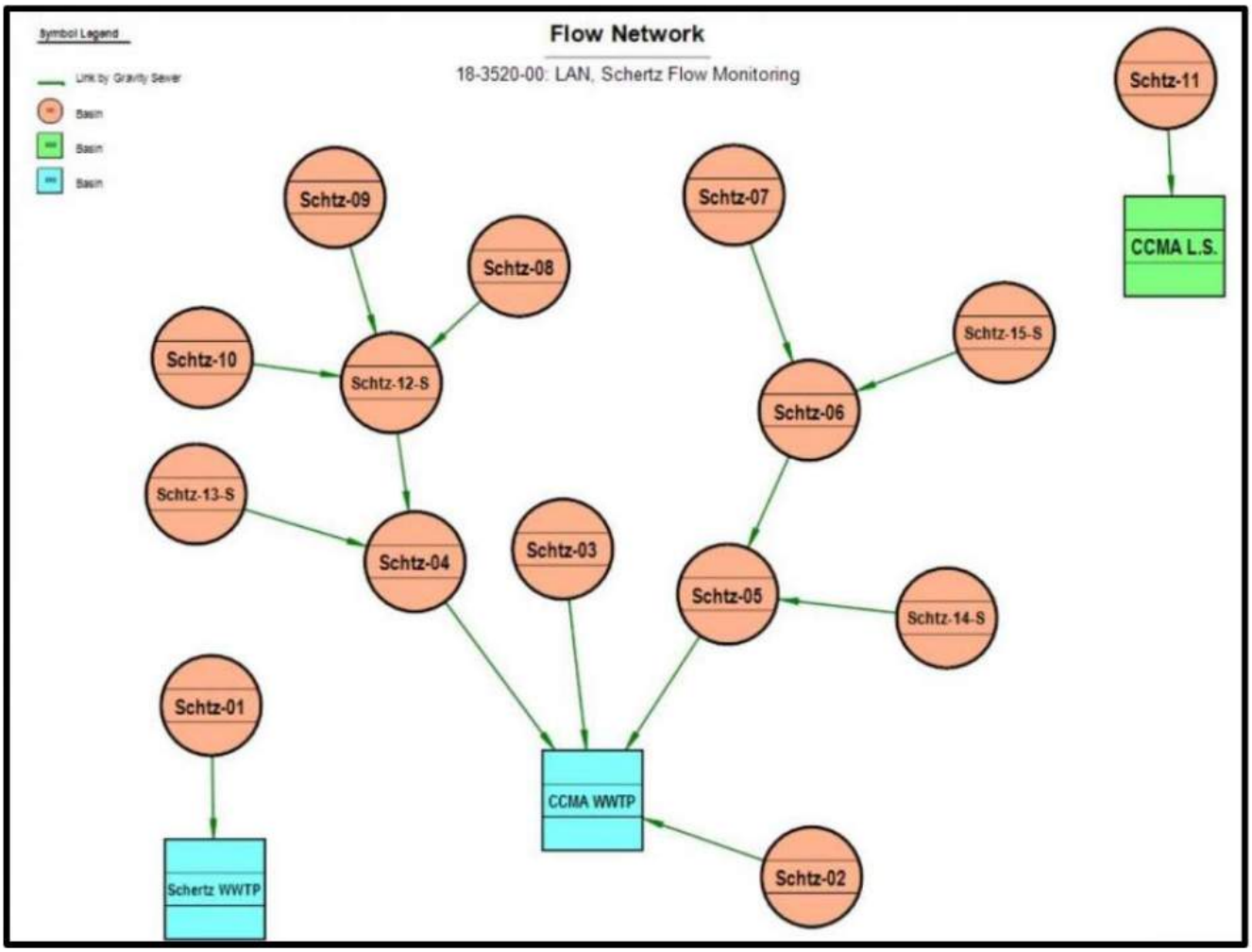
To evaluate the existing wastewater system, a reliable hydraulic model is needed. Model reliability is developed through hydraulic model calibration. Model calibration and simulation were performed using Sewer GEMS software which provided the tool and results necessary to assess the existing wastewater system under dry and wet weather conditions. The purpose of this technical memorandum (TM) is to summarize the calibration results for Average Day Flow (ADF) dry and wet weather conditions and to identify areas with hydraulic deficiencies in the City's wastewater system based on a design storm.

## 4.1 Modeling the Existing Wastewater System

### 4.1.1 Flow Monitoring and Rain Gauges

RJN Group installed 15 flow monitors in the City's wastewater system across a variety of gravity main sizes. The flow monitors recorded data in 5-minute increments from April through June of 2020. The goal of the flow monitoring was to record dry weather flows as well as wet weather flows during rain events. RJN also installed six rain gauges in concert with the flow monitors to collect the rainfall data. The rain gauges were located to capture spatial variation of rainfall across the sewer system in 5-minute increments. Appendix 16 illustrates placement of rain gauges, where the 15 flow monitors were placed in the City's sewer system and the boundaries of the corresponding sewer shed basin for each flow monitor. A schematic network of the flow monitor basins within the City's sewer system is provided in Figure 23.

Figure 23: Schematic of Flow Monitors in the City's Wastewater System




### 4.1.2 Dry Weather Calibration Criteria

The following guidelines were used as calibration criteria for dry weather calibration effort:

- The modeled and monitored flow hydrographs should follow closely in terms of the shape and magnitude.
- Timing of the high and low flows from the model and the flow monitors should be within 1-hour.
- The modeled and monitored peak flows should be within +/- 10% range.
- The modeled and monitored total volume should be within +/- 10% range.

### 4.1.3 Dry Weather Flows (DWF)

Developing base sanitary sewer loads for each sewershed basin is an iterative process. First, preliminary base loads were estimated by applying Traffic Analysis Zone (TAZ) population and employment data to each sewershed basin. A unique gallon per capita per day (gpcd) was estimated for each basin using the TAZ data and the flow monitoring data. These gpcds were then used to calculate the preliminary base load for each basin which was input into the model.

Second, Tuesday May 26, 2020, was chosen as the dry weather calibration day due to the lack of any rainstorms on that day and the consistency in the monitoring across all 15 of the flow monitors within this 24-hour period. Next, a 24-hour Extended Period Simulation was run in the model and the results were compared to the flow monitoring data collected on the chosen dry weather calibration day. Based on this comparison, adjustments were made to the base load and diurnal pattern for each basin until the model results met the dry weather calibration criteria.

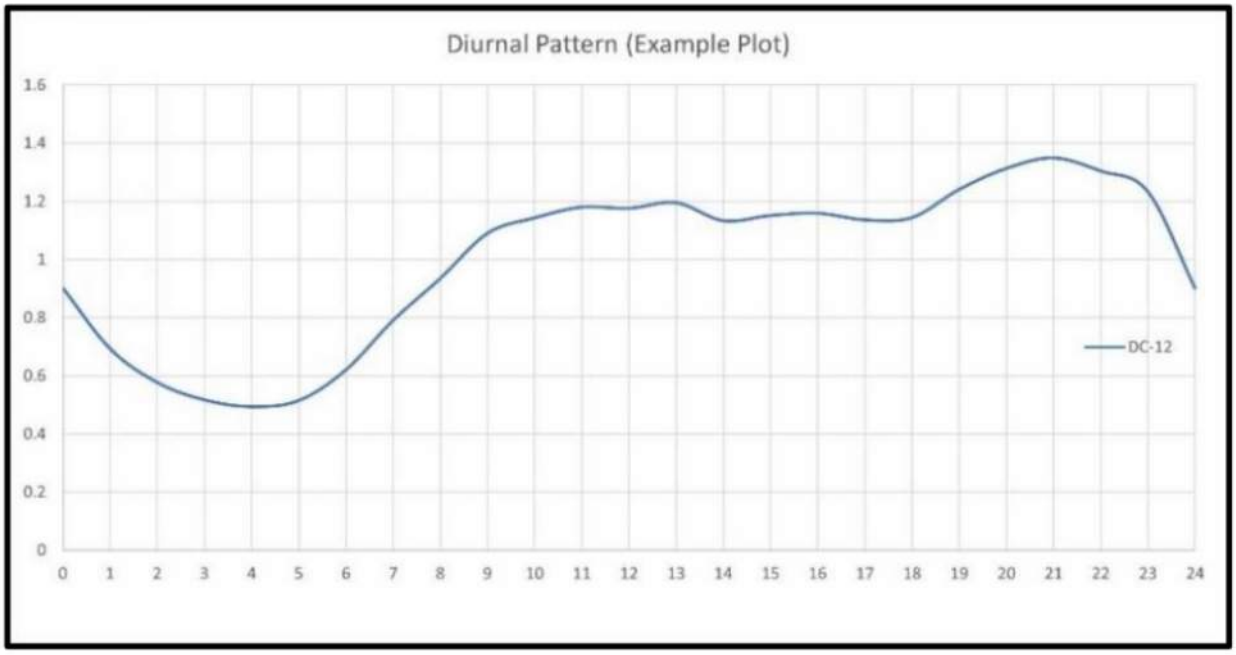
Some adjustments to the preliminary sanitary loading were significant because the TAZ polygon data which were used to calculate the initial base load estimates are on a large scale. These adjustments were needed to represent the density of load distribution more accurately in the system. To further refine the sanitary loading in the system, point loads were applied to represent significantly large contributors such as apartment buildings or schools. A summary of the adjustments made per basin is provided in Table 29.

**Table 29: Dry Weather Sanitary Load & Diurnal Curve Adjustment Summary**

| Flow Monitor Basin | Adjustment(s) Made |
|---|---|
| FM-01 | Sanitary loading reduced by 62.5% |
| FM-02 | Diurnal curve adjusted by one timestep; Sanitary loading reduced by 20% |
| FM-03 | Sanitary loading reduced by 20% |
| FM-04 | None |
| FM-05 | This basin had several added demands for one apartment building (0.1 mgd), local businesses (0.04 mgd), and two schools (0.03 mgd); Increased loading by 50% |
| FM-06 | Added institute loading (0.1 mgd) and business loading (0.123 mgd) |
| FM-07 | Sanitary loading increased by 15% |
| FM-08 | Diurnal curve adjusted by one timestep; Sanitary loading increased by 20% |
| FM-09 | Diurnal curve adjusted by one timestep; Sanitary loading increased by 25% |
| FM-10 | Diurnal curve adjusted by half an hour; Added sanitary loading for the FedEx lift station (0.1 mgd) |
| FM-11 | Reduced sanitary loading by 10% |
| FM-12 | Added sanitary loading (1.15 mgd) on the manhole at the intersection of Wiederstein Rd. and Ike Ln. to represent flow from City of Selma |
| FM-13 | None |
| FM-14 | None |
| FM-15 | Reduced sanitary loading by 10% |

Figure 24 provides an example of a diurnal pattern developed for flow monitor basin FM-12.

Figure 24: Example Plot of Diurnal Pattern




### 4.1.4 Dry Weather Calibration Results

The dry weather calibration was an iterative process involving adjustment of base sanitary loadings, diurnal curves, and point loads. Eventually, the adjustment process produced results that fit the calibration criteria. Figure 25 presents a typical plot of observed versus modeled dry weather flows (FM-06). Graphs for the 15 flowmeter basins are provided in Appendix 17.

Figure 25: Sample Dry Weather Calibration Plot

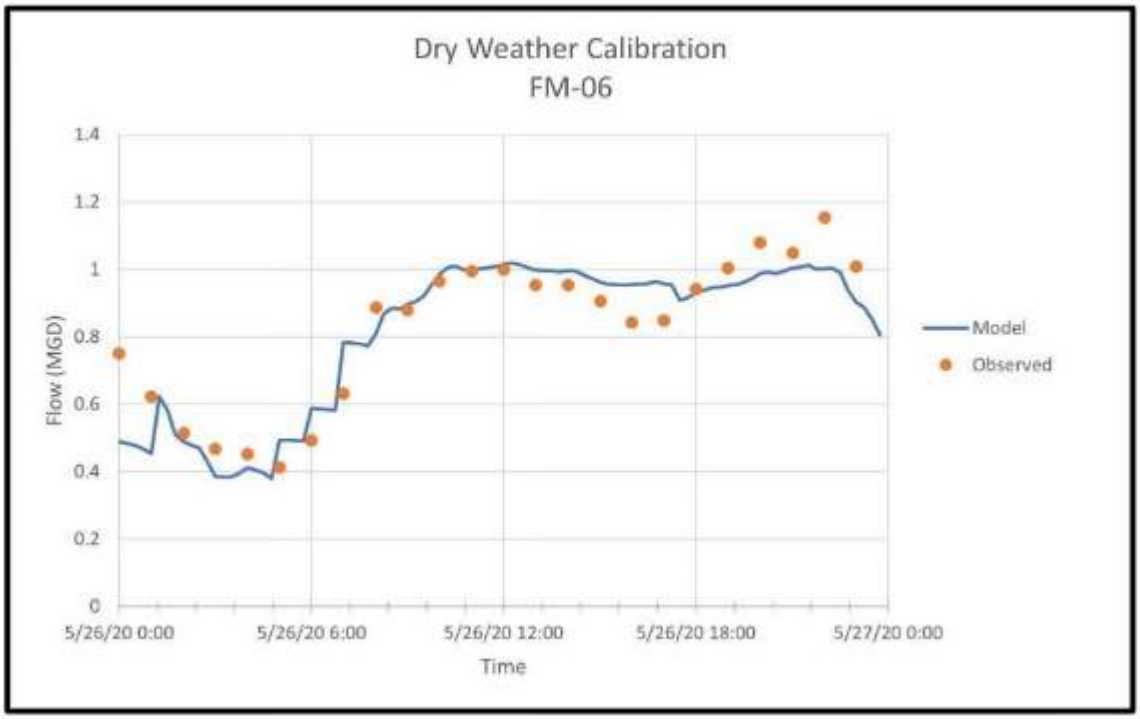


Table 30 shows the dry weather calibration results for the 15 flow monitoring locations.

**Table 30: Dry Weather Calibration Results**

| Flow Meter Basin | Peak Flow (mgd) | | | Volume (Million Gallons) | | |
|---|---|---|---|---|---|---|
| | Model | Monitor | % Difference | Model | Monitor | % Difference |
| FM-01 | 0.074 | 0.076 | -2.7% | 0.0521 | 0.0512 | 1.6% |
| FM-02 | 0.073 | 0.075 | -2.2% | 0.0554 | 0.0535 | 3.6% |
| FM-03 | 0.301 | 0.361 | -16.6% | 0.2582 | 0.245 | 5.5% |
| FM-04 | 3.561 | 3.525 | 1.0% | 2.4641 | 2.6665 | -7.6% |
| FM-05 | 1.905 | 1.894 | 0.6% | 1.4374 | 1.3983 | 2.8% |
| FM-06 | 1.019 | 1.154 | -11.7% | 0.8127 | 0.8255 | -1.6% |
| FM-07 | 0.218 | 0.215 | 1.5% | 0.1751 | 0.1717 | 1.9% |
| FM-08 | 0.151 | 0.156 | -3.2% | 0.1068 | 0.1241 | -13.9% |
| FM-09 | 0.178 | 0.181 | -1.4% | 0.1104 | 0.1082 | 2.0% |
| FM-10 | 0.628 | 0.533 | 17.9% | 0.3645 | 0.3341 | 9.1% |
| FM-11 | 1.462 | 1.053 | 38.9% | 0.7732 | 0.7980 | -3.1% |
| FM-12 | 2.355 | 2.454 | -4.0% | 1.7350 | 1.8006 | -3.6% |
| FM-13 | 0.662 | 0.676 | -2.0% | 0.5324 | 0.5428 | -1.9% |
| FM-14 | 0.253 | 0.250 | 1.3% | 0.1649 | 0.1635 | 0.8% |
| FM-15 | 0.271 | 0.266 | 1.8% | 0.2185 | 0.2117 | 3.2% |

As shown in Table 30, dry weather calibration reached reasonable results with most basins meeting the calibration criteria. There are few flow monitor basins that do not fully meet the criteria described above. Those basins are FM-03, FM-08, FM-10, and FM-11. All these basins have lift stations upstream of the monitoring locations which directly affect the model results. For basins FM-03 and FM-11, assumptions were made for the lift stations within the basin. Those assumptions were provided in the Existing Wastewater System TM (September 4, 2020). The FM-08 basin has eight lift stations. Without accurate pump curves and pump operations for all the lift stations in these basins, the results are satisfactory with the current level of accuracy achieved. In addition to the City-owned lift stations in basins FM-03 and FM-11, there are several privately owned lift stations that contribute to the overall sanitary loadings in the wastewater system. Pump curves for these smaller lift stations were not available, therefore pump curves were assumed for modeling purposes. The following lift stations are privately owned: Aquatic Center, FedEx, & Fire Station 3. For Basins FM-06 and FM-10, calibration was performed by assuming sanitary loadings for business and institutes in the basins (see Table 29 for the specific adjustments performed on each basin).

### 4.1.5 Wet Weather Calibration Criteria

Wet weather calibration is necessary along with dry weather calibration to adequately model the effects that rainfall derived inflow and infiltration (RDII) have on the wastewater system. The following guidelines were used as calibration criteria for WW calibration effort:

- The hydrographs (modeled and observed) should closely reflect the same shape and magnitude.
- The peaks and troughs of the hydrographs (modeled and observed) should be within one hour.
- The modeled and monitored peak flows should be within +/- 15% range.
- The modeled and monitored total volume should be within +/- 15% range.

### 4.1.6 Calibration Rainfall Event

Six rain gauges were installed for the duration of the flow monitoring period to record rainfall events. Review of the observed rainfall and flow monitoring data identified a distinct rain event with reliable flow monitoring data that could be used for wet weather calibration. Table 31 summarizes the rainfall event identified for wet weather calibration at the six rain gauges.

**Table 31: Rainfall Event Properties**

| Rain Gauge | Date/Time | Total Precipitation (inch) |
|---|---|---|
| RG-01 | 5/24/20 8PM – 5/25/20 6AM | 2.46 |
| RG-02 | 5/24/20 8PM – 5/25/20 6AM | 2.18 |
| RG-03 | 5/24/20 8PM – 5/25/20 6AM | 1.43 |
| RG-04 | 5/24/20 8PM – 5/25/20 6AM | 1.81 |
| RG-05 | 5/24/20 8PM – 5/25/20 6AM | 1.71 |
| RG-06 | 5/24/20 8PM – 5/25/20 6AM | 2.36 |

Because there were only six rain gauges for the 15 flowmeter basins, it was necessary to make assumptions as to which rain data to associate with each basin. Table 32 presents those assumptions.

**Table 32: Rain Gauge Data Assumptions**

| Flow Meter Basin | Corresponding Rain Gauge(s) |
|---|---|
| FM-01 | RG-01 |
| FM-02 | RG-O1 |
| FM-03 | RG-02 & RG-05 |
| FM-04 | RG-02 & RG-05 |
| FM-05 | RG-02 |
| FM-06 | RG-04 & RG-06 |
| FM-07 | RG06 |
| FM-08 | RG-05 |
| FM-09 | RG-05 |
| FM-10 | RG-04 |
| FM-11 | RG-03 |
| FM-12 | RG-05 |
| FM-13 | RG-05 |
| FM-14 | RG-05 |
| FM-15 | RG-06 |

In addition to the basins listed above, the SARA and Hallie's Cove Outfalls were associated with RG-01 data because no rain monitoring took place in those areas.

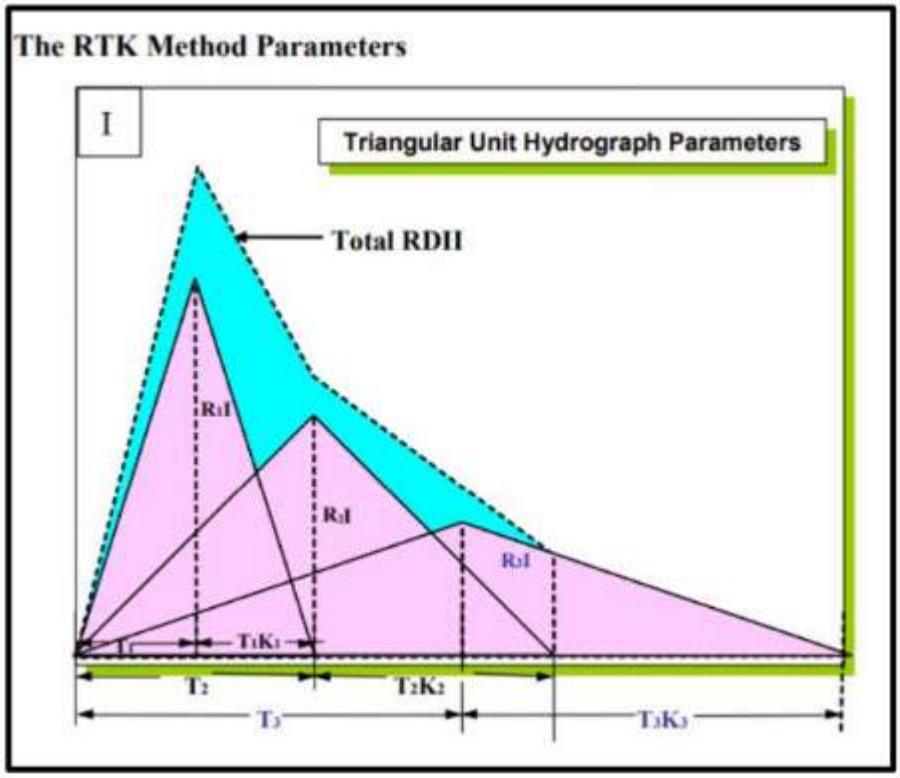
### 4.1.7 Wet Weather Flow Characterization

To calibrate for wet weather, the RTK Method was used in the model to predict the sanitary sewer system's short-, medium-, and long-term response to a rainfall event. These parameters, developed using the flow monitoring data recorded in the field, are applied in the model so that results are representative of field conditions. The R, T, and K parameters are defined as follows:

- R - fraction of precipitation that enters the sanitary sewer system
- T - the time to peak of the hydrograph
- K - the ratio of the 'time of recession' to the 'time to peak'.

How these parameters are used to generate the short-, medium-, and long-term unit hydrographs used in the model is illustrated in Figure 26.

Figure 26: RTK Method Parameters




The RTK method creates a triangle from the three values with a separate triangle made for each type of response (short, medium, and long). The final hydrograph is represented by the addition of the three triangles. Therefore, this method uses a total of 9 parameters (3 RTK parameter sets for each of the 3 triangles that represent the short, medium, and long-term responses.)

LAN assigned a RTK hydrograph to each of the flow monitoring locations that would represent the response to the rainfall. Then, iterative model runs were used to adjust the RTK parameters until the model outputs and flow monitoring were within tolerances specified by the calibration criteria. A 30-hour extended period simulation (EPS) scenario for wet weather calibration was created for the following period: Sunday May 24, 2020, through 6:00 AM on Monday May 25, 2020.

There can be some variations between a sewer's diurnal pattern on a weekday vs. a weekend. Because the rainfall event selected to use for wet weather calibration occurred on a weekend, the flow monitoring data was used to develop an adjusted diurnal pattern that represents the behavior of system base flows on a weekend. The weekend diurnal pattern was applied to the base sanitary loads in the system for the wet weather calibration. Accurately representing the pattern of the base flow will prevent the over or under estimation of the system's response to rainfall with the development of the RTK parameters.

### 4.1.8 Wet Weather Calibration Results

Using the data from the six rain gauges, the flow monitoring data and the RTK hydrographs, the model was calibrated. With the rain data collected and assigned to the separate flow monitor basins, the RTK hydrograph values were estimated for each basin. Table 33 lists calibrated RTK parameters for wet weather calibration for each flowmeter basin.

**Table 33: Calibrated RTK Parameters**

| Meter Basin | R1 | T1 | K1 | R2 | T2 | K2 | R3 | T3 | K3 |
|---|---|---|---|---|---|---|---|---|---|
| FM-01 | 0.001 | 0.5 | 1.6 | 0.001 | 1 | 2.5 | - | - | - |
| FM-02 | 0.001 | 0.75 | 1.4 | 0.001 | 3.5 | 1.8 | - | - | - |
| FM-03 | 0.002 | 1.75 | 1.2 | 0.001 | 3 | 1.4 | - | - | - |
| FM-04 | 0.001 | 4 | 2 | - | - | - | - | - | - |
| FM-05 | 0.001 | 0.5 | 1.4 | 0.001 | 4 | 1.6 | - | - | - |
| FM-06 | 0.01 | 2.2 | 0.8 | 0.001 | 2.5 | 1.6 | 0.003 | 5 | 1.2 |
| FM-07 | 0.001 | 0.5 | 1.4 | 0.001 | 3 | 1.6 | - | - | - |
| FM-08 | 0.001 | 1 | 1 | - | - | - | - | - | - |
| FM-09 | 0.001 | 1 | 1 | - | - | - | - | - | - |
| FM-10 | 0.001 | 1 | 1 | - | - | - | - | - | - |
| FM-11 | 0.001 | 1 | 1.4 | - | - | - | 0.01 | 4 | 1.75 |
| FM-12 | 0.1 | 2 | 1.2 | 0.07 | 4 | 1.5 | 0.01 | 4 | 1.75 |
| FM-13 | 0.5 | 4 | 1.4 | 0.2 | 5 | 1.6 | 0.1 | 7 | 1.75 |
| FM-14 | 0.001 | 0.75 | 1.4 | - | - | - | - | - | - |
| FM-15 | 0.001 | 1 | 1.4 | 0.001 | 3 | 1.6 | - | - | - |

Figure 27 presents a typical plot of observed versus modeled wet weather flows (FM-06). Wet weather graphs for the 15 flowmeter basins are shown in Appendix 17.

Figure 27: Sample Wet Weather Calibration Plot

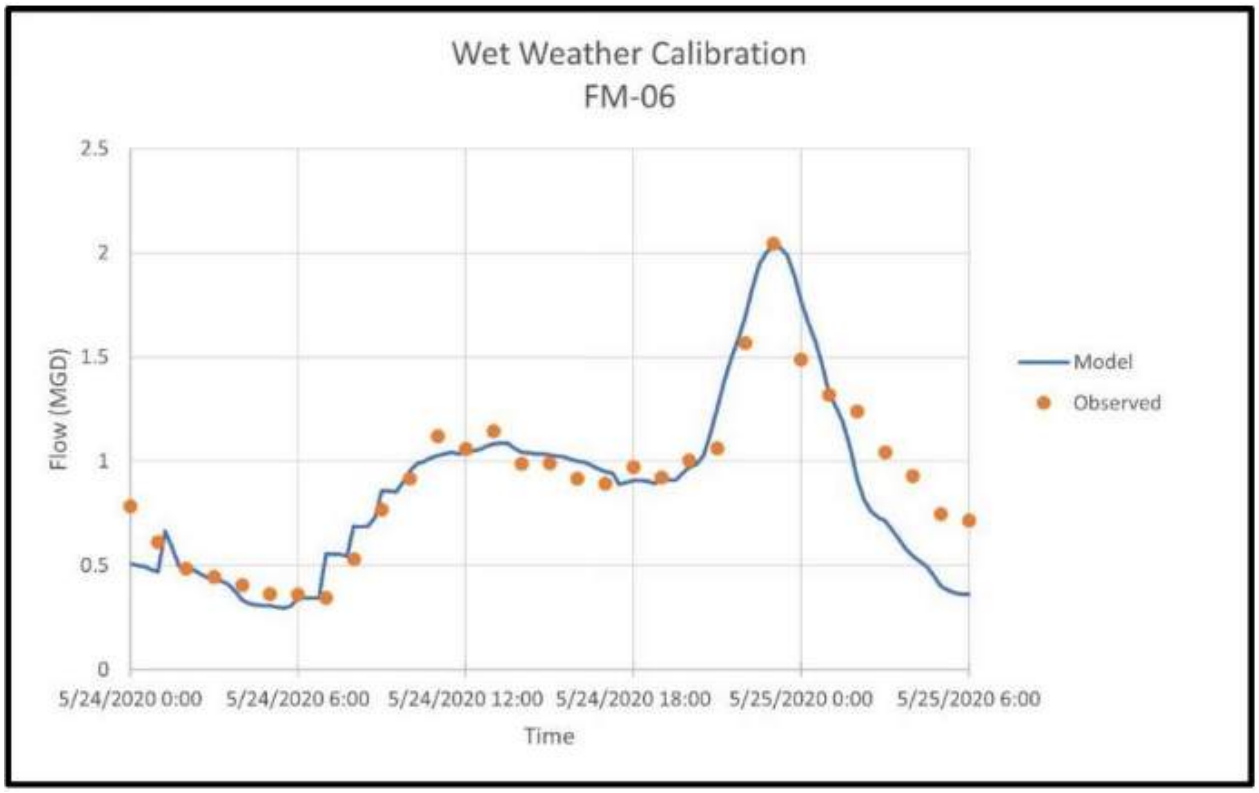



Table 34 documents the results of the wet weather calibration for all 15 flowmeter basins.

Table 34: Wet Weather Calibration Results

| Flow Meter Basin | Peak Flow (mgd) | | | Volume (Million Gallons) | | |
|---|---|---|---|---|---|---|
| | Model | Monitor | % Difference | Model | Monitor | % Difference |
| FM-01 | 0.078 | 0.08 | -2.5% | 0.043 | 0.039 | 10.3% |
| FM-02 | 0.103 | 0.095 | 8.4% | 0.055 | 0.05 | 10.0% |
| FM-03 | 0.672 | 0.711 | -5.5% | 0.298 | 0.259 | -15% |
| FM-04 | 6.489 | 5.014 | 29.4% | 2.874 | 2.745 | 4.7% |
| FM-05 | 2.87 | 2.45 | 17.1% | 1.456 | 1.42 | 2.5% |
| FM-06 | 2.031 | 2.043 | -0.6% | 0.877 | 0.949 | -7.6% |
| FM-07 | 0.304 | 0.3 | 1.3% | 0.162 | 0.145 | 11.7% |
| FM-08 | 0.1529 | 0.153 | -0.1% | 0.1 | 0.097 | 3.1% |
| FM-09 | 0.162 | 0.165 | -1.8% | 0.097 | 0.095 | 2.1% |
| FM-10 | 0.474 | 0.413 | 14.8% | 0.23 | 0.255 | -9.8% |
| FM-11 | 1.739 | 1.124 | 54.7% | 0.845 | 0.715 | 18.2% |
| FM-12 | 5.261 | 5.396 | -2.5% | 2.029 | 1.868 | 8.6% |
| FM-13 | 0.738 | 0.754 | -2.1% | 0.546 | 0.519 | 5.2% |
| FM-14 | 0.259 | 0.263 | -1.5% | 0.159 | 0.152 | 4.6% |
| FM-15 | 0.273 | 0.298 | -8.4% | 0.169 | 0.204 | -17.2% |

Wet weather calibration reached reasonable results with most basins meeting the calibration criteria. There were few flow monitor basins that do not fully meet the wet weather calibration criteria. Those basins were FM-04, FM-11, and FM-15. Like dry weather calibration, inaccurate pump curves and pump operation for lift stations within these basins could adversely affect the model

results. In addition, FM-11 flowmeter data seems to be erroneous at some time periods. Looking at the FM-04 graph in Appendix 18 and comparing its peak flow with upstream contributing flowmeter basins (FM-12 and FM-13), the observed FM-04 peak flow (5 mgd) is lower than summation of peak flows at FM-12 (5.4 mgd) and FM-13 (0.75 mgd). In fact, summing up the observed peak flows at FM-12 and FM-13 (6.15 mgd) provides a peak flow closer to the modeled peak flow at FM-04. This discrepancy might be related to erroneous flowmeter data at FM 04 or there might be an unknown unmetered interconnect with leaving flows to another basin from FM 04. For FM-15, the observed flows at 5/25/20 from 0:00 to 6:00 AM seems too high, as the rain started to diminish around that time based on the recording at RG-03, which indicates flows cannot be as high as the FM-15 showed during that time period.

### 4.1.9 RDII Assessment

The flow monitoring data for the calibration days were used to assess the sewer system susceptibility and response to RDII. Table 35 shows the wet weather peaking factors (peak WWF/average DWF).

**Table 35: Calibration Event Wet Weather Peaking Factors for Metered Basins**

| Flow Monitor Basin | Average DWF (mgd) | Peak WWF (mgd) | Peaking Factor |
|---|---|---|---|
| FM-01 | 0.05 | 0.08 | 1.6 |
| FM-02 | 0.053 | 0.095 | 1.8 |
| FM-03 | 0.247 | 0.378 | 1.5 |
| FM-04 | 2.7 | 3.025 | 1.1 |
| FM-05 | 1.4 | 1.894 | 1.4 |
| FM-06 | 0.83 | 2.043 | 2.5 |
| FM-07 | 0.17 | 0.3 | 1.8 |
| FM-08 | 0.1 | 0.15 | 1.5 |
| FM-09 | 0.11 | 0.165 | 1.5 |
| FM-10 | 0.32 | 0.41 | 1.3 |
| FM-11 | 0.8 | 1.12 | 1.4 |
| FM-12 | 1.82 | 5.4 | 3 |
| FM-13 | 0.55 | 0.64 | 1.2 |
| FM-14 | 0.16 | 0.25 | 1.6 |
| FM-15 | 0.21 | 0.27 | 1.3 |

Only FM-06 and FM-12 had substantial RDII response. The rest of the basins did not have significant RDII response based on the flow monitoring data for the calibration days.

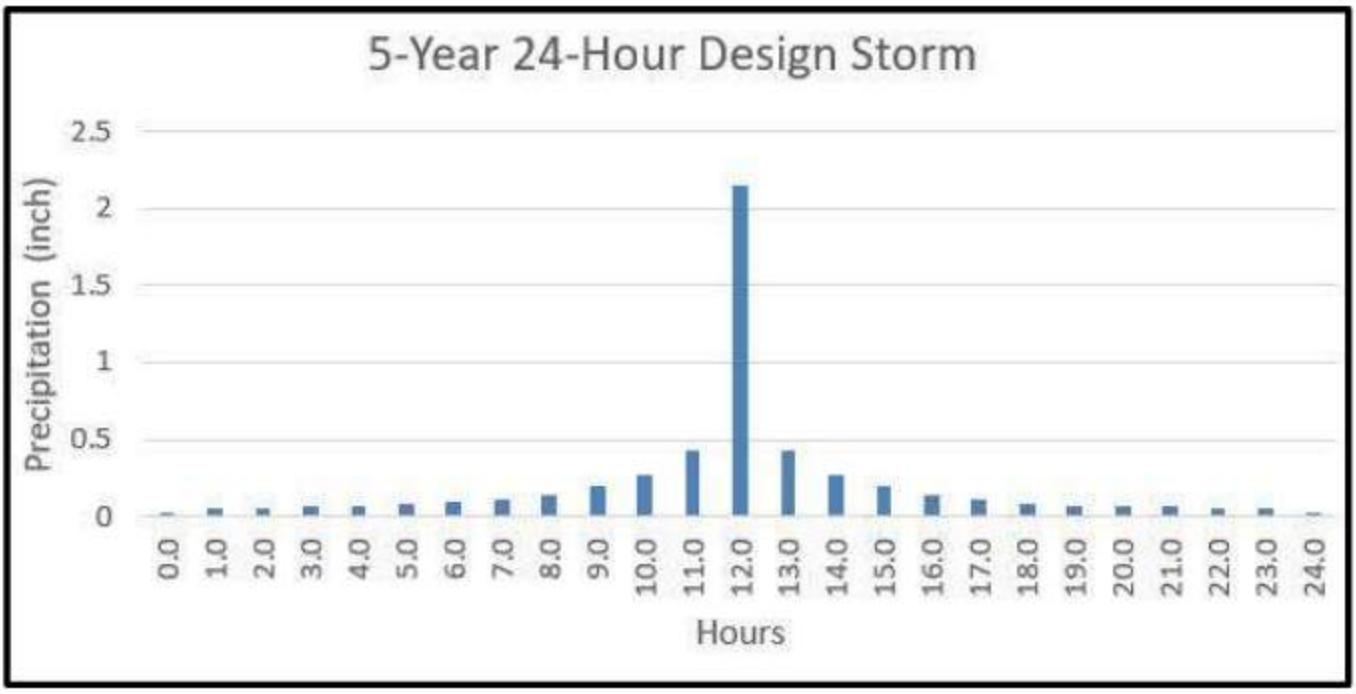
## 4.2 Existing Wastewater System Evaluation

### 4.2.1 Design Storm

To evaluate the existing wastewater system, a 5-year design storm with a 24-hour duration was applied to the calibrated model. For the City of Schertz, the rainfall depth provided in the National Oceanic and Atmospheric Association's Atlas 14 precipitation frequency estimates is 5.3-inches.

The rainfall depth was distributed over time using the Soil Conservation Service (SCS) rainfall distribution type III. Figure 28 shows the hyetograph of the design storm used for this evaluation.

Figure 28: 5-Year 24 Hour Design Storm




### 4.2.2 System Evaluation

The 5-year 24-hour design storm shown in Figure 28 was then applied to the City's calibrated model for system evaluation. The following criteria were used to evaluate the existing wastewater system and identify potential problem areas:

- Sanitary Sewer Overflows (SSO) at manholes
- Surcharged gravity mains

The majority of the SSOs and surcharged lines in the system are located on the 10-inch CCMA line which parallels Roy Richard Dr. and the 30-inch CCMA line which follows the drainage channel from I-35 down to the outfall at Cibolo Creek. Some surcharging and SSOs were also predicted by the model in the Northcliffe area around the I-35 corridor. The extents and locations of these SSOs and surcharged lines for the existing system evaluation results are presented in Appendix 19.

### 4.2.3 Summary

Using data collected from the flow monitors and rain gauges, the wastewater hydraulic model for the City of Schertz was calibrated for both dry and wet weather flows. The model calibration reached the required level of accuracy for both calibration scenarios. Further accuracy may be achieved with the provision of further data such as pump curve information and detailed customer sanitary sewer flow information for certain areas.

Following the model calibration, the City's wastewater system was evaluated based on a 5-year, 24-hour design storm for wet weather condition. The total number of SSOs found to be 21 (7 of these 21 SSOs are on lines owned by the City) which is less than 1 percent of the total number of manholes. The total length of sewer found to be capacity deficient (maximum flow greater than pipe full capacity)

was approximately 52,000-feet (of which approximately 22,500-feet is owned by the City). This is about 5.7 percent of the total existing conduits length.

The next phase of the modeling process is a future model evaluation. This phase of the modeling includes running the model with population predictions based on the future TAZ population data and recommendations for future system improvements as part of the City's capital improvement plan. This evaluation will be described in the next section.

## 4.3 Future Wastewater System Evaluation & CIPs

The City contracted LAN to conduct the wastewater system improvement analysis and update the Capital Improvements Plan (CIP). This effort requires developing a future sanitary sewer representation model of the City's collection system based on anticipated growth areas. Future Average Dry Weather Flow and Wet Weather Flow scenarios for 10-year and 30-year were developed. The purpose of this section is to summarize the results of the future wastewater system improvement analysis and list the 10-year and 30-year wastewater system CIPs.

### 4.3.1 Future Modeling Methodology

The future scenarios assumed increases in residential and commercial/industrial developments based on information about planned development projects provided by the City. LAN used the City's calibrated model for dry and wet weather scenarios as the base for this analysis and allocated wastewater sanitary loads to the wastewater hydraulic model using the projected water demands developed for the Schertz water hydraulic model. To generate the sanitary loads, a return rate of 70% was applied to water demand at each node. Then GIS tools were used to determine which demand nodes fell within the existing wastewater service areas. If a demand node fell outside an existing service area, new interceptors were recommended to connect them to an existing or future wastewater treatment plant. Using Thiessen polygon and Loadbuilder tools from SewerGEMS, the sanitary loads were allocated to the nearest manholes in the model. Table 36 presents the existing and future average dry weather flow projections.

Table 36: Dry Weather Flow Projections

| Condition | Estimated Average DWF (MGD) | % Increase |
|---|---|---|
| Existing | 5.2 | - |
| 10-yr (2030) | 6.4 | 23.0 |
| 30-yr (2050) | 7.4 | 42.3 |

Future scenarios were created in the model for the 10-year (2030) and 30-year (2050) increments, along with their respective sanitary loads to simulate the future growth anticipated by the City. Diurnal curves were developed from the field monitoring data for the existing system model and then used to distribute the future average dry weather sanitary flows over 24 hours. Analysis began on the 2030 scenario to evaluate the system and to find where the required improvements to the existing system are, besides any future projects to accommodate the new growth areas.

#### 4.3.1.1 Hydraulic Criteria

Hydraulic criteria used for this analysis include capacity deficiency and design criteria. Capacity deficiency criteria identify the need to replace an existing facility, while design criteria determine the size of new facilities. These criteria were established based on the Texas Commission on Environmental Quality (TCEQ) and engineering best practices. Table 37 lists a summary of capacity deficiency criteria used for the existing system in this analysis.

Table 37: Capacity Deficiency Criteria for Existing Facilities

| Item | Recommended Value |
|---|---|
| **Maximum Allowable Flow Depth** | No sanitary sewer overflows (SSOs) |
| **Force Main Velocity** | Maximum velocity of 8 ft/s under peak wet weather flow |
| **Pump Station Capacity** | Peak design flow (from 5-year, 24-hour design storm) not to exceed firm capacity (i.e., capacity with the largest pump out of service) |

Table 38 lists a summary of design criteria used for new sewer facilities.

Table 38: Design Criteria for New Sewer Facilities

| Item | Recommended Value |
|---|---|
| **Maximum Allowable Flow Depth** | Maximum depth-to-diameter (d/D) of 1.0 (full pipe) under peak design flow (from 5-year, 24-hour design storm) |
| **Force Main Velocity** | Minimum velocity of 2 ft/s (for a pump station with two pumps, with one pump in operation)<br>Maximum velocity of 8 ft/s under peak wet weather flow |
| **Pump Station Capacity** | Peak design flow not to exceed firm capacity (i.e., capacity with the largest pump out of service) |
| **Minimum Gravity Line Size** | 8-inch |
| **Slopes for Gravity Lines** | 8-inch: 0.33% to 8.4%<br>10-inch: 0.25% to 6.23%<br>12-inch: 0.20% to 4.86%<br>15-inch: 0.15% to 3.62%<br>18-inch: 0.115% to 2.83%<br>21-inch: 0.095% to 2.30%<br>24-inch: 0.08% to 1.93%<br>27-inch: 0.07% to 1.65%<br>30-inch: 0.06% to 1.43%<br>33-inch: 0.055% to 1.26%<br>36-inch: 0.045% to 1.12% |
| **Maximum Manhole Spacing** | 500 ft |

#### 4.3.1.2 Design Storm

For wet weather scenarios, a 5-year design storm with a 24-hour duration was applied to the model. For the City of Schertz, the rainfall depth provided in the National Oceanic and Atmospheric Association's Atlas 14 precipitation frequency estimates is 5.4 inches.

The rainfall depth was distributed over time using the Soil Conservation Service (SCS) rainfall distribution Type III, representing the rainfall temporal distribution type happening in the Gulf of Mexico and Atlantic coastal areas (TR-55 Cover (hydrocad.net)). The same hyetograph in section 4.2.1 is applicable to this evaluation.

#### 4.3.1.3 Inflow & Infiltration Assumption

The RTK hydrographs developed from the field monitoring data for the existing system model were used to represent the inflow and infiltration (I&I) for the existing infrastructure and service areas. In addition to utilizing diurnal curves to incorporate peak dry flow, a peaking factor of 4 was applied to represent the effect of I&I for future loadings outside the existing service areas where there is no historical data is available. The assumption was that new infrastructure would meet current standards and would therefore be less susceptible to I&I.

### 4.3.2 Future System Analysis & CIPs

The following scenarios were created for future system analysis:

- Dry Weather 2030 Scenario
- Wet Weather 2030 Scenario
- Dry Weather 2050 Scenario
- Wet Weather 2050 Scenario

Table 39 shows a breakdown of the dry weather flow projections for each planning period by the system outfalls.

Table 39: Breakdown of Average Dry Weather Flows by Outfalls

| Outfall | Estimated Average DWF (gpm) | | |
|---|---|---|---|
| | Existing | 2030 | 2050 |
| Whisper Branch | 16 | 16 | 16 |
| NBU | 19 | 19 | 60 |
| O-4 | 469 | 707 | 934 |
| SARA | 22 | 68 | 92 |
| Bubbling Springs | 1,960 | 2,023 | 2,178 |
| Aztec Way | 21 | 21 | 44 |
| O-21-22 | 992 | 1,014 | 1,156 |
| Greaves WWTP | 30 | - | - |
| Corbett | 61 | - | - |
| Halley's Cove | 7 | - | - |
| CCMA S WWTP | - | 586 | 667 |
| Total (gpm) | 3,597 | 4,454 | 5,147 |
| Total (MGD) | 5.2 | 6.4 | 7.4 |

#### 4.3.2.1 Near Term CIP Projects

The near-term project list for Schertz provided by the City was incorporated into the existing system to create future scenarios along with future sanitary loadings. Each scenario includes all the currently planned projects that will be in place by that planning year. Table 40 lists currently planned projects (near-term) provided by the City (shown in Appendix 20).

Table 40: Near Term Projects Summary

| CIP Number | Project Description |
|---|---|
| | **Growth Projects** |
| NT-S1 | Town Creek Phase IV 24" – Section 1 |
| NT-S2 | Town Creek Phase IV 24" – Section 2 |
| NT-S3 | Town Creek Phase V 24" |
| NT-S4 | Upsize Lookout Line |
| NT-S5 | Upsize Tri County Line |
| NT-S6 | Cibolo West Main |
| NT-S7 | Woman Hollering Creek Lift Station, Gravity Line, and Force Main |
| | **System Improvement Projects** |
| NT SI-1 | Decommission Tri County Lift Station |
| NT SI-2 | Decommission Corbett Lift Station |
| NT SI-3 | Decommission Sedona Lift Station & Woman Hollering Creek WWTP |

It is important to note that the pipe size was undetermined for the Cibolo West Main Trunkline. Based on the available information and hydraulic model results, LAN recommends an 18-inch pipe size for the above project. In addition, LAN received the 2021 Wastewater Collection System Master Plan for the Cibolo Creek Municipal Authority (CCMA) prepared by Kimley Horn Inc. The CCMA's CIP projects affecting the Schertz sewer system were also incorporated into each scenario based on the planning year.

#### 4.3.2.2 2030 CIP Growth Projects

The 2030 scenario included the currently planned CIP projects for the City. To serve the new development areas happening between 2022 to 2030, LAN proposes new growth CIPs as listed in Table 41. The alignments are based on the available information regarding topographic elevations, existing roads, and engineering judgment and are to be considered as preliminary. Final alignments will be determined as part of the design process.

The design criteria listed in Table 38 was used to size the new facilities. For modeling purposes, slopes for new growth CIP lines were assumed based on the TCEQ minimum slope requirement. At some locations, higher than minimum slopes were considered to prevent extra excavation. Appendix 21 shows the location of the 2030 growth CIPs.

Table 41: 2030 Growth Projects Summary

| CIP Number | Project Description |
|---|---|
| **NT-S1** | Hope Lane 8" Gravity Line |
| **NT-S2** | Old Wiederstein Road 8" |
| **NT-S3** | Union Pacific Railroad 8" – Section 1 |
| **NT-S4** | Union Pacific Railroad 8" – Section 2 |
| **NT-S5** | Wiederstein Road 8" |
| **NT-S6** | Schaefer Road 8" – Section 1 |
| **NT-S7** | Schaefer Road 8" – Section 2 |
| **NT-S8** | Aranda 8" |
| **NT-S9** | Weir Road 10" |
| **NT-S10** | Trainer Hale Road 10" |
| **NT-S11** | Ware Seguin Road 8" |
| **NT-S12** | FM 1518 8" |
| **NT-S13** | I-10 8" – Section 1 |
| **NT-S14** | Boenig Drive 8" |
| **NT-S15** | N Greytown Road 8" |

#### 4.3.2.3 Model Results Under 2030 Flows

After bringing in the 2030 new growth CIPs, the model was run with predicted 2030 dry weather flows. The modeling results for this scenario are presented in Appendix 22. The results show 98% of conduits have a maximum depth to diameter (d/D) of less than 0.5. It also shows gravity lines parallel to Friesenhahn Ln and upstream of the Friesenhahn lift station having maximum d/D of greater than 0.75, and gravity lines right upstream of Riata lift station having a maximum d/D between 0.5 and 0.75. This indicates these gravity lines (i.e., with maximum d/D greater than 0.5) may not accommodate the additional capacity needs from future flows and could require upsizing.

Since peak wet weather is crucial for analyzing a sewer system, the 2030 wet weather flow (average dry weather plus 5-year, 24-hour I&I) was used to determine areas that are susceptible to sanitary sewer overflows (SSOs). Note that the model shows SSOs at locations where the maximum hydraulic grade (HGL) rises above manhole rim elevations. The modeling results for this scenario are presented in Appendix 23. The results show a total of 11 manholes within the existing service areas are overflowing. Per the Capacity Deficiency Criteria listed in Table 37, the sewer system is capacity deficient at the locations where SSOs are reported by the model.

#### 4.3.2.4 2030 CIP System Improvement Projects

LAN proposes several system improvement projects listed in Table 42 to address the SSOs. In addition, Belmont Park lift station is set to go offline by 2030 per City staff. Therefore, that lift station was set inactive in the model, and gravity lines were added to bypass it. LAN also determined that the Northcliffe (Town Creek) lift station needs to upgrade to a firm capacity of 4,800 gpm to meet TCEQ requirements (refer to section 2.5.3). Appendix 24 shows the location of the 2030 system improvement projects.

Table 42: 2030 System Improvement Projects Summary

| CIP Number | Project Description | Purpose |
|---|---|---|
| 2030 SI-1 | Friesenhahn West Line WW Upsize | To resolve 4 SSOs upstream of Friesenhahn LS. |
| 2030 SI-2 | Fairlawn WW Upsize | To resolve an SSO upstream of Riata LS. |
| 2030 SI-3 | Cibolo Crossing WW Line Upsize | To resolve an SSO near I-35 N. |
| 2030 SI-4 | Woodland Oak Drive Replacements | To resolve an SSO near Woodland Oak Dr. |
| 2030 SI-5 | Old Wiederstein WW Upsize | To increase line capacity. |
| 2030 SI-6 | Northcliffe LS Upgrade | To follow TCEQ requirement of peak flow not to exceed firm capacity. This upgrade is based on buildout flow of 4,485 gpm. |
| 2030 SI-7 | Decommission Belmont Park Lift Station | Per City request. |

#### 4.3.2.5 2030 CCMA Recommended Projects

The results of the 2030 wet weather flow scenario showed some of the CCMA's gravity lines have capacity issues that would affect the City's sewer system performance. LAN recommends the following system improvement projects related to CCMA's gravity lines (listed in Table 43 and shown in Appendix 24). Although originally listed as 2041 CCMA CIPs (Projects 2030 C-1 & 2030 C-2) and as Buildout CCMA CIP (Project 2030 C-4) in the Wastewater Collection System Master Plan prepared by Kimley Horn Inc. in 2021, LAN currently recommends these CIP projects for inclusion in the 2030 planning period.

Table 43: 2030 CCMA System Improvement Projects Summary

| CIP Number | Project Description | Purpose |
|---|---|---|
| 2030 C-1 | Roy Richard Drive Replacements | To resolve 2 SSOs near Woodland Oak Dr and Valencia Ln. |
| 2030 C-2 | Valencia Lane Replacements | To resolve 2 SSOs near Woodland Oak Dr and Valencia Ln. |
| 2030 C-3 | Savannah Drive Replacements | To resolve an SSO near Maske Rd. |
| 2030 C-4 | Build Out Project 25 – 36" Schertz Line | To resolve 2 SSOs near Maske Rd. |

#### 4.3.2.6 2050 CIP Growth Projects

To develop the 2050 scenario, the system changes proposed for 2030 were used as the base. To serve the new development areas happening between 2030 to 2050, LAN proposes new growth CIPs listed in Table 44 and shown in Appendix 25. Similar to 2030 growth CIPs, the alignments are based on the available information regarding topographic elevations, existing roads, and engineering judgment, and final alignments will be determined as part of the design process. The design criteria listed in Table 38 were used to size the new facilities.

Table 44: 2050 Growth Projects Summary

| CIP Number | Project Description |
|---|---|
| **2050-S1** | I-35 N 8" |
| **2050-S2** | Friesenhahn Lane 8" |
| **2050-S3** | Schaefer Road 8" – Section 3 |
| **2050-S4** | Corbett JH 8" |
| **2050-S5** | Lower Seguin Road 8" |
| **2050-S6** | IH-10 8" – Section 2 |

In addition, Schertz Pkwy, Cover's Cove, and Park lift stations are set to go offline by 2050 per City staff. Therefore, Cover's Cove and Park lift stations were set inactive in the model, and gravity lines were added to bypass that lift station. Schertz Pkwy lift station will also go offline, and its flow will be conveyed to a new CCMA line which will be built by 2050. However, due to the unavailability of information about the new CCMA's line, the Schertz Pkwy lift station was set inactive in the model and its flow was directed to a new outfall.

#### 4.3.2.7 Model Results Under 2050 Flows

After bringing in the 2050 new growth CIPs, the model was run with predicted 2050 dry weather flows. The modeling results for this scenario are presented in Appendix 26. Similar to 2030 scenario results, 97% of conduits have a maximum depth to diameter (d/D) of less than 0.5, and only 3% of gravity lines have a maximum (d/D) of greater than 0.5. Since peak wet weather is crucial for analyzing a sewer system, the 2050 wet weather flow was used to determine areas that are susceptible to overflowing. The modeling results show no manholes are overflowing indicating the 2050 system has sufficient capacity per the Capacity Deficiency Criteria listed in Table 37. Therefore, LAN does not recommend any capacity-related CIPs for the 2050 planning period.

#### 4.3.2.8 2050 CIP System Improvement Projects

LAN determined that Cypress Point lift station needs to upgrade to a firm capacity of 1,250 gpm to meet TCEQ requirements (refer to section 2.5.3). Table 45 describes 2050 system improvement projects shown in Appendix 27.

Table 45: 2050 System Improvement Projects Summary

| CIP Number | Project Description | Purpose |
|---|---|---|
| **2050 SI-1** | Cypress Point Lift Station Upgrade | To follow TCEQ requirement of Peak flow not to exceed firm capacity. This upgrade is based on buildout flow of 1,233 gpm. |
| **2050 SI-2** | Decommission Schertz Parkway Lift Station | To convey flow to a new CCMA's line which will be built by 2050. |
| **2050 SI-3** | Decommission Park Lift Station | Per City request. |
| **2050 SI-4** | Decommission Cover's Cove Lift Station | Per City request. |

#### 4.3.2.9 Pumping Capacity Evaluation

For pumping capacity evaluation, the existing firm capacity (i.e., capacity with the largest pump off) will be compared to peak wet weather flow at each lift station. Per TCEQ requirements, peak wet weather flow should not exceed firm capacity. Table 46 shows the results of the pumping capacity evaluation. Note that this analysis has only been conducted for public existing lift stations; private lift stations have been excluded from the study.

Table 46: Lift Station Capacity Evaluation

| Lift Station Name | Number of Pumps | Capacity per pump(1) (gpm) | Lift Station Firm Capacity (gpm) | Peak Existing WWF (gpm) | Peak 2030 WWF (gpm) | Peak 2050 WWF (gpm) | Note |
|---|---|---|---|---|---|---|---|
| Belmont Park | 2 | 750 | 750 | 30 | Plan to go offline by 2030 | | |
| Cover's Cove | 2 | 75 | 75 | 4.5 | 5 | Plan to go offline by 2050 | |
| Cypress Point | 3 | 915 | 1,012 | 435 | 997 | 1,233 | Need upgrade by 2050 per TCEQ |
| Elbel | 2 | 750 | 750 | 85 | 86 | 101 | |
| Friesenhahn | 3 | 1,500 | 1,800 | 772 | 1,293 | 1,610 | |
| Homestead | 2 | 900 | 900 | 646 | 737 | 894 | |
| Maxfli | 2 | 750 | 750 | 12 | 12 | 13 | |
| Park | 2 | 220 | 220 | 20 | 20 | Plan to go offline by 2050 | |
| Riata | 2 | 750 | 750 | 660 | 727 | 728 | |
| Schertz Pkwy | 2 | 250 | 250 | 101 | 113 | Plan to go offline by 2050 | |
| Smoke Pit | 2 | 600 | 600 | 20 | 20 | 20 | |
| Northcliffe (Town Creek) | 3 | 1,000 | 1,750 | 3,780 | 4,450 | 4,485 | Need upgrade by 2030 per TCEQ |
| Corbett | 2 | Offline per Near-Term CIP | | | | | |
| Sedona | 3 | Offline per Near-Term CIP | | | | | |
| Tri-County | 2 | Offline per Near-Term CIP | | | | | |

(1) Capacity per pump is estimated based on the pump curve for pumps within each lift station.

As seen in Table 46, except for Cypress Point and Northcliffe lift stations, all other existing lift stations have adequate capacity for existing and future peak flows since their peak flows are less than lift station firm capacities. Per TCEQ requirement, Northcliffe lift station requires an upgrade to firm capacity of 4,500 gpm based on its 2050 peak flow of 4,485 gpm, and Cypress Point lift

station needs an upgrade to firm capacity of 1,250 gpm based on its 2050 peak flow of 1,233 gpm. Northcliffe lift station upgrade should be done as early as 2030, but Cypress Point's upgrade can wait until 2050.

#### 4.3.2.10 Force Main Capacity Evaluation

As listed in Table 37, the hydraulic criterion for force mains is not to exceed a maximum velocity of 8 ft/s under the peak wet weather flow (average dry plus 5-year, 24-hour storm flow). Higher than 8 ft/s velocities correspond to high head loss in force mains which over time scour force main interior causing premature structural failure. Table 47 shows the results of the force main capacity evaluation.

Table 47: Force Main Capacity Evaluation

| Lift Station Name | Force Main Diameter (inch) | Existing | | 2030 | | 2050 | |
|---|---|---|---|---|---|---|---|
| | | Peak* WWF (gpm) | Velocity (ft/s) | Peak* WWF (gpm) | Velocity (ft/s) | Peak* WWF (gpm) | Velocity (ft/s) |
| Belmont Park | 6 | 313 | 3.6 | Plan to go offline by 2030 | | | |
| Cover's Cove | 3 | 89 | 4.0 | 89 | 4.0 | Plan to go offline by 2050 | |
| Cypress Point | 8 | 713 | 4.6 | 810 | 5.2 | 933 | 6.0 |
| Elbel | 6 | 552 | 6.3 | 552 | 6.3 | 552 | 6.3 |
| Friesenhahn | 16 | 1,242 | 2 | 1,660 | 2.6 | 1,516 | 2.4 |
| Homestead | 8 | 553 | 3.5 | 905 | 5.8 | 908 | 5.8 |
| Maxfli | 4 | 162 | 4.1 | 162 | 4.1 | 162 | 4.1 |
| Park | 6 | 100 | 1.1 | 100 | 1.1 | Plan to go offline by 2050 | |
| Riata | 6 | 321 | 3.7 | 321 | 3.7 | 321 | 3.7 |
| Schertz Pkwy | 6 | 182 | 2.1 | 182 | 2.1 | Plan to go offline by 2050 | |
| Smoke Pit | 6 | 232 | 2.6 | 244 | 2.8 | 244 | 2.8 |
| Northcliffe (Town Creek) | 18 | 1,753 | 2.2 | 4,050 | 5.1 | 5,115 | 6.4 |

*Peak flows in this table represent peak flows through the force mains

All existing force mains have adequate capacity for existing and future peak flows since they have velocities below the maximum criterion (8 ft/s).

### 4.3.3 Summary

The recommendations outlined in this section were a joint effort with City personnel and LAN to identify improvements needed for the City's sewer system. These improvements aim to address capacity limitations and accommodate the anticipated growth in the planning years of 2030 and 2050. The sewer collection system model should be maintained and updated as new projects are implemented and adjusted to address changes in development schedules.

# 5. IMPACT FEE DEVELOPMENT

## 5.1 Living Unit Equivalent

Living unit or service unit equivalents (LUEs) are "a standardized measure of consumption, use, generation, or discharge attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years". Standard engineering practices equate one water LUE to a single, typical residential water meter's usage. The wastewater LUE is assumed to be 70% of a single residential water meter's usage to account for irrigation, evaporation, and other water losses associated with the wastewater system.

An analysis of the existing water and wastewater system hydraulic models determined that the water LUE is 0.17 gpm, and the wastewater LUE is 0.119 gpm. From the hydraulic water model, the total existing and future 2030 system flows for residential and "other" uses were calculated. These total flow values were divided by their respective LUE to determine the growth in each system. "Growth" in this case refers to the difference between the 2030 value and the existing value. It is important to note that the CCN boundaries for the Schertz water and wastewater system are not the same, so the growth in the respective systems is slightly different. Table 48 & Table 49 below show the process of determining the growth in LUEs for the water and wastewater systems.

Table 48: Calculations for Growth in Water LUEs

| Growth in Water LUEs | | | |
|---|---|---|---|
| Scenario | Total Flow (gpm) | Living Unit Equivalent (gpm) | # of LUEs |
| Existing Residential | 2,225 | 0.17 | 13,089 |
| Existing Other | 2,485 | | 14,620 |
| 2030 Residential | 3,372 | | 19,838 |
| 2030 Other | 2,545 | | 14,971 |
| | | ***Growth In Residential:*** | ***6,749*** |
| | | ***Growth In Other:*** | ***351*** |

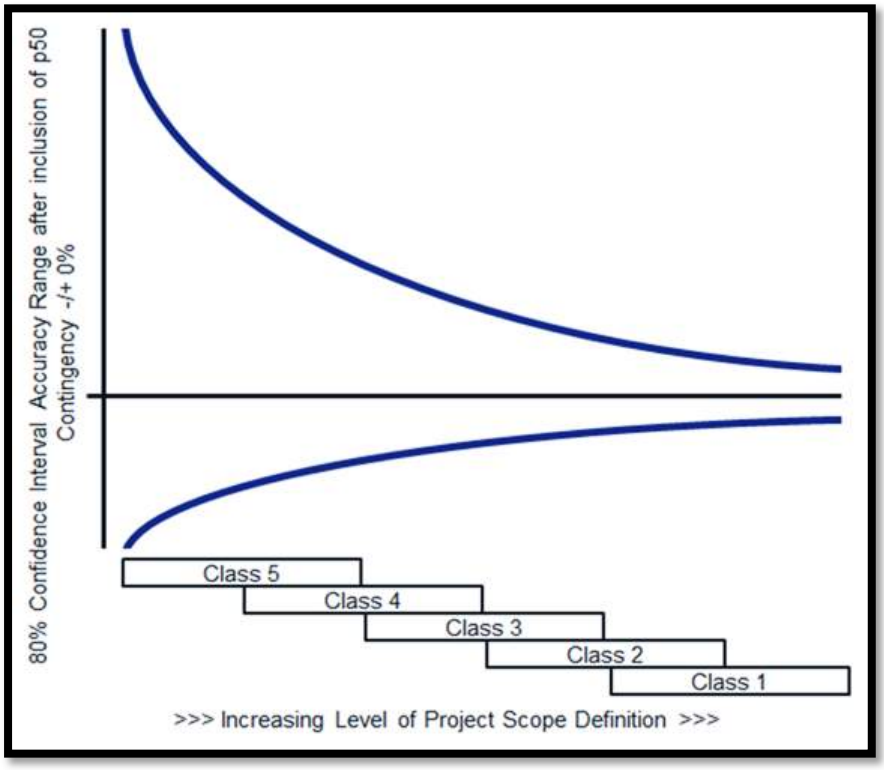
Table 49: Calculations for Growth in Wastewater LUEs

| Growth in Wastewater LUEs | | | |
|---|---|---|---|
| Scenario | Total Flow (gpm) | Living Unit Equivalent (gpm) | # of LUEs |
| Existing Business | 113 | 0.119 | 951 |
| Existing Other | 3,483 | | 29,269 |
| 2030 Business | 123 | | 1,034 |
| 2030 Other | 4,332 | | 36,403 |
| | | ***Growth in Business:*** | ***82*** |
| | | ***Growth In Other:*** | ***7,134*** |

## 5.2 Cost Data

The Association for the Advancement of Cost Engineering (AACE) provides a cost estimate classification system that includes five classes of estimates. Each class has specific characteristics that indicate the level of detail of the cost estimate, with 5 being the least defined and 1 being the most defined. These classes are commonly used industry standards for engineers, contractors, and estimators. The accuracy range of an estimate narrows (becomes more accurate) as the project scope becomes more defined as shown in Figure 29 from AACE below. In the same figure, the approximate overlap of classes is shown as well in relation to the level of scope definition.

Figure 29: AACE Cost Estimate Clases




For this analysis, Class 4 estimating was identified as the appropriate, industry standard, estimation class. According to AACE, Class 4 estimates “are prepared for a number of purposes, such as but not limited to, detailed strategic planning, business development, project screening at more developed stages, alternative scheme analysis, confirmation of economic and/or technical feasibility and preliminary budget approval or approval to proceed to next stage”. The developed cost estimates are preliminary and rely on available information and standard preliminary engineering methods for Class 4 cost estimation. These methods were consistently applied to similar project components (e.g., pipelines, pump stations, lift stations, etc.) to facilitate comparison between different project alternatives.

Cost data for the proposed CIP projects was obtained from the following sources:

- TxDOT Online Bid Reports (past year)
- RS Means Database
- Cost Estimates from Past & Current City Projects
- Cost Estimates from Past & Current LAN Projects

Item costs were averaged from these sources and an inflation rate was applied to the costs for 2030 and 2050, which is discussed in detail in the following section. A 30% contingency factor was applied across all costs estimates, which reflects the range of accuracy of a Class 4 estimate.

For cost components that were highly variable and unpredictable at this stage of analysis, such as developing construction documents and construction management, estimates were derived from previous project experience and included as a percentage of the total construction costs.

## 5.3 Inflation Rate Calculation

In order to accurately capture construction prices for the future scenarios, an average yearly inflation rate was calculated and applied to the 2030 & 2050 project cost estimates. Three sources were consulted for historical inflation indexes including RS Means, Mortenson Construction Cost Indexes, and Turner Building Cost Indexes. Varying time frames of inflation were provided by these sources, but the data was not normalized to ensure that a wide range of indexes were included in the yearly inflation rate calculation. Additionally, these indexes are the average of nationwide data. Table 50 below shows the varying time frames and their associated total and yearly inflation rates. The median yearly inflation rate of this data is 3.91%, and this value was applied to the line items in the 2030 and 2050 cost estimates. See Appendix 28 for inflation rate source data.

Table 50: Yearly Inflation Rate Calculations

| Time Frame | Total Inflation Rate | Yearly Inflation Rate |
|---|---|---|
| RS Means Historical Inflation Indexes | | |
| 2020 to 2024 | 128% | 6.31% |
| 2010 to 2024 | 169% | 3.81% |
| 2000 to 2024 | 251% | 3.91% |
| 1990 to 2024 | 309% | 3.38% |
| 1980 to 2024 | 454% | 3.50% |
| Mortenson Historical Inflation Indexes | | |
| 2020 to 2023 | 132% | 9.65% |
| 2010 to 2023 | 188% | 5.93% |
| Turner Historical Inflation Indexes | | |
| 2020 to 2023 | 117% | 5.27% |
| 2010 to 2023 | 172% | 4.25% |
| 2000 to 2023 | 231% | 3.70% |
| 1996 to 2024 | 272% | 3.77% |
| | ***Average:*** | **4.86%** |
| | ***Median:*** | **3.91%** |

## 5.4 Project Costs Eligibility

Estimates of total construction cost for the proposed water and wastewater CIP projects were developed. However, TLGC Section 395 stipulates that only certain types of projects and only the portion of the project utilized during the 10-year planning period can be included in the impact fee eligible total.

### 5.4.1 Eligible Project Types

There are defined items payable by the impact fee per TGLC Section 395, and these items are listed in Section 1 of this report. The proposed CIP projects were divided into "Growth" projects and "System Improvement" projects to assist in clearly identifying those projects that are eligible. Some of the projects only have a portion of the project costs listed as eligible because they serve both new growth and provide system improvements. Only the growth portions of those projects are eligible to be included in the total impact fee costs. The following types of projects are **not eligible** to be included in the total impact fee costs:

- All 2050 Projects
- Cibolo Creek Municipal Authority Projects (CCMA)

In the tables below, the projects, costs and their impact fee eligible costs are shown for the Water CIP, Wastewater CIP, and the recommended CCMA System Improvement projects. Projects denoted by two asterisks indicate that only a portion of the project costs are impact fee eligible. See Appendix 29 for individual project cost estimates.

### 5.4.2 Project Utilization During 10-Year Planning Period

This water and wastewater master plan includes three phases of projects: near term, 2030, and 2050. Only the projects within the 10-year planning period of 2020-2030 are eligible to be paid by impact fees in this analysis. TLGC also stipulates that only the portion of a project that is utilized during the 10-year period may be considered for impact fee eligibility. The utilization is determined by the following equation:

$$\%\ Utilization = \frac{2030\ Peak\ Flow - 2020\ Peak\ Flow}{2050\ Peak\ Flow}$$

There are some cases where proposed 2030 CIP projects utilize 100% of their build out capacity in 2030 and then in 2050 use less than the build out capacity. This occurs due to additional infrastructure being added in 2050 which takes on some of the capacity burden from those 2030 CIP projects. In these cases, the utilization is determined using the same equation as above, but with 2030 Peak Flow in the denominator:

$$\%\ Utilization\ (special\ case) = \frac{2030\ Peak\ Flow - 2020\ Peak\ Flow}{2030\ Peak\ Flow}$$

See Appendix 30 for utilization calculations.

Table 51: Near Term Water CIP Projects Estimate of Probable Costs

| Project Number | Project Name | Total Project Cost | 2020-2030 Growth Utilization | Impact Fee Eligible Portion |
|---|---|---|---|---|
| **Near Term CIP** | | | | |
| **System Improvement Projects** | | | | |
| NT-W1** | Bubbling Springs 6" WL Replacement | $763,000 | 27% | $206,715 |
| NT-W2 | Corbett Pump Station & 3.0 MG GST | $8,600,000 | 0% | $0 |
| NT-W3 | Ware Seguin Pump Station Operational Improvement | $175,000 | 0% | $0 |
| NT-W4 | 12" WL from Ware Seguin to Lower Seguin | $1,538,000 | 0% | $0 |
| NT-W5 | Fred Couples to Schwab | $455,556 | 0% | $0 |
| NT-W6 | Schwab to Eckhardt | $1,600,000 | 0% | $0 |
| NT-W7** | Graytown to Pfeil | $1,550,000 | 69% | $1,077,040 |
| NT-W8** | FM 78 Water Line Replacement | $875,000 | 22% | $194,778 |
| NT-W9** | Moonlight Meadow Dr & Lost Meadow Dr WL Replacement | $3,000,000 | 0% | $0 |
| NT-W10** | Robinhood Way WL Replacement | $4,650,000 | 0% | $0 |
| | ***NEAR TERM TOTAL:*** | **$23,206,556** | **-** | **$1,478,532** |

Note: Projects denoted by ** indicate that it has both growth & system improvement components.

Table 52: 2030 Water CIP Projects Estimate of Probable Costs

| Project Number | Project Name | Total Project Cost | 2020-2030 Growth Utilization | Impact Fee Eligible Portion |
|---|---|---|---|---|
| **Proposed 2030 CIP** | | | | |
| **Growth Projects** | | | | |
| 2030-W1 | 12" WL from Tri-County Extension to Cibolo Valley Drive | $4,788,000 | 100% | $4,788,000 |
| 2030-W2 | Raf Burnette Rd 12" WL Improvements | $1,438,000 | 89% | $1,272,934 |
| 2030-W3 | 8" WL from Ray Corbett Dr to Lower Seguin Rd | $3,688,000 | 97% | $3,569,245 |
| 2030-W4** | Trainer Hale Rd 2" WL Replacement & 8" WL Improvement | $9,850,000 | 93% | $9,192,317 |
| 2030-W5** | Boenig Dr S 6" WL Replacement & 8" WL Improvement | $6,388,000 | 69% | $4,411,757 |
| 2030-W6 | Live Oak to IH-35 24" Transmission Main | $32,075,000 | 100% | $32,075,000 |
| 2030-W7 | Ware Seguin Pump Station Expansion Phase 1 | $5,213,000 | 33% | $1,737,667 |
| 2030-W8 | IH-10 8" WL Improvements | $6,063,000 | 100% | $6,063,000 |
| | ***2030 Growth Subtotal:*** | **$69,503,000** | **-** | **$63,109,920** |
| **System Improvement Projects** | | | | |
| 2030-W9 | PRV Installation for Proposed Southwest Pressure Plane | $413,000.0 | 0% | $0 |
| 2030-W10** | River Rd 6" WL Replacement | $2,325,000 | 58% | $1,354,926 |
| | ***2030 System Improvement Projects Subtotal:*** | **$2,738,000** | **-** | **$1,354,926** |
| | ***2030 TOTAL:*** | **$72,241,000** | **-** | **$64,464,846** |

Note: Projects denoted by ** indicate that it has both growth & system improvement components.

Table 53: 2050 Water CIP Projects Estimate of Probable Costs

| Project Number | Project Name | Total Project Cost | 2020-2030 Growth Utilization | Impact Fee Eligible Portion |
|---|---|---|---|---|
| **Proposed 2050 CIP** | | | | |
| **Growth Projects** | | | | |
| 2050-W1 | Corbett Pump Station Expansion | $1,663,000 | 2050 CIP Projects are not eligible to be included in this impact fee total. | |
| 2050-W2 | FM 2252 8" WL Improvements | $8,800,000 | | |
| 2050-W3 | Ware Seguin Pump Station Expansion Phase 2 | $2,725,000 | | |
| 2050-W4 | Beck St 6" WL Replacement | $5,288,000 | | |
| 2050-W5 | Raf Burnette Rd 8" WL Improvements | $4,438,000 | | |
| 2050-W6 | IH-35 Pump Station & 3.0 MG GST | $42,188,000 | | |
| 2050-W7 | IH-10 & FM 1518 8" WL Improvements | $3,075,000 | | |
| | ***2050 Growth Subtotal:*** | **$68,177,000** | | |
| **System Improvement Projects** | | | | |
| 2050-W8 | Lower Seguin Rd 8" WL Replacement | $4,775,000 | | |
| | ***2050 System Improvement Projects Subtotal:*** | **$4,775,000** | | |
| | ***2050 TOTAL:*** | **$72,952,000** | | |

Table 54: Near Term Wastewater CIP Projects Estimate of Probable Costs

| Project Number | Project Name | Total Project Cost | 2020-2030 Growth Utilization | Impact Fee Eligible Portion |
|---|---|---|---|---|
| **Near Term CIP** | | | | |
| **Growth Projects** | | | | |
| NT-S1 | Town Creek Phase IV 24" - Section 1 | $6,875,000 | 21% | $1,440,972 |
| NT-S2 | Town Creek Phase IV 12" - Section 2 | $2,925,000 | 0% | $0 |
| NT-S3 | Town Creek Phase V 24" | $10,425,000 | 23% | $2,378,763 |
| NT-S4** | Upsize Lookout Line | $3,838,000 | 20% | $771,788 |
| NT-S5** | Upsize Tri County Line | $2,084,800 | 25% | $526,887 |
| NT-S6 | Cibolo West Main | $16,213,000 | 83% | $13,523,463 |
| NT-S7 | Woman Hollering Creek Lift Station, Gravity Lines, and Force Main | $13,000,000 | 89% | $11,632,450 |
| ***Near Term Growth Subtotal:*** | | **$55,360,800** | **-** | **$30,274,324** |
| **System Improvement Projects** | | | | |
| NT SI-1 | Decommission Tri County Lift Station | $88,000 | 0% | $0 |
| NT SI-2 | Decommission Corbett Lift Station | $1,500,000 | 0% | $0 |
| NT SI-3 | Decommission Sedona Lift Station & Woman Hollering Creek WWTP | $175,000 | 0% | $0 |
| | ***Near Term System Improvement Projects Subtotal:*** | **$1,763,000** | **-** | **$0** |
| | ***NEAR TERM TOTAL:*** | **$57,123,800** | **-** | **$30,274,324** |

Note: Projects denoted by ** indicate that it has both growth & system improvement components.

Table 55: 2030 Wastewater CIP Projects Estimate of Probable Costs

| Project Number | Project Name | Total Project Cost | 2020-2030 Growth Utilization | Impact Fee Eligible Portion |
|---|---|---|---|---|
| **Proposed 2030 CIP** | | | | |
| **Growth Projects** | | | | |
| 2030-S1 | Hope Lane 8" Gravity Line | $2,025,000 | 67% | $1,359,153 |
| 2030-S2 | Old Wiederstein Road 8" | $1,338,000 | 5% | $68,849 |
| 2030-S3 | Union Pacific Railroad 8" - Section 1 | $2,563,000 | 10% | $249,210 |
| 2030-S4 | Union Pacific Railroad 8" - Section 2 | $400,000 | 12% | $47,722 |
| 2030-S5 | Wiederstein Road 8" | $1,663,000 | 83% | $1,372,188 |
| 2030-S6 | Schaefer Road 8" - Section 1 | $4,913,000 | 33% | $1,613,509 |
| 2030-S7 | Schaefer Road 8" - Section 2 | $1,938,000 | 100% | $1,938,000 |
| 2030-S8 | Aranda 8" | $475,000 | 100% | $475,000 |
| 2030-S9 | Weir Road 10" | $2,525,000 | 100% | $2,522,465 |
| 2030-S10 | Trainer Hale Road 10" | $1,038,000 | 100% | $1,034,756 |
| 2030-S11 | Ware Seguin Road 8" | $3,113,000 | 97% | $3,012,264 |
| 2030-S12 | FM 1518 8" | $400,000 | 40% | $160,000 |
| 2030-S13 | I-10 8" - Section 1 | $2,713,000 | 99% | $2,677,145 |
| 2030-S14 | Boenig Drive 8" | $2,963,000 | 29% | $849,531 |
| 2030-S15 | N Greytown Road 8" | $1,275,000 | 52% | $661,379 |
| | ***2030 Growth Subtotal:*** | **$29,342,000** | **-** | **$18,041,171** |
| **System Improvement Projects** | | | | |
| 2030 SI-1** | Friesenhahn West Line WW Upsize | $8,175,000 | 22% | $1,833,143 |
| 2030 SI-2** | Fairlawn WW Upsize | $1,375,000 | 9% | $121,579 |
| 2030 SI-3** | Cibolo Crossing WW Line Upsize | $1,288,000 | 4% | $46,406 |
| 2030 SI-4** | Woodland Oak Drive Replacements | $338,000 | 4% | $13,741 |
| 2030 SI-5** | Old Wiederstein WW Upsize | $5,050,000 | 61% | $3,099,614 |
| 2030 SI-6** | Northcliffe Lift Station Upgrade | $7,838,000 | 5% | $392,686 |
| 2030 SI-7 | Decommission Belmont Park Lift Station | $463,000 | 0% | $0 |
| | ***2030 System Improvement Projects Subtotal:*** | **$24,527,000** | **-** | **$5,507,169** |
| | ***2030 TOTAL:*** | **$53,869,000** | **-** | **$23,548,341** |

Note: Projects denoted by ** indicate that it has both growth & system improvement components.

Table 56: 2050 Wastewater CIP Projects Estimate of Probable Costs

| Project Number | Project Name | Total Project Cost | 2020-2030 Growth Utilization | Impact Fee Eligible Portion |
|---|---|---|---|---|
| **Proposed 2050 CIP** | | | | |
| **Growth Projects** | | | | |
| 2050-S1 | I-35 N 8" | $9,088,000 | 2050 CIP projects are not eligible to be included in the impact fee total. | |
| 2050-S2 | Friesenhahn Lane 8" | $6,500,000 | | |
| 2050-S3 | Schaefer Road 8" - Section 3 | $5,713,000 | | |
| 2050-S4 | Corbett JH 8" | $2,888,000 | | |
| 2050-S5 | Lower Seguin Road 8" | $1,338,000 | | |
| 2050-S6 | I-10 8" - Section 2 | $3,338,000 | | |
| | ***2050 Growth Subtotal:*** | **$28,865,000** | | |
| **System Improvement Projects** | | | | |
| 2050 SI-1 | Cypress Point Lift Station Upgrade | $1,463,000 | | |
| 2050 SI-2 | Decommission Schertz Parkway Lift Station | $238,000 | | |
| 2050 SI-3 | Decommission Park Lift Station | $3,663,000 | | |
| 2050 SI-4 | Decommission Cover's Cove Lift Station | $238,000 | | |
| | ***2050 System Improvement Projects Subtotal:*** | **$5,602,000** | | |
| | ***2050 TOTAL:*** | **$34,467,000** | | |

Table 57: CCMA 2030 System Improvement Projects Estimate of Probable Costs

| Project Number | Project Name | Project Cost |
|---|---|---|
| **Proposed 2030 CIP** | | |
| **CCMA System Improvement Projects** | | |
| 2030 C-1 | Roy Richard Drive Replacements | $1,588,000 |
| 2030 C-2 | Valencia Lane Replacements | $2,288,000 |
| 2030 C-3 | Savannah Drive Replacements | $12,425,000 |
| 2030 C-4 | Build Out Project 25 - 36" Schertz Line | $12,950,000 |
| | ***CCMA System Improvement Projects Total:*** | **$29,251,000** |

## 5.5 Water Meter Updates

Part of the update to the impact fees included updating the water meter types and characteristics to correspond with the new meters that the City will now be utilizing. The City was previously using simple, compound, and turbine type meters. Going forward, the City will be using multi-jet and ultrasonic meters. The maximum allowable impact fees by meter size were calculated by multiplying the LUE per meter by the maximum allowable water and wastewater impact fees. Table 58 shows the difference in the existing and proposed meter characteristics.

Table 58: Existing & Proposed Meter Characteristics

| Meter Size | Meter Type | Maximum Flow Rate (gpm) | Normal Flow Range (gpm) | Maximum Flow Rate for Continuous Duty (gpm) | Existing LUE by Meter Size | Proposed LUE by Meter Size |
|---|---|---|---|---|---|---|
| 5/8" | MULTI-JET | 20 | 1-20 | 15 | 1.0 | 1.0 |
| 3/4" | MULTI-JET | 30 | 2-30 | 20 | 1.5 | 1.3 |
| 1" | MULTI-JET | 50 | 3-50 | 30 | 2.5 | 2.0 |
| 2" | ULTRASONIC | 250 | 0.5-250 | 250 | 10.0 | 16.7 |
| 3" | ULTRASONIC | 500 | 1-500 | 500 | 24.0 | 33.3 |
| 4" | ULTRASONIC | 1,000 | 1.5-1,000 | 1,000 | 42.0 | 66.7 |
| 6" | ULTRASONIC | 1,600 | 3-1,600 | 1,600 | 92.0 | 106.7 |
| 8" | ULTRASONIC | 2,800 | 5-2,800 | 2,800 | 80.0 | 186.7 |
| 10" | ULTRASONIC | 5,500 | 14-5,500 | 5,500 | 250.0 | 366.7 |
| 12" | ULTRASONIC | 5,500 | 14-5,500 | 5,500 | 330.0 | 366.7 |

These meter type changes affected the maximum flow rate for continuous duty for each meter size, which established the updated LUE per meter. The LUE per meter size corresponds to the equivalent impact fees for each meter size.

See Appendix 31 for the new multi-jet and ultrasonic meter characteristics.

## 5.6 Maximum Allowable Impact Fees

TLGC requires that the maximum allowable impact fee may not exceed the value of the total impact fee eligible costs (identified in Section 5.4 of this report) less the required credit that reduces the overall impact fee eligible costs, divided by the growth in LUEs. This credit to the growth-related cost component of the impact fee calculation is required under Local Government Code Chapter 395 to ensure that new service units are not double charged for impact fee related capital improvements. The credit can be determined in the following ways:

- A credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan.
- In the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan.

### 5.6.1 Credit Analysis

The first method was used to calculate the credit and was applied as shown in Table 59 and Table 60. This credit calculation method was performed by the City's financial consultant, Willdan Financial Services. According to Wildan's report, there were seven critical assumptions made in order to determine the credits:

1) Willdan assumed a ten-year period for the calculation, FY 2025 – FY 2034, consistent with guidelines set by Chapter 395.
2) Willdan utilized Capital Improvement Plan cost estimates and percentages of each project allocable to growth developed by City staff and its consulting engineers (LAN).

3) Growth estimates were based on the latest forecasts as presented by the City's consulting engineers (LAN).
4) Terms and interest rates for new debt forecast to be issued for growth-related improvements were based on estimates used in the City's 2023 water and wastewater rate study.
5) Willdan is interpreting Chapter 395 so that the debt allocable to growth-related projects includes both principal and interest.
6) Current debt allocable to growth-related projects was based on estimates provided by City staff.
7) The totals represent Net Present Values of the ten-year cash flows utilizing a discount rate of 6.0%.

From these assumptions, the following values were calculated:

**WATER Revenue Credit -- $3,365,530**

**WASTEWATER Revenue Credit -- $4,611,802**

The full report and detailed credit calculations can be found in Appendix 32.

### 5.6.2 Maximum Allowable Impact Fee

After the calculated credit is applied, the total impact fee eligible costs are divided by the growth in LUEs (discussed in Sections 2 & 5.1 of this report) to obtain the maximum allowable impact fee per LUE. Table 59 and Table 60 summarize the maximum allowable impact fee calculations, including credits.

Table 59: Maximum Allowable Water Impact Fee

| Water Impact Fee | |
|---|---|
| Impact Fee Eligible Costs | $65,943,379 |
| Credit (Calculated: 5.1%) | ($3,365,530) |
| Total Impact Fee Eligible Costs | $62,577,849 |
| Growth in LUEs | 7,100 |
| **Maximum Allowable Water Impact Fee per LUE** | **$8,814** |

Table 60: Maximum Allowable Wastewater Impact Fee

| Wastewater Impact Fee | |
|---|---|
| Impact Fee Eligible Costs | $53,822,665 |
| Credit (Calculated: 8.6%) | ($4,611,802) |
| Total Impact Fee Eligible Costs | $49,210,863 |
| Growth in LUEs | 7,217 |
| **Maximum Allowable Wastewater Impact Fee per LUE** | **$6,819** |

As discussed in the previous section, updates were made to the meter types that the City will be using. Table 61 reflects both the update to the impact fees by meter type and the new meter characteristics. The impact fee by meter size was calculated by multiplying the proposed LUE by the maximum allowable water or wastewater impact fee for per LUE (identified in the tables above). In the last two columns of Table 61, the maximum allowable water and wastewater impact fees by meter size are presented.

Table 61: Maximum Allowable Impact Fee by Meter Size

| Meter Size | Meter Type | Maximum Flow Rate for Continuous Duty (gpm) | Proposed LUE | Maximum Allowable Water Impact Fee | Maximum Allowable Wastewater Impact Fee |
|---|---|---|---|---|---|
| 5/8" | MULTI-JET | 15 | 1.0 | $8,814 | $6,819 |
| 3/4" | MULTI-JET | 20 | 1.3 | $11,810 | $9,137 |
| 1" | MULTI-JET | 30 | 2.0 | $17,627 | $13,638 |
| 2" | ULTRASONIC | 250 | 16.7 | $146,924 | $113,671 |
| 3" | ULTRASONIC | 500 | 33.3 | $293,848 | $227,341 |
| 4" | ULTRASONIC | 1,000 | 66.7 | $587,607 | $454,615 |
| 6" | ULTRASONIC | 1,600 | 106.7 | $940,154 | $727,370 |
| 8" | ULTRASONIC | 2,800 | 186.7 | $1,645,248 | $1,272,880 |
| 10" | ULTRASONIC | 5,500 | 366.7 | $3,231,708 | $2,500,279 |
| 12" | ULTRASONIC | 5,500 | 366.7 | $3,231,708 | $2,500,279 |

## 5.7 Comparison of Local Impact Fees

Since the last water and wastewater impact fee update was performed in 2011, the City expressed interest in comparing the 2024 proposed fees with other municipalities and utility providers in the area. Table 62 provides a comparison of the impact fees imposed by local municipalities and utility providers, and the City of Schertz 2024 proposed impact fees. The City can decide to adopt lower impact fees than those established by this report, typically to spur more development, but should have a means to recoup the costs building the infrastructure to serve the developments.

**Table 62: Local Impact Fee Comparison**

| City/Utility | Total | Water | Wastewater | Population Served (At the Time of Individual Analysis) |
|---|---|---|---|---|
| Pflugerville (2023) | $29,849 | $14,713 | $15,136 | 65,191 |
| NBU (2022) | $25,692 | $19,448 | $6,244 | 90,403 |
| Seguin (2023) | $16,558 | $7,308 | $9,250 | 29,470 |
| **Schertz (Proposed 2024)** | **$15,633** | **$8,814** | **$6,819** | **45,719** |
| SAWS (2024) | $9,350 | $5,987 | $3,363 | 2,000,000 |
| Austin (2023) | $7,700 | $4,800 | $2,900 | 961,000 |
| Boerne (2023) | $7,629 | $2,509 | $5,120 | 18,232 |
| San Marcos (2018) | $6,485 | $3,801 | $2,684 | 68,217 |
| **Schertz (Current from 2011)** | **$4,603** | **$2,934** | **$1,669** | **34,754** |
| Cibolo (2021) | $2,712 | $1,839 | $873 | 34,000 |

Sources can be found in Appendix 33.

# 6. LIST OF APPENDICES

**SECTION 2**

Appendix 1 – 2018 Comprehensive Land Use Plan

Appendix 2 – Zoning Map

Appendix 3 - 30-Year Population Distribution Projections

Appendix 4 - 30-Year Housing Distribution Projections

Appendix 5 - Planned & Existing Residential Developments Comparison to Wastewater CCN

Appendix 6 - Planned & Existing Residential Developments Comparison to Water CCN

Appendix 7 - Planned & Existing Commercial Development Comparison to Wastewater CCN

Appendix 8 - Planned & Existing Commercial Developments Comparison to Water CCN

Appendix 9 - Wastewater CCN Service Area & Comprehensive Land Use

Appendix 10 - Water CCN Service Area & Comprehensive Land Use

**SECTION 3**

Appendix 11 – Near Term Water CIP Map

Appendix 12 – 2030 Fire Flow Analysis Locations

Appendix 13 – 2030 Water CIP Map

Appendix 14 – 2050 Fire Flow Analysis Locations

Appendix 15 – 2050 Water CIP Map

**SECTION 4**

Appendix 16 – Flow Meter, Meter Basin, & Rain Gauge Location Map

Appendix 17 – Dry Weather Calibration Graphs

Appendix 18 – Wet Weather Calibration Graphs

Appendix 19 – Existing System Evaluation Results, Surcharge, & SSO Location Maps

Appendix 20 – Near Term Wastewater Growth & System Improvement Projects

Appendix 21 – 2030 Wastewater System Growth Projects

Appendix 22 – Max Depth to Diameter with 2030 Dry Weather Flows

Appendix 23 – Sanitary Sewer Overflows with 2030 Wet Weather Flows

Appendix 24 – 2030 Wastewater System Improvement Projects

Appendix 25 – 2050 Wastewater System Growth Projects

Appendix 26 – Max Depth to Diameter With 2050 Dry Weather Flows

Appendix 27 – 2050 Wastewater System Improvement Projects

**SECTION 5**

Appendix 28 – Inflation Rate Calculation Sources

Appendix 29 – CIP Projects Cost Estimates

Appendix 30 – CIP Projects Utilization Calculations

Appendix 31 – Octave Meter Specifications

Appendix 32 – Willdan Revenue Credit Calculations & Summary

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# APPENDIX 1 - 2018 COMPREHENSIVE LAND USE PLAN

# SCHERTZ

COMMUNITY ★ SERVICE ★ OPPORTUNITY

Last Update: February 20, 2018

City of Schertz, GIS Coordinator: Tony McFalls, gis@schertz.com (210) 619-1184

"The City of Schertz provides this Geographic Information System product "as is" without any express or implied warranty of any kind including but not limited to the implied warranties of merchantability and fitness for a particular purpose. In no event shall The City of Schertz be liable for any special, indirect or consequential damages or any damages whatsoever arising out of or in connection with the use of or performance of these materials. Information published in this product could include technical inaccuracies or typographical errors. Periodical changes may be made and information may be added to the information herein. The City of Schertz may make improvements and/or changes in the product(s) described herein at any time."

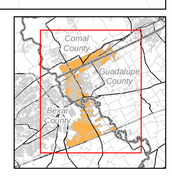
# Comprehensive Land Use Plan

- Schertz Municipal Boundary
- Schertz ETJ Boundary
- County Boundaries
- Railroads

Air Installation Compatible Use Zone
- APZ I
- APZ II
- Clear Zone

- Major Roads
- Minor Roads
- Proposed Roads

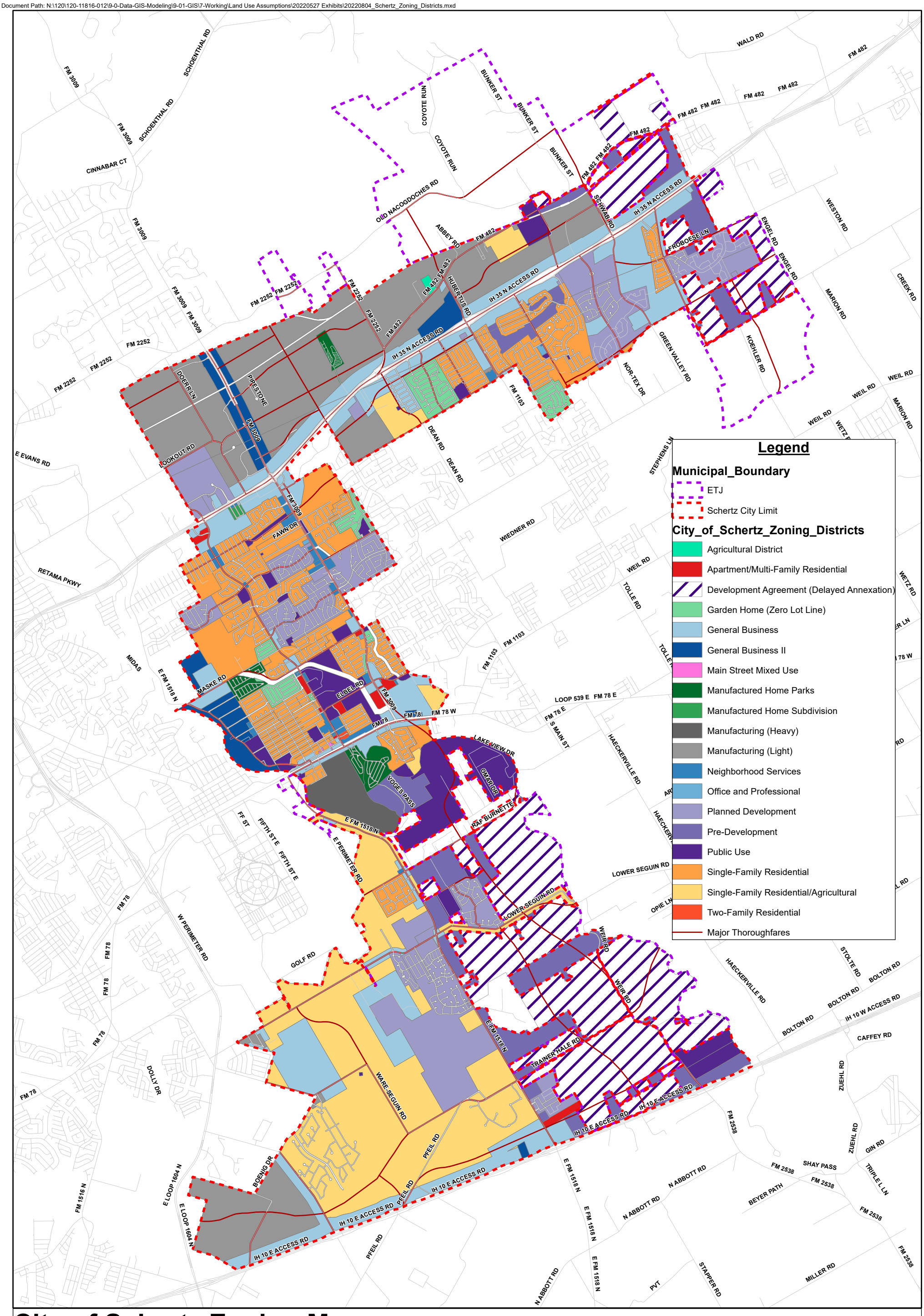
- Rural Frontage
- Sector Boundary
- Air Installation Impact
- Air Installation Compatible
- Civic, Schools
- Main Street Commercial
- Commercial Campus
- Highway Commercial
- Industrial
- Industry, Technology and R and D
- Parks, Open Space
- Agricultural Conservation
- Estate Neighborhood
- Single Family Residential
- Multi-Family Residential
- Manufactured Housing
- Mixed Use Neighborhood
- Mixed Use Core
- TND/TOD
- Transition
- 1% Annual-Chance Flood Event




0 ¼ ½ 1 1½ 2 Miles

# APPENDIX 2 - ZONING MAP

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# City of Schertz Zoning Map

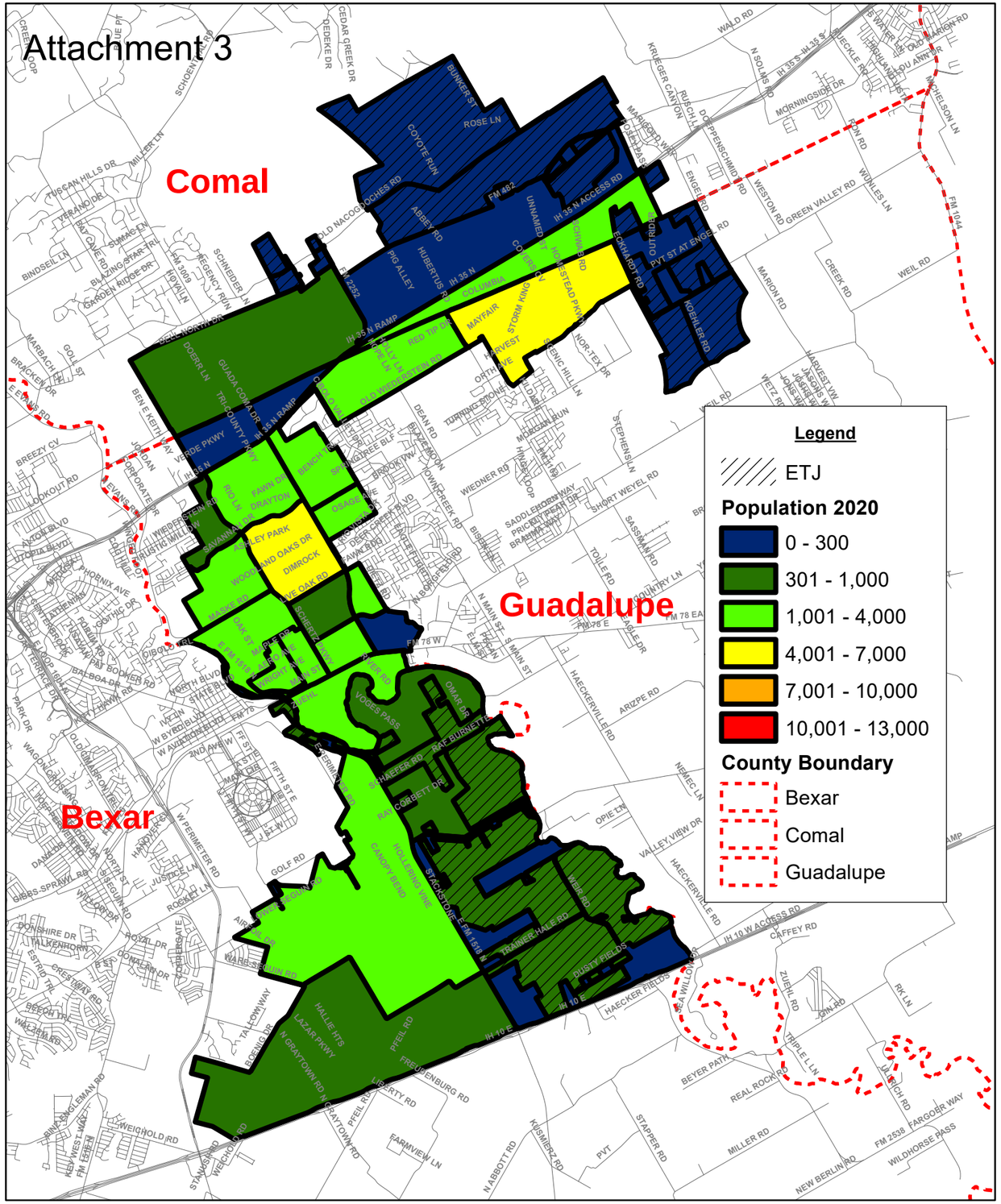
8/4/2022

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

# APPENDIX 3 - 30 YEAR POPULATION DISTRIBUTION PROJECTIONS

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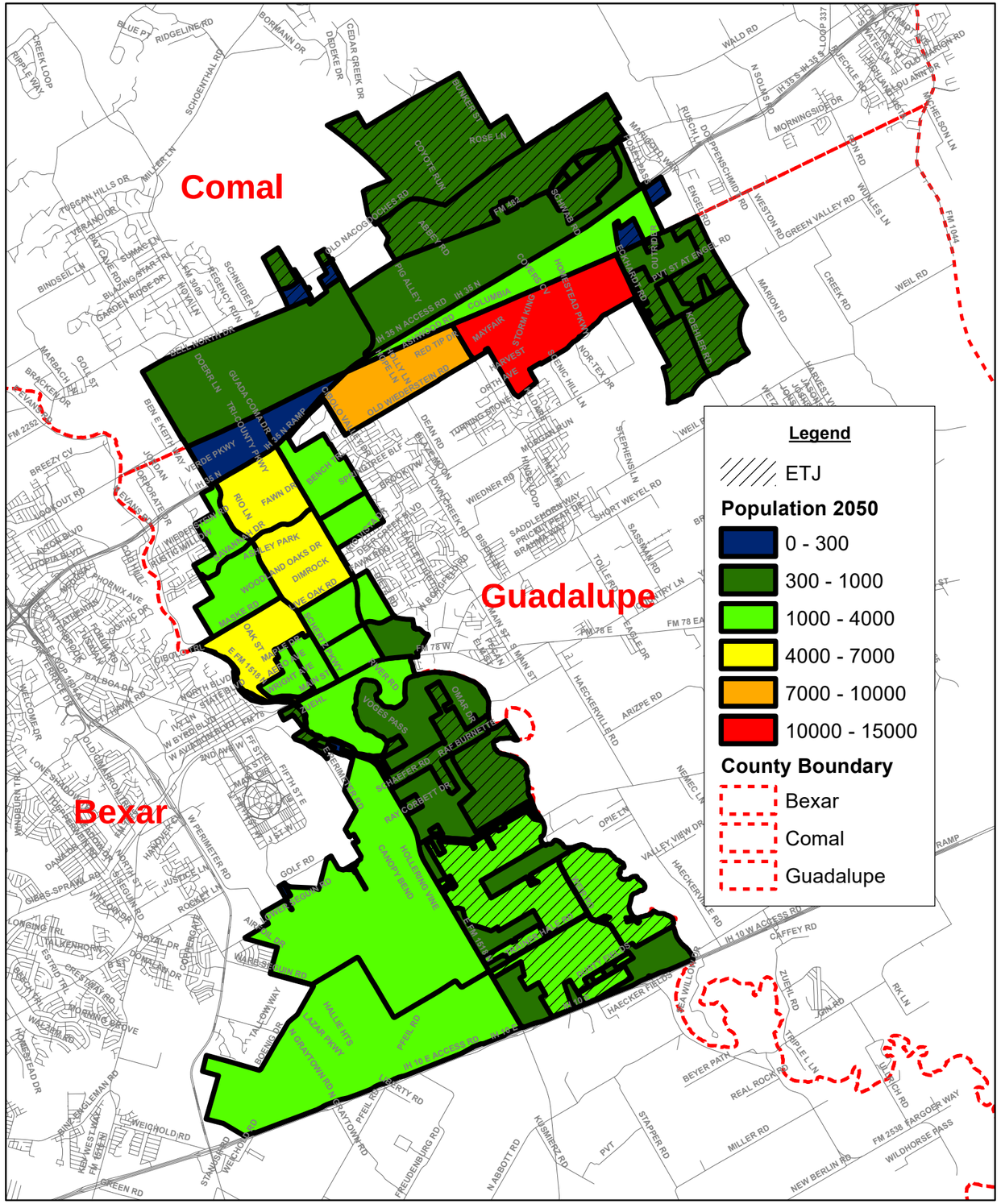
Attachment 3




**Schertz 2020 Population Distribution**

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

0 5,000 10,000 Feet



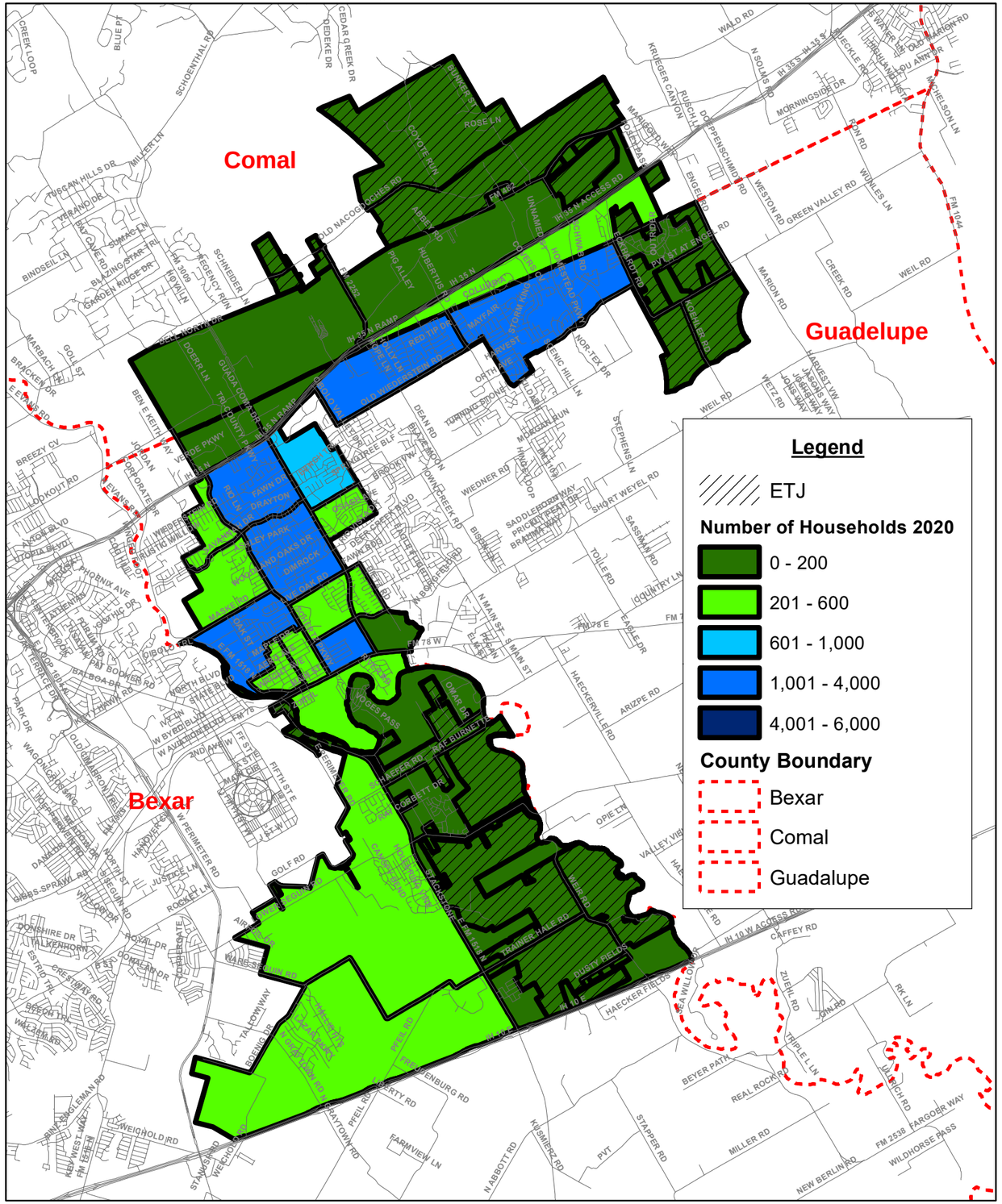

**Schertz 2050 Population Distribution**
8/4/2022

N W E S

0 5,000 10,000 Feet

# APPENDIX 4 - 30 YEAR HOUSING DISTRIBUTION PROJECTIONS

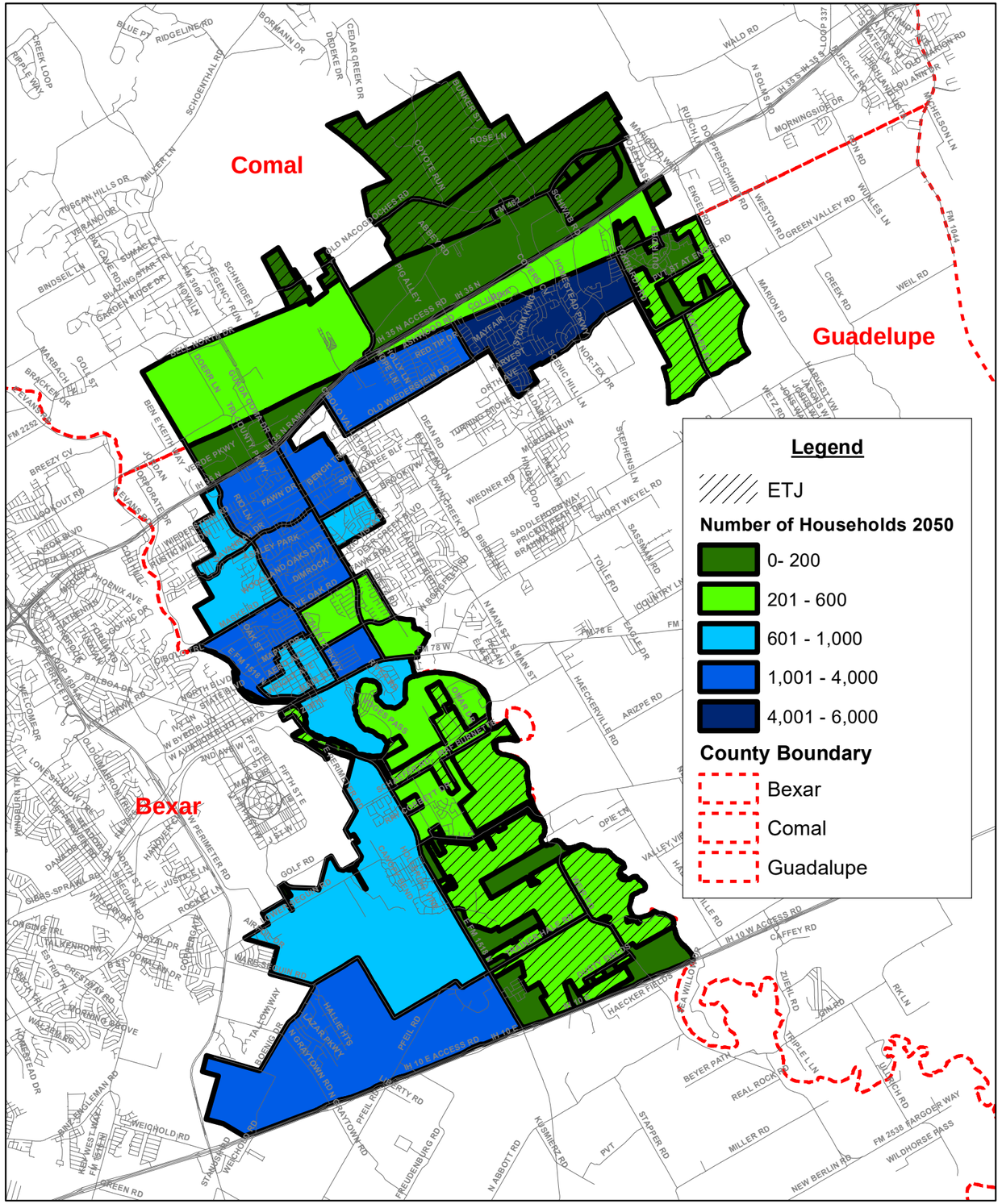
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**Schertz 2020 Residential Housing Distribution**

Lockwood, Andrews & Newnam, Inc.
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0 5,000 10,000 Feet




**Schertz 2050 Residential Housing Distribution**
1/11/2022

N W E S

0 5,000 10,000 Feet

# APPENDIX 5 - PLANNED & EXISTING RESIDENTIAL DEVELOPMENTS COMPARISON TO WASTEWATER CCN

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# Attachment 5

Parklands &
Parklands II

Oakmont Place

Saddlebrook

Carmel Ranch

Sterling Grove

Crossvine
Module III

Graytown

## Legend

- SchertzWW_CCN_Boundary
- Schertz City Limit
- ETJ
- Multi-Family Residential Development

**Planned and Existing Residential Subdivisions**

**Maximum Housing Units**

- 0 - 5
- 6 - 25
- 26 - 75
- 76 - 100
- 101 - 200
- 201 - 300
- 301 - 400
- 401 - 1050

**Schertz Planned and Existing Residential Developments**
**Comparison to Wastewater CCN Service Area**
8/8/2022

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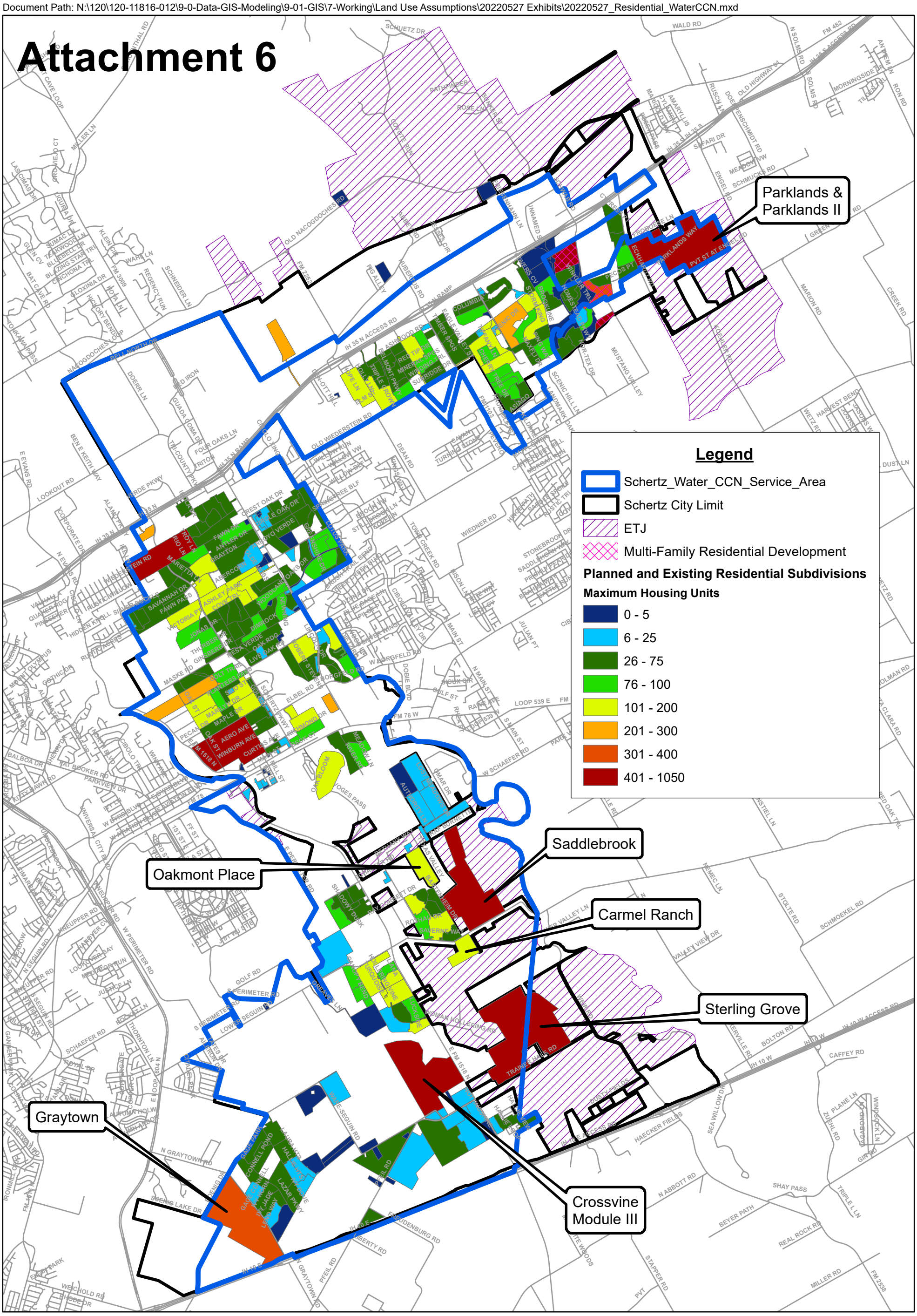
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# APPENDIX 6 - PLANNED & EXISTING RESIDENTIAL DEVELOPMENTS COMPARISON TO WATER CCN

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# Attachment 6




**Schertz Planned and Existing Residential Developments**
**Comparison to Water CCN Service Area**
8/8/2022

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

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Feet

# APPENDIX 7 - PLANNED & EXISTING COMMERCIAL DEVELOPMENTS COMPARISON TO WASTEWATER CCN

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# Attachment 7

## Legend

- Schertz Wastewater CCN Service Area
- Schertz City Limit
- ETJ

**Commercial Parcels**

**Planned and Existing Commercial Properties**

- Commercial Parcels

**Schertz Planned and Existing Commericial Developments**
**Comparison to Wastewater CCN Service Area**
8/16/2022

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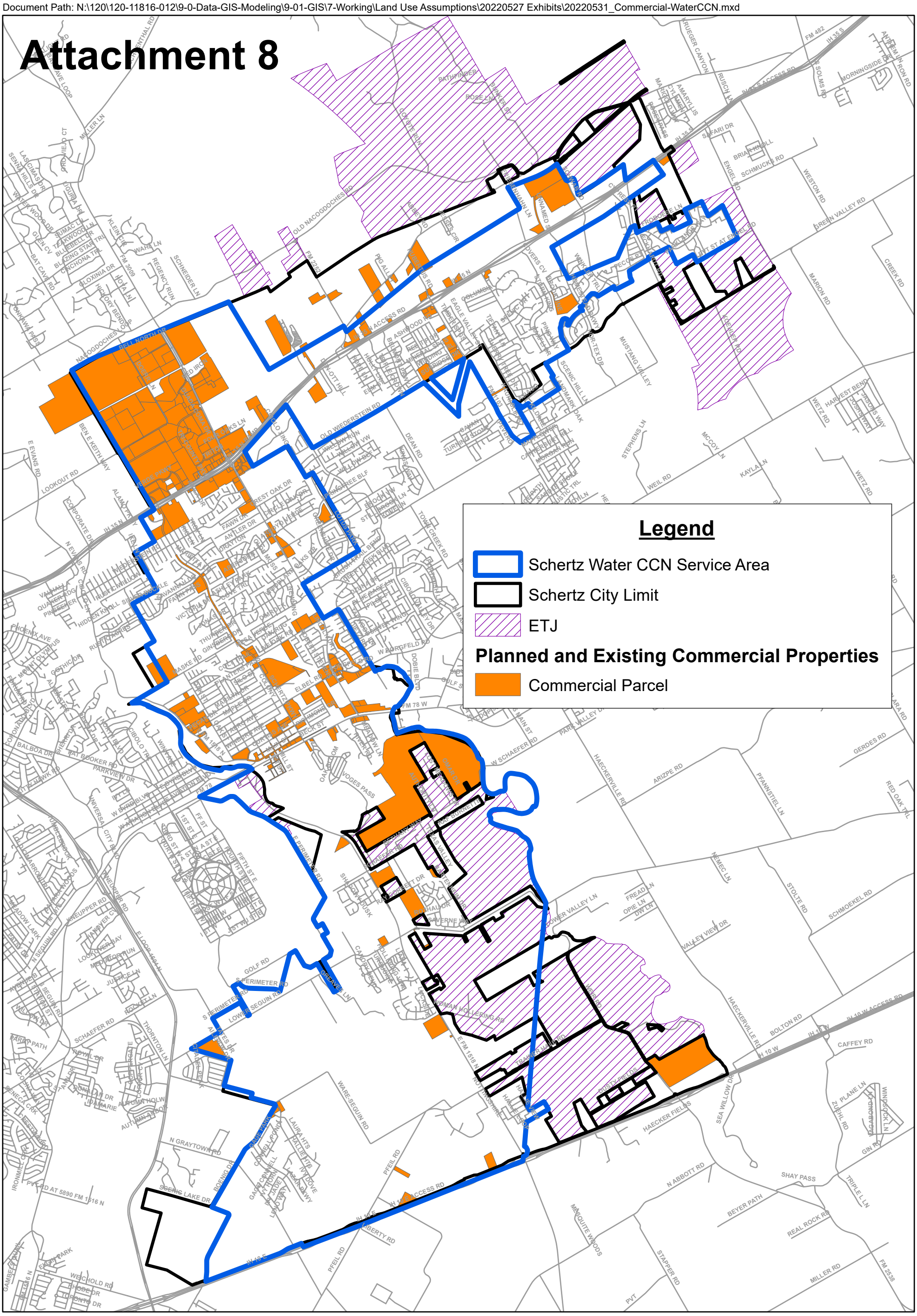
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# APPENDIX 8 - PLANNED & EXISTING COMMERCIAL DEVELOPMENTS COMPARISON TO WATER CCN

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# Attachment 8




**Schertz Planned and Existing Commericial Developments**
**Comparison to Water CCN Service Area**
8/16/2022

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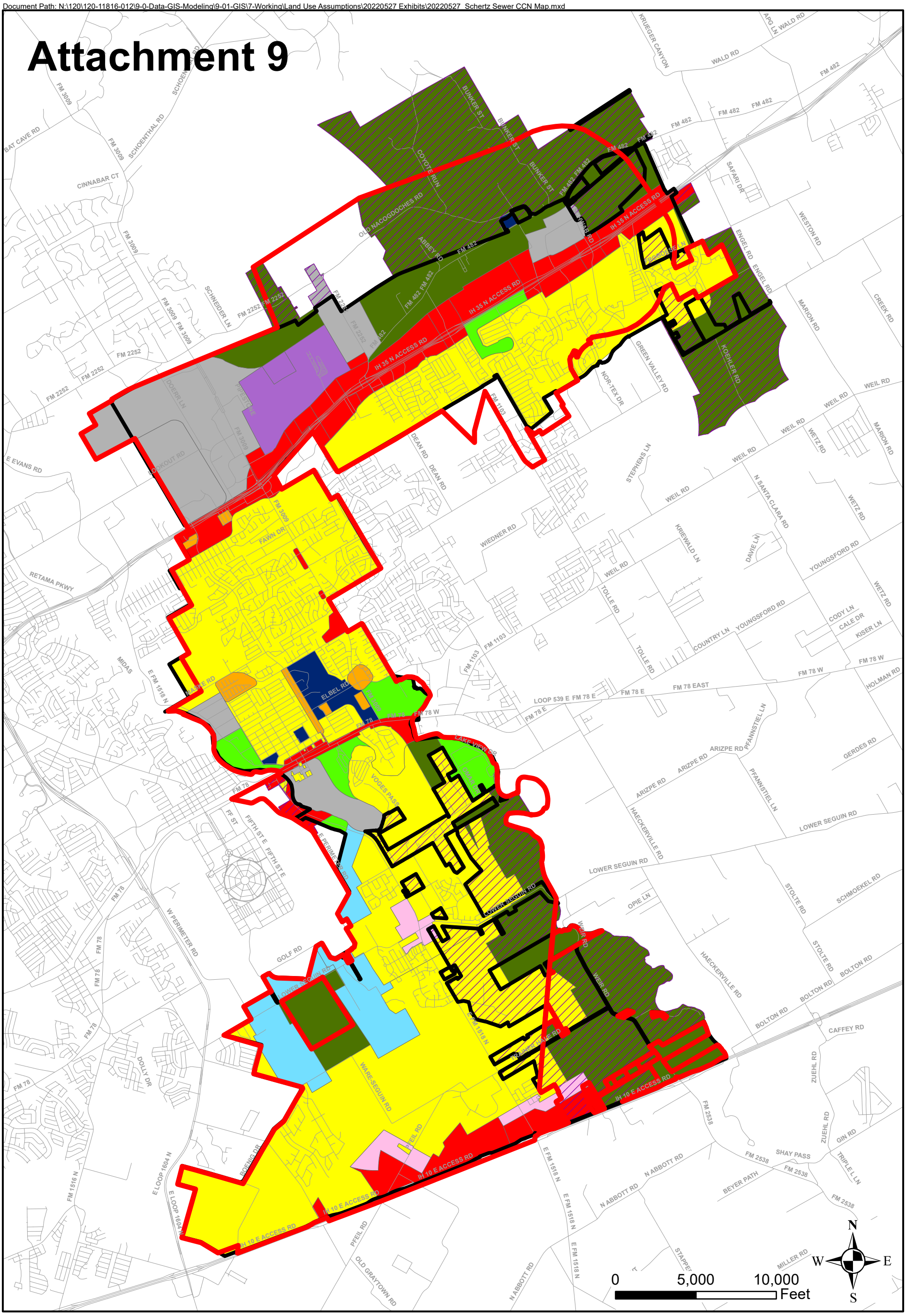
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# APPENDIX 9 - WASTEWATER CCN SERVICE AREA & COMPREHENSIVE LAND USE

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# Attachment 9




## Legend

- ETJ
- Schertz City Limit

**Schertz Sewer CCN Service Area**

- Schertz Sewer CCN Service Area

**Future Land Use**

- Agricultural Conservation
- Air Installation
- Civic, Schools
- Commercial
- Industrial
- Mixed Use
- Multi-Family Residential
- Parks, Open Space
- Single Family Residential
- Transition

**Schertz**
**CCN Sewer Service Area Map**
**Supported Land Uses**

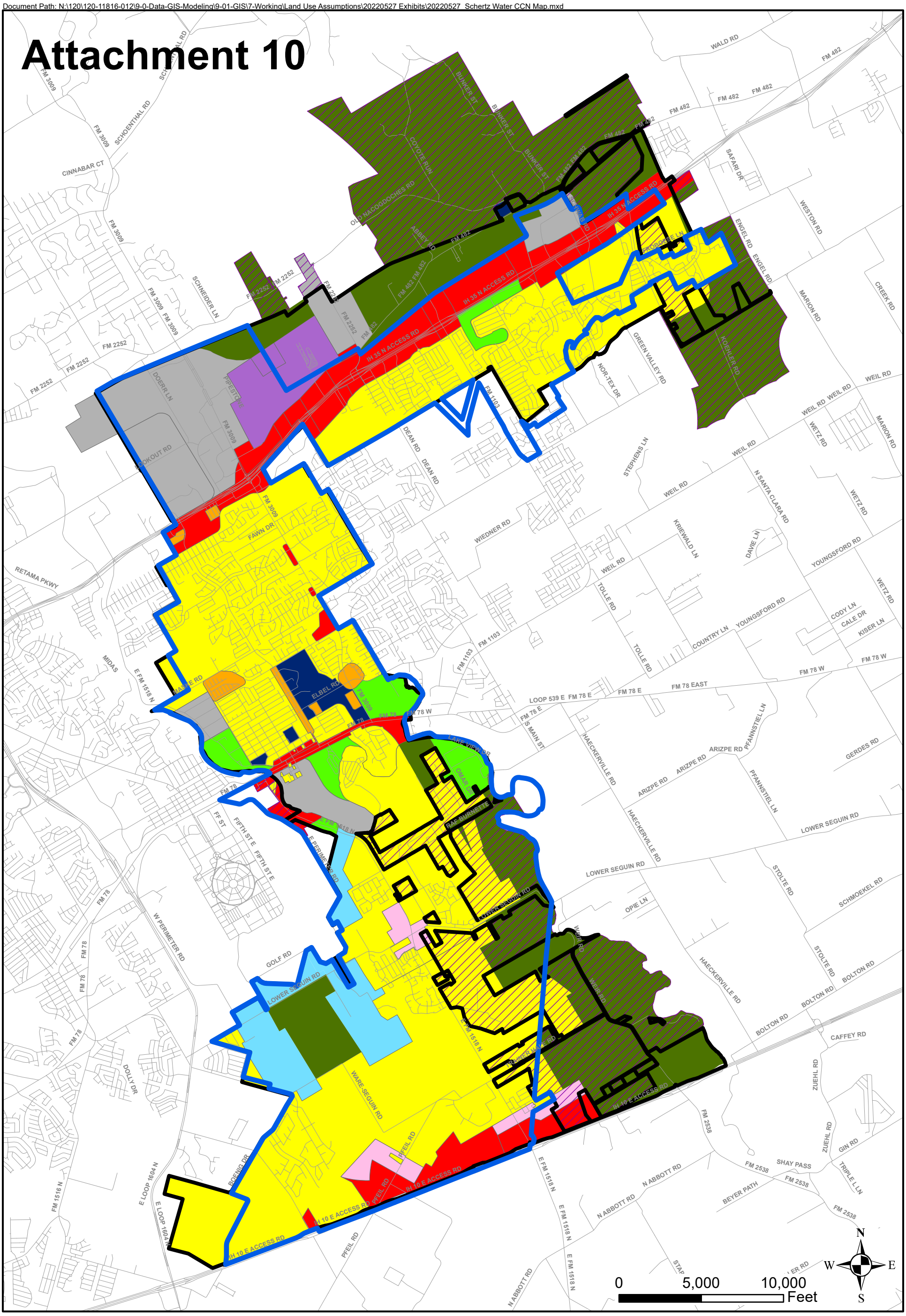
8/8/2022

Lockwood, Andrews & Newnam, Inc.
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# APPENDIX 10 - WATER CCN SERVICE AREA & COMPREHENSIVE LAND USE

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# Attachment 10




## Legend

- ETJ
- Schertz City Limit

**Schertz Water CCN Service Area**

- Schertz Water CCN Service Area

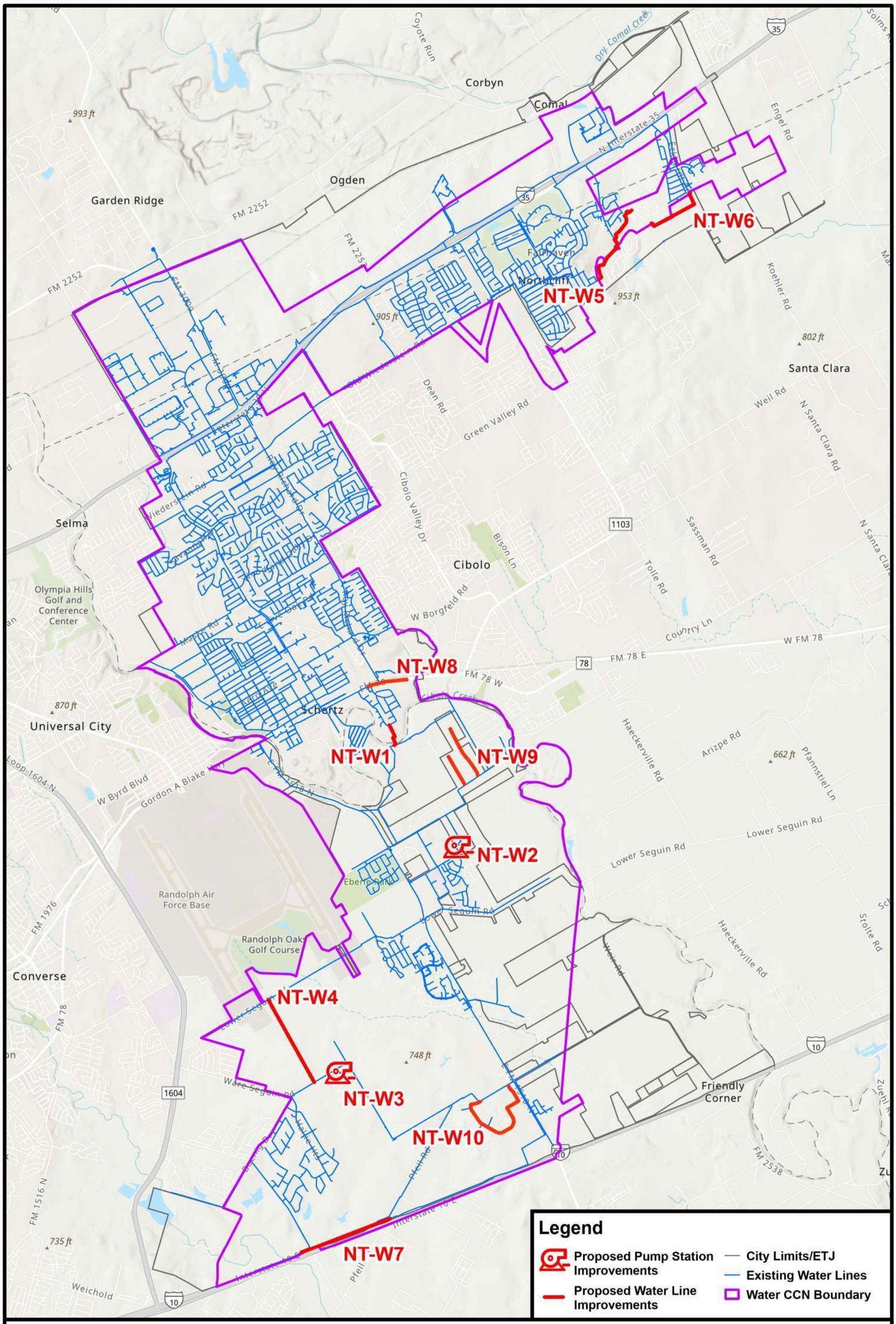
**Future Land Use**

- Agricultural Conservation
- Air Installation
- Civic, Schools
- Commercial
- Industrial
- Mixed Use
- Multi-Family Residential
- Parks, Open Space
- Single Family Residential
- Transition

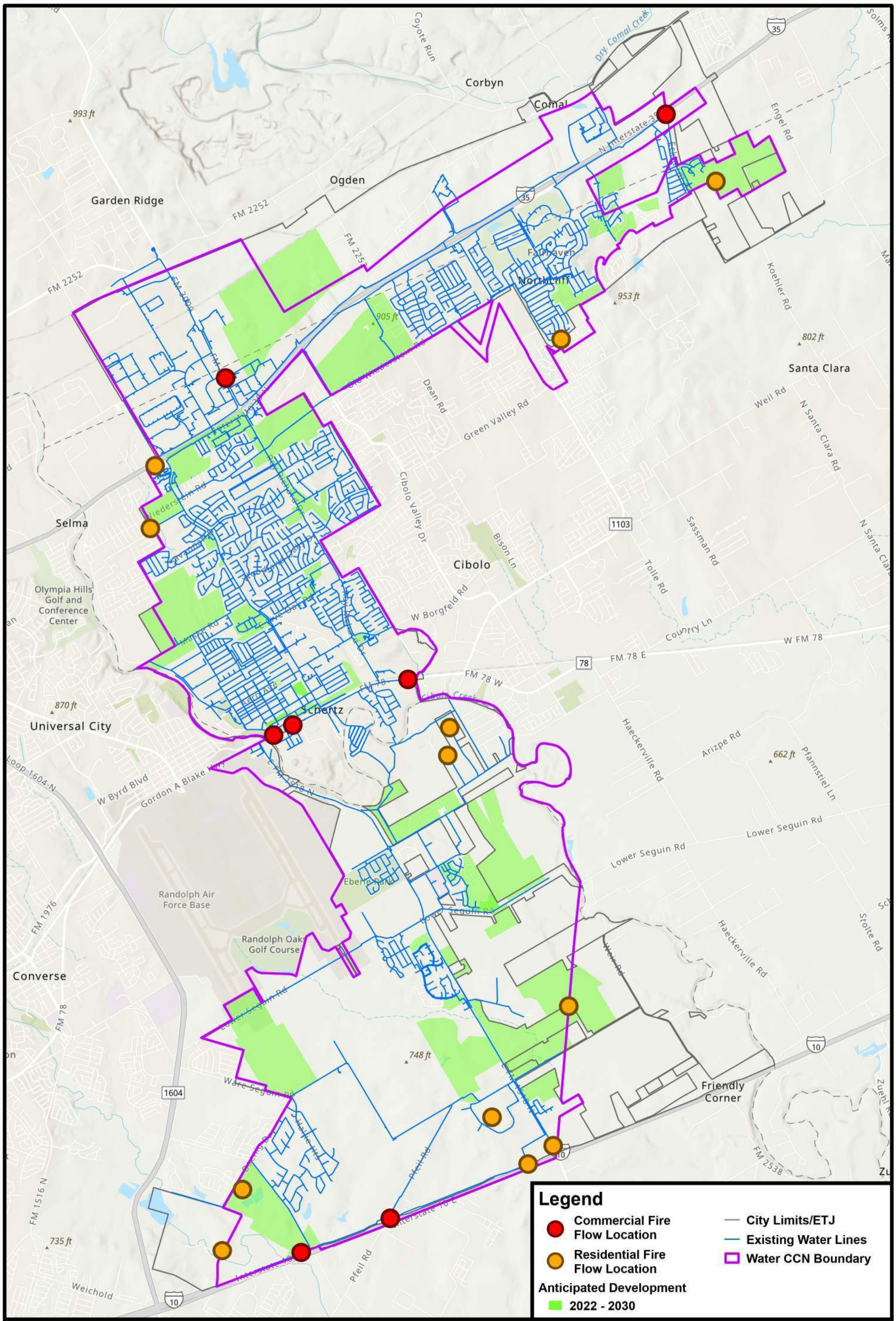
**Schertz**
**CCN Water Service Area Map**
**Supported Land Uses**
8/8/2022

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

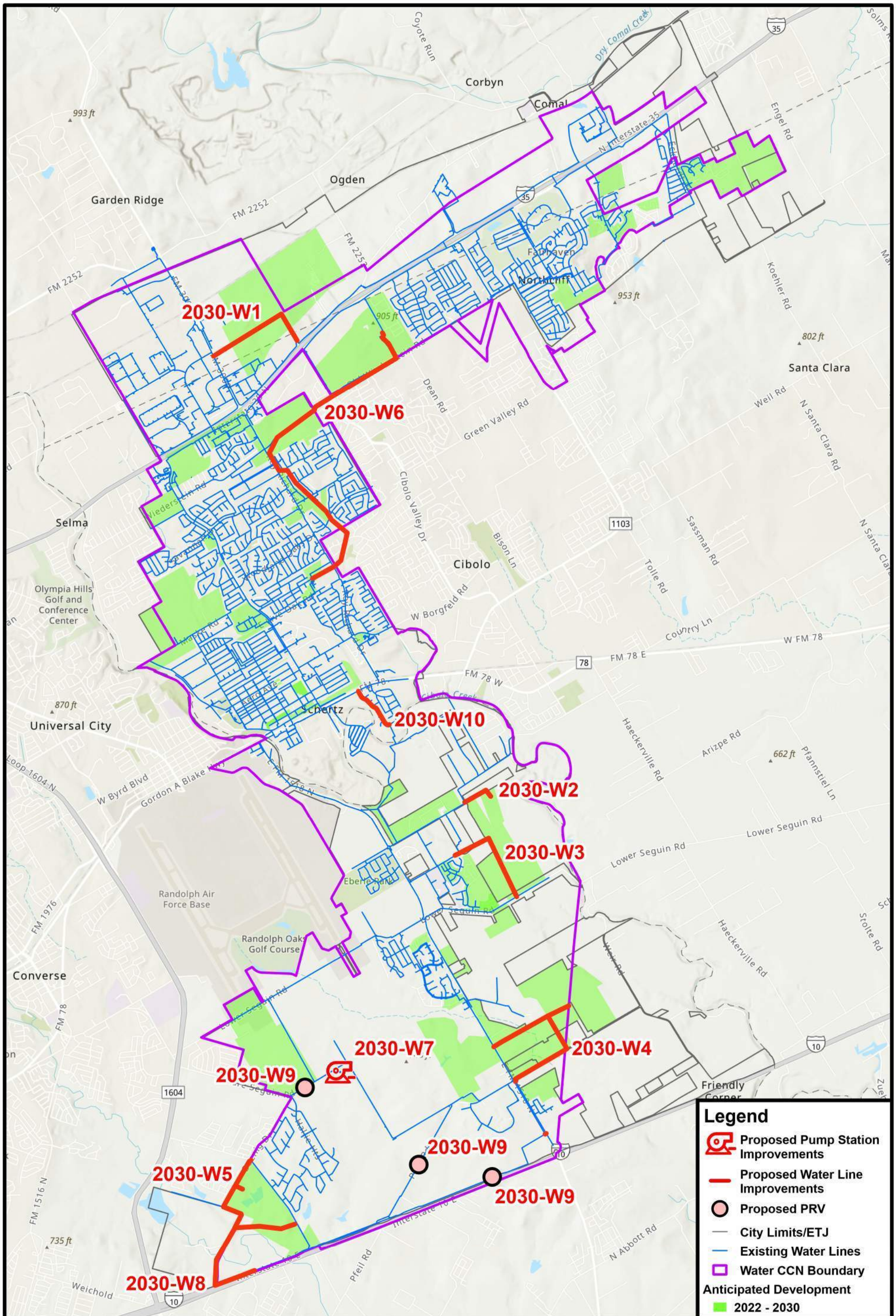
# APPENDIX 11 - NEAR TERM WATER CIP MAP


NT-W6
NT-W5
NT-W8
NT-W1
NT-W9
NT-W2
NT-W4
NT-W3
NT-W10
NT-W7
Corbyn
Comal
Ogden
Garden Ridge
Selma
Cibolo
Schertz
Universal City
Converse
Santa Clara
Friendly Corner
Randolph Air Force Base
Olympia Hills Golf and Conference Center
Randolph Oaks Golf Course
Fairhaven
Northcliff
Eberle Park
Coyote Run
Dry Comal Creek
Engel Rd
Koehler Rd
Dean Rd
Green Valley Rd
Cibolo Valley Dr
Bison Ln
Sassman Rd
Tolle Rd
W Borgfeld Rd
Country Ln
W FM 78
FM 78 E
FM 78 W
Haeckerville Rd
Arizpe Rd
Pfannstiel Ln
Lower Seguin Rd
Stolte Rd
Weil Rd
N Santa Clara Rd
Wiederstein Rd
Maple Rd
Live Oak Rd
Cedar Ave
W Byrd Blvd
Gordon A Blake Hwy
Loop 1604 N
FM 1976
FM 78
FM 1516 N
Ware Seguin Rd
Pfeil Rd
Weichold
FM 2538
Interstate 35
Interstate 10
FM 2252
FM 2252
FM 2252
FM 3009
993 ft
905 ft
953 ft
802 ft
870 ft
662 ft
748 ft
735 ft
1604
1103
78
35
10
Legend
Proposed Pump Station Improvements
Proposed Water Line Improvements
City Limits/ETJ
Existing Water Lines
Water CCN Boundary
NEAR TERM WATER CIP MAP
Planning
Engineering
Program Management
SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.
N
W
E
S
0
3,500
7,000
14,000
Feet

# APPENDIX 12 - 2030 FIRE FLOW ANALYSIS LOCATIONS

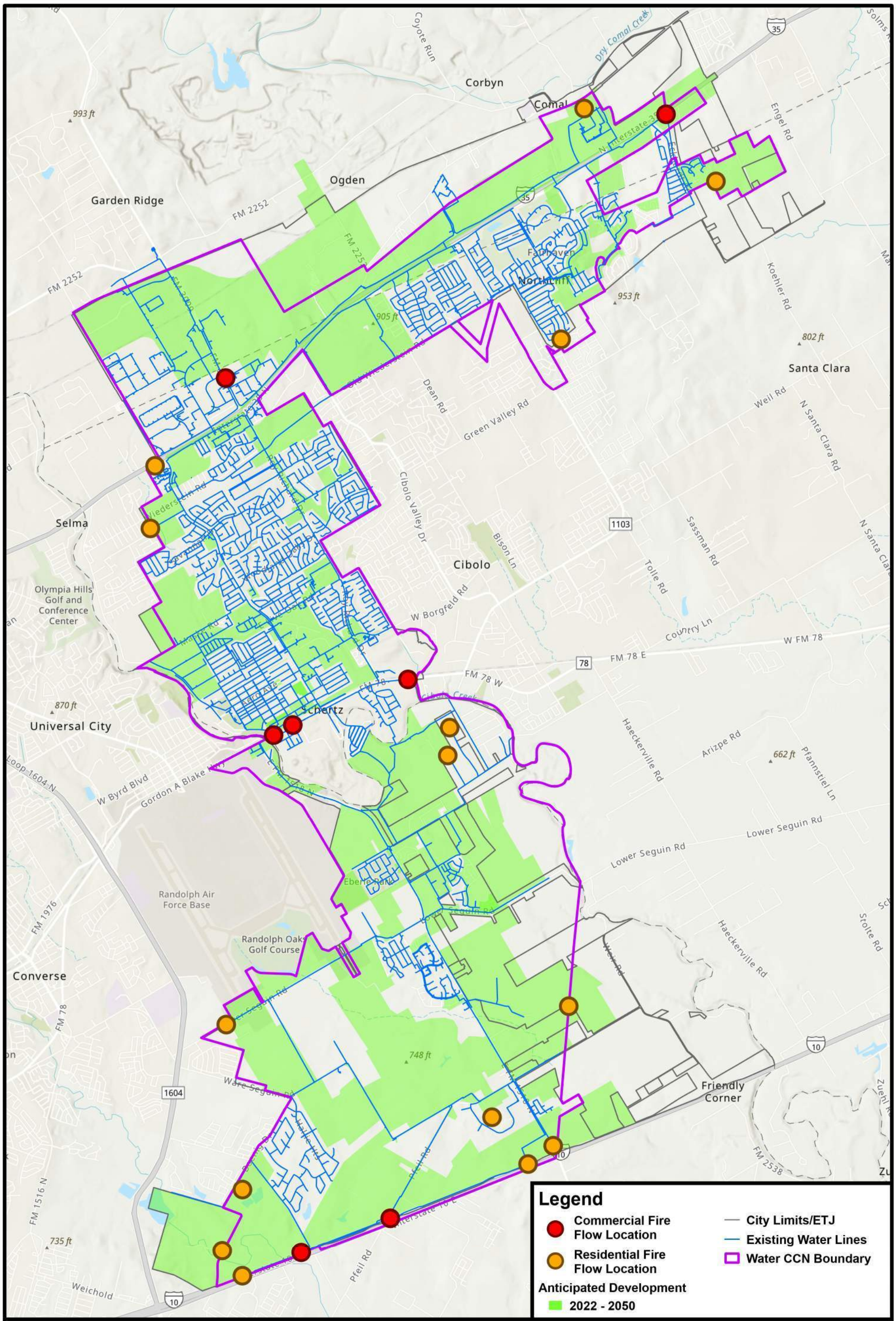

Corbyn
Comal
Ogden
Garden Ridge
Fairhaven
Northcliff
Santa Clara
Selma
Cibolo
Olympia Hills Golf and Conference Center
Schertz
Universal City
Randolph Air Force Base
Randolph Oaks Golf Course
Converse
Friendly Corner
Coyote Run
Dry Comal Creek
Engel Rd
Koehler Rd
Dean Rd
Green Valley Rd
Cibolo Valley Dr
Bison Ln
Sassman Rd
Tolle Rd
W Borgfeld Rd
Country Ln
W FM 78
FM 78 E
FM 78 W
Haeckerville Rd
Arizpe Rd
Pfannstiel Ln
Lower Seguin Rd
Well Rd
N Santa Clara Rd
Stolte Rd
Pfeil Rd
Ware Seguin Rd
FM 2538
FM 2252
FM 2537
FM 3009
FM 1976
FM 1516 N
FM 78
W Byrd Blvd
Gordon A Blake Hwy
Loop 1604 N
993 ft
905 ft
953 ft
802 ft
870 ft
748 ft
735 ft
662 ft
35
1103
78
1604
10
Legend
Commercial Fire Flow Location
Residential Fire Flow Location
Anticipated Development
2022 - 2030
City Limits/ETJ
Existing Water Lines
Water CCN Boundary
FIRE FLOW ANALYSIS LOCATIONS
Planning
Engineering
Program Management
SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.
N
W
E
S
0
3,500
7,000
14,000
Feet

# APPENDIX 13 - 2030 WATER CIP MAP


2030-W1
2030-W6
2030-W10
2030-W2
2030-W3
2030-W4
2030-W7
2030-W9
2030-W9
2030-W9
2030-W5
2030-W8
Garden Ridge
Ogden
Corbyn
Comal
Fairhaven
Northcliff
Santa Clara
Selma
Cibolo
Olympia Hills Golf and Conference Center
Schertz
Universal City
Randolph Air Force Base
Randolph Oaks Golf Course
Converse
Friendly Corner
Legend
Proposed Pump Station Improvements
Proposed Water Line Improvements
Proposed PRV
City Limits/ETJ
Existing Water Lines
Water CCN Boundary
Anticipated Development
2022 - 2030
2030 WATER CIP MAP
Planning
Engineering
Program Management
SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.
N
W
E
S
0
3,500
7,000
14,000
Feet

# APPENDIX 14 - 2050 FIRE FLOW ANALYSIS LOCATIONS

# 2050 FIRE FLOW ANALYSIS LOCATIONS




## Legend

- Commercial Fire Flow Location
- Residential Fire Flow Location
- City Limits/ETJ
- Existing Water Lines
- Water CCN Boundary

Anticipated Development

- 2022 - 2050

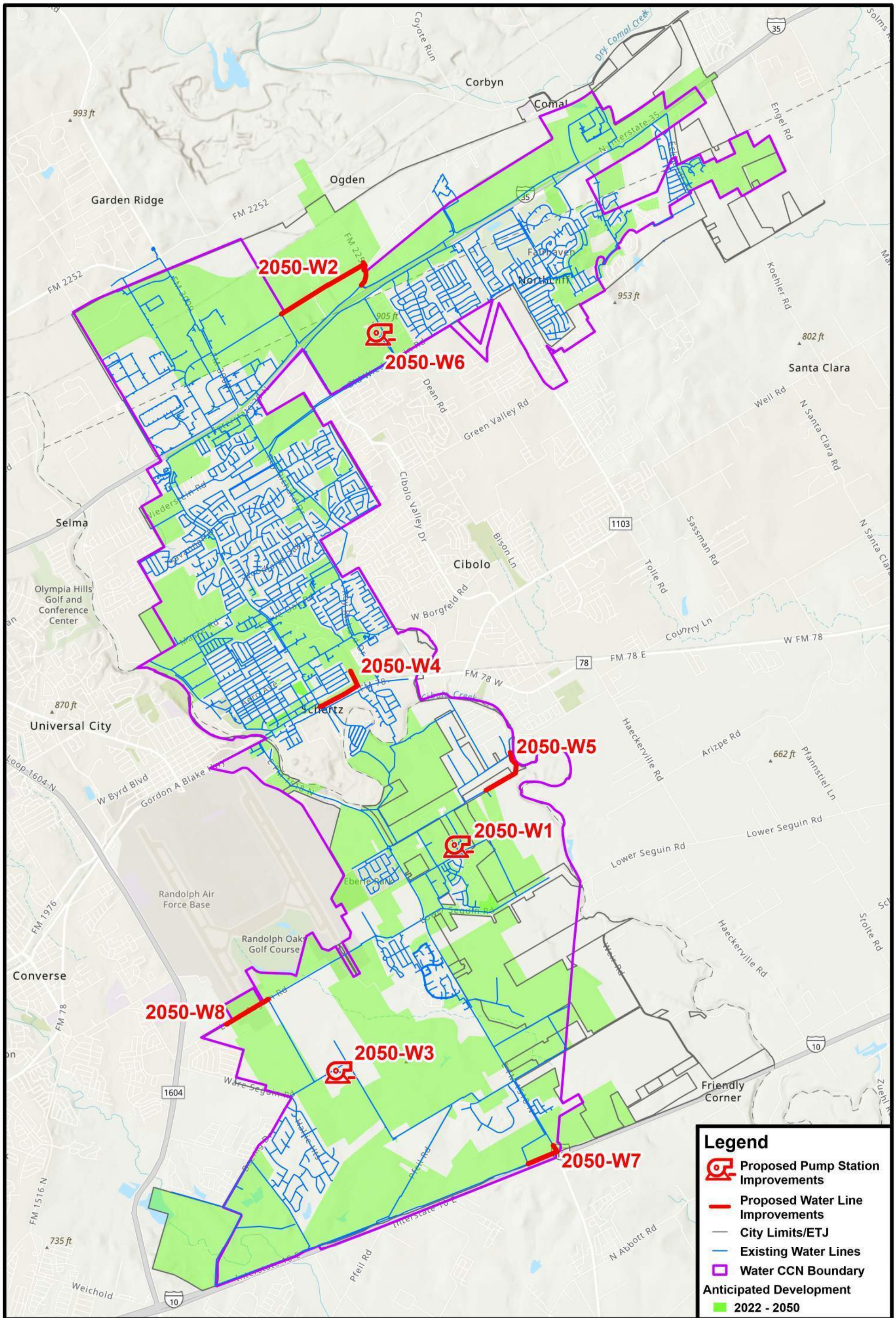
Planning
Engineering
Program Management

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N W E S

0 3,500 7,000 14,000 Feet

# APPENDIX 15 - 2050 WATER CIP MAP




# 2050 WATER CIP MAP

Planning
Engineering
Program Management

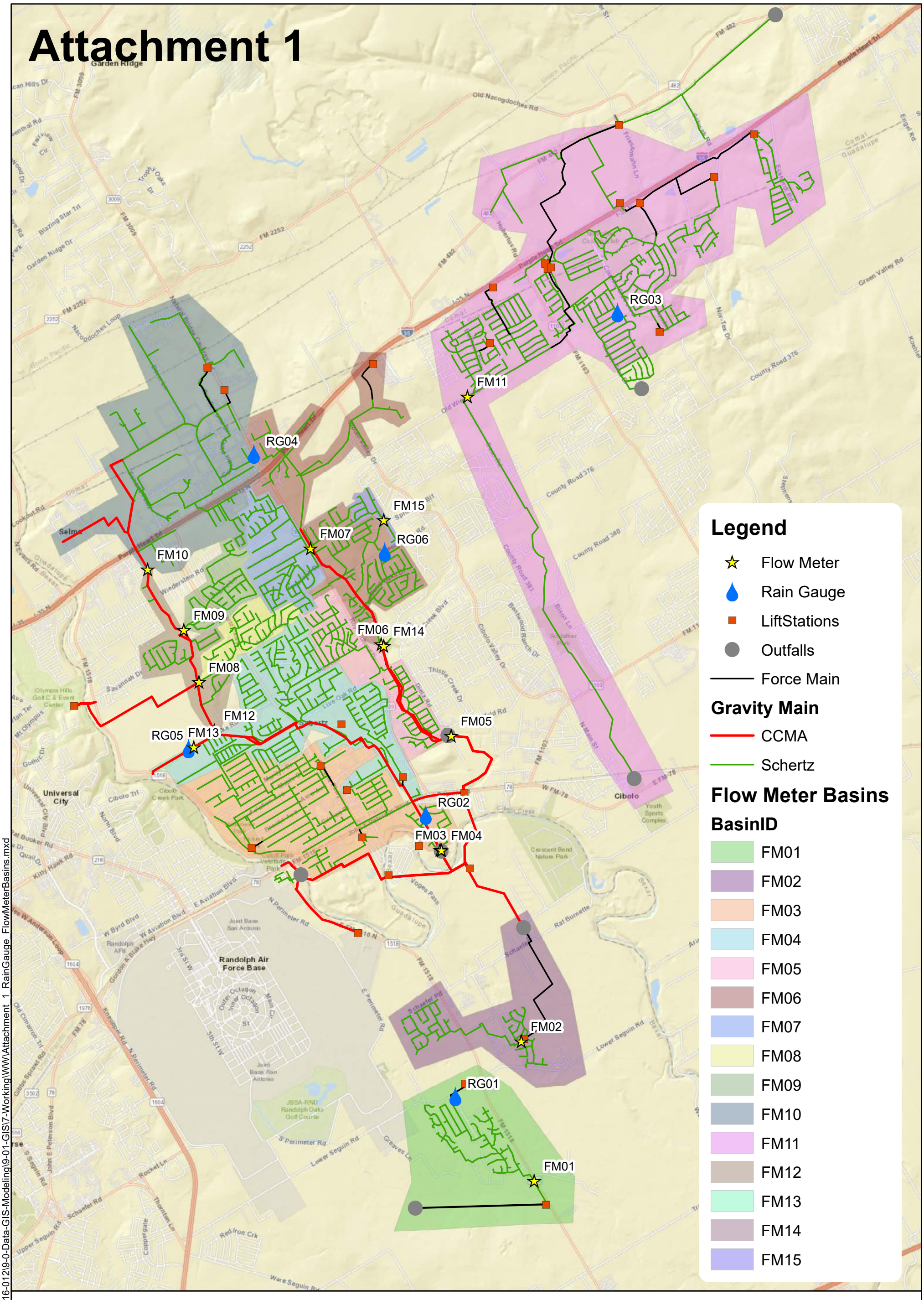
SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N W E S

0 3,500 7,000 14,000 Feet

# APPENDIX 16 - FLOW METER, METER BASIN, & RAIN GAUGE LOCATION MAP

# Attachment 1




Document Path: N:\120\120-11816-012\9-0-Data-GIS-Modeling\9-01-GIS\7-Working\WW\Attachment_1_RainGauge_FlowMeterBasins.mxd

## Flow Meter, Meter Basin, and Rain Gauge Location

8/26/2022

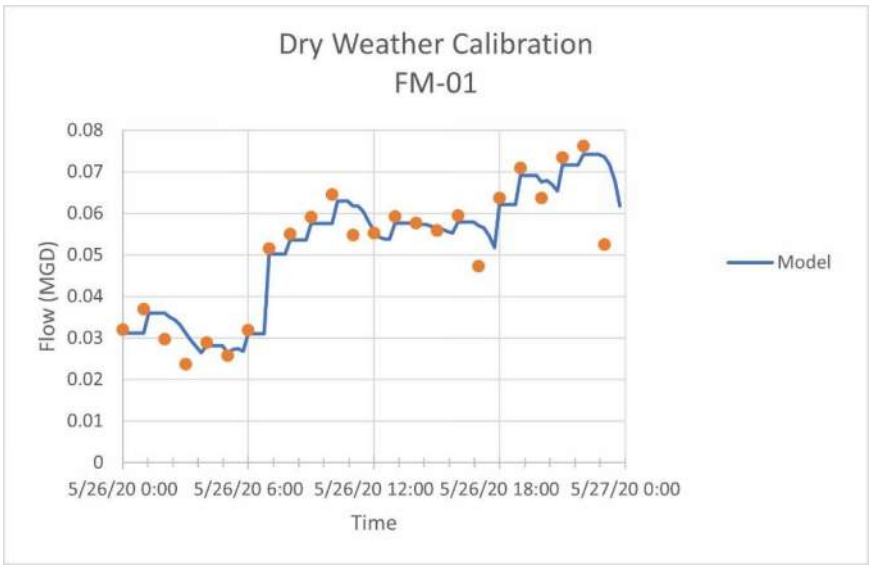
Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

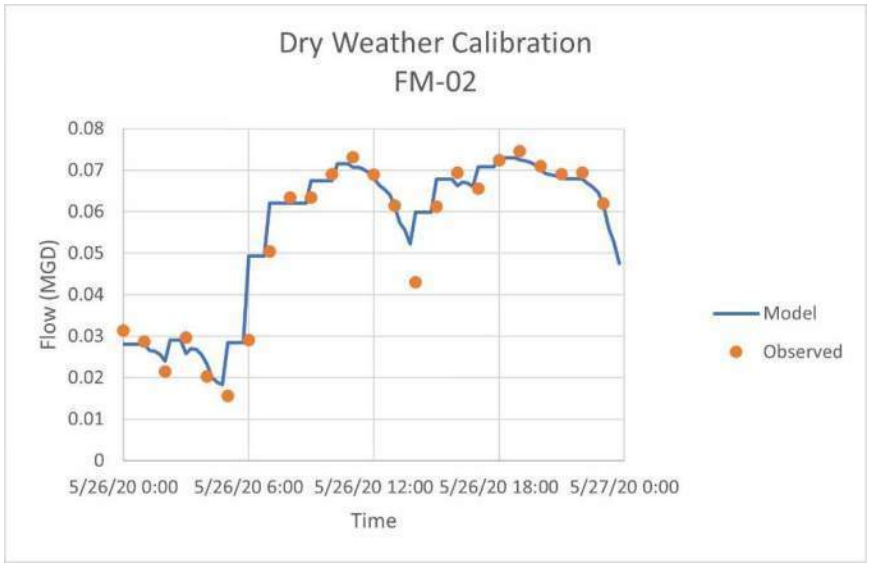
SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

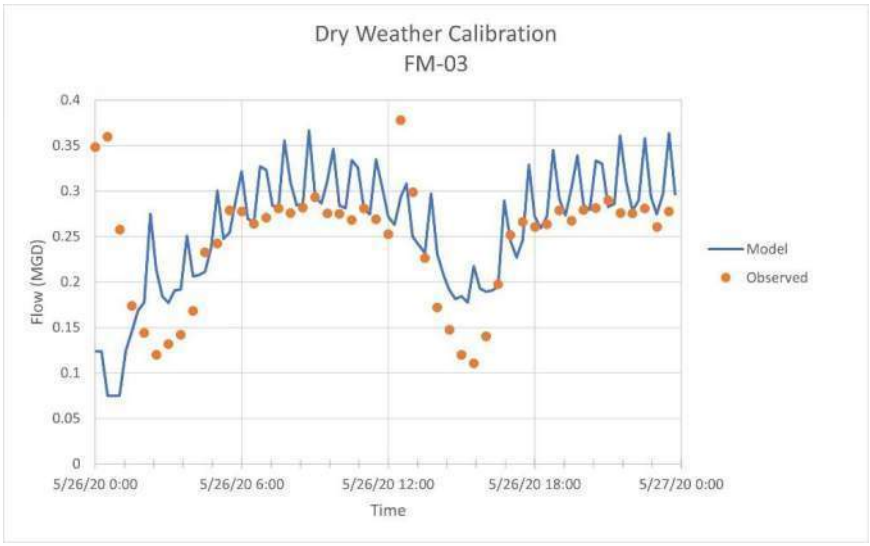
N
W E
S

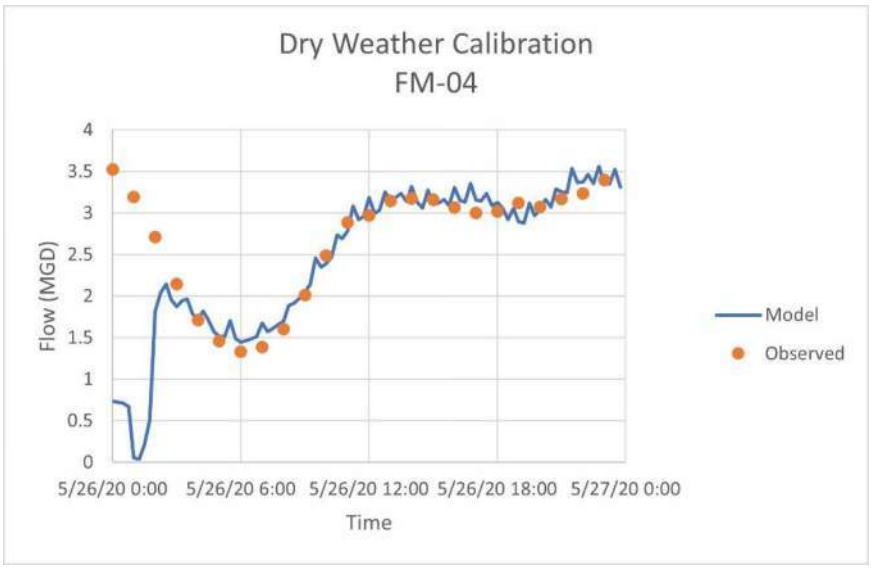
0 1 2 Miles

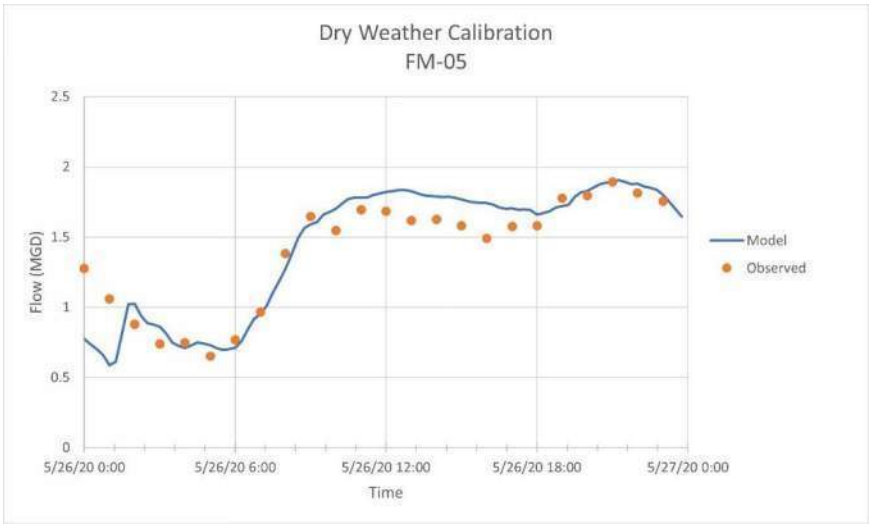
# APPENDIX 17 - DRY WEATHER CALIBRATION GRAPHS

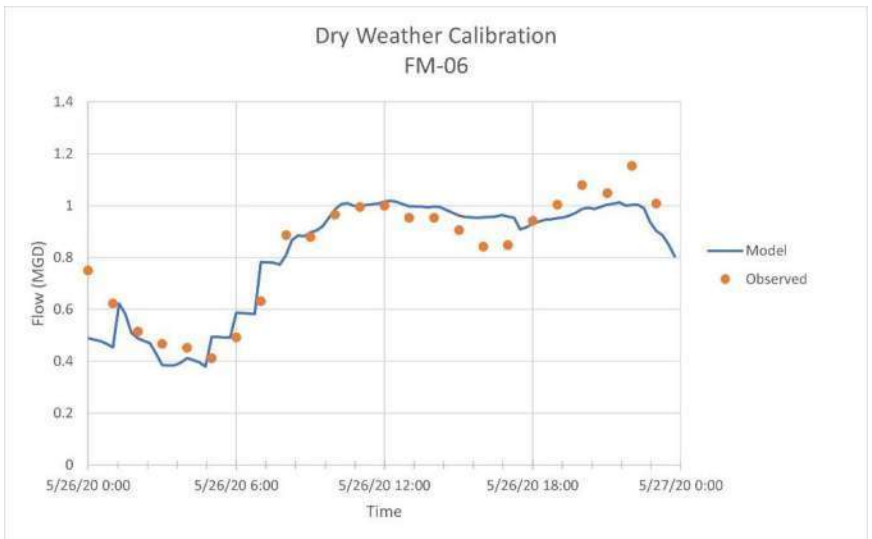

Dry Weather Calibration
FM-01
Flow (MGD)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model

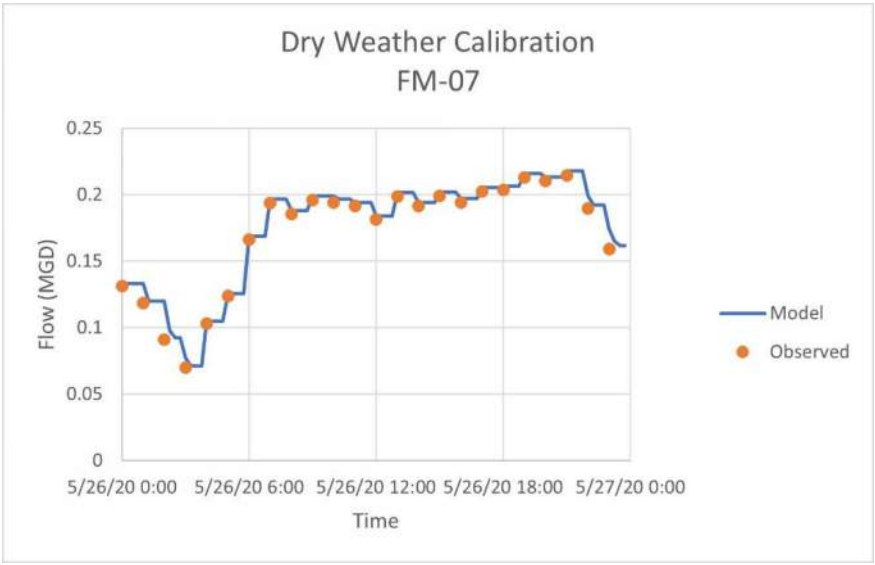

Dry Weather Calibration
FM-02
Flow (MGD)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

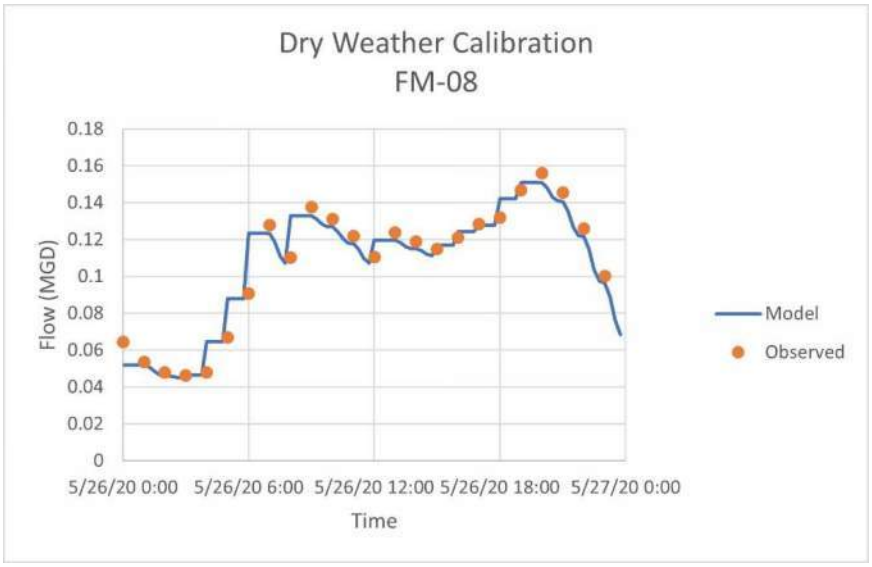

Dry Weather Calibration
FM-03
Flow (MGD)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

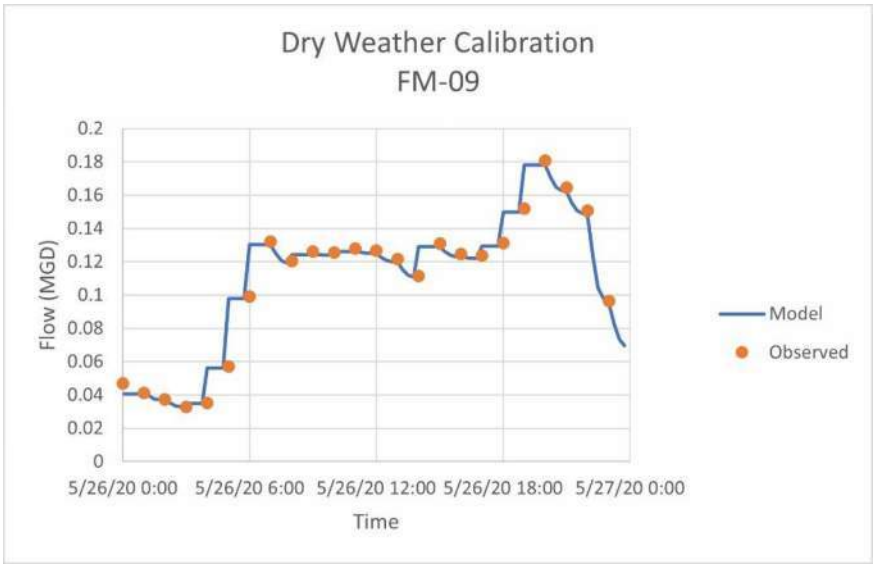

Dry Weather Calibration
FM-04
Flow (MGD)
4
3.5
3
2.5
2
1.5
1
0.5
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

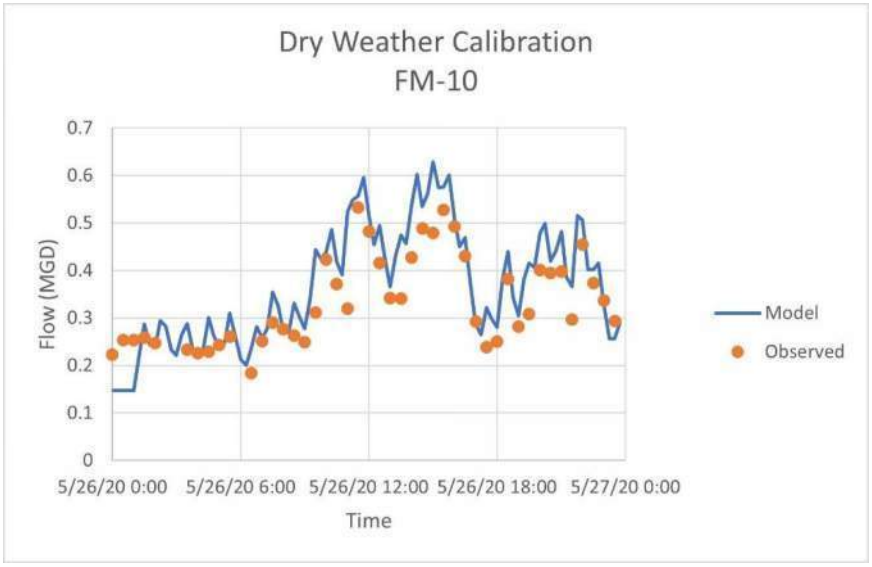

Dry Weather Calibration
FM-05
Flow (MGD)
2.5
2
1.5
1
0.5
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

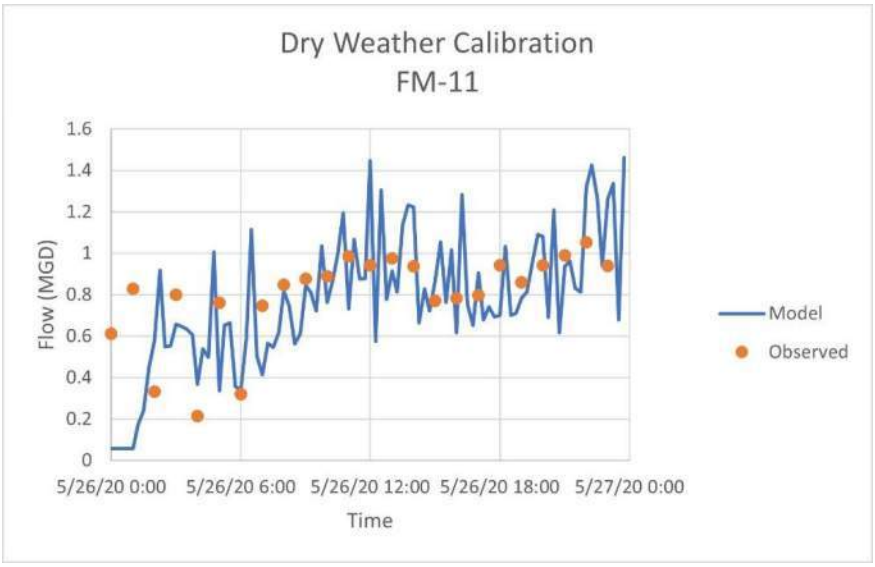

Dry Weather Calibration
FM-06
Flow (MGD)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

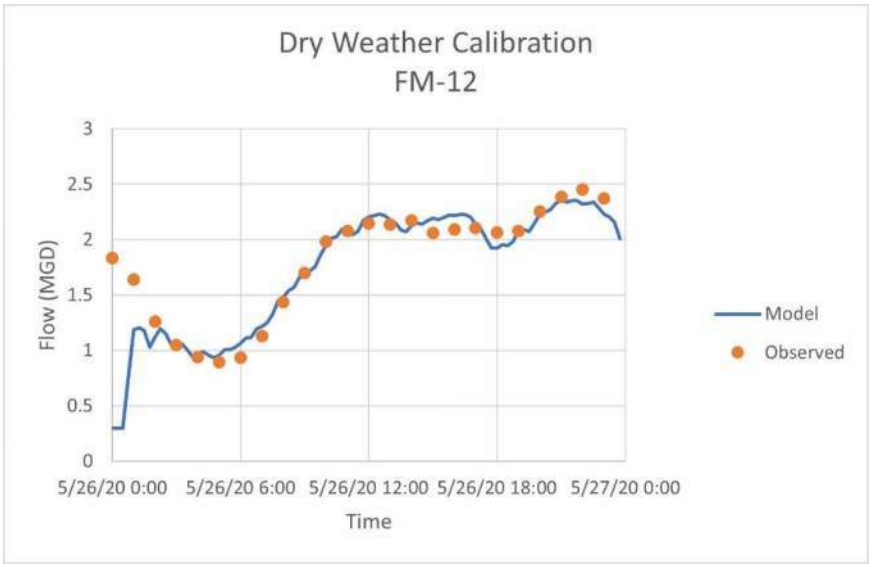

Dry Weather Calibration
FM-07
0.25
0.2
0.15
0.1
0.05
0
Flow (MGD)
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

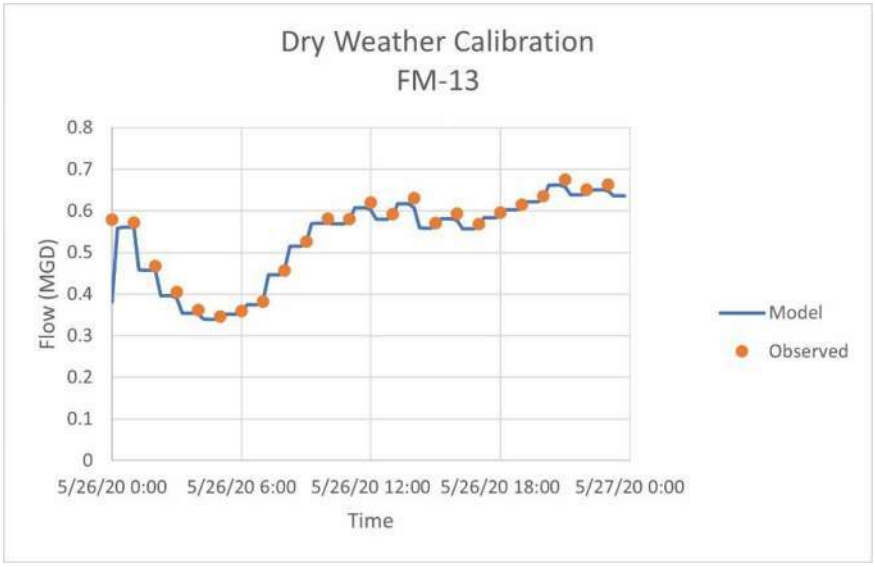

Dry Weather Calibration
FM-08
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Flow (MGD)
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

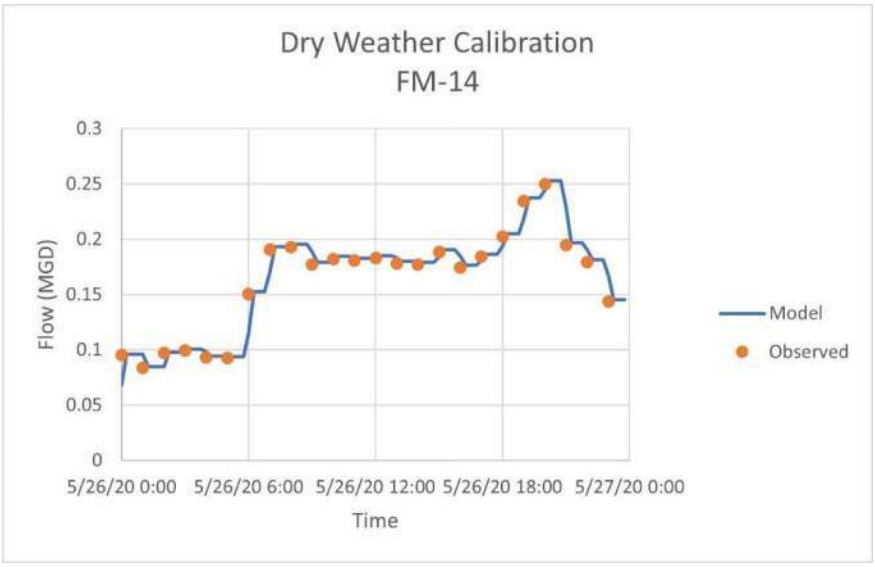

Dry Weather Calibration
FM-09
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Flow (MGD)
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

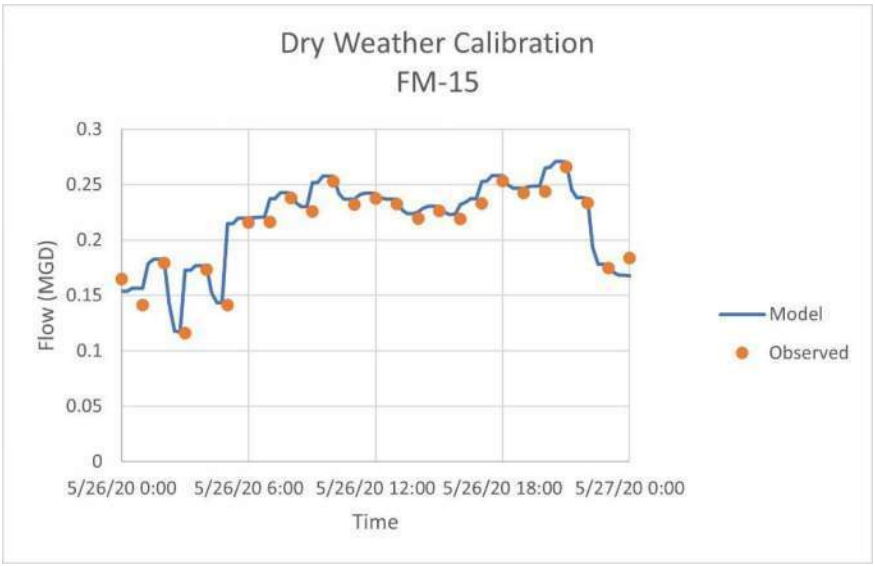

Dry Weather Calibration
FM-10
Flow (MGD)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed


Dry Weather Calibration
FM-11
Flow (MGD)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

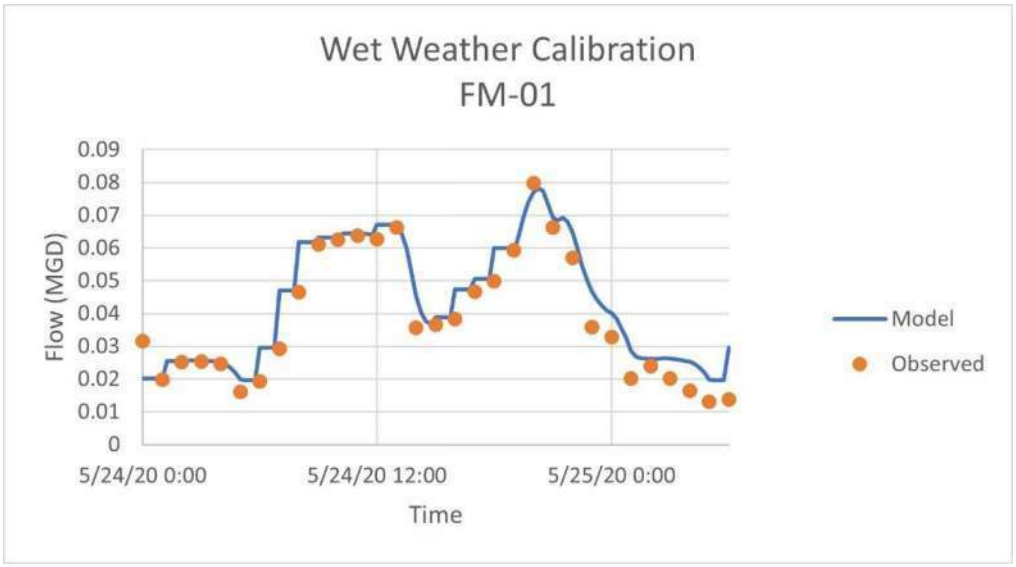

Dry Weather Calibration
FM-12
Flow (MGD)
3
2.5
2
1.5
1
0.5
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

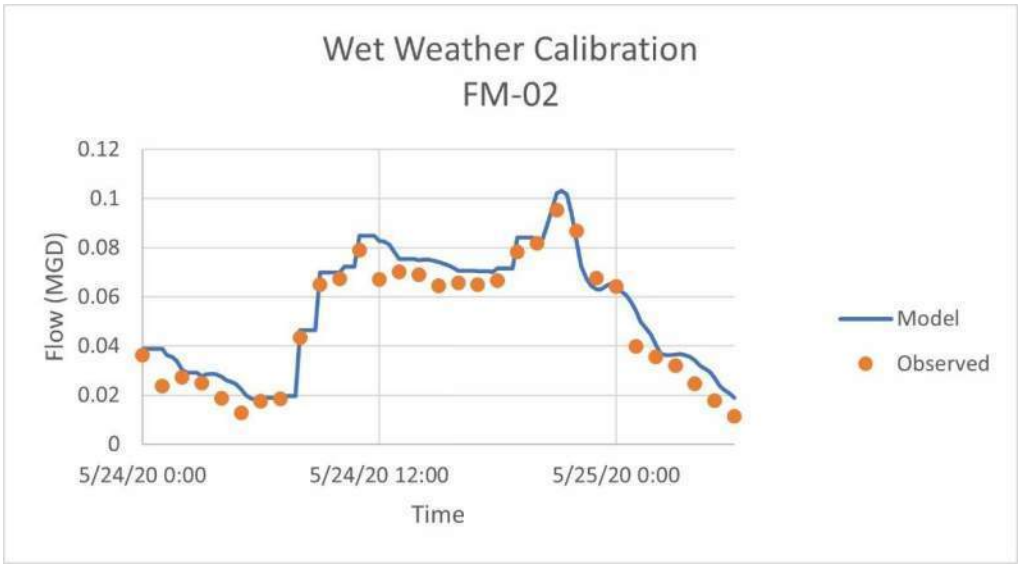

Dry Weather Calibration
FM-13
Flow (MGD)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

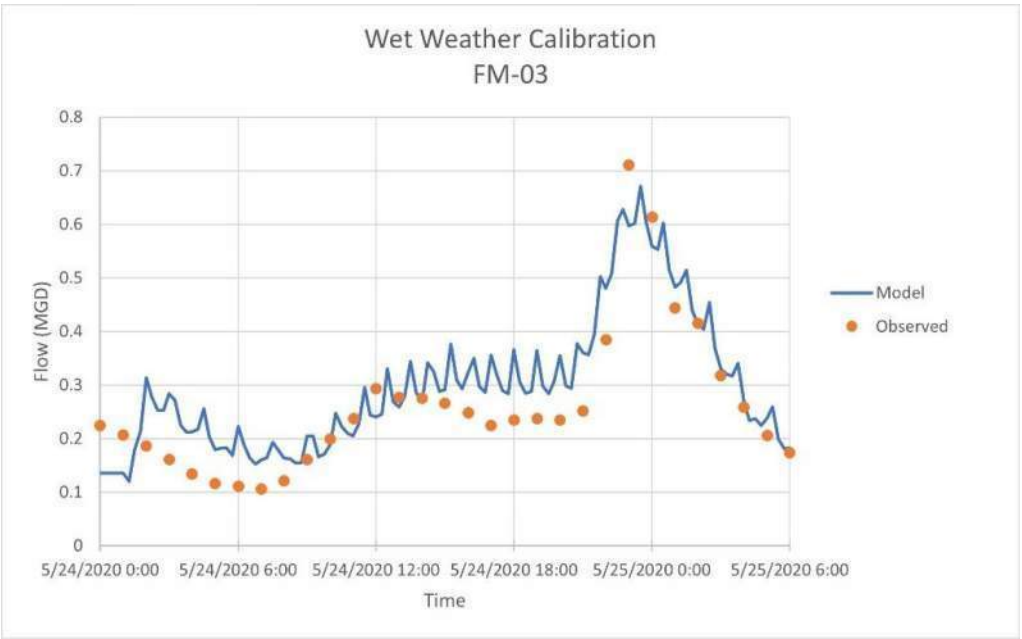

Dry Weather Calibration
FM-14
Flow (MGD)
0.3
0.25
0.2
0.15
0.1
0.05
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

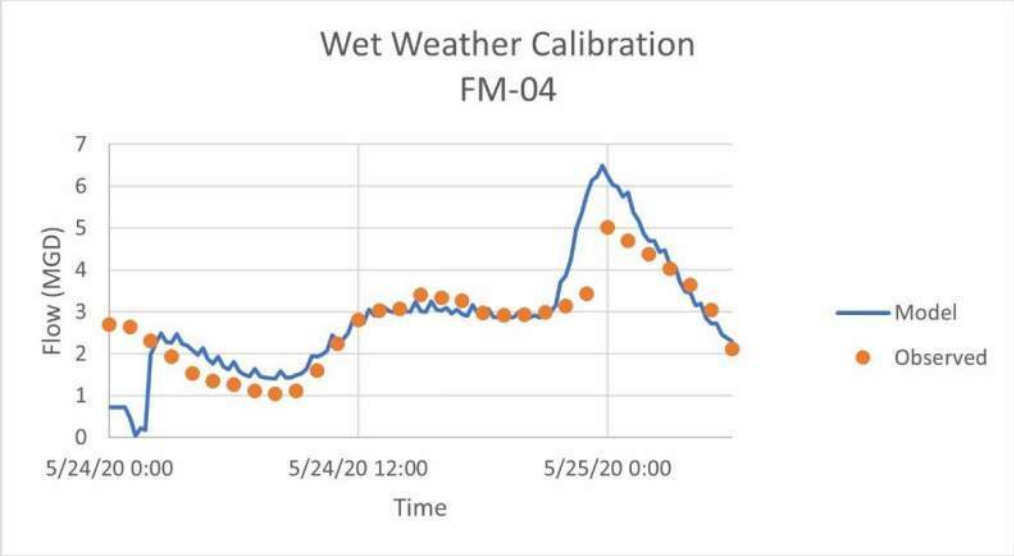

Dry Weather Calibration
FM-15
Flow (MGD)
0.3
0.25
0.2
0.15
0.1
0.05
0
5/26/20 0:00
5/26/20 6:00
5/26/20 12:00
5/26/20 18:00
5/27/20 0:00
Time
Model
Observed

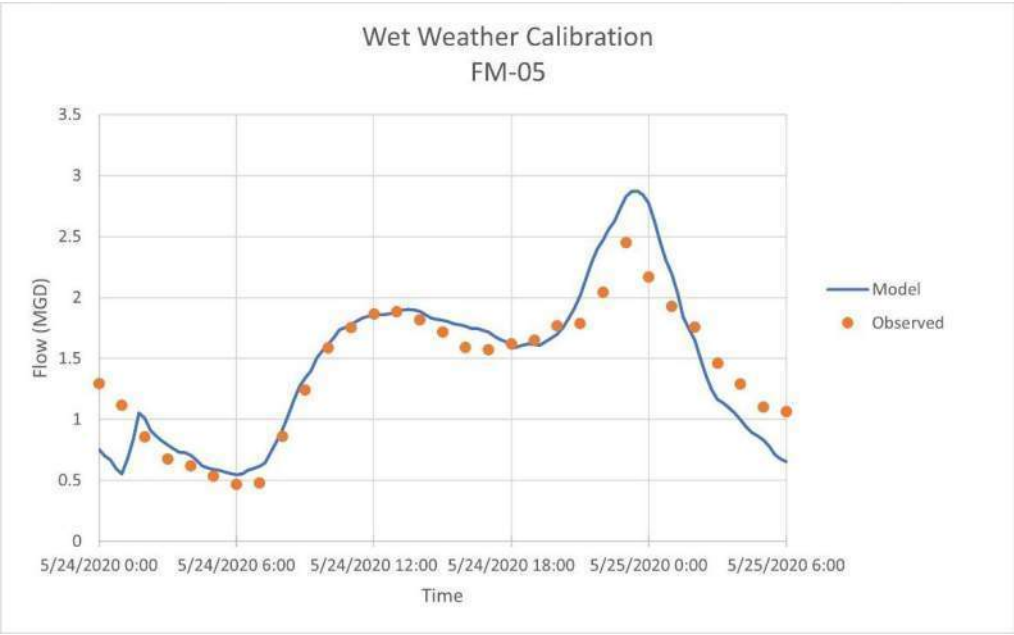
# APPENDIX 18 - WET WEATHER CALIBRATION GRAPHS

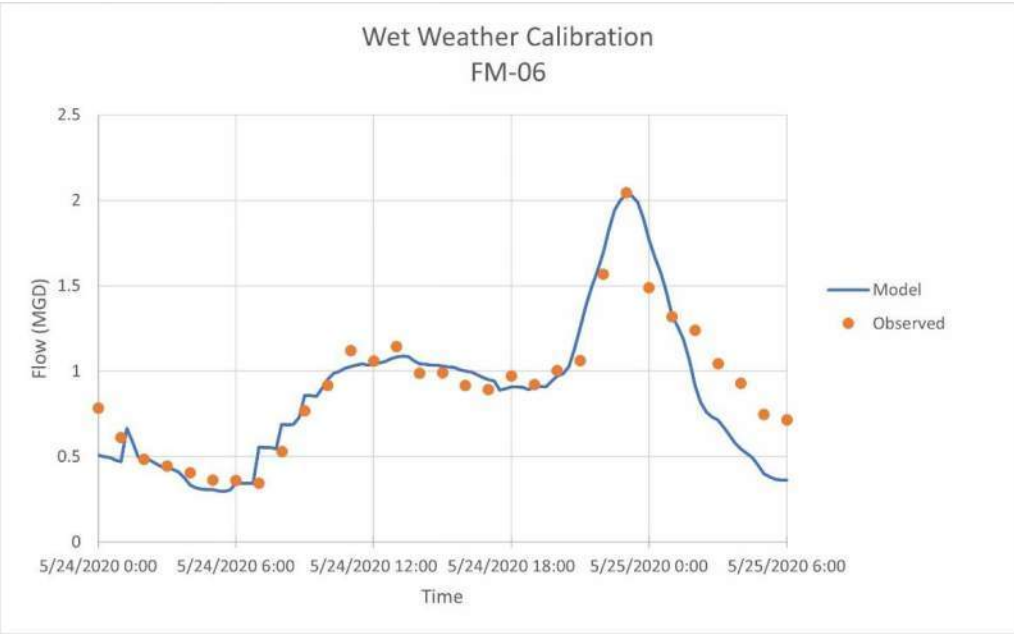

Wet Weather Calibration
FM-01
Flow (MGD)
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed

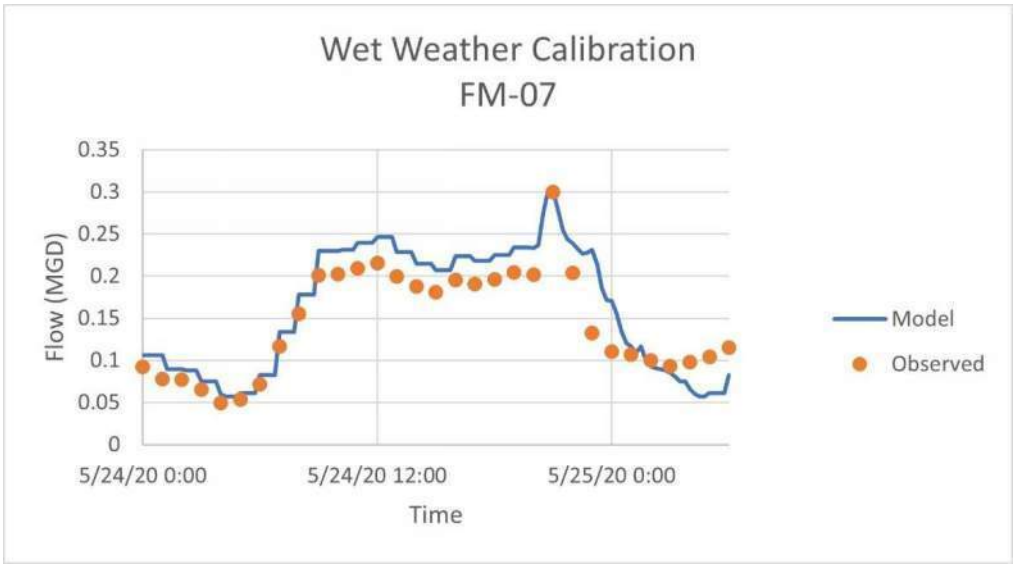

Wet Weather Calibration
FM-02
Flow (MGD)
0.12
0.1
0.08
0.06
0.04
0.02
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed

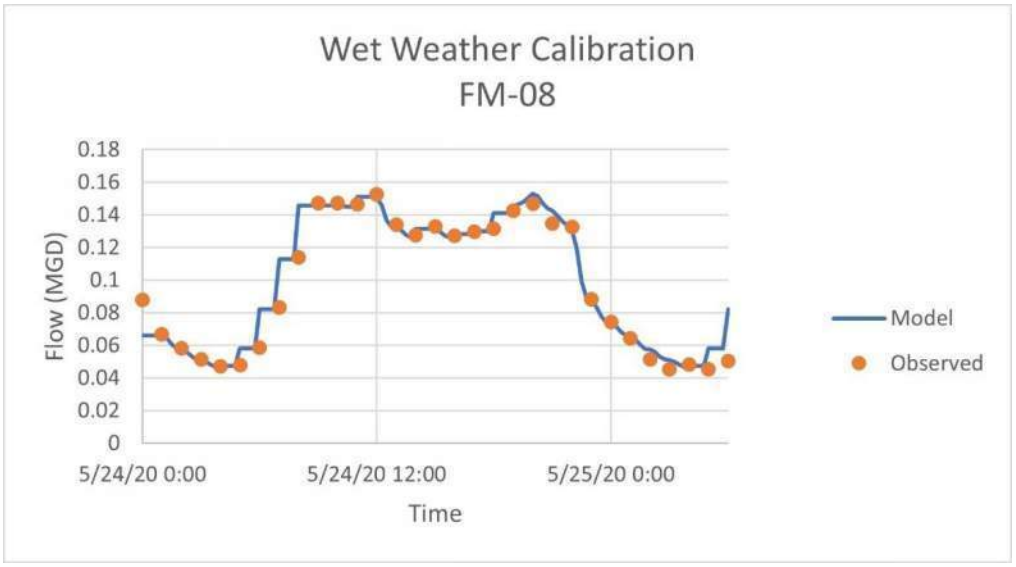

Wet Weather Calibration
FM-03
Flow (MGD)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
5/24/2020 0:00
5/24/2020 6:00
5/24/2020 12:00
5/24/2020 18:00
5/25/2020 0:00
5/25/2020 6:00
Time
Model
Observed

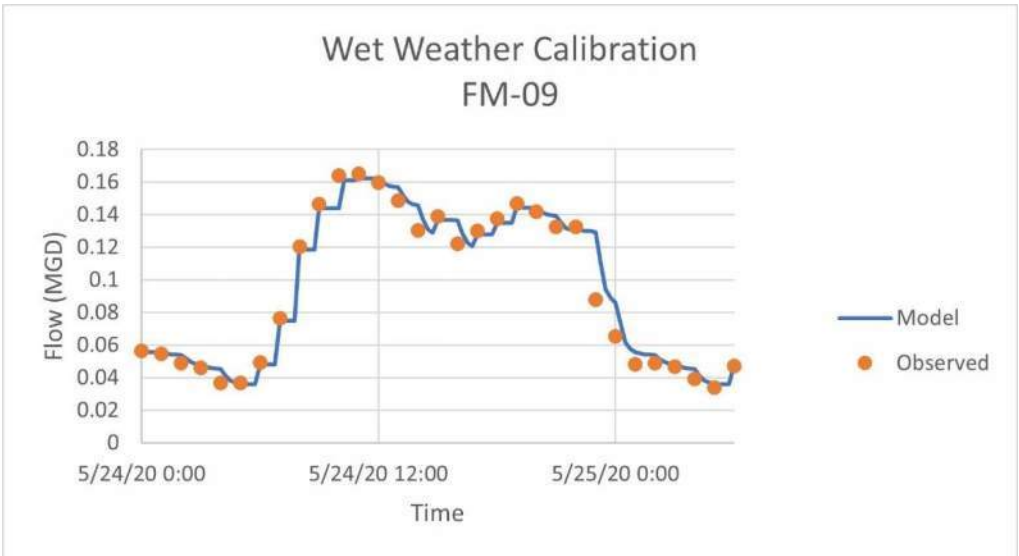

Wet Weather Calibration
FM-04
Flow (MGD)
7
6
5
4
3
2
1
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed

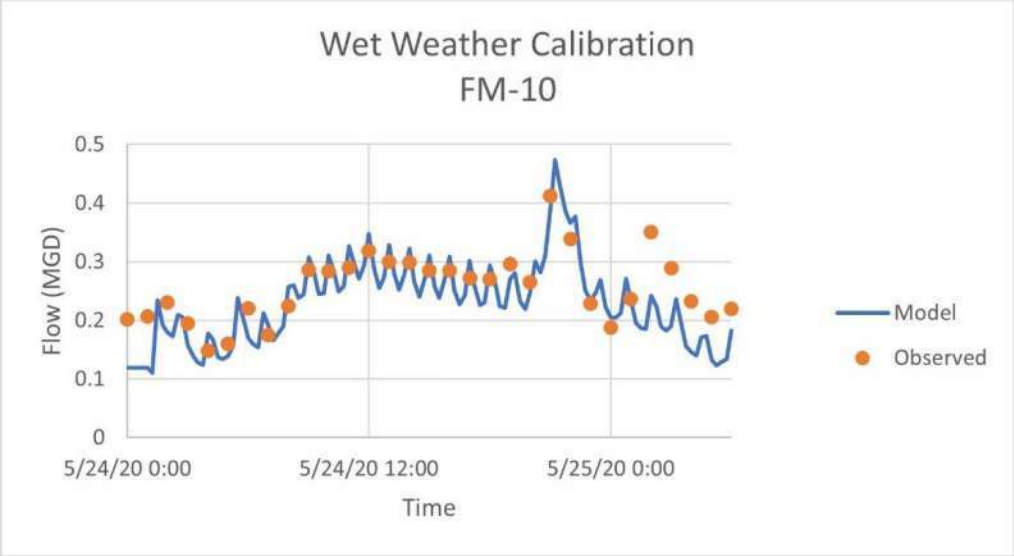

Wet Weather Calibration
FM-05
Flow (MGD)
3.5
3
2.5
2
1.5
1
0.5
0
5/24/2020 0:00
5/24/2020 6:00
5/24/2020 12:00
5/24/2020 18:00
5/25/2020 0:00
5/25/2020 6:00
Time
Model
Observed

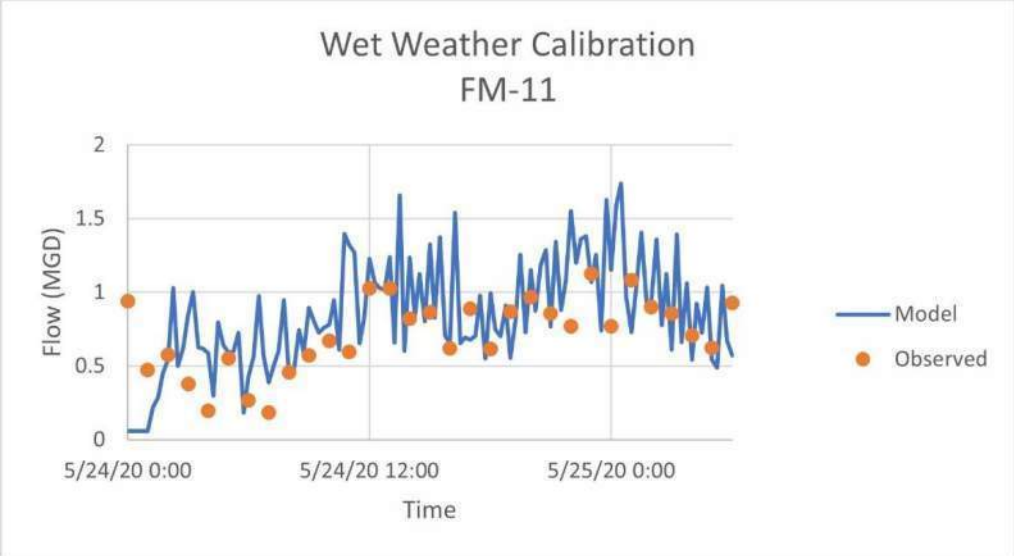

Wet Weather Calibration
FM-06
Flow (MGD)
2.5
2
1.5
1
0.5
0
5/24/2020 0:00
5/24/2020 6:00
5/24/2020 12:00
5/24/2020 18:00
5/25/2020 0:00
5/25/2020 6:00
Time
Model
Observed

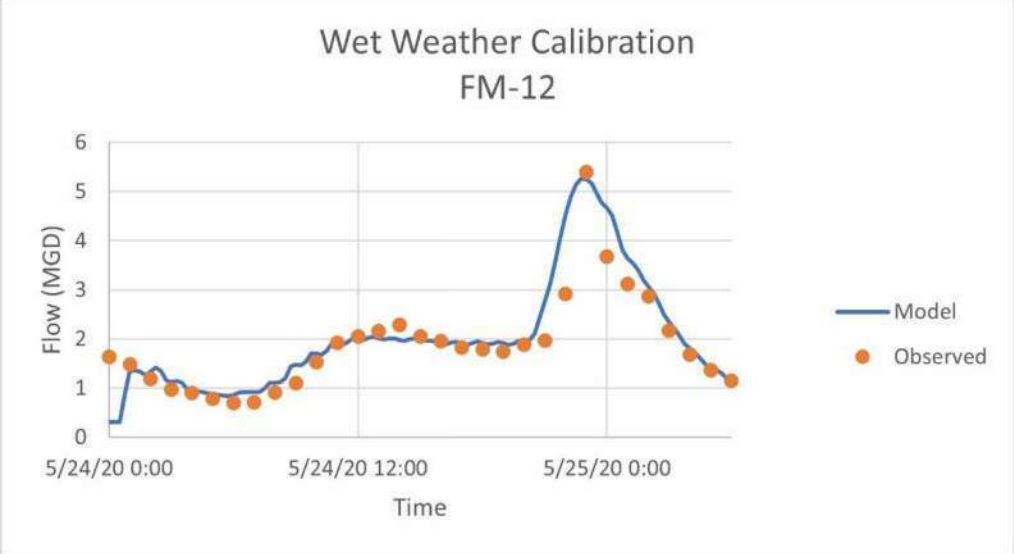

Wet Weather Calibration
FM-07
Flow (MGD)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed

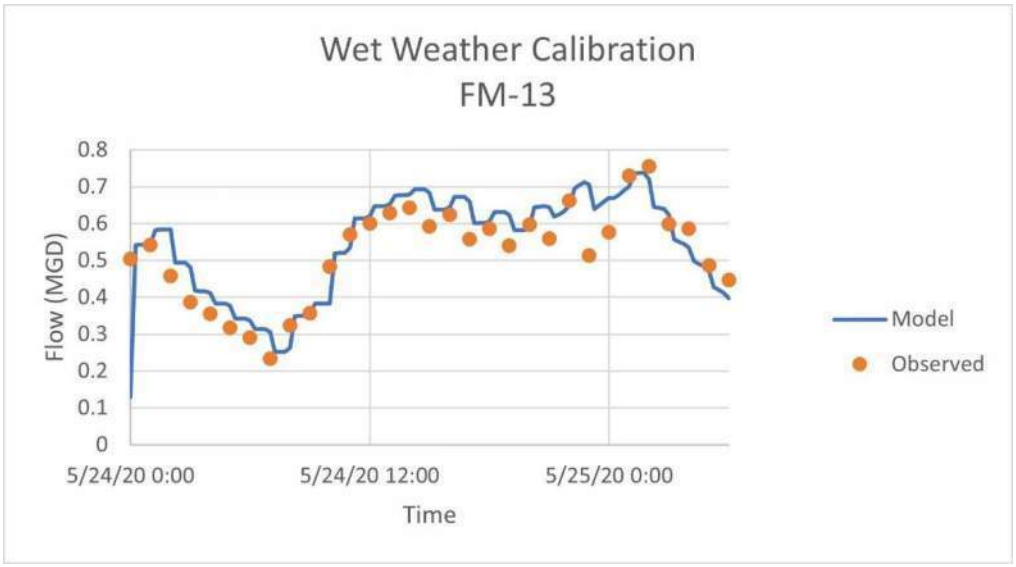

Wet Weather Calibration
FM-08
Flow (MGD)
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed

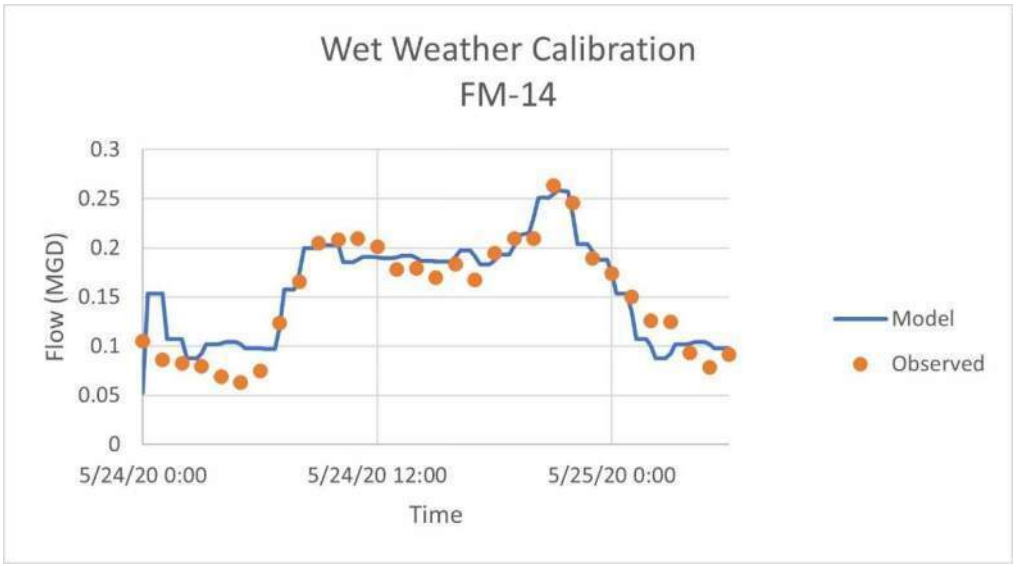

Wet Weather Calibration
FM-09
Flow (MGD)
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed

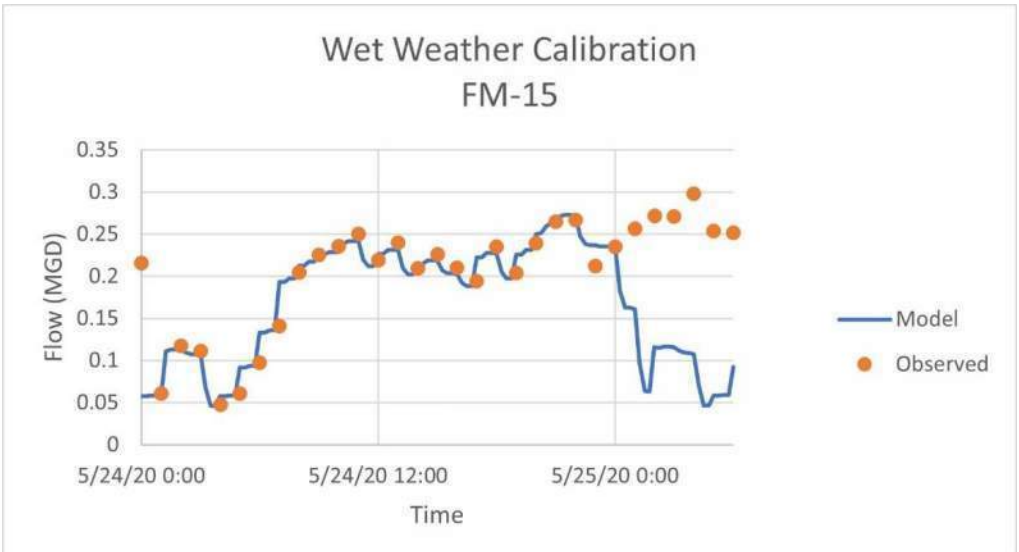

Wet Weather Calibration
FM-10
Flow (MGD)
0.5
0.4
0.3
0.2
0.1
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed


Wet Weather Calibration
FM-11
Flow (MGD)
2
1.5
1
0.5
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed


Wet Weather Calibration
FM-12
Flow (MGD)
6
5
4
3
2
1
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed


Wet Weather Calibration
FM-13
Flow (MGD)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed


Wet Weather Calibration
FM-14
Flow (MGD)
0.3
0.25
0.2
0.15
0.1
0.05
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed


Wet Weather Calibration
FM-15
Flow (MGD)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
5/24/20 0:00
5/24/20 12:00
5/25/20 0:00
Time
Model
Observed

# APPENDIX 19 - EXISTING SYSTEM EVALUATION RESULTS, SURCHARGE, & SSO LOCATION MAPS

# Attachment 4

Surcharged lines highlighted in GREEN are owned by the City

4.A

4.B

4.C

4.D

4.E

## Legend

- SSO
- LiftStations
- Outfalls
- Force Main

**Hydraulic Condition**

- Not Surcharged
- Surcharged

## Existing System Evaluation Results - Surcharge and SSO Locations

8/26/2022

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N W E S

0 1 2 Miles

Document Path: N:\120\120-11816-012\9-0-Data-GIS-Modeling\9-01-GIS\7-Working\WW\Attachment 2-A Surcharge and SSO.mxd

# Attachment 4.A

Surcharged lines highlighted in GREEN are owned by the City

## Legend

- SSO
- LiftStations
- Outfalls
- Force Main

**Hydraulic Condition**

- Not Surcharged
- Surcharged

## Existing System Evaluation Results - Surcharge and SSO Locations

8/26/2022

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

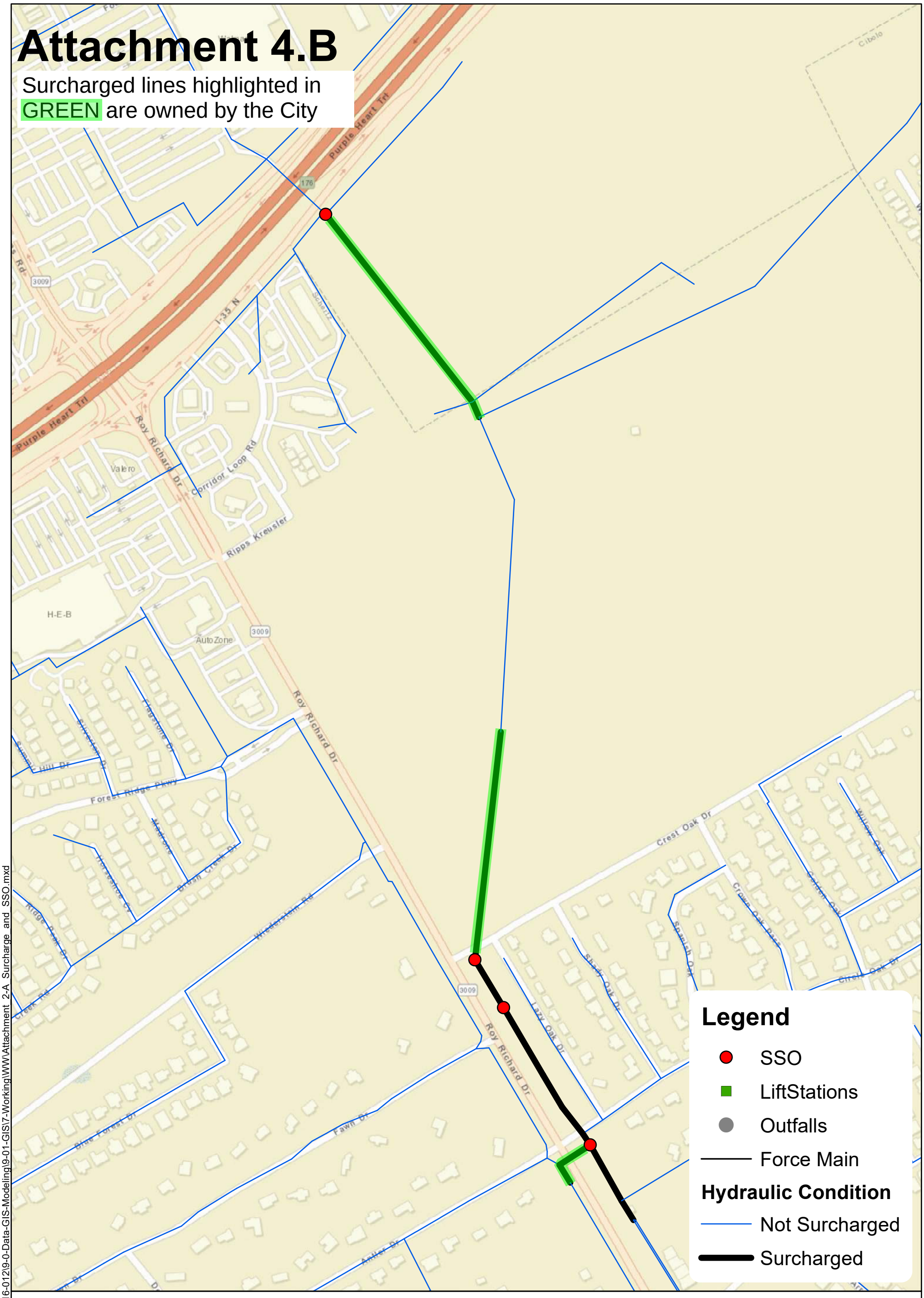
N W E S

0 0.275 0.55 Miles

Document Path: N:\120\120-11816-012\9-0-Data-GIS-Modeling\9-01-GIS\7-Working\WW\Attachment 2-A Surcharge and SSO.mxd

# Attachment 4.B

Surcharged lines highlighted in GREEN are owned by the City




Document Path: N:\120\120-11816-012\9-0-Data-GIS-Modeling\9-01-GIS\7-Working\WW\Attachment 2-A Surcharge and SSO.mxd

## Existing System Evaluation Results - Surcharge and SSO Locations

8/26/2022

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N W E S

0 0.1 0.2 Miles

# Attachment 4.C

Surcharged lines highlighted in GREEN are owned by the City

## Legend

- SSO
- LiftStations
- Outfalls
- Force Main

**Hydraulic Condition**

- Not Surcharged
- Surcharged

## Existing System Evaluation Results - Surcharge and SSO Locations

8/26/2022

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N W E S

0 0.05 0.1 Miles

Document Path: N:\120\120-11816-012\9-0-Data-GIS-Modeling\9-01-GIS\7-Working\WW\Attachment 2-A Surcharge and SSO.mxd

# Attachment 4.D

Surcharged lines highlighted in GREEN are owned by the City




## Legend

- SSO
- LiftStations
- Outfalls
- Force Main

**Hydraulic Condition**

- Not Surcharged
- Surcharged

## Existing System Evaluation Results - Surcharge and SSO Locations

8/26/2022

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

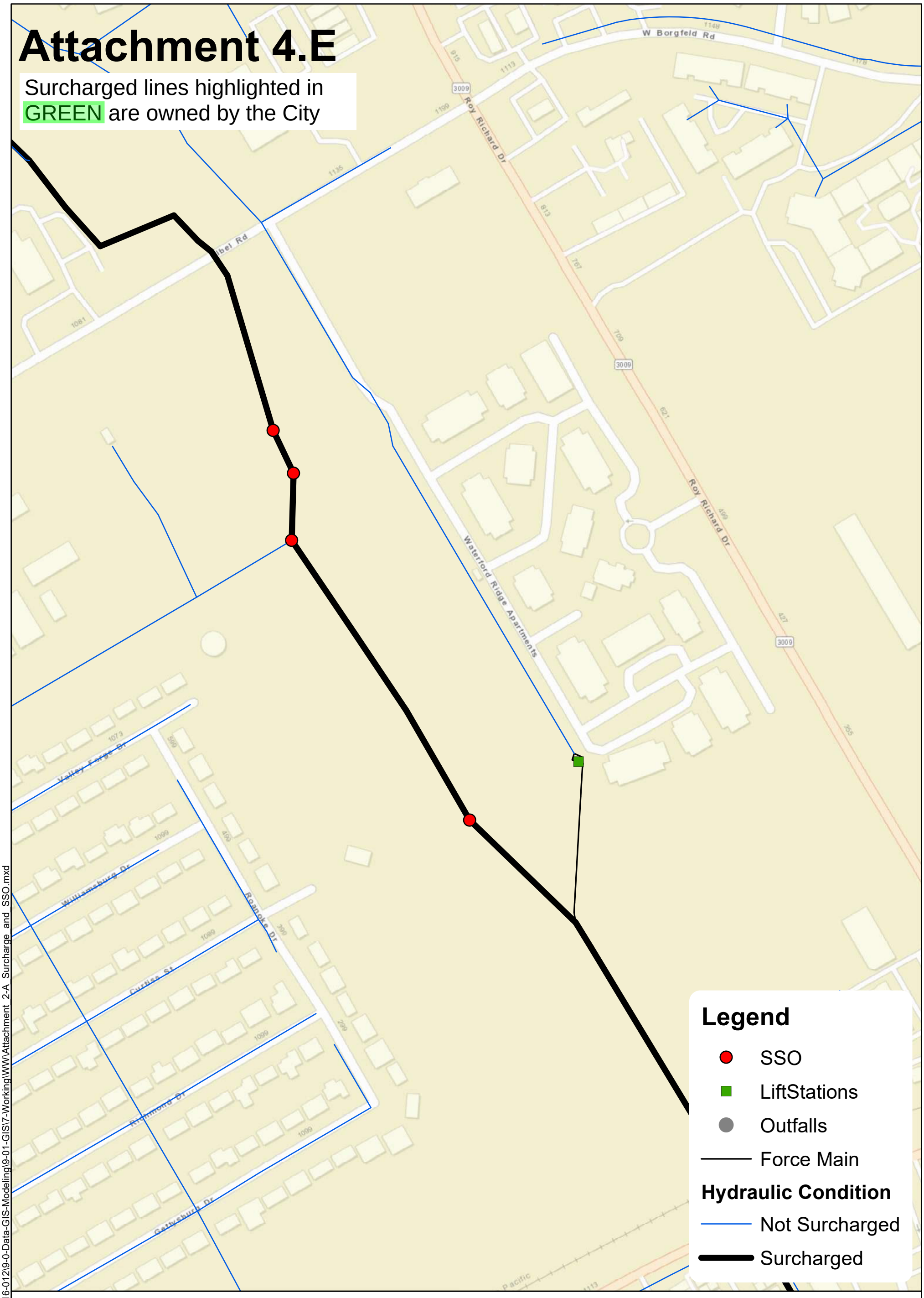
N
W E
S

0 0.15 0.3 Miles

Document Path: N:\120\120-11816-012\9-0-Data-GIS-Modeling\9-01-GIS\7-Working\WW\Attachment 2-A Surcharge and SSO.mxd

# Attachment 4.E

Surcharged lines highlighted in GREEN are owned by the City




## Existing System Evaluation Results - Surcharge and SSO Locations

8/26/2022

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

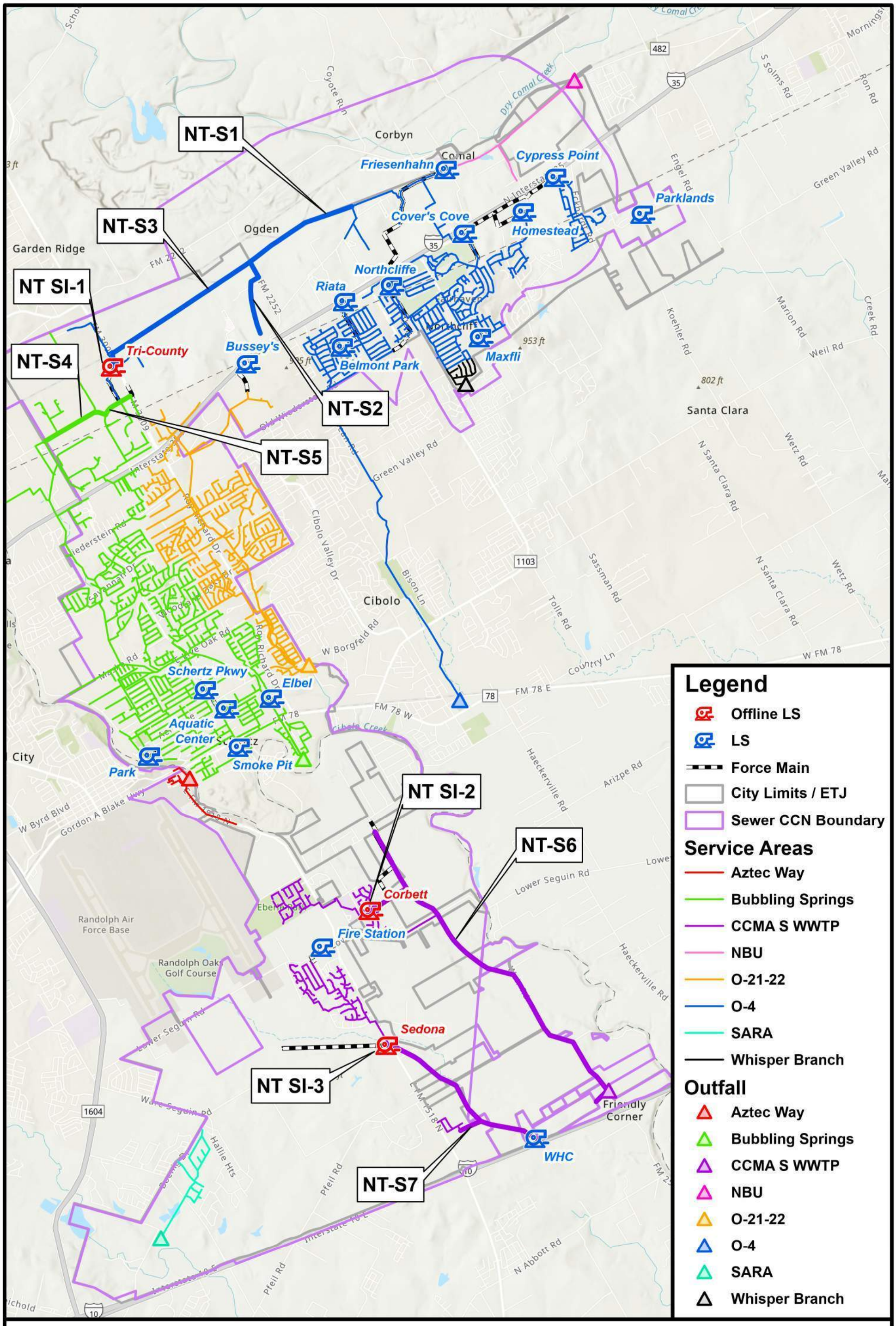
SCHIERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N W E S

0 0.05 0.1 Miles

Document Path: N:\120\120-11816-012\9-0-Data-GIS-Modeling\9-01-GIS\7-Working\WW\Attachment 2-A Surcharge and SSO.mxd

# APPENDIX 20 - NEAR TERM WASTEWATER GROWTH & SYSTEM IMPROVEMENT PROJECTS




# NEAR TERM WASTE WATER GROWTH & SYSTEM IMPROVEMENT PROJECTS

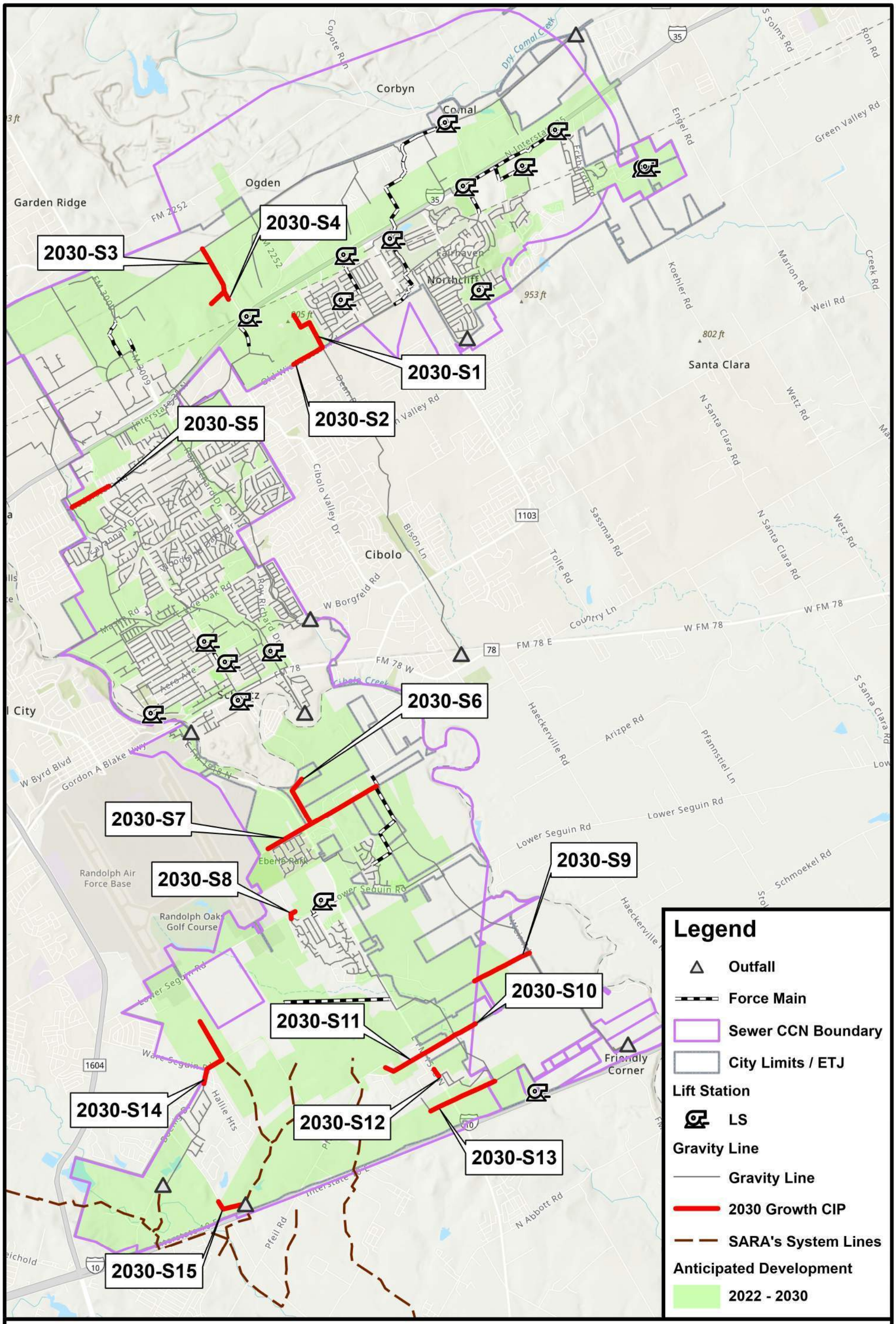
LAN
Planning
Engineering
Program Management

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N W E S

0 3,750 7,500 15,000 Feet

# APPENDIX 21 - 2030 WASTEWATER SYSTEM GROWTH PROJECTS




# 2030 WASTE WATER SYSTEM GROWTH PROJECTS

LAN
Planning
Engineering
Program Management

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N
W E
S

0 3,750 7,500 15,000 Feet

# APPENDIX 22 - MAX DEPTH TO DIAMETER WITH 2030 DRY WEATHER FLOWS

# MAX DEPTH-DIAMETER (d/D) WITH 2030 DRY WEATHER FLOW

## Legend

- Outfall
- Lift Station
- Force Main
- SARA's System Lines
- Sewer CCN Boundary
- City Limits / ETJ

**Max (d/D)**

- 0 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00

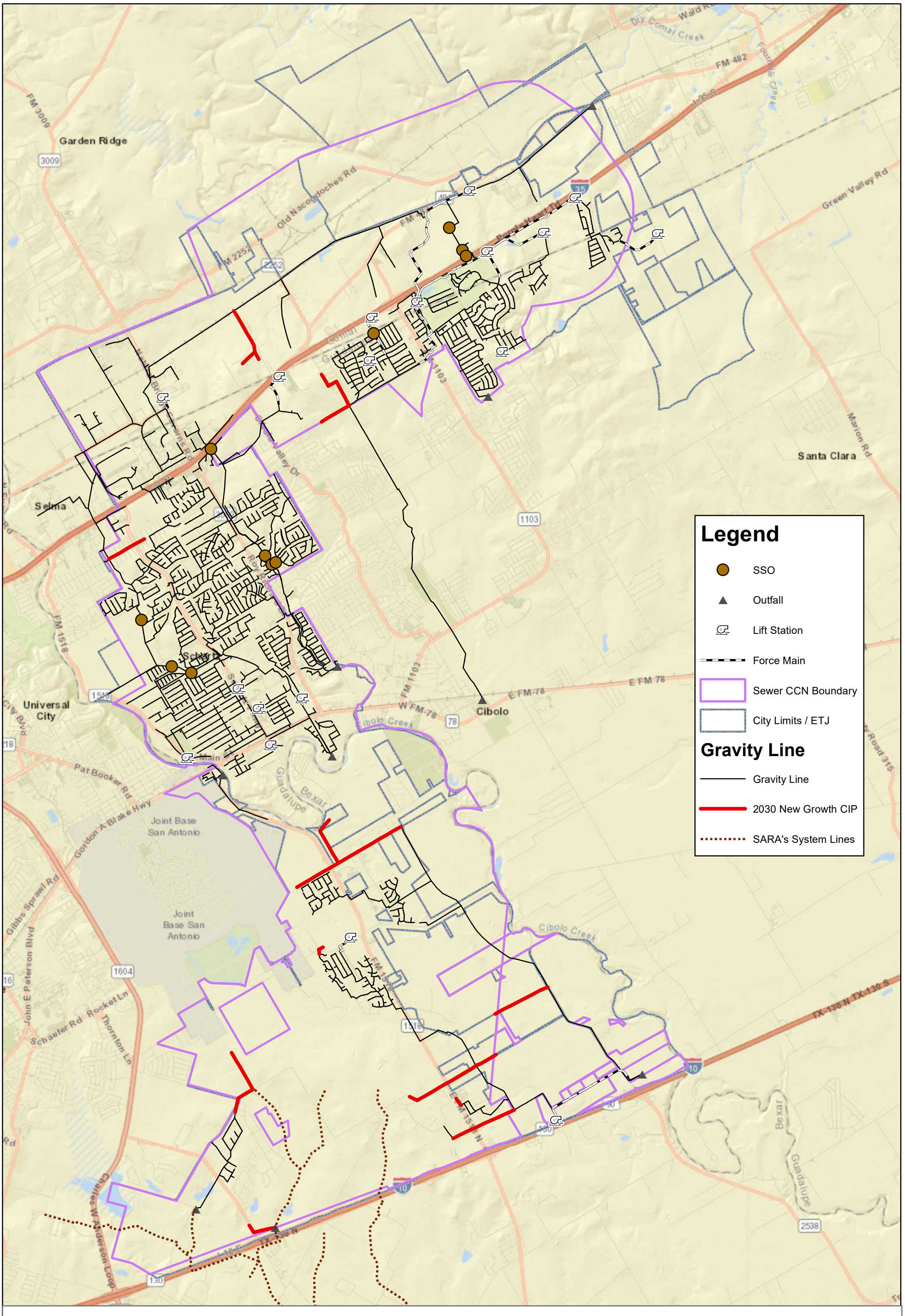
Planning
Engineering
Program Management

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

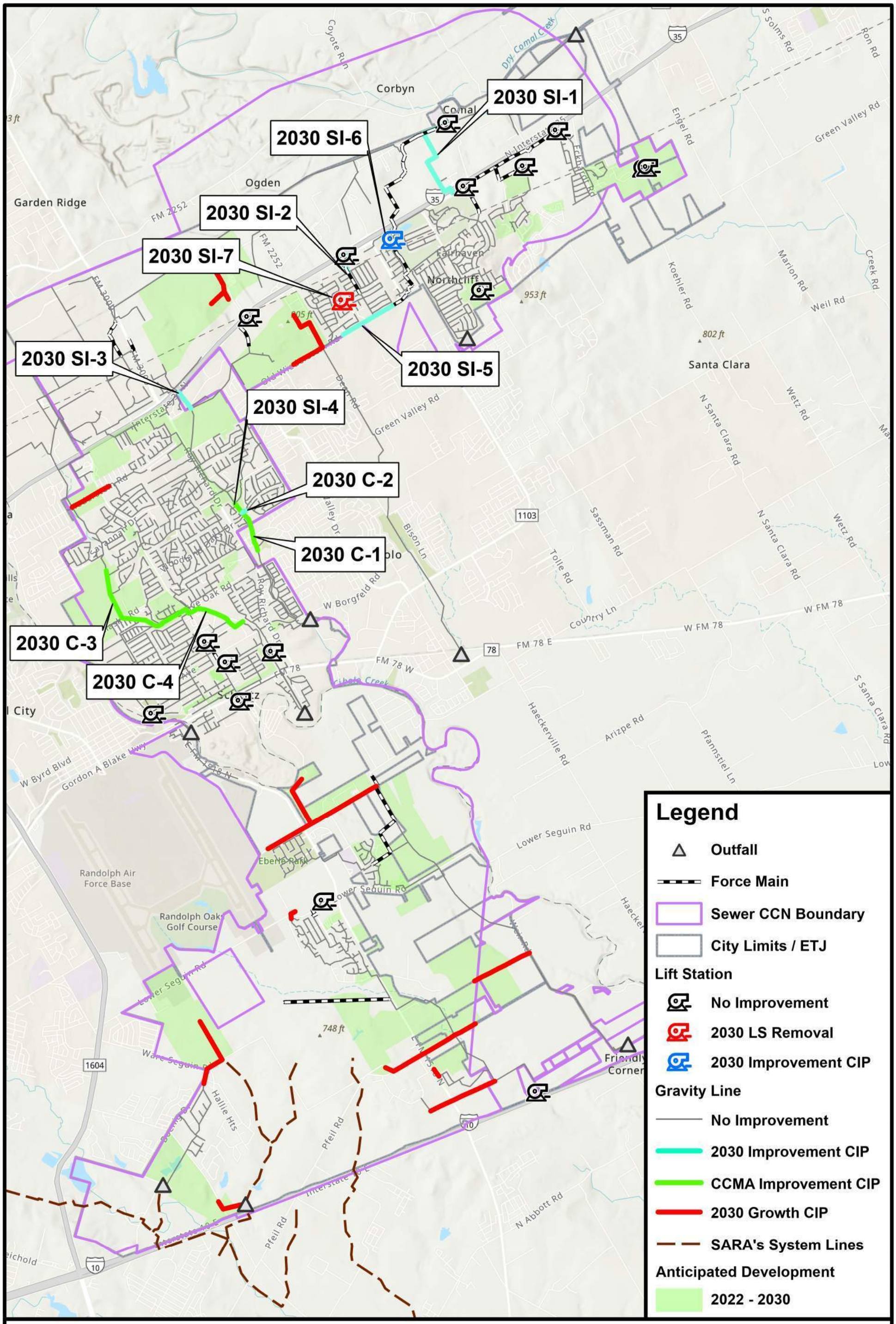
0 0.75 1.5 3 Miles

N W E S

# APPENDIX 23 - SANITARY SEWER OVERFLOWS WITH 2030 WET WEATHER FLOWS


Garden Ridge
Selma
Schertz
Universal City
Santa Clara
Cibolo
Joint Base San Antonio
Joint Base San Antonio
Old Nacogdoches Rd
Green Valley Rd
Pat Booker Rd
Gordon A Blake Hwy
Schaefer Rd
Rocket Ln
Thornton Ln
Charles W Anderson Loop
Marion Rd
Dry Comal Creek
Cibolo Creek
Guadalupe
Bexar
FM 3009
FM 482
FM 2252
FM 1518
FM 1103
E FM 78
W FM 78
I-35 S
TX-130 N
TX-130 S
Legend
SSO
Outfall
Lift Station
Force Main
Sewer CCN Boundary
City Limits / ETJ
Gravity Line
Gravity Line
2030 New Growth CIP
SARA's System Lines
SANITARY SEWER OVERFLOWS (SSO) WITH 2030 WET WEATHER FLOWS
Planning
Engineering
Program Management
SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.
0
0.75
1.5
3
Miles
N
W
E
S

# APPENDIX 24 - 2030 WASTEWATER SYSTEM IMPROVEMENT PROJECTS




# 2030 WASTE WATER SYSTEM IMPROVEMENT PROJECTS

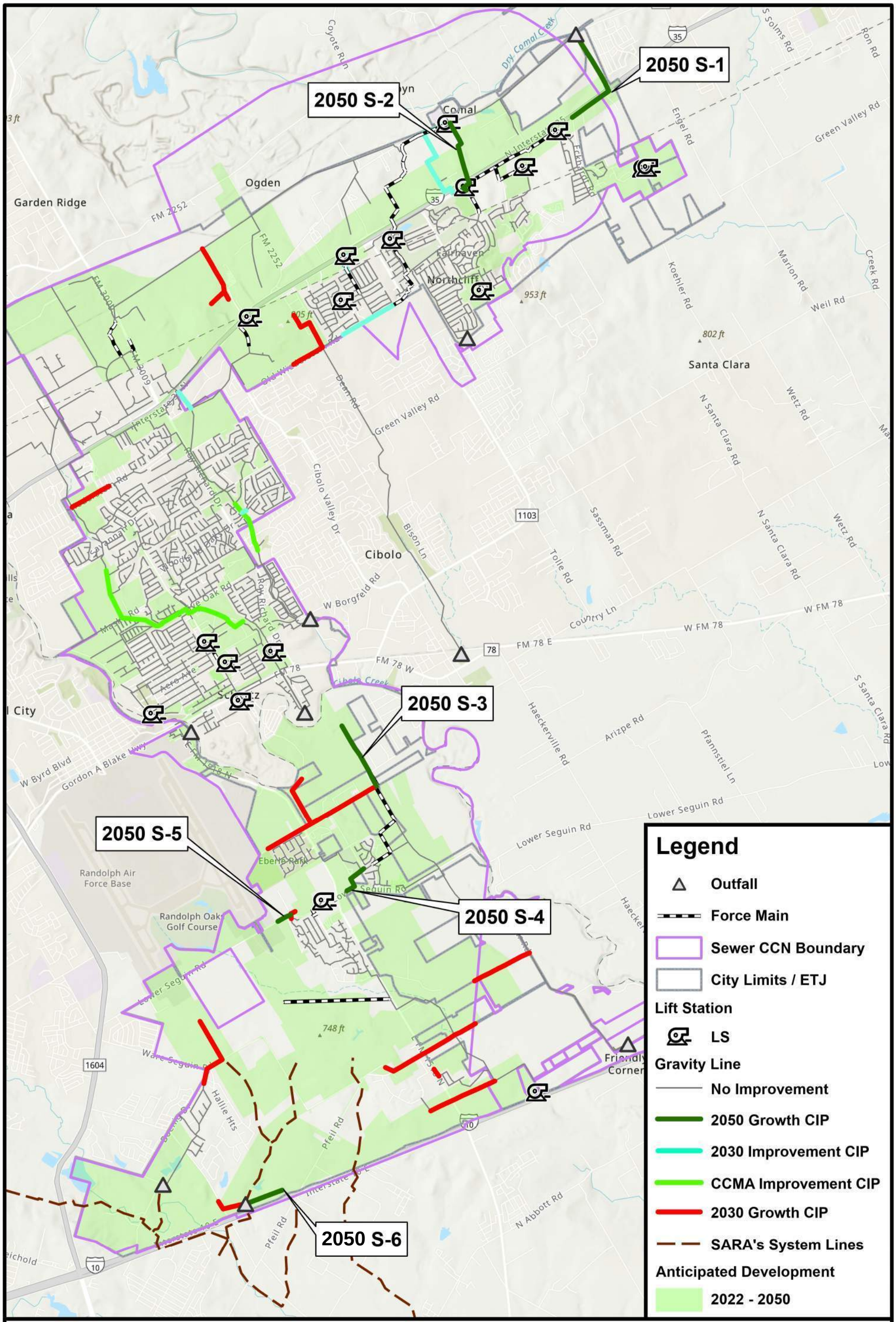
Planning
Engineering
Program Management

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N
W E
S

0 3,750 7,500 15,000 Feet

# APPENDIX 25 - 2050 WASTEWATER SYSTEM GROWTH PROJECTS


2050 S-1
2050 S-2
2050 S-3
2050 S-4
2050 S-5
2050 S-6
Comal
Ogden
Garden Ridge
Northcliff
Fairhaven
Santa Clara
Cibolo
Randolph Air Force Base
Randolph Oaks Golf Course
Eberle Park
Friendly Corner
Dry Comal Creek
Cibolo Creek
Coyote Run
Engel Rd
Green Valley Rd
Koehler Rd
Marion Rd
Creek Rd
Weil Rd
Ron Rd
S Solms Rd
N Santa Clara Rd
Wetz Rd
Sassman Rd
Tolle Rd
Bison Ln
Cibolo Valley Dr
W Borgfeld Rd
Country Ln
W FM 78
FM 78 E
FM 78 W
Haeckerville Rd
Arizpe Rd
Pfannstiel Ln
S Santa Clara Rd
Lower Seguin Rd
Dean Rd
Pfeil Rd
N Abbott Rd
Hallie Hts
Ware Seguin Rd
Gordon A Blake Hwy
W Byrd Blvd
FM 2252
FM 3009
Interstate 35
Interstate 10
1103
1604
953 ft
802 ft
748 ft
Legend
Outfall
Force Main
Sewer CCN Boundary
City Limits / ETJ
Lift Station
LS
Gravity Line
No Improvement
2050 Growth CIP
2030 Improvement CIP
CCMA Improvement CIP
2030 Growth CIP
SARA's System Lines
Anticipated Development
2022 - 2050
2050 WASTE WATER SYSTEM GROWTH PROJECTS
Planning
Engineering
Program Management
SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.
N
W
E
S
0
3,750
7,500
15,000
Feet

# APPENDIX 26 - MAX DEPTH TO DIAMETER WITH 2050 DRY WEATHER FLOWS

# MAX DEPTH-TO-DIAMETER (d/D) WITH 2050 DRY WEATHER FLOW

## Legend

- Outfall
- Lift Station
- Force Main
- Sewer CCN Boundary
- City Limits / ETJ
- SARA's System Lines

**Max (d/D)**

- 0 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00

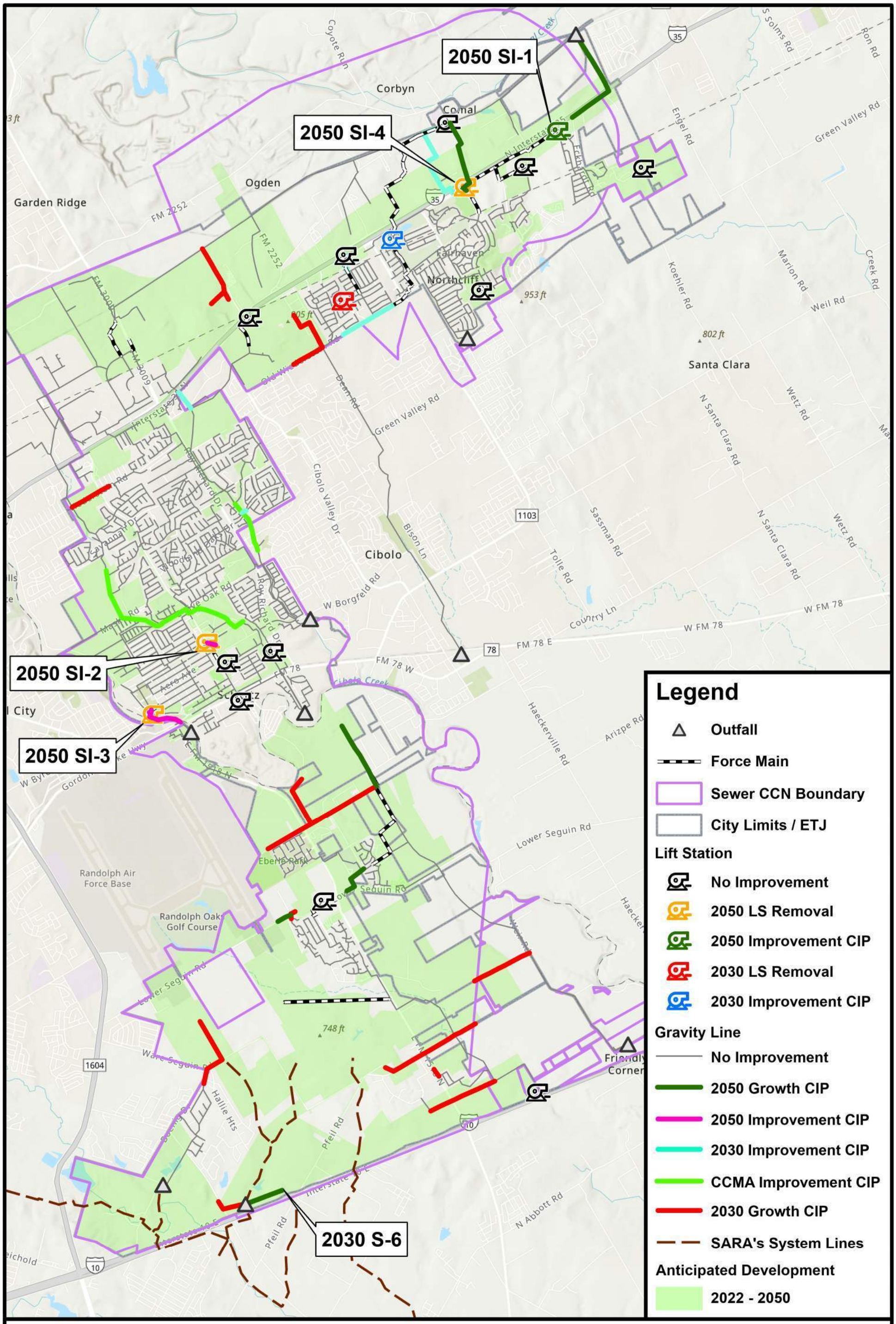
Planning
Engineering
Program Management

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N
W E
S

0 0.75 1.5 3 Miles

# APPENDIX 27 - 2050 WASTEWATER SYSTEM IMPROVEMENT PROJECTS




# WASTE WATER SYSTEM IMPROVEMENT PROJECTS

LAN
Planning
Engineering
Program Management

SCHERTZ
COMMUNITY. SERVICE. OPPORTUNITY.

N
W E
S

0 3,750 7,500 15,000 Feet

# APPENDIX 28 - INFLATION RATE CALCULATION SOURCES

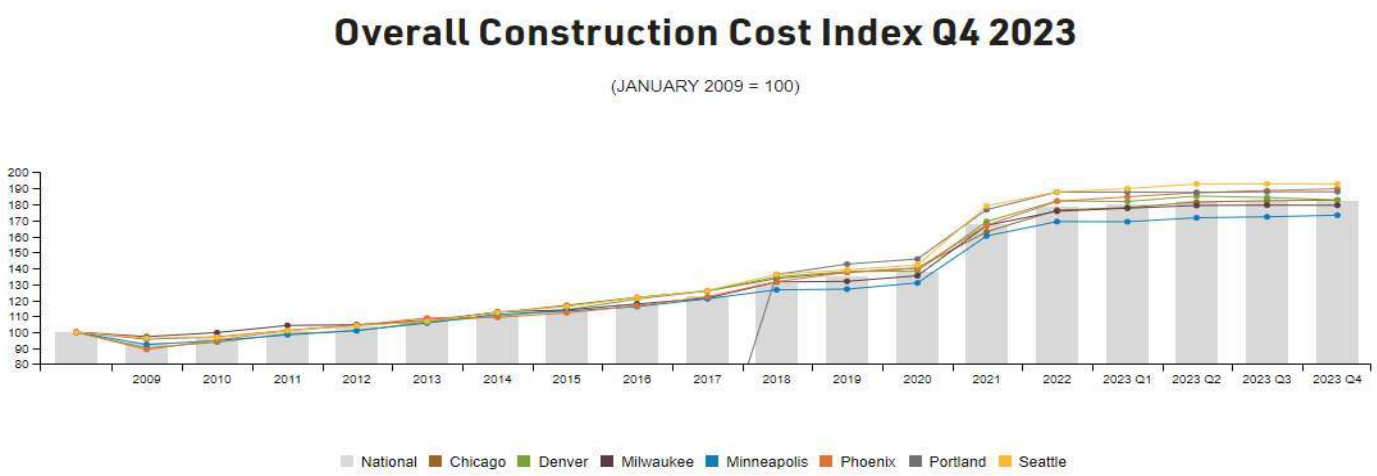
| RSMeans Historical Inflation Indexes | | |
|---|---|---|
| Year | San Antonio Index | Difference |
| 2024 | 249.7 | -4.7 |
| 2023 | 254.4 | 21 |
| 2022 | 233.4 | 33.9 |
| 2021 | 199.5 | 4 |
| 2020 | 195.5 | 11 |
| 2019 | 184.5 | 3.5 |
| 2018 | 181 | 5.5 |
| 2017 | 175.5 | 2.4 |
| 2016 | 173.1 | 1.3 |
| 2015 | 171.8 | 2.3 |
| 2014 | 169.5 | 5.2 |
| 2013 | 164.3 | 3.6 |
| 2012 | 160.7 | 8.1 |
| 2011 | 152.6 | 4.7 |
| 2010 | 147.9 | 26.6 |
| 2005 | 121.3 | 21.9 |
| 2000 | 99.4 | 1.4 |
| 1999 | 98 | 3.2 |
| 1998 | 94.8 | 1.4 |
| 1997 | 93.4 | 4.5 |
| 1995 | 88.9 | 8.2 |
| 1990 | 80.7 | 6.8 |
| 1985 | 73.9 | 18.9 |
| 1980 | 55 | - |

| Time Frame | Total Inflation Rate | Yearly Inflation Rate |
|---|---|---|
| 2020 to 2024 | 128% | 6.31% |
| 2010 to 2024 | 169% | 3.81% |
| 2000 to 2024 | 251% | 3.91% |
| 1990 to 2024 | 309% | 3.38% |
| 1980 to 2024 | 454% | 3.50% |

| Year | | National 30 City Average | Texas | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Abi-lene | Ama-rillo | Austin | Beau-mont | Corpus Christi | Dallas | El Paso | Fort Worth | Houston | Lubbock | Odessa | San Antonio | Waco | Wichita Falls |
| Jan | 2024 | 295.6 | 246.8 | 252.5 | 253 | 249.3 | 254.9 | 253.4 | 248.8 | 251.3 | 254 | 252.1 | 251.5 | 249.7 | 251.6 | 245.2 |
| | 2023 | 299.4 | 250.1 | 254.6 | 254.9 | 254.5 | 254.5 | 261.8 | 252.4 | 258.3 | 261 | 252.5 | 250.2 | 254.4 | 252.2 | 251.3 |
| | 2022 | 276.9 | 230.5 | 232.5 | 231.2 | 230.9 | 232.3 | 242.3 | 234.5 | 234.4 | 238.7 | 234.4 | 231.6 | 233.4 | 228.8 | 227.7 |
| | 2021 | 238.3 | 195.4 | 196.7 | 195.7 | 198.7 | 200.1 | 203.2 | 196.2 | 197.6 | 204.8 | 196.3 | 194.4 | 199.5 | 192.6 | 192.8 |
| | 2020 | 234.3 | 192.6 | 193.7 | 191.3 | 195.8 | 193.7 | 199.5 | 194.1 | 194.4 | 202.2 | 195.5 | 193.4 | 195.5 | 189.3 | 190.6 |
| | 2019 | 227.3 | 182.1 | 181.4 | 182.3 | 186.2 | 184.5 | 188.6 | 181.9 | 183.9 | 188.7 | 184.7 | 183.6 | 184.5 | 180.1 | 179.7 |
| | 2018 | 217.7 | 178.7 | 178.0 | 178.9 | 182.7 | 181.0 | 185.0 | 178.5 | 180.4 | 185.1 | 181.2 | 180.1 | 181.0 | 176.7 | 176.3 |
| | 2017 | 209.4 | 174.0 | 172.8 | 172.6 | 178.0 | 178.9 | 180.0 | 173.5 | 174.9 | 179.2 | 176.6 | 175.6 | 175.5 | 170.7 | 170.4 |
| | 2016 | 207.7 | 173.7 | 171.0 | 173.3 | 178.3 | 175.5 | 177.9 | 172.8 | 174.1 | 180.5 | 175.2 | 172.6 | 173.1 | 170.3 | 170.1 |
| | 2015 | 204.0 | 170.8 | 170.7 | 172.3 | 174.0 | 172.8 | 174.4 | 168.8 | 172.5 | 176.4 | 173.3 | 171.5 | 171.8 | 167.3 | 169.0 |
| | 2014 | 203.0 | 160.9 | 167.2 | 167.5 | 165.2 | 167.3 | 172.4 | 156.2 | 169.5 | 176.0 | 166.9 | 159.2 | 169.5 | 161.7 | 160.6 |
| | 2013 | 196.9 | 155.2 | 161.7 | 158.7 | 160.2 | 157.7 | 167.4 | 151.2 | 161.7 | 169.4 | 159.3 | 151.5 | 164.3 | 156.1 | 155.9 |
| | 2012 | 194.0 | 152.5 | 158.6 | 154.3 | 158.2 | 151.8 | 165.2 | 149.1 | 159.4 | 167.8 | 156.6 | 149.1 | 160.7 | 153.8 | 152.9 |
| | 2011 | 185.7 | 145.9 | 151.9 | 147.6 | 152.4 | 145.0 | 157.9 | 142.5 | 152.8 | 160.8 | 150.0 | 142.5 | 152.6 | 147.3 | 146.6 |
| | 2010 | 181.6 | 144.2 | 150.1 | 144.7 | 150.5 | 142.1 | 155.1 | 140.8 | 149.6 | 157.3 | 148.1 | 140.7 | 147.9 | 145.8 | 145.0 |
| | 2005 | 146.7 | 113.8 | 117.3 | 117.9 | 121.3 | 114.4 | 123.7 | 112.5 | 119.4 | 129.0 | 115.5 | 110.5 | 121.3 | 116.1 | 117.3 |
| | 2000 | 118.9 | 93.4 | 98.1 | 99.1 | 101.6 | 96.9 | 102.7 | 92.4 | 99.9 | 106.0 | 97.6 | 93.4 | 99.4 | 97.3 | 96.9 |
| | 1999 | 116.6 | 91.8 | 94.5 | 96.0 | 99.7 | 94.0 | 101.0 | 90.7 | 97.6 | 104.6 | 96.0 | 92.1 | 98.0 | 94.8 | 95.5 |
| | 1998 | 113.6 | 89.8 | 92.7 | 94.2 | 97.9 | 91.8 | 97.9 | 88.4 | 94.5 | 101.3 | 93.3 | 90.1 | 94.8 | 92.7 | 92.9 |
| | 1997 | 111.5 | 88.4 | 91.3 | 92.8 | 96.8 | 90.3 | 96.1 | 87.0 | 93.3 | 100.1 | 91.9 | 88.8 | 93.4 | 91.4 | 91.5 |
| | 1995 | 105.6 | 85.2 | 87.4 | 89.3 | 93.7 | 87.4 | 91.4 | 85.2 | 89.5 | 95.9 | 88.4 | 85.6 | 88.9 | 86.4 | 86.8 |
| | 1990 | 93.2 | 78.0 | 80.1 | 81.3 | 86.5 | 79.3 | 84.5 | 76.7 | 82.1 | 85.4 | 81.5 | 78.6 | 80.7 | 79.6 | 80.3 |
| | 1985 | 81.8 | 71.1 | 72.5 | 74.5 | 79.3 | 72.3 | 77.6 | 69.4 | 75.1 | 79.6 | 74.0 | 71.2 | 73.9 | 71.7 | 73.3 |
| | 1980 | 60.7 | 53.4 | 55.2 | 54.5 | 57.6 | 54.5 | 57.9 | 53.1 | 57.0 | 59.4 | 55.6 | 57.2 | 55.0 | 54.9 | 55.4 |
| | 1975 | 43.7 | 37.6 | 39.0 | 39.0 | 39.6 | 38.1 | 40.7 | 38.0 | 40.4 | 41.2 | 38.9 | 37.9 | 39.0 | 38.6 | 38.0 |
| | 1970 | 27.8 | 24.5 | 24.9 | 24.9 | 25.7 | 24.5 | 25.5 | 23.7 | 25.9 | 25.4 | 25.1 | 24.6 | 23.3 | 24.8 | 24.5 |
| | 1965 | 21.5 | 18.9 | 19.2 | 19.2 | 19.9 | 18.9 | 19.9 | 19.0 | 19.9 | 20.0 | 19.4 | 19.0 | 18.5 | 19.2 | 18.9 |
| | 1960 | 19.5 | 17.1 | 17.4 | 17.4 | 18.1 | 17.1 | 18.2 | 17.0 | 18.1 | 18.2 | 17.6 | 17.3 | 16.8 | 17.4 | 17.2 |
| | 1955 | 16.3 | 14.4 | 14.6 | 14.6 | 15.1 | 14.4 | 15.3 | 14.3 | 15.2 | 15.2 | 14.8 | 14.5 | 14.1 | 14.6 | 14.4 |
| | 1950 | 13.5 | 11.9 | 12.1 | 12.1 | 12.5 | 11.9 | 12.6 | 11.8 | 12.5 | 12.6 | 12.2 | 12.0 | 11.6 | 12.1 | 11.9 |
| | 1945 | 8.6 | 7.6 | 7.7 | 7.7 | 8.0 | 7.6 | 8.0 | 7.5 | 8.0 | 8.0 | 7.8 | 7.6 | 7.4 | 7.7 | 7.6 |
| | 1940 | 6.6 | 5.9 | 5.9 | 5.9 | 6.1 | 5.8 | 6.2 | 5.8 | 6.2 | 6.2 | 6.0 | 5.9 | 5.7 | 5.9 | 5.8 |

| Mortenson Historical Inflation Indexes (Base 2009) | | |
|---|---|---|
| Year | National Index | Difference |
| 2023 Q4 | 182.5 | 0.1 |
| 2023 Q3 | 182.4 | 0.4 |
| 2023 Q2 | 182 | 2.3 |
| 2023 Q1 | 179.7 | 1.1 |
| 2022 | 178.6 | 11.2 |
| 2021 | 167.4 | 29.6 |
| 2020 | 137.8 | 2.8 |
| 2019 | 135 | 4.2 |
| 2018 | 130.8 | 8.5 |
| 2017 | 122.3 | 4.8 |
| 2016 | 117.5 | 3.6 |
| 2015 | 113.9 | 3 |
| 2014 | 110.9 | 3.6 |
| 2013 | 107.3 | 3.7 |
| 2012 | 103.6 | 2.6 |
| 2011 | 101 | 4.6 |
| 2010 | 96.4 | 2.6 |
| 2009 | 93.8 | - |

| Time Frame | Total Inflation Rate | Yearly Inflation Rate |
|---|---|---|
| 2020 to 2023 | 132% | 9.65% |
| 2010 to 2023 | 188% | 5.93% |



| Turner Historical Inflation Indexes | | |
|---|---|---|
| Year | Average Index | Difference |
| 2023 | 1373 | 78 |
| 2022 | 1295 | 96 |
| 2021 | 1199 | 22 |
| 2020 | 1177 | 21 |
| 2019 | 1156 | 60 |
| 2018 | 1096 | 58 |
| 2017 | 1038 | 49 |
| 2016 | 989 | 46 |
| 2015 | 943 | 41 |
| 2014 | 902 | 38 |
| 2013 | 864 | 34 |
| 2012 | 830 | 18 |
| 2011 | 812 | 13 |
| 2010 | 799 | -33 |
| 2009 | 832 | -76 |
| 2008 | 908 | 54 |
| 2007 | 854 | 61 |
| 2006 | 793 | 76 |
| 2005 | 717 | 62 |
| 2004 | 655 | 34 |
| 2003 | 621 | 2 |
| 2002 | 619 | 6 |
| 2001 | 613 | 18 |
| 2000 | 595 | 25 |
| 1999 | 570 | 21 |
| 1998 | 549 | 24 |
| 1997 | 525 | 20 |
| 1996 | 505 | - |

| Time Frame | Total Inflation Rate | Yearly Inflation Rate |
|---|---|---|
| 2020 to 2023 | 117% | 5.27% |
| 2010 to 2023 | 172% | 4.25% |
| 2000 to 2023 | 231% | 3.70% |
| 1996 to 2024 | 272% | 3.77% |

| Quarter | Index | △% |
|---|---|---|
| **4th Quarter 2023** | **1395** | **1.01** |
| 3rd Quarter 2023 | 1381 | 1.17 |
| 2nd Quarter 2023 | 1365 | 1.19 |
| 1st Quarter 2023 | 1349 | 1.28 |

| Year | Average Index | △% |
|---|---|---|
| 2023 | 1373 | 6.0 |
| 2022 | 1295 | 8.0 |
| 2021 | 1199 | 1.9 |
| 2020 | 1177 | 1.8 |
| 2019 | 1156 | 5.5 |
| 2018 | 1096 | 5.6 |
| 2017 | 1038 | 5.0 |
| 2016 | 989 | 4.8 |
| 2015 | 943 | 4.5 |
| 2014 | 902 | 4.4 |
| 2013 | 864 | 4.1 |
| 2012 | 830 | 2.1 |
| 2011 | 812 | 1.6 |

The Turner Building Cost Index is determined by the following factors considered on a nationwide basis: labor rates and productivity, material prices and the competitive condition of the marketplace.

2010-1996 rates are stored online and can be provided if desired

# APPENDIX 29 - CIP PROJECTS COST ESTIMATES

SCHERTZ

**City of Schertz**
**2024 Impact Fee Update**
**Water CIP Estimate of Probable Cost Summary**

| Project Number | Project Name | Project Cost | 2020-2030 Growth Utilization | Impact Fee Eligible Portion |
|---|---|---|---|---|
| **Near Term CIP** | | | | |
| **System Improvement Projects** | | | | |
| NT-W1** | Bubbling Springs 6" WL Replacement | $763,000 | 27% | $206,715 |
| NT-W2 | Corbett Pump Station & 3.0 MG GST | $8,600,000 | 0% | $0 |
| NT-W3 | Ware Seguin Pump Station Operational Improvement | $175,000 | 0% | $0 |
| NT-W4 | 12" WL from Ware Seguin to Lower Seguin | $1,538,000 | 0% | $0 |
| NT-W5 | Fred Couples to Schwab | $455,556 | 0% | $0 |
| NT-W6 | Schwab to Eckhardt | $1,600,000 | 0% | $0 |
| NT-W7** | Graytown to Pfeil | $1,550,000 | 69% | $1,077,040 |
| NT-W8** | FM 78 Water Line Replacement | $875,000 | 22% | $194,778 |
| NT-W9** | Moonlight Meadow Dr & Lost Meadow Dr WL Replacement | $3,000,000 | 0% | $0 |
| NT-W10** | Robinhood Way WL Replacement | $4,650,000 | 0% | $0 |
| | ***NEAR TERM TOTAL:*** | **$23,206,556** | - | **$1,478,532** |
| **Proposed 2030 CIP** | | | | |
| **Growth Projects** | | | | |
| 2030-W1 | 12" WL from Tri-County Extension to Cibolo Valley Drive | $4,788,000 | 100% | $4,788,000 |
| 2030-W2 | Raf Burnette Rd 12" WL Improvements | $1,438,000 | 89% | $1,438,000 |
| 2030-W3 | 8" WL from Ray Corbett Dr to Lower Seguin Rd | $3,688,000 | 97% | $3,688,000 |
| 2030-W4** | Trainer Hale Rd 2" WL Replacement & 8" WL Improvement | $9,850,000 | 93% | $9,192,317 |
| 2030-W5** | Boenig Dr S 6" WL Replacement & 8" WL Improvement | $6,388,000 | 69% | $4,411,757 |
| 2030-W6 | Live Oak to IH-35 24" Transmission Main | $32,075,000 | 100% | $32,075,000 |
| 2030-W7 | Ware Seguin Pump Station Expansion Phase 1 | $5,213,000 | 33% | $5,213,000 |
| 2030-W8 | IH-10 8" WL Improvements | $6,063,000 | 100% | $6,063,000 |
| | ***2030 Growth Subtotal:*** | **$69,503,000** | - | **$66,869,073** |
| **System Improvement Projects** | | | | |
| 2030-W9 | PRV Installation for Proposed Southwest Pressure Plane | $413,000.0 | 0% | $0 |
| 2030-W10** | River Rd 6" WL Replacement | $2,325,000 | 58% | $0 |
| | ***2030 System Improvement Projects Subtotal:*** | **$2,738,000** | - | **$0** |
| | ***2030 TOTAL:*** | **$72,241,000** | - | **$68,347,606** |
| **Proposed 2050 CIP** | | | | |
| **Growth Projects** | | | | |
| 2050-W1 | Corbett Pump Station Expansion | $1,663,000 | 2050 CIP Projects are not eligible to be included in this impact fee total. | |
| 2050-W2 | FM 2252 8" WL Improvements | $8,800,000 | | |
| 2050-W3 | Ware Seguin Pump Station Expansion Phase 2 | $2,725,000 | | |
| 2050-W4 | Beck St 6" WL Replacement | $5,288,000 | | |
| 2050-W5 | Raf Burnette Rd 8" WL Improvements | $4,438,000 | | |
| 2050-W6 | IH-35 Pump Station & 3.0 MG GST | $42,188,000 | | |
| 2050-W7 | IH-10 & FM 1518 8" WL Improvements | $3,075,000 | | |
| | ***2050 Growth Subtotal:*** | **$68,177,000** | | |
| **System Improvement Projects** | | | | |
| 2050-W8 | Lower Seguin Rd 8" WL Replacement | $4,775,000 | | |
| | ***2050 System Improvement Projects Subtotal:*** | **$4,775,000** | | |
| | ***2050 TOTAL:*** | **$72,952,000** | | |
| | ***WATER CIP TOTAL:*** | **$168,399,556** | | **$69,826,138** |

** - Indicates that there are both growth & system improvement components to the project.

SCHERTZ

**City of Schertz**
**2024 Impact Fee Update**
**Waste Water CIP Estimate of Probable Cost Summary**

| Project Number | Project Name | Total Project Cost | 2020-2030 Growth Utilization | Impact Fee Eligible Portion |
|---|---|---|---|---|
| **Near Term CIP** | | | | |
| **Growth Projects** | | | | |
| NT-S1 | Town Creek Phase IV 24" - Section 1 | $6,875,000 | 21% | $1,440,972 |
| NT-S2 | Town Creek Phase IV 12" - Section 2 | $2,925,000 | 0% | $0 |
| NT-S3 | Town Creek Phase V 24" | $10,425,000 | 23% | $2,378,763 |
| NT-S4** | Upsize Lookout Line | $3,838,000 | 20% | $771,788 |
| NT-S5** | Upsize Tri County Line | $2,084,800 | 25% | $526,887 |
| NT-S6 | Cibolo West Main | $16,213,000 | 83% | $13,523,463 |
| NT-S7 | Woman Hollering Creek Lift Station, Gravity Lines, and Force Main | $13,000,000 | 89% | $11,632,450 |
| | ***Near Term Growth Subtotal:*** | **$55,360,800** | - | **$30,274,324** |
| **System Improvement Projects** | | | | |
| NT SI-1 | Decommission Tri County Lift Station | $88,000 | 0% | $0 |
| NT SI-2 | Decommission Corbett Lift Station | $1,500,000 | 0% | $0 |
| NT SI-3 | Decommission Sedona Lift Station & Woman Hollering Creek WWTP | $175,000 | 0% | $0 |
| | ***Near Term System Improvement Projects Subtotal:*** | **$1,763,000** | - | **$0** |
| | ***NEAR TERM TOTAL:*** | **$57,123,800** | - | **$30,274,324** |
| **Proposed 2030 CIP** | | | | |
| **Growth Projects** | | | | |
| 2030-S1 | Hope Lane 8" Gravity Line | $2,025,000 | 67% | $1,359,153 |
| 2030-S2 | Old Wiederstein Road 8" | $1,338,000 | 5% | $68,849 |
| 2030-S3 | Union Pacific Railroad 8" - Section 1 | $2,563,000 | 10% | $249,210 |
| 2030-S4 | Union Pacific Railroad 8" - Section 2 | $400,000 | 12% | $47,722 |
| 2030-S5 | Wiederstein Road 8" | $1,663,000 | 83% | $1,372,188 |
| 2030-S6 | Schaefer Road 8" - Section 1 | $4,913,000 | 33% | $1,613,509 |
| 2030-S7 | Schaefer Road 8" - Section 2 | $1,938,000 | 100% | $1,938,000 |
| 2030-S8 | Aranda 8" | $475,000 | 100% | $475,000 |
| 2030-S9 | Weir Road 10" | $2,525,000 | 100% | $2,522,465 |
| 2030-S10 | Trainer Hale Road 10" | $1,038,000 | 100% | $1,034,756 |
| 2030-S11 | Ware Seguin Road 8" | $3,113,000 | 97% | $3,012,264 |
| 2030-S12 | FM 1518 8" | $400,000 | 40% | $160,000 |
| 2030-S13 | I-10 8" - Section 1 | $2,713,000 | 99% | $2,677,145 |
| 2030-S14 | Boenig Drive 8" | $2,963,000 | 29% | $849,531 |
| 2030-S15 | N Greytown Road 8" | $1,275,000 | 52% | $661,379 |
| | ***2030 Growth Subtotal:*** | **$29,342,000** | - | **$18,041,171** |
| **System Improvement Projects** | | | | |
| 2030 SI-1** | Friesenhahn West Line WW Upsize | $8,175,000 | 22% | $1,833,143 |
| 2030 SI-2** | Fairlawn WW Upsize | $1,375,000 | 9% | $121,579 |
| 2030 SI-3** | Cibolo Crossing WW Line Upsize | $1,288,000 | 4% | $46,406 |
| 2030 SI-4** | Woodland Oak Drive Replacements | $338,000 | 4% | $13,741 |
| 2030 SI-5** | Old Wiederstein WW Upsize | $5,050,000 | 61% | $3,099,614 |
| 2030 SI-6** | Northcliffe Lift Station Upgrade | $7,838,000 | 5% | $392,686 |
| 2030 SI-7 | Decommission Belmont Park Lift Station | $463,000 | 0% | $0 |
| | ***2030 System Improvement Projects Subtotal:*** | **$24,527,000** | - | **$5,507,169** |
| | ***2030 TOTAL:*** | **$53,869,000** | - | **$23,548,341** |
| **Proposed 2050 CIP** | | | | |
| **Growth Projects** | | | | |
| 2050-S1 | I-35 N 8" | $9,088,000 | | |
| 2050-S2 | Friesenhahn Lane 8" | $6,500,000 | | |
| 2050-S3 | Schaefer Road 8" - Section 3 | $5,713,000 | | |
| 2050-S4 | Corbett JH 8" | $2,888,000 | | |
| 2050-S5 | Lower Seguin Road 8" | $1,338,000 | | |
| 2050-S6 | I-10 8" - Section 2 | $3,338,000 | | |
| | ***2050 Growth Subtotal:*** | **$28,865,000** | | |
| **System Improvement Projects** | | | | |
| 2050 SI-1 | Cypress Point Lift Station Upgrade | $1,463,000 | | |
| 2050 SI-2 | Decommission Schertz Parkway Lift Station | $238,000 | | |
| 2050 SI-3 | Decommission Park Lift Station | $3,663,000 | | |
| 2050 SI-4 | Decommission Cover's Cove Lift Station | $238,000 | | |
| | ***2050 System Improvement Projects Subtotal:*** | **$5,602,000** | | |
| | ***2050 TOTAL:*** | **$34,467,000** | | |
| | ***WASTE WATER CIP TOTAL:*** | **$145,459,800** | | **$53,822,665** |

2050 CIP projects are not eligible to be included in the impact fee total.

** - Indicates that there are both growth & system improvement components to the project.

**City of Schertz**
**2024 Impact Fee Update**
**CCMA System Improvement Projects - Estimate of Probable Cost**
**Summary**

| Project Number | Project Name | Project Cost |
|---|---|---|
| **Proposed 2030 CIP** | | |
| **CCMA System Improvement Projects** | | |
| 2030 C-1 | Roy Richard Drive Replacements | $1,588,000 |
| 2030 C-2 | Valencia Lane Replacements | $2,288,000 |
| 2030 C-3 | Savannah Drive Replacements | $12,425,000 |
| 2030 C-4 | Build Out Project 25 - 36" Schertz Line | $12,950,000 |
| | ***CCMA System Improvement Projects Total:*** | **$29,251,000** |

# NEAR TERM WATER CIP PROJECTS

SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Bubbling Springs 6" WL Replacement
**Project Number:** NT-W1**
**Project Category:** Water
**CIP Type:** System Improvement

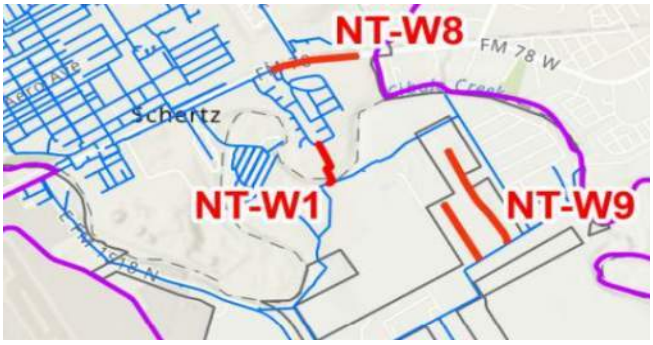
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Replace leaking 6" from River Rd to just south of Cibolo Creek along Bubbling Springs with 12", approximately 1,320 LF.

**Justification:**
City identified CIP.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 1,320 | $ 135 | $ 179,000 |
| 2 | Gate Valve | EA | 3 | $ 7,000 | $ 21,000 |
| 3 | Fire Hydrant | EA | 3 | $ 8,500 | $ 26,000 |
| 4 | Service & System Connections | EA | 27 | $ 2,100 | $56,700 |
| 4 | Surface Replacement | LF | 660 | $ 196 | $ 130,000 |
| 5 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 6 | SWPPP | LS | 1 | $ 25,000 | $ 25,000 |
| | | | | **SUBTOTAL** | **$ 446,000** |
| | | | | MOBILIZATION (5%) | $23,000 |
| | | | | CONTINGENCY (30%) | $134,000 |
| | | | | **TOTAL CONSTRUCTION** | **$610,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $153,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$763,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Corbett Pump Station & 3.0 MG GST
**Project Number:** NT-W2
**Project Category:** Water
**CIP Type:** System Improvement

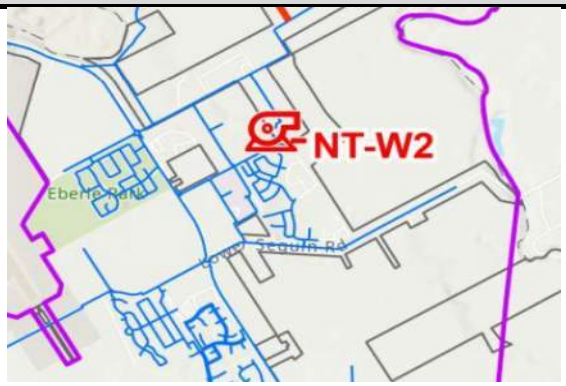
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Corbett Pump Station (2,000 gpm, 183 TDH firm capacity) and 3.0 MG GST.

**Justification:**
Per "Corbett 3.0 MG GST Project" Preliminary Engineering Report (2021), construction is currently underway.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 2,000 gpm Pump Station & 3.0 MG GST | LS | 1 | $ 8,600,000 | $ 8,600,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$ 8,600,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Ware Seguin Pump Station Operational Improvement
**Project Number:** NT-W3
**Project Category:** Water
**CIP Type:** System Improvement

**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Control improvements at Ware Seguin Pump Station to be per GST level rather than a timer.

**Justification:**
Potentially zero cost project to improve pump station performance in this service area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | Controls | LS | 1 | $ 100,000 | $ 100,000 |
| | | | | **SUBTOTAL** | **$ 100,000** |
| | | | | MOBILIZATION (5%) | $5,000 |
| | | | | CONTINGENCY (30%) | $30,000 |
| | | | | **TOTAL CONSTRUCTION** | **$140,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $35,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$175,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** 12" WL from Ware Seguin to Lower Seguin
**Project Number:** NT-W4
**Project Category:** Water
**CIP Type:** Growth

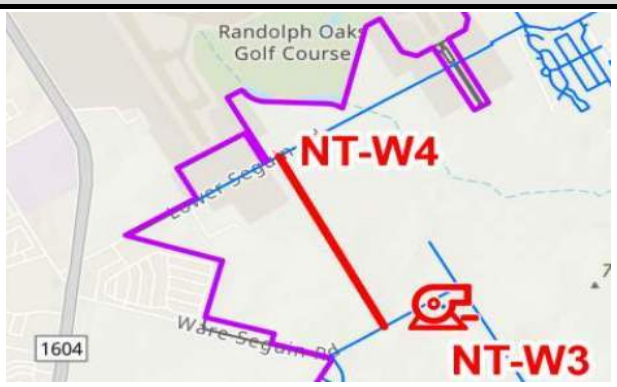
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Approximately 5,150 LF of 12" from Ware Seguin to Lower Seguin in open field.

**Justification:**
Currently in design.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 5,150 | $ 135 | $696,000 |
| 2 | Gate Valve | EA | 11 | $ 7,000 | $77,000 |
| 3 | Fire Hydrant | EA | 11 | $ 8,500 | $93,500 |
| 4 | Traffic Control | LS | 1 | $ 15,000 | $15,000 |
| 5 | SWPPP | LS | 1 | $ 25,000 | $25,000 |
| | | | | **SUBTOTAL** | **$ 907,000** |
| | | | | MOBILIZATION (5%) | $46,000 |
| | | | | CONTINGENCY (30%) | $273,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,230,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $308,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,538,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Fred Couples to Schwab
**Project Number:** NT-W5
**Project Category:** Water
**CIP Type:** Growth

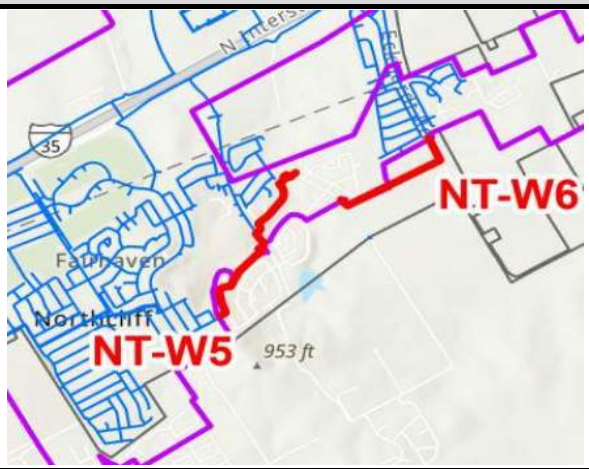
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Approximately 2,270 LF of 12" from Fred Couples to Schwab. Total cost shown is portion paid for by the City.

**Justification:**
Currently under construction.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| | | | | ESTIMATE TOTAL PROJECT COST | $455,555.79 |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Schwab to Eckhardt
**Project Number:** NT-W6
**Project Category:** Water
**CIP Type:** Growth

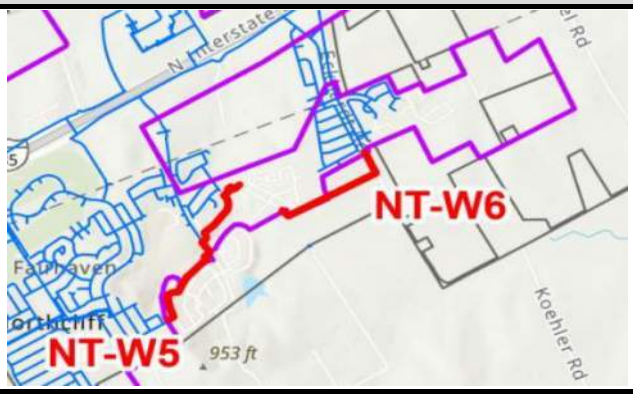
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Approximately 5,400 LF of 12" from Schwab to Eckhardt.

**Justification:**
Currently in design.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 5,400 | $ 135 | $729,000 |
| 2 | Gate Valve | EA | 11 | $ 7,000 | $77,000 |
| 3 | Fire Hydrant | EA | 11 | $ 8,500 | $93,500 |
| * | Traffic Control | LS | 1 | $ 16,000 | $16,000 |
| 6 | SWPPP | LS | 1 | $ 25,000 | $25,000 |
| | | | | **SUBTOTAL** | **$ 941,000** |
| | | | | MOBILIZATION (5%) | $48,000 |
| | | | | CONTINGENCY (30%) | $283,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,280,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $320,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,600,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Graytown to Pfeil
**Project Number:** NT-W7**
**Project Category:** Water
**CIP Type:** System Improvement

**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Approximately 5,200 LF of 12" along IH-10 from N. Graytown Rd to Pfeil Rd.

**Justification:**
Currently in design.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 5,200 | $ 135 | $702,000 |
| 2 | Gate Valve | EA | 11 | $ 7,000 | $77,000 |
| 3 | Fire Hydrant | EA | 11 | $ 8,500 | $93,500 |
| 4 | Traffic Control | LS | 1 | $ 15,000 | $15,000 |
| 5 | SWPPP | LS | 1 | $ 25,000 | $25,000 |
| | | | | **SUBTOTAL** | **$ 913,000** |
| | | | | MOBILIZATION (5%) | $46,000 |
| | | | | CONTINGENCY (30%) | $274,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,240,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $310,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,550,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** FM 78 Water Line Replacement
**Project Number:** NT-W8**
**Project Category:** Water
**CIP Type:** System Improvement

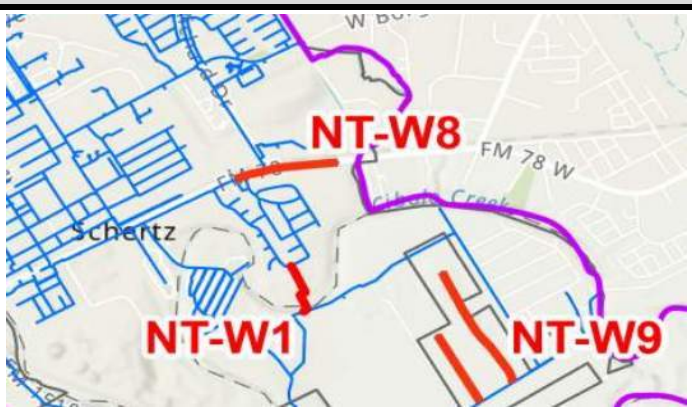
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Upsize existing 8"/10" to 12" along FM 78 from east of Bubbling Springs Rd to end of dead-end line, approximately 2,300 LF.

**Justification:**
Needed for fire flow.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 2,300 | $ 135 | $310,500 |
| 2 | Gate Valve | EA | 5 | $ 7,000 | $35,000 |
| 3 | Fire Hydrant | EA | 5 | $ 8,500 | $42,500 |
| 4 | Service & System Connections | EA | 46 | $ 2,100 | $96,600 |
| 5 | Traffic Control | LS | 1 | $ 8,000 | $8,000 |
| 6 | SWPPP | LS | 1 | $ 25,000 | $25,000 |
| | | | | **SUBTOTAL** | **$ 518,000** |
| | | | | MOBILIZATION (5%) | $26,000 |
| | | | | CONTINGENCY (30%) | $156,000 |
| | | | | **TOTAL CONSTRUCTION** | **$700,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $175,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$875,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Moonlight Meadow Dr & Lost Meadow Dr WL Replacement
**Project Number:** NT-W9**
**Project Category:** Water
**CIP Type:** System Improvement

**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Upsize existing 4" to 8" along Moonlight Meadow Dr and Lost Meadows Dr north of Schaefer Rd, approximately 4,970 LF.

**Justification:**
Needed for fire flow.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Water Line | LF | 4,970 | $ 85 | $423,000 |
| 2 | Gate Valve | EA | 10 | $ 7,000 | $70,000 |
| 3 | Fire Hydrant | EA | 10 | $ 8,500 | $85,000 |
| 4 | Service & System Connections | EA | 100 | $ 2,100 | $210,000 |
| 5 | Surface Replacement | LF | 4,970 | $ 190 | $945,000 |
| 6 | Traffic Control | LS | 1 | $ 15,000 | $15,000 |
| 7 | SWPPP | LS | 1 | $ 25,000 | $25,000 |
| | | | | **SUBTOTAL** | **$ 1,773,000** |
| | | | | MOBILIZATION (5%) | $89,000 |
| | | | | CONTINGENCY (30%) | $532,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,400,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $600,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$3,000,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Robinhood Way WL Replacement
**Project Number:** NT-W10**
**Project Category:** Water
**CIP Type:** System Improvement

**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Upsize existing 8" to 12" along Robin Hood Way, approximately 6,670 LF.

**Justification:**
Needed for fire flow.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 6,670 | $ 135 | $901,000 |
| 2 | Gate Valve | EA | 14 | $ 7,000 | $98,000 |
| 3 | Fire Hydrant | EA | 14 | $ 8,500 | $119,000 |
| 4 | Service & System Connections | EA | 134 | $ 2,100 | $281,400 |
| 5 | Surface Replacement | LF | 6,670 | $ 196 | $1,307,320 |
| 6 | Traffic Control | LS | 1 | $ 19,000 | $19,000 |
| 7 | SWPPP | LS | 1 | $ 25,000 | $25,000 |
| | | | | **SUBTOTAL** | **$2,751,000** |
| | | | | MOBILIZATION (5%) | $138,000 |
| | | | | CONTINGENCY (30%) | $826,000 |
| | | | | **TOTAL CONSTRUCTION** | **$3,720,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $930,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$4,650,000** |

**Project Location:**



# 2030 WATER CIP PROJECTS

SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** 12" WL from Tri-County Extension to Cibolo Valley Drive
**Project Number:** 2030-W1
**Project Category:** Water
**CIP Type:** Growth

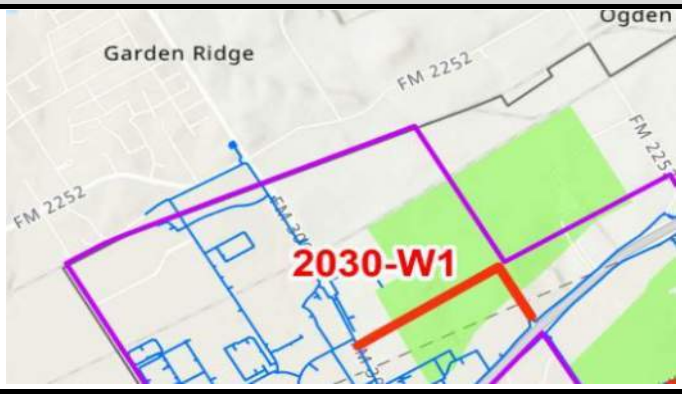
**Date:** August 2024
**Phase:** 2030

**Project Description:**
New 12" loop east of FM 3009, north of IH-35 (approximately 6,060 LF).

**Justification:**
Supplies new service area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 6,060 | $ 170 | $1,030,200 |
| 2 | Gate Valve | EA | 13 | $ 8,900 | $115,700 |
| 3 | Fire Hydrant | EA | 13 | $ 10,700 | $139,100 |
| 4 | Surface Replacement | LF | 6,060 | $ 247 | $1,496,000 |
| 5 | Traffic Control | LS | 1 | $ 22,000 | $22,000 |
| 6 | SWPPP | LS | 1 | $ 32,000 | $32,000 |
| | | | | **SUBTOTAL** | **$2,835,000** |
| | | | | MOBILIZATION (5%) | $142,000 |
| | | | | CONTINGENCY (30%) | $851,000 |
| | | | | **TOTAL CONSTRUCTION** | **$3,830,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $958,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$4,788,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Raf Burnette Rd 12" WL Improvements
**Project Number:** 2030-W2
**Project Category:** Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 1,750 LF of 12" along Raf Burnette east of Authority Ln.

**Justification:**
Supplies new service area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 1,750 | $ 170 | $297,500 |
| 2 | Gate Valve | EA | 4 | $ 8,900 | $35,600 |
| 3 | Fire Hydrant | EA | 4 | $ 10,700 | $42,800 |
| 4 | Surface Replacement | LF | 1,750 | $ 247 | $432,000 |
| 5 | Traffic Control | LS | 1 | $ 7,000 | $7,000 |
| 6 | SWPPP | LS | 1 | $ 32,000 | $32,000 |
| | | | | **SUBTOTAL** | **$847,000** |
| | | | | MOBILIZATION (5%) | $43,000 |
| | | | | CONTINGENCY (30%) | $255,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,150,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $288,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,438,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** 8" WL from Ray Corbett Dr to Lower Seguin Rd
**Project Number:** 2030-W3
**Project Category:** Water
**CIP Type:** Growth

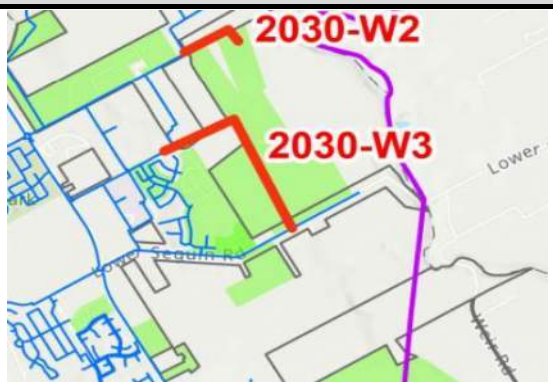
**Date:** August 2024
**Phase:** 2030

**Project Description:**
New 8" loop north of Lower Seguin Rd, east of Ray Corbett Dr (approximately 5,590 LF).

**Justification:**
Supplies new service area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Water Line | LF | 5,590 | $ 110 | $614,900 |
| 2 | Gate Valve | EA | 12 | $ 3,800 | $45,600 |
| 3 | Fire Hydrant | EA | 12 | $ 10,700 | $128,400 |
| 4 | Surface Replacement | LF | 5,590 | $ 239 | $1,337,000 |
| 5 | Traffic Control | LS | 1 | $ 20,000 | $20,000 |
| 6 | SWPPP | LS | 1 | $ 32,000 | $32,000 |
| | | | | **SUBTOTAL** | **$2,178,000** |
| | | | | MOBILIZATION (5%) | $109,000 |
| | | | | CONTINGENCY (30%) | $654,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,950,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $738,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$3,688,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Trainer Hale Rd 2" WL Replacement & 8" WL Improvement
**Project Number:** 2030-W4**
**Project Category:** Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Upsize approximately 2,960 LF of 2" to 12" along Trainer Hale Rd east of FM 1518; and 9,650 LF of new 8" loop north of Trainer Hale Rd, east of FM 1518.

**Justification:**
Upgrades distribution system to current min. pipe size (8") to supply new service area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 2,960 | $ 170 | $503,200 |
| 2 | 8" Water Line | LF | 9,650 | $ 110 | $1,061,500 |
| 3 | 12" Gate Valve | EA | 6 | $ 8,900 | $53,400 |
| 4 | 8" Gate Valve | EA | 20 | $ 3,800 | $76,000 |
| 5 | Fire Hydrant | EA | 26 | $ 10,700 | $278,200 |
| 6 | Service & System Connections | EA | 253 | $ 2,650 | $670,450 |
| 7 | Surface Replacement | LF | 12,610 | $ 247 | $3,112,000 |
| 8 | Traffic Control | LS | 1 | $ 46,000 | $46,000 |
| 9 | SWPPP | LS | 1 | $ 32,000 | $32,000 |
| | | | | **SUBTOTAL** | **$5,833,000** |
| | | | | MOBILIZATION (5%) | $292,000 |
| | | | | CONTINGENCY (30%) | $1,750,000 |
| | | | | **TOTAL CONSTRUCTION** | **$7,880,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,970,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$9,850,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Boenig Dr S 6" WL Replacement & 8" WL Improvement
**Project Number:** 2030-W5**
**Project Category:** Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Upsize approximately 5,300 LF of 6" to 8" along Boenig Dr south of N Graytown Rd, and 3,300 LF new 8" along future Binz-Engleman Rd.

**Justification:**
Needed to meet growth in area and provide fire flow.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Water Line | LF | 8,600 | $ 110 | $946,000 |
| 2 | Gate Valve | EA | 18 | $ 3,800 | $68,400 |
| 3 | Fire Hydrant | EA | 18 | $ 10,700 | $192,600 |
| 4 | Service & System Connections | EA | 172 | $ 2,650 | $455,800 |
| 5 | Surface Replacement | LF | 8,600 | $ 239 | $2,057,000 |
| 6 | Traffic Control | LS | 1 | $ 31,000 | $31,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $32,000 |
| | | | | **SUBTOTAL** | **$3,783,000** |
| | | | | MOBILIZATION (5%) | $190,000 |
| | | | | CONTINGENCY (30%) | $1,135,000 |
| | | | | **TOTAL CONSTRUCTION** | **$5,110,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,278,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$6,388,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Live Oak to IH-35 24" Transmission Main
**Project Number:** 2030-W6
**Project Category:** Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Live Oak to IH-35 24" transmission line (approximately 20,000 LF).

**Justification:**
In progress, pending easement acquisition. Needed to meet growth and provide redundancy.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 24" Water Line | LF | 20,000 | $ 570 | $11,400,000 |
| 2 | Gate Valve | EA | 40 | $ 25,700 | $1,028,000 |
| 3 | Fire Hydrant | EA | 40 | $ 10,700 | $428,000 |
| 4 | ARV (1") | EA | 16 | $ 17,700 | $283,200 |
| 5 | CAV (3") | EA | 16 | $ 23,200 | $371,200 |
| 6 | Surface Replacement | LF | 20,000 | $ 269 | $5,388,000 |
| 7 | Traffic Control | LS | 1 | $ 72,000 | $72,000 |
| 8 | SWPPP | LS | 1 | $ 32,000 | $32,000 |
| | | | | **SUBTOTAL** | **$19,003,000** |
| | | | | MOBILIZATION (5%) | $951,000 |
| | | | | CONTINGENCY (30%) | $5,701,000 |
| | | | | **TOTAL CONSTRUCTION** | **$25,660,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $6,415,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$32,075,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Ware Seguin Pump Station Expansion Phase 1
**Project Number:** 2030-W7
**Project Category:** Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Ware Seguin Pump Station Improvements Phase 1 - Expand Ware Seguin to firm pumping capacity of 1,000 gpm, 105 TDH; and new groundwater well to provide supply to Ware Seguin.

**Justification:**
Needed to meet new growth in Ware Seguin area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 1,000 GPM GW Well | LS | 1 | $ 2,518,000 | $2,518,000 |
| 2 | 1,000 GPM Pump for PS | EA | 2 | $ 189,000 | $378,000 |
| 3 | VFD | EA | 1 | $ 126,000 | $126,000 |
| 4 | Yard Piping & Other Appurtenances | LS | 1 | $ 63,000 | $63,000 |
| | | | | **SUBTOTAL** | **$3,085,000** |
| | | | | MOBILIZATION (5%) | $155,000 |
| | | | | CONTINGENCY (30%) | $926,000 |
| | | | | **TOTAL CONSTRUCTION** | **$4,170,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,043,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$5,213,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** IH-10 8" WL Improvements
**Project Number:** 2030-W8
**Project Category:** Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
4,300 LF of new 8" along IH-10 and Scenic Lake Dr.

**Justification:**
Needed to meet growth in area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Water Line | LF | 4,300 | $ 230 | $991,000 |
| 2 | Gate Valve | EA | 9 | $ 8,200 | $73,800 |
| 3 | Fire Hydrant | EA | 9 | $ 23,100 | $207,900 |
| 4 | Surface Replacement | LF | 4,300 | $ 515 | $2,215,000 |
| 5 | Traffic Control | LS | 1 | $ 34,000 | $34,000 |
| 6 | SWPPP | LS | 1 | $ 68,000 | $68,000 |
| | | | | **SUBTOTAL** | **$3,590,000** |
| | | | | MOBILIZATION (5%) | $180,000 |
| | | | | CONTINGENCY (30%) | $1,077,000 |
| | | | | **TOTAL CONSTRUCTION** | **$4,850,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,213,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$6,063,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** PRV Installation for Proposed Southwest Pressure Plane
**Project Number:** 2030-W9
**Project Category:** Water
**CIP Type:** System Improvement

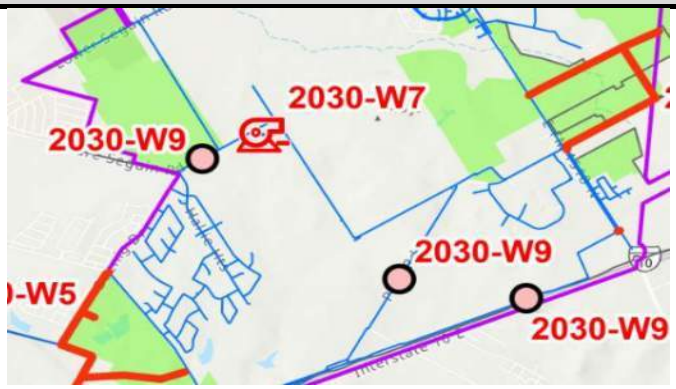
**Date:** August 2024
**Phase:** 2030

**Project Description:**
3 new PRVs (2-6", 1-8") to create new pressure zone in southwest part of system.

**Justification:**
Avoids high pressures and improves performance of Ware Seguin Pump Station.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 6" PRV | EA | 2 | $ 70,000 | $140,000 |
| 2 | 8" PRV | EA | 1 | $ 80,000 | $80,000 |
| 3 | Connection/Operations Expenses | LS | 1 | $ 19,000 | $19,000 |
| | | | | **SUBTOTAL** | **$239,000** |
| | | | | MOBILIZATION (5%) | $12,000 |
| | | | | CONTINGENCY (30%) | $72,000 |
| | | | | **TOTAL CONSTRUCTION** | **$330,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $83,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$413,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** River Rd 6" WL Replacement
**Project Number:** 2030-W10**
**Project Category:** Water
**CIP Type:** System Improvement

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Upsize 2,590 LF of ex. 6" to 12" along River Rd from FM 78 to Bubbling Springs Rd to remove bottleneck.

**Justification:**
Removes system bottleneck.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 2,590 | $ 170 | $440,300 |
| 2 | Gate Valve | EA | 6 | $ 8,900 | $53,400 |
| 3 | Fire Hydrant | EA | 6 | $ 10,700 | $64,200 |
| 4 | Service & System Connections | EA | 52 | $ 2,650 | $137,800 |
| 5 | Surface Replacement | LF | 2,590 | $ 247 | $639,000 |
| 6 | Traffic Control | LS | 1 | $ 10,000 | $10,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $32,000 |
| | | | | **SUBTOTAL** | **$1,377,000** |
| | | | | MOBILIZATION (5%) | $69,000 |
| | | | | CONTINGENCY (30%) | $414,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,860,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $465,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$2,325,000** |

**Project Location:**



# 2050 WATER CIP PROJECTS

SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Corbett Pump Station Expansion
**Project Number:** 2050-W1
**Project Category:** Water
**CIP Type:** System Improvement

**Date:** August 2024
**Phase:** 2050

**Project Description:**
Corbett Pump Station Expansion - Expand Corbett to 4,000 gpm, 183 TDH firm capacity.

**Justification:**
Prevents low pressures throughout southern part of system.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 2,000 GPM Pump | EA | 1 | $ 543,000 | $543,000 |
| 2 | VFD | EA | 1 | $ 272,000 | $272,000 |
| 3 | Yard Piping & Other Appurtenances | LS | 1 | $ 163,000 | $163,000 |
| | | | | **SUBTOTAL** | **$978,000** |
| | | | | MOBILIZATION (5%) | $49,000 |
| | | | | CONTINGENCY (30%) | $294,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,330,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $333,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,663,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** FM 2252 8" WL Improvements
**Project Number:** 2050-W2
**Project Category:** Water
**CIP Type:** System Improvement

**Date:** August 2024
**Phase:** 2050

**Project Description:**
Approximately 6,290 LF of 8" along FM 2252 and new loop.

**Justification:**
Supplies new service area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Water Line | LF | 6,290 | $ 230 | $1,450,000 |
| 2 | Gate Valve | EA | 13 | $ 8,200 | $106,600 |
| 3 | Fire Hydrant | EA | 13 | $ 23,100 | $300,300 |
| 4 | Surface Replacement | LF | 6,290 | $ 515 | $3,240,000 |
| 5 | Traffic Control | LS | 1 | $ 49,000 | $49,000 |
| 6 | SWPPP | LS | 1 | $ 68,000 | $68,000 |
| | | | | **SUBTOTAL** | **$5,214,000** |
| | | | | MOBILIZATION (5%) | $261,000 |
| | | | | CONTINGENCY (30%) | $1,565,000 |
| | | | | **TOTAL CONSTRUCTION** | **$7,040,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,760,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$8,800,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Ware Seguin Pump Station Expansion Phase 2
**Project Number:** 2050-W3
**Project Category:** Water
**CIP Type:** System Improvement

**Date:** August 2024
**Phase:** 2050

**Project Description:**
Ware Seguin Pump Station Improvements Phase 2 - Expand Ware Seguin to 1,200 gpm, 123 TDH firm capacity.

**Justification:**
Prevents low pressures in Ware Seguin area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 1,200 GPM Pump | EA | 2 | $ 461,000 | $922,000 |
| 2 | VFD | EA | 2 | $ 272,000 | $544,000 |
| 3 | Yard Piping & Other Appurtenances | LS | 1 | $ 147,000 | $147,000 |
| | | | | **SUBTOTAL** | **$1,613,000** |
| | | | | MOBILIZATION (5%) | $81,000 |
| | | | | CONTINGENCY (30%) | $484,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,180,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $545,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$2,725,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Beck St 6" WL Replacement
**Project Number:** 2050-W4
**Project Category:** Water
**CIP Type:** System Improvement

**Date:** August 2024
**Phase:** 2050

**Project Description:**
Upsize 1,590 LF of 6" to 8" along Beck St east of Schertz Pkwy, 1,680 LF of new 8".

**Justification:**
Upgrades distribution system to current min. pipe size (8") to serve new service area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Water Line | LF | 3,270 | $ 230 | $754,000 |
| 2 | Gate Valve | EA | 7 | $ 8,200 | $57,400 |
| 3 | Fire Hydrant | EA | 7 | $ 23,100 | $161,700 |
| 4 | Service & System Connections | EA | 66 | $ 5,700 | $376,200 |
| 5 | Surface Replacement | LF | 3,270 | $ 515 | $1,685,000 |
| 6 | Traffic Control | LS | 1 | $ 26,000 | $26,000 |
| 7 | SWPPP | LS | 1 | $ 68,000 | $68,000 |
| | | | | **SUBTOTAL** | **$3,129,000** |
| | | | | MOBILIZATION (5%) | $157,000 |
| | | | | CONTINGENCY (30%) | $939,000 |
| | | | | **TOTAL CONSTRUCTION** | **$4,230,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,058,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$5,288,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Raf Burnette Rd 8" WL Improvements
**Project Number:** 2050-W5
**Project Category:** Water
**CIP Type:** Growth

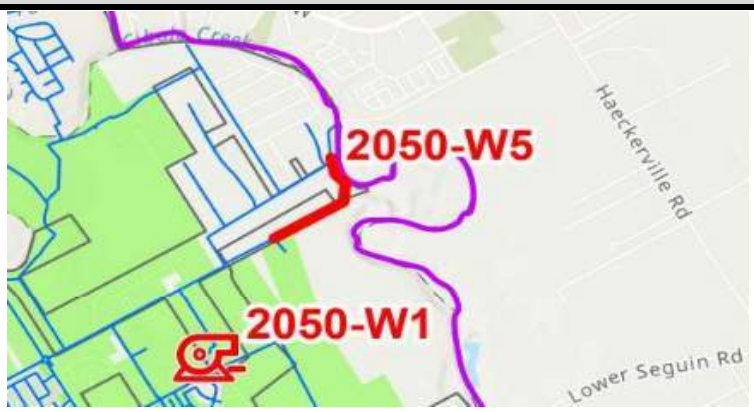
**Date:** August 2024
**Phase:** 2050

**Project Description:**
3,100 LF of new 8" along Raf Burnette east of Authority Ln.

**Justification:**
Needed to meet growth in area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Water Line | LF | 3,100 | $ 230 | $715,000 |
| 2 | Gate Valve | EA | 7 | $ 8,200 | $57,400 |
| 3 | Fire Hydrant | EA | 7 | $ 23,100 | $161,700 |
| 4 | Surface Replacement | LF | 3,100 | $ 515 | $1,597,000 |
| 5 | Traffic Control | LS | 1 | $ 24,000 | $24,000 |
| 6 | SWPPP | LS | 1 | $ 68,000 | $68,000 |
| | | | | **SUBTOTAL** | **$2,624,000** |
| | | | | MOBILIZATION (5%) | $132,000 |
| | | | | CONTINGENCY (30%) | $788,000 |
| | | | | **TOTAL CONSTRUCTION** | **$3,550,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $888,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$4,438,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** IH-35 Pump Station & 3.0 MG GST
**Project Number:** 2050-W6
**Project Category:** Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2050

**Project Description:**
IH-35 Pump Station (4,000 gpm, 183 TDH firm capacity) and 3.0 MG GST, new connection from SSLGC transmission main to the Live Oak to IH-35 24" transmission main.

**Justification:**
Needed to meet growth in area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 3.0 MG GST | EA | 1 | $ 14,232,000 | $14,232,000 |
| 2 | Yard Piping & Pumps for GST | LS | 1 | $ 3,031,000 | $3,031,000 |
| 3 | Foundation for GST | LS | 1 | $ 922,000 | $922,000 |
| 4 | Connect to 24" Main | LS | 1 | $ 85,000 | $85,000 |
| 5 | Pump Station | LS | 1 | $ 6,723,000 | $6,723,000 |
| | | | | **SUBTOTAL** | **$24,993,000** |
| | | | | MOBILIZATION (5%) | $1,250,000 |
| | | | | CONTINGENCY (30%) | $7,498,000 |
| | | | | **TOTAL CONSTRUCTION** | **$33,750,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $8,438,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$42,188,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** IH-10 & FM 1518 8" WL Improvements
**Project Number:** 2050-W7
**Project Category:** Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2050

**Project Description:**
2,110 LF of new 8" along IH-10 and FM 1518.

**Justification:**
Needed to meet growth in area.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Water Line | LF | 2,110 | $ 230 | $487,000 |
| 2 | Gate Valve | EA | 5 | $ 8,200 | $41,000 |
| 3 | Fire Hydrant | EA | 5 | $ 23,100 | $115,500 |
| 4 | Surface Replacement | LF | 2,110 | $ 515 | $1,087,000 |
| 5 | Traffic Control | LS | 1 | $ 17,000 | $17,000 |
| 6 | SWPPP | LS | 1 | $ 68,000 | $68,000 |
| | | | | **SUBTOTAL** | **$1,816,000** |
| | | | | MOBILIZATION (5%) | $91,000 |
| | | | | CONTINGENCY (30%) | $545,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,460,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $615,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$3,075,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Lower Seguin Rd 8" WL Replacement
**Project Number:** 2050-W8
**Project Category:** Water
**CIP Type:** Capacity

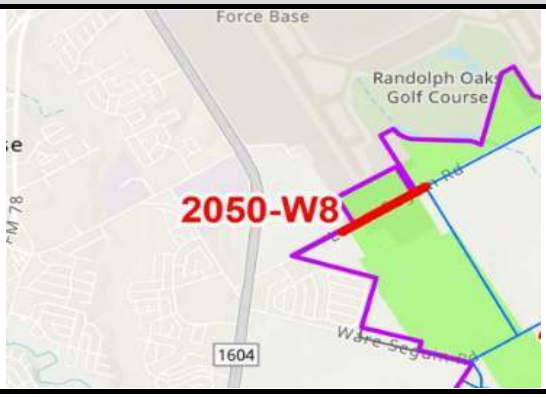
**Date:** August 2024
**Phase:** 2050

**Project Description:**
Upsize 2,500 LF of 8" to 12" along Lower Seguin Rd.

**Justification:**
Needed for fire flow.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Water Line | LF | 2,500 | $ 366 | $915,000 |
| 2 | Gate Valve | EA | 5 | $ 19,000 | $95,000 |
| 3 | Fire Hydrant | EA | 5 | $ 23,100 | $115,500 |
| 4 | Service & System Connections | EA | 50 | $ 5,700 | $285,000 |
| 5 | Surface Replacement | LF | 2,500 | $ 531 | $1,329,000 |
| 6 | Traffic Control | LS | 1 | $ 20,000 | $20,000 |
| 7 | SWPPP | LS | 1 | $ 68,000 | $68,000 |
| | | | | **SUBTOTAL** | **$2,828,000** |
| | | | | MOBILIZATION (5%) | $142,000 |
| | | | | CONTINGENCY (30%) | $849,000 |
| | | | | **TOTAL CONSTRUCTION** | **$3,820,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $955,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$4,775,000** |

**Project Location:**



# NEAR TERM WASTEWATER CIP PROJECTS

SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Town Creek Phase IV 24" - Section 1
**Project Number:** NT-S1
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Town Creek Phase IV (section 1) with approximately 6,600 LF of 24-inch gravity line.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 24" Gravity Line | LF | 6,600 | $ 360 | $ 2,376,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 14 | $ 17,000 | $ 238,000 |
| 3 | Surface Replacement | LF | 6,600 | $ 214 | $ 1,413,000 |
| 4 | Traffic Control | LS | 1 | $ 19,000 | $ 19,000 |
| 5 | SWPPP | LS | 1 | $ 25,000 | $ 25,000 |
| | | | | **SUBTOTAL** | **$ 4,071,000** |
| | | | | MOBILIZATION (5%) | $204,000 |
| | | | | CONTINGENCY (30%) | $1,222,000 |
| | | | | **TOTAL CONSTRUCTION** | **$5,500,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,375,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$6,875,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Town Creek Phase IV 12" - Section 2
**Project Number:** NT-S2
**Project Category:** Waste Water
**CIP Type:** Growth

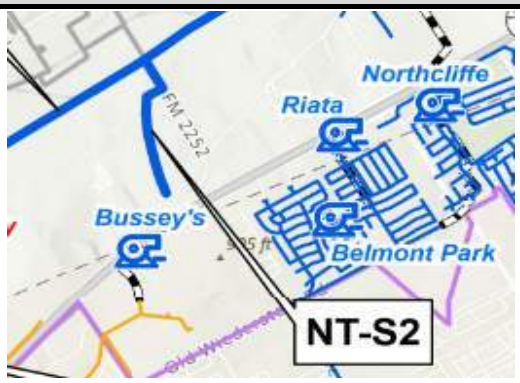
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Town Creek Phase IV (section 2) with approximately 4,470 LF of 12-inch gravity line.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Gravity Line | LF | 4,470 | $ 130 | $ 582,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 9 | $ 17,000 | $ 153,000 |
| 3 | Surface Replacement | LF | 4,470 | $ 214 | $ 957,000 |
| 4 | Traffic Control | LS | 1 | $ 13,000 | $ 13,000 |
| 5 | SWPPP | LS | 1 | $ 25,000 | $ 25,000 |
| | | | | **SUBTOTAL** | **$ 1,730,000** |
| | | | | MOBILIZATION (5%) | $87,000 |
| | | | | CONTINGENCY (30%) | $519,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,340,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $585,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$2,925,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Town Creek Phase V 24"
**Project Number:** NT-S3
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Town Creek Phase V with approximately 10,060 LF of 24-inch gravity line.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 24" Gravity Line | LF | 10,060 | $ 360 | $ 3,622,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 20 | $ 17,000 | $ 343,000 |
| 3 | Surface Replacement | LF | 10,060 | $ 214 | $ 2,153,000 |
| 4 | Traffic Control | LS | 1 | $ 29,000 | $ 29,000 |
| 5 | SWPPP | LS | 1 | $ 25,000 | $ 25,000 |
| | | | | **SUBTOTAL** | **$ 6,172,000** |
| | | | | MOBILIZATION (5%) | $309,000 |
| | | | | CONTINGENCY (30%) | $1,852,000 |
| | | | | **TOTAL CONSTRUCTION** | **$8,340,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $2,085,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$10,425,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Upsize Lookout Line
**Project Number:** NT-S4**
**Project Category:** Waste Water
**CIP Type:** Growth

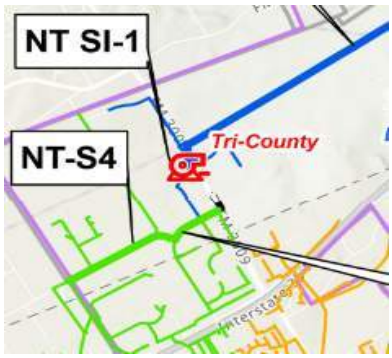
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Lookout Line (8") upsized to 18-inch gravity line (~ 3,910 LF).

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 18" Gravity Line | LF | 3,910 | $ 200 | $ 782,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 8 | $ 17,000 | $ 133,000 |
| 3 | Lateral Lines | LF | 3,128 | $ 100 | $ 313,000 |
| 4 | Operational Expenses | LS | 1 | $ 203,000 | $ 203,000 |
| 5 | Surface Replacement | LF | 3,910 | $ 205 | $ 802,000 |
| 6 | Traffic Control | LS | 1 | $ 12,000 | $ 12,000 |
| 7 | SWPPP | LS | 1 | $ 25,000 | $ 25,000 |
| | | | | **SUBTOTAL** | **$ 2,270,000** |
| | | | | MOBILIZATION (5%) | $114,000 |
| | | | | CONTINGENCY (30%) | $681,000 |
| | | | | **TOTAL CONSTRUCTION** | **$3,070,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $768,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$3,838,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Upsize Tri County Line
**Project Number:** NT-S5**
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Tri County Line upsized from 8-inch gravity line to 18-inch gravity line (~ 1,760 LF).

Note: Costs provided by City.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 18" Gravity Line | LF | 3,910 | $ 234 | $ 916,000 |
| 2 | Remaining Costs | LS | 1 | $ 1,168,800 | $ 1,168,800 |
| | | | | ESTIMATE TOTAL PROJECT COST | $2,084,800 |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Cibolo West Main
**Project Number:** NT-S6
**Project Category:** Waste Water
**CIP Type:** Growth

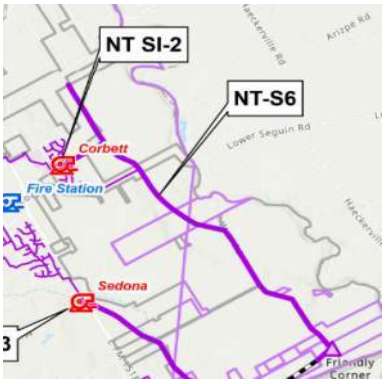
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Cibolo West Main with approximately 21,680 LF of 18-inch gravity line.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 18" Gravity Line | LF | 21,680 | $ 200 | $ 4,336,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 43 | $ 17,000 | $ 738,000 |
| 3 | Surface Replacement | LF | 21,680 | $ 205 | $ 4,445,000 |
| 4 | Traffic Control | LS | 1 | $ 62,000 | $ 62,000 |
| 5 | SWPPP | LS | 1 | $ 25,000 | $ 25,000 |
| | | | | **SUBTOTAL** | **$ 9,606,000** |
| | | | | MOBILIZATION (5%) | $481,000 |
| | | | | CONTINGENCY (30%) | $2,882,000 |
| | | | | **TOTAL CONSTRUCTION** | **$12,970,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $3,243,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$16,213,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Woman Hollering Creek Lift Station, Gravity Lines, and Force Main
**Project Number:** NT-S7
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Approximately 1,940 LF of 18-inch gravity line serving Hallie's Cove. Approximately 12,550 LF of 30-inch gravity line, approximately 5,990 LF of 14-inch force main, and WHC lift station. Cost provided by the City.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| | | | ESTIMATE TOTAL PROJECT COST | | $13,000,000 |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Decommission Tri County Lift Station
**Project Number:** NT SI-1
**Project Category:** Waste Water
**CIP Type:** Lift Station Removal

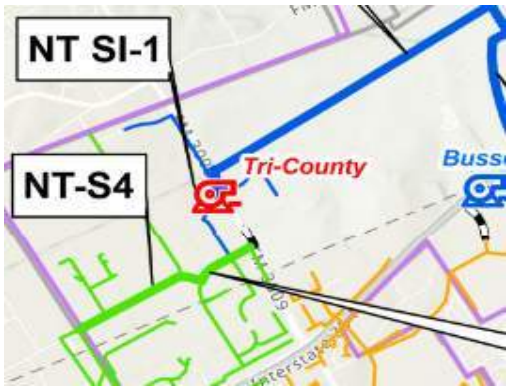
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Tri County LS to go offline.

**Justification:**
Per City request.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | Decommission Lift Station | LS | 1 | $ 50,000 | $ 50,000 |
| | | | | **SUBTOTAL** | **$ 50,000** |
| | | | | MOBILIZATION (5%) | $3,000 |
| | | | | CONTINGENCY (30%) | $15,000 |
| | | | | **TOTAL CONSTRUCTION** | **$70,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $18,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$88,000** |

**Project Location:**



SCHIERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Decommission Corbett Lift Station
**Project Number:** NT SI-2
**Project Category:** Waste Water
**CIP Type:** Lift Station Removal

**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Corbett LS to go offline. Approximately 2,410 LF of 10-inch gravity line installed to connect to existing system.

**Justification:**
Part of the lift station elimination plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | Decommission Lift Station | LS | 1 | $ 50,000 | $ 50,000 |
| 2 | 10" Gravity Line | LF | 2,410 | $ 105 | $ 254,000 |
| 3 | Standard Manhole (60" DIA.) | EA | 5 | $ 17,000 | $ 85,000 |
| 4 | Surface Replacement | LF | 2,410 | $ 193 | $ 466,000 |
| 5 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 6 | SWPPP | LS | 1 | $ 25,000 | $ 25,000 |
| | | | | **SUBTOTAL** | **$ 888,000** |
| | | | | MOBILIZATION (5%) | $45,000 |
| | | | | CONTINGENCY (30%) | $267,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,200,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $300,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,500,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Decommission Sedona Lift Station & Woman Hollering Creek WWTP
**Project Number:** NT SI-3
**Project Category:** Waste Water
**CIP Type:** Lift Station & WWTP Removal
**Date:** August 2024
**Phase:** Near Term

**Project Description:**
Sedona LS to go offline and Woman Hollering Creek (WHC) WWTP decommissioned.

**Justification:**
Part of the lift station elimination plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | Decommission Lift Station | LS | 1 | $ 50,000 | $ 50,000 |
| 2 | Decommission WWTP | LS | 1 | $ 50,000 | $ 50,000 |
| | | | | **SUBTOTAL** | **$ 100,000** |
| | | | | MOBILIZATION (5%) | $5,000 |
| | | | | CONTINGENCY (30%) | $30,000 |
| | | | | **TOTAL CONSTRUCTION** | **$140,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $35,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$175,000** |

**Project Location:**



# 2030
# WASTEWATER
# CIP PROJECTS

SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Hope Lane 8" Gravity Line
**Project Number:** 2030-S1
**Project Category:** Waste Water
**CIP Type:** Growth

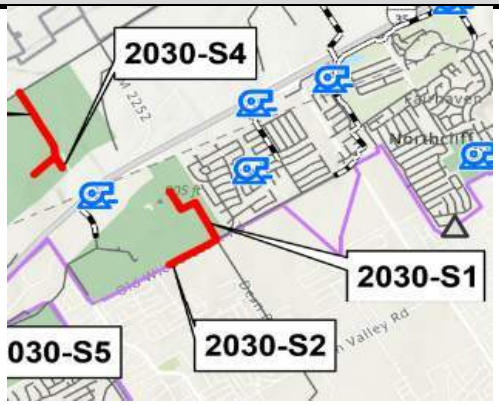
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 2,950 LF of 8-inch gravity line north of Old Wiederstein Rd and along Hope Ln.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 2,950 | $ 107 | $ 316,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 6 | $ 21,400 | $ 129,000 |
| 3 | Surface Replacement | LF | 2,950 | $ 239 | $ 706,000 |
| 4 | Traffic Control | LS | 1 | $ 11,000 | $ 11,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$1,194,000** |
| | | | | MOBILIZATION (5%) | $60,000 |
| | | | | CONTINGENCY (30%) | $359,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,620,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $405,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$2,025,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Old Wiederstein Road 8"
**Project Number:** 2030-S2
**Project Category:** Waste Water
**CIP Type:** Growth

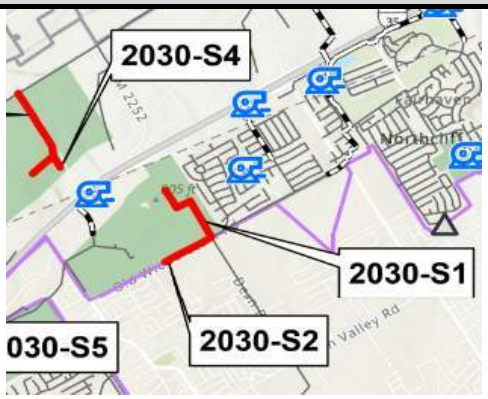
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 1,900 LF of 8-inch gravity line along Old Wiederstein Rd from Dean Rd to vicinity of Kaylee Chase.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 1,900 | $ 107 | $ 204,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 4 | $ 21,400 | $ 86,000 |
| 3 | Surface Replacement | LF | 1,900 | $ 239 | $ 455,000 |
| 4 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$785,000** |
| | | | | MOBILIZATION (5%) | $40,000 |
| | | | | CONTINGENCY (30%) | $236,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,070,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $268,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,338,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Union Pacific Railroad 8" - Section 1
**Project Number:** 2030-S3
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 3,750 LF of 8-inch gravity line south of Union Pacific Rail Road.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 3,750 | $ 107 | $ 402,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 8 | $ 21,400 | $ 172,000 |
| 3 | Surface Replacement | LF | 3,750 | $ 239 | $ 897,000 |
| 4 | Traffic Control | LS | 1 | $ 14,000 | $ 14,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$1,517,000** |
| | | | | MOBILIZATION (5%) | $76,000 |
| | | | | CONTINGENCY (30%) | $456,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,050,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $513,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$2,563,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Union Pacific Railroad 8" - Section 2
**Project Number:** 2030-S4
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 500 LF of 8-inch gravity line south of Union Pacific Rail Road.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 500 | $ 107 | $ 54,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 1 | $ 21,400 | $ 22,000 |
| 3 | Surface Replacement | LF | 500 | $ 239 | $ 120,000 |
| 4 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$236,000** |
| | | | | MOBILIZATION (5%) | $12,000 |
| | | | | CONTINGENCY (30%) | $71,000 |
| | | | | **TOTAL CONSTRUCTION** | **$320,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $80,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$400,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Wiederstein Road 8"
**Project Number:** 2030-S5
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 2,400 LF of 8-inch gravity line along Wiederstein Rd between Jupe and Quail Ln.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 2,400 | $ 107 | $ 257,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 5 | $ 21,400 | $ 107,000 |
| 3 | Surface Replacement | LF | 2,400 | $ 239 | $ 574,000 |
| 4 | Traffic Control | LS | 1 | $ 9,000 | $ 9,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$979,000** |
| | | | | MOBILIZATION (5%) | $49,000 |
| | | | | CONTINGENCY (30%) | $294,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,330,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $333,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,663,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Schaefer Road 8" - Section 1
**Project Number:** 2030-S6
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 7,300 LF of 8-inch gravity line, along Schaefer Rd , Lisa Meadows and Voges pass.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 7,300 | $ 107 | $ 782,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 15 | $ 21,400 | $ 321,000 |
| 3 | Surface Replacement | LF | 7,300 | $ 239 | $ 1,746,000 |
| 4 | Traffic Control | LS | 1 | $ 27,000 | $ 27,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$2,908,000** |
| | | | | MOBILIZATION (5%) | $146,000 |
| | | | | CONTINGENCY (30%) | $873,000 |
| | | | | **TOTAL CONSTRUCTION** | **$3,930,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $983,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$4,913,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Schaefer Road 8" - Section 2
**Project Number:** 2030-S7
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 2,800 LF of 8-inch gravity line along Schaefer Rd west of FM 1518.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 2,800 | $ 107 | $ 300,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 6 | $ 21,400 | $ 129,000 |
| 3 | Surface Replacement | LF | 2,800 | $ 239 | $ 670,000 |
| 4 | Traffic Control | LS | 1 | $ 11,000 | $ 11,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$1,142,000** |
| | | | | MOBILIZATION (5%) | $58,000 |
| | | | | CONTINGENCY (30%) | $343,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,550,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $388,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,938,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Aranda 8"
**Project Number:** 2030-S8
**Project Category:** Waste Water
**CIP Type:** Growth

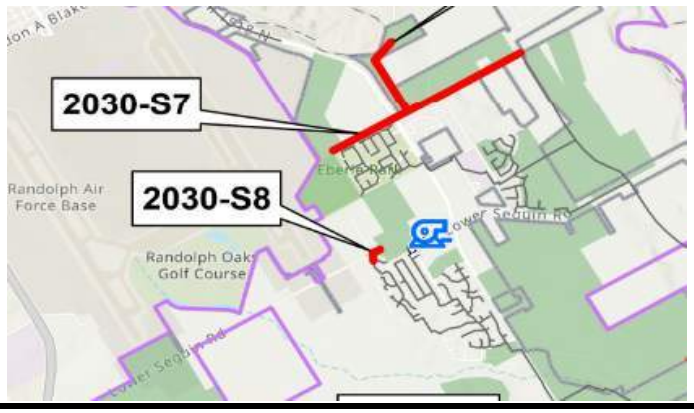
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 550 LF of 8-inch gravity line along Aranda, north of Chalk Stem.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 550 | $ 107 | $ 59,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 2 | $ 21,400 | $ 43,000 |
| 3 | Surface Replacement | LF | 550 | $ 239 | $ 132,000 |
| 4 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$274,000** |
| | | | | MOBILIZATION (5%) | $14,000 |
| | | | | CONTINGENCY (30%) | $83,000 |
| | | | | **TOTAL CONSTRUCTION** | **$380,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $95,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$475,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Weir Road 10"
**Project Number:** 2030-S9
**Project Category:** Waste Water
**CIP Type:** Growth

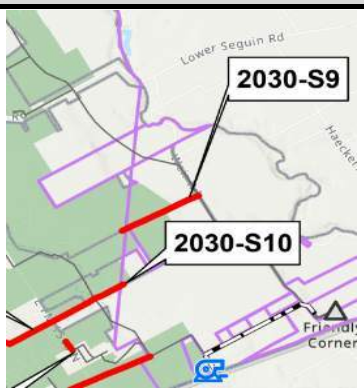
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 3,500 LF of 10-inch gravity line west of Weir Rd and north of Trainer Hale Rd.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 10" Gravity Line | LF | 3,500 | $ 132 | $ 463,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 7 | $ 21,400 | $ 150,000 |
| 3 | Surface Replacement | LF | 3,500 | $ 239 | $ 838,000 |
| 4 | Traffic Control | LS | 1 | $ 13,000 | $ 13,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$1,496,000** |
| | | | | MOBILIZATION (5%) | $75,000 |
| | | | | CONTINGENCY (30%) | $449,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,020,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $505,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$2,525,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Trainer Hale Road 10"
**Project Number:** 2030-S10
**Project Category:** Waste Water
**CIP Type:** Growth

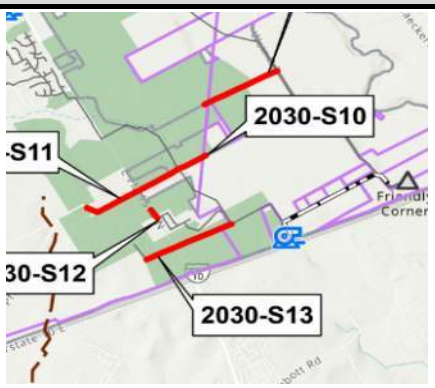
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 1,350 LF of 10-inch gravity line along Trainer Hale Rd, east of E FM 1518 N.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 10" Gravity Line | LF | 1,350 | $ 132 | $ 179,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 3 | $ 21,400 | $ 65,000 |
| 3 | Surface Replacement | LF | 1,350 | $ 239 | $ 323,000 |
| 4 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$607,000** |
| | | | | MOBILIZATION (5%) | $31,000 |
| | | | | CONTINGENCY (30%) | $183,000 |
| | | | | **TOTAL CONSTRUCTION** | **$830,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $208,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,038,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Ware Seguin Road 8"
**Project Number:** 2030-S11
**Project Category:** Waste Water
**CIP Type:** Growth

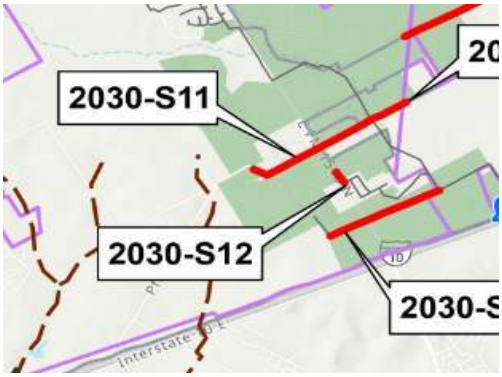
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 4,550 LF of 8-inch gravity line along Ware Seguin Rd west of FM 1518.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 4,550 | $ 107 | $ 487,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 10 | $ 21,400 | $ 214,000 |
| 3 | Surface Replacement | LF | 4,550 | $ 239 | $ 1,089,000 |
| 4 | Traffic Control | LS | 1 | $ 17,000 | $ 17,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$1,839,000** |
| | | | | MOBILIZATION (5%) | $92,000 |
| | | | | CONTINGENCY (30%) | $552,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,490,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $623,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$3,113,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** FM 1518 8"
**Project Number:** 2030-S12
**Project Category:** Waste Water
**CIP Type:** Growth

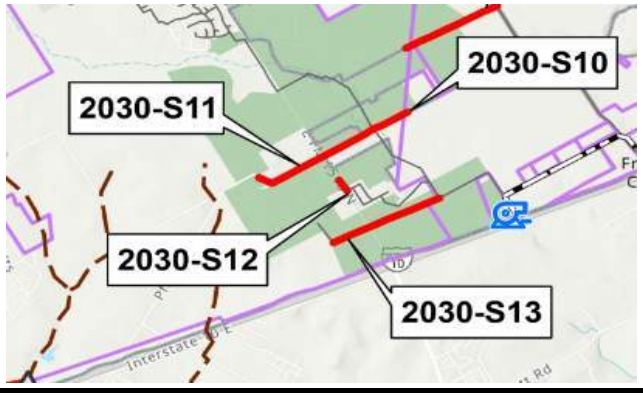
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 500 LF of 8-inch gravity line along E FM 1518 N.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 500 | $ 107 | $ 54,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 1 | $ 21,400 | $ 22,000 |
| 3 | Surface Replacement | LF | 500 | $ 239 | $ 120,000 |
| 4 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$236,000** |
| | | | | MOBILIZATION (5%) | $12,000 |
| | | | | CONTINGENCY (30%) | $71,000 |
| | | | | **TOTAL CONSTRUCTION** | **$320,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $80,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$400,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** I-10 8" - Section 1
**Project Number:** 2030-S13
**Project Category:** Waste Water
**CIP Type:** Growth

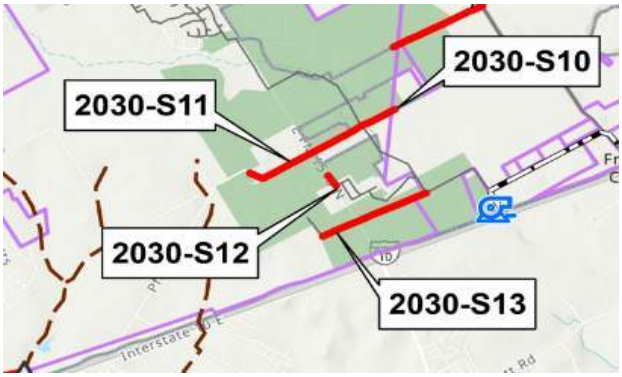
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 4,000 LF of 8-inch gravity line north of I-10 E.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 4,000 | $ 107 | $ 428,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 8 | $ 21,400 | $ 172,000 |
| 3 | Surface Replacement | LF | 4,000 | $ 239 | $ 957,000 |
| 4 | Traffic Control | LS | 1 | $ 15,000 | $ 15,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$1,604,000** |
| | | | | MOBILIZATION (5%) | $81,000 |
| | | | | CONTINGENCY (30%) | $482,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,170,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $543,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$2,713,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Boenig Drive 8"
**Project Number:** 2030-S14
**Project Category:** Waste Water
**CIP Type:** Growth

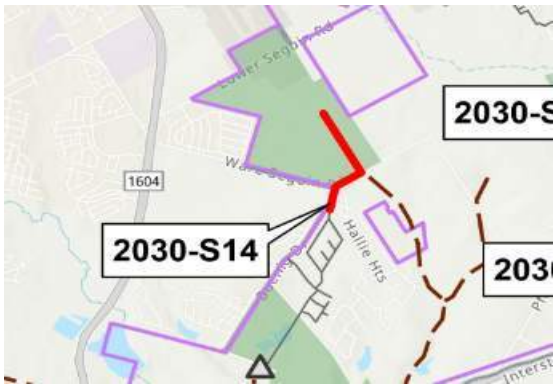
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 4,350 LF of 8-inch gravity line along Boenig Dr and Ware Seguin Rd going north.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 4,350 | $ 107 | $ 466,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 9 | $ 21,400 | $ 193,000 |
| 3 | Surface Replacement | LF | 4,350 | $ 239 | $ 1,041,000 |
| 4 | Traffic Control | LS | 1 | $ 16,000 | $ 16,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$1,748,000** |
| | | | | MOBILIZATION (5%) | $88,000 |
| | | | | CONTINGENCY (30%) | $525,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,370,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $593,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$2,963,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** N Greytown Road 8"
**Project Number:** 2030-S15
**Project Category:** Waste Water
**CIP Type:** Growth

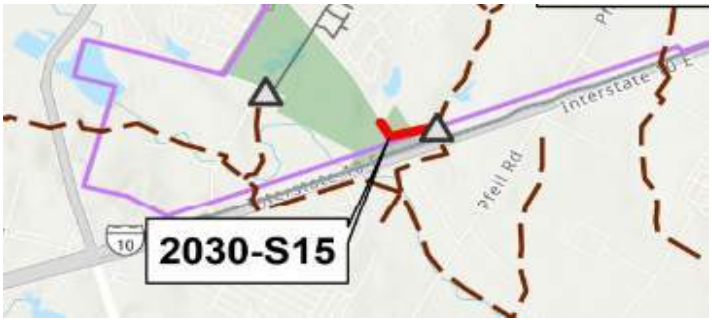
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Approximately 1,800 LF of 8-inch gravity line north of I-10 E and along N Greytown Rd.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 1,800 | $ 107 | $ 193,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 4 | $ 21,400 | $ 86,000 |
| 3 | Surface Replacement | LF | 1,800 | $ 239 | $ 431,000 |
| 4 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 5 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$750,000** |
| | | | | MOBILIZATION (5%) | $38,000 |
| | | | | CONTINGENCY (30%) | $225,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,020,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $255,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,275,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Friesenhahn West Line WW Upsize
**Project Number:** 2030 SI-1**
**Project Category:** Waste Water
**CIP Type:** System Improvement

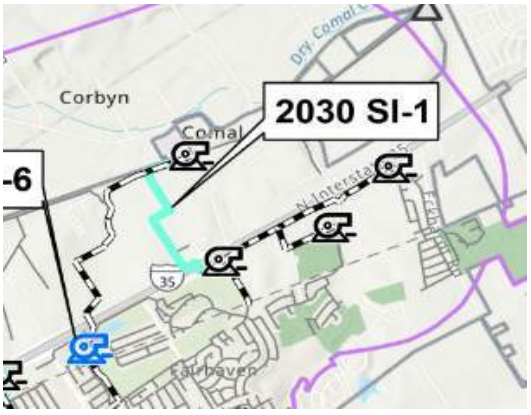
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Replacing an existing 8-inch with 18-inch gravity line (~4,900 LF), parallel to Friesenhahn Ln and an existing 12-inch with 18-inch gravity line (~1,600 LF) immediately upstream of the Friesenhahn LS.

**Justification:**
To resolve 4 SSOs upstream of Friesenhahn LS.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 18" Gravity Line | LF | 6,500 | $ 252 | $ 1,637,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 13 | $ 21,400 | $ 279,000 |
| 3 | Lateral Lines | LF | 5,200 | $ 126 | $ 655,000 |
| 4 | Operational Expenses | LS | 1 | $ 535,000 | $ 535,000 |
| 5 | Surface Replacement | LF | 6,500 | $ 258 | $ 1,678,000 |
| 6 | Traffic Control | LS | 1 | $ 24,000 | $ 24,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$ 4,840,000** |
| | | | | MOBILIZATION (5%) | $242,000 |
| | | | | CONTINGENCY (30%) | $1,452,000 |
| | | | | **TOTAL CONSTRUCTION** | **$6,540,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,635,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$8,175,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Fairlawn WW Upsize
**Project Number:** 2030 SI-2**
**Project Category:** Waste Water
**CIP Type:** System Improvement

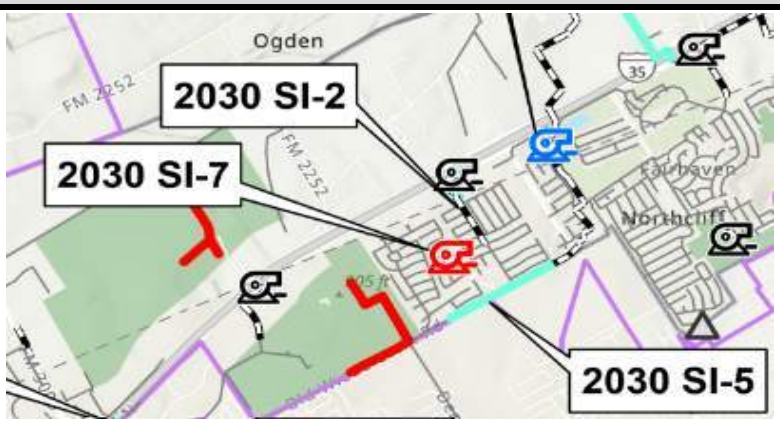
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Replacing an existing 8-inch with 10-inch gravity line (~1,320 LF) along Fairlawn Ave from Ashwood Rd to Riata LS.

**Justification:**
To resolve an SSO upstream of Riata LS.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 10" Gravity Line | LF | 1,320 | $ 132 | $ 175,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 3 | $ 21,400 | $ 57,000 |
| 3 | Lateral Lines | LF | 1,056 | $ 126 | $ 133,000 |
| 4 | Operational Expenses | LS | 1 | $ 87,000 | $ 87,000 |
| 5 | Surface Replacement | LF | 1,320 | $ 243 | $ 321,000 |
| 6 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$ 813,000** |
| | | | | MOBILIZATION (5%) | $41,000 |
| | | | | CONTINGENCY (30%) | $244,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,100,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $275,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,375,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Cibolo Crossing WW Line Upsize
**Project Number:** 2030 SI-3**
**Project Category:** Waste Water
**CIP Type:** System Improvement

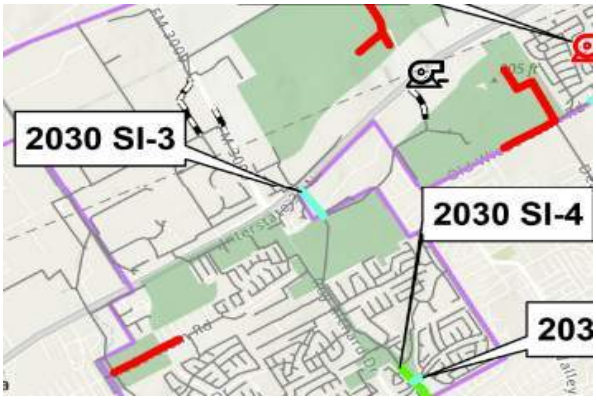
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Replacing an existing 10-inch with 12-inch gravity line (~1,150 LF), south of I-35 N and east of Hampton Inn & Suites of Schertz.

**Justification:**
To resolve an SSO near I 35 N.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Gravity Line | LF | 1,150 | $ 164 | $ 189,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 2 | $ 21,400 | $ 50,000 |
| 3 | Lateral Lines | LF | 920 | $ 126 | $ 116,000 |
| 4 | Operational Expenses | LS | 1 | $ 81,000 | $ 81,000 |
| 5 | Surface Replacement | LF | 1,150 | $ 247 | $ 284,000 |
| 6 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$ 760,000** |
| | | | | MOBILIZATION (5%) | $38,000 |
| | | | | CONTINGENCY (30%) | $228,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,030,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $258,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,288,000** |

**Project Location:**



SCHIERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Woodland Oak Drive Replacements
**Project Number:** 2030 SI-4**
**Project Category:** Waste Water
**CIP Type:** System Improvement

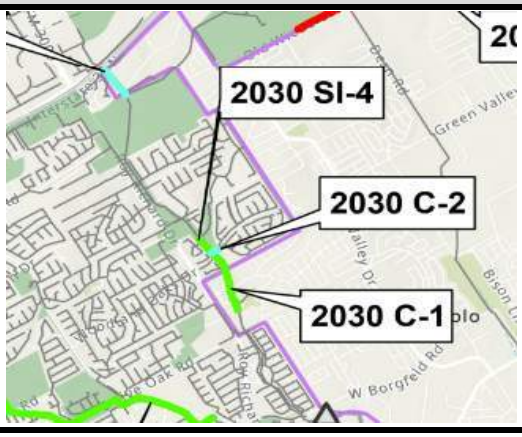
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Replacing an existing 8-inch with 12-inch gravity line (~250 LF), near Woodland Oak Dr.

**Justification:**
To resolve an SSO near Woodland Oak Dr.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 12" Gravity Line | LF | 250 | $ 164 | $ 41,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 1 | $ 21,400 | $ 11,000 |
| 3 | Lateral Lines | LF | 200 | $ 126 | $ 26,000 |
| 4 | Operational Expenses | LS | 1 | $ 18,000 | $ 18,000 |
| 5 | Surface Replacement | LF | 250 | $ 247 | $ 62,000 |
| 6 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$ 198,000** |
| | | | | MOBILIZATION (5%) | $10,000 |
| | | | | CONTINGENCY (30%) | $60,000 |
| | | | | **TOTAL CONSTRUCTION** | **$270,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $68,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$338,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Old Wiederstein WW Upsize
**Project Number:** 2030 SI-5**
**Project Category:** Waste Water
**CIP Type:** System Improvement

**Date:** August 2024
**Phase:** 2030

**Project Description:**
Replacing an existing 18-inch with 21-inch gravity line (~3,330 LF), along Old Wiederstein Rd.

**Justification:**
To increase line capacity.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 21" Gravity Line | LF | 3,330 | $ 378 | $ 1,258,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 7 | $ 21,400 | $ 143,000 |
| 3 | Lateral Lines | LF | 2,664 | $ 126 | $ 336,000 |
| 4 | Operational Expenses | LS | 1 | $ 330,000 | $ 330,000 |
| 5 | Surface Replacement | LF | 3,330 | $ 263 | $ 877,000 |
| 6 | Traffic Control | LS | 1 | $ 12,000 | $ 12,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$ 2,988,000** |
| | | | | MOBILIZATION (5%) | $150,000 |
| | | | | CONTINGENCY (30%) | $897,000 |
| | | | | **TOTAL CONSTRUCTION** | **$4,040,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,010,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$5,050,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Northcliffe Lift Station Upgrade
**Project Number:** 2030 SI-6**
**Project Category:** Waste Water
**CIP Type:** System Improvement

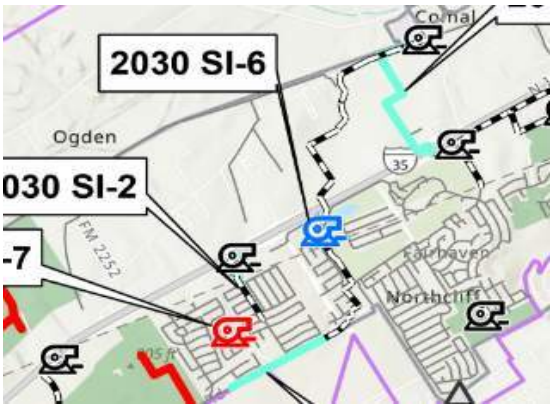
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Northcliffe LS upgrade to firm capacity of 4,500 gpm.

**Justification:**
To follow TCEQ requirement of peak flow not to exceed firm capacity. This upgrade is based on buildout flow of 4,485 gpm.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | Upgrade Lift Station (2,750 gpm) | LS | 1 | $ 4,637,000 | $ 4,637,000 |
| | | | | **SUBTOTAL** | **$4,637,000** |
| | | | | MOBILIZATION (5%) | $232,000 |
| | | | | CONTINGENCY (30%) | $1,392,000 |
| | | | | **TOTAL CONSTRUCTION** | **$6,270,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,568,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$7,838,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Decommission Belmont Park Lift Station
**Project Number:** 2030 SI-7
**Project Category:** Waste Water
**CIP Type:** Lift Station Removal

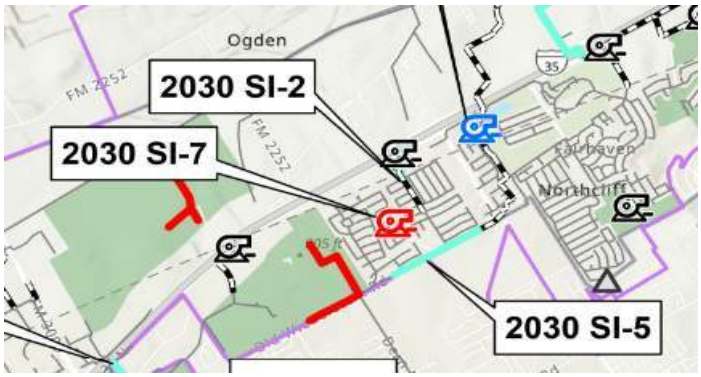
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Belmont Park LS to go offline; install approximately 420 LF of 8-inch gravity line to connect to the line along Livingston Dr.

**Justification:**
Per City request.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | Decommission Lift Station | LS | 1 | $ 63,000 | $ 63,000 |
| 2 | 8" Gravity Line | LF | 420 | $ 107 | $ 45,000 |
| 3 | Standard Manhole (60" DIA.) | EA | 1 | $ 21,400 | $ 22,000 |
| 4 | Surface Replacement | LF | 420 | $ 239 | $ 101,000 |
| 5 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 6 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$ 271,000** |
| | | | | MOBILIZATION (5%) | $14,000 |
| | | | | CONTINGENCY (30%) | $82,000 |
| | | | | **TOTAL CONSTRUCTION** | **$370,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $93,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$463,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Roy Richard Drive Replacements
**Project Number:** 2030 C-1
**Project Category:** Waste Water
**CIP Type:** CCMA System Capacity

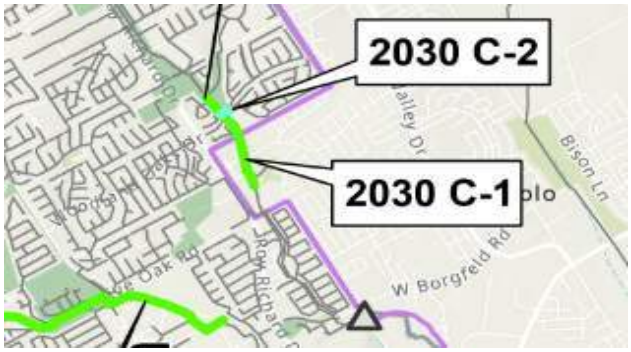
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Replacing an existing 15-inch with 18-inch gravity line (~1,220 LF), east of Roy Richard Dr and south of Woodland Oaks Dr.

**Justification:**
To resolve 2 SSOs near Woodland Oak Dr and Valencia Ln.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 18" Gravity Line | LF | 1,220 | $ 252 | $ 308,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 2 | $ 21,400 | $ 53,000 |
| 3 | Lateral Lines | LF | 976 | $ 126 | $ 123,000 |
| 4 | Operational Expenses | LS | 1 | $ 101,000 | $ 101,000 |
| 5 | Surface Replacement | LF | 1,220 | $ 258 | $ 315,000 |
| 6 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$ 940,000** |
| | | | | MOBILIZATION (5%) | $47,000 |
| | | | | CONTINGENCY (30%) | $282,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,270,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $318,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,588,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Valencia Lane Replacements
**Project Number:** 2030 C-2
**Project Category:** Waste Water
**CIP Type:** CCMA System Capacity

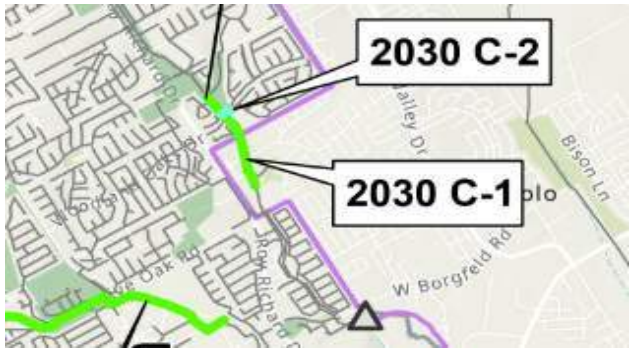
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Replacing an existing 10-inch with 18-inch gravity line (~1,780 LF), north of Woodland Oaks Dr and east of Valencia Ln.

**Justification:**
To resolve 2 SSOs near Woodland Oak Dr and Valencia Ln.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 18" Gravity Line | LF | 1,780 | $ 252 | $ 449,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 4 | $ 21,400 | $ 77,000 |
| 3 | Lateral Lines | LF | 1,424 | $ 126 | $ 180,000 |
| 4 | Operational Expenses | LS | 1 | $ 147,000 | $ 147,000 |
| 5 | Surface Replacement | LF | 1,780 | $ 258 | $ 460,000 |
| 6 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$ 1,353,000** |
| | | | | MOBILIZATION (5%) | $68,000 |
| | | | | CONTINGENCY (30%) | $406,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,830,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $458,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$2,288,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Savannah Drive Replacements
**Project Number:** 2030 C-3
**Project Category:** Waste Water
**CIP Type:** CCMA System Capacity

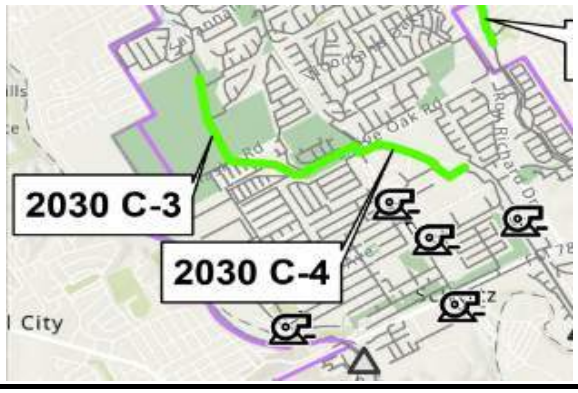
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Replacing an existing 30-inch with 36-inch gravity line (~5,230 LF), south of Savannah Dr and north of Live Oak Rd.

**Justification:**
To resolve an SSO near Maske Rd.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 36" Gravity Line | LF | 5,230 | $ 806 | $ 4,214,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 10 | $ 21,400 | $ 224,000 |
| 3 | Lateral Lines | LF | 4,184 | $ 126 | $ 527,000 |
| 4 | Operational Expenses | LS | 1 | $ 818,000 | $ 818,000 |
| 5 | Surface Replacement | LF | 5,230 | $ 292 | $ 1,528,000 |
| 6 | Traffic Control | LS | 1 | $ 19,000 | $ 19,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$ 7,362,000** |
| | | | | MOBILIZATION (5%) | $369,000 |
| | | | | CONTINGENCY (30%) | $2,209,000 |
| | | | | **TOTAL CONSTRUCTION** | **$9,940,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $2,485,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$12,425,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Build Out Project 25 - 36" Schertz Line
**Project Number:** 2030 C-4
**Project Category:** Waste Water
**CIP Type:** CCMA System Capacity

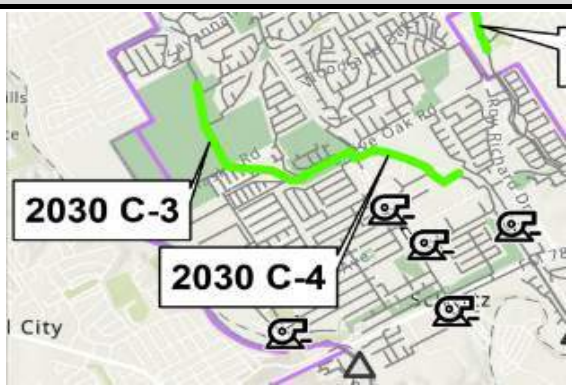
**Date:** August 2024
**Phase:** 2030

**Project Description:**
Replacing an existing 30-inch with 36-inch gravity line (~5,450 LF), near Community Cir, from Buffalo Dr to Live Oak Rd.

**Justification:**
To resolve 2 SSOs near Maske Rd.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 36" Gravity Line | LF | 5,450 | $ 806 | $ 4,391,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 11 | $ 21,400 | $ 234,000 |
| 3 | Lateral Lines | LF | 4,360 | $ 126 | $ 549,000 |
| 4 | Operational Expenses | LS | 1 | $ 852,000 | $ 852,000 |
| 5 | Surface Replacement | LF | 5,450 | $ 292 | $ 1,592,000 |
| 6 | Traffic Control | LS | 1 | $ 20,000 | $ 20,000 |
| 7 | SWPPP | LS | 1 | $ 32,000 | $ 32,000 |
| | | | | **SUBTOTAL** | **$ 7,670,000** |
| | | | | MOBILIZATION (5%) | $384,000 |
| | | | | CONTINGENCY (30%) | $2,301,000 |
| | | | | **TOTAL CONSTRUCTION** | **$10,360,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $2,590,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$12,950,000** |

**Project Location:**



# 2050
# WASTEWATER
# CIP PROJECTS

SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** I-35 N 8"
**Project Number:** 2050-S1
**Project Category:** Waste Water
**CIP Type:** Growth

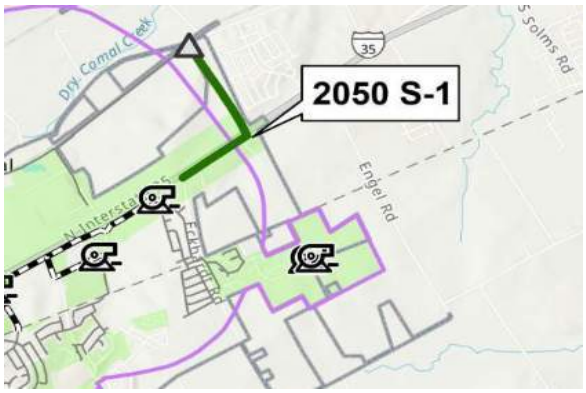
**Date:** August 2024
**Phase:** 2050

**Project Description:**
Approximately 6,250 LF of 8-inch gravity line north of and along I-35 N.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 6,250 | $ 230 | $ 1,441,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 13 | $ 46,100 | $ 600,000 |
| 3 | Surface Replacement | LF | 6,250 | $ 515 | $ 3,220,000 |
| 4 | Traffic Control | LS | 1 | $ 49,000 | $ 49,000 |
| 5 | SWPPP | LS | 1 | $ 68,000 | $ 68,000 |
| | | | | **SUBTOTAL** | **$ 5,378,000** |
| | | | | MOBILIZATION (5%) | $269,000 |
| | | | | CONTINGENCY (30%) | $1,614,000 |
| | | | | **TOTAL CONSTRUCTION** | **$7,270,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,818,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$9,088,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Friesenhahn Lane 8"
**Project Number:** 2050-S2
**Project Category:** Waste Water
**CIP Type:** Growth

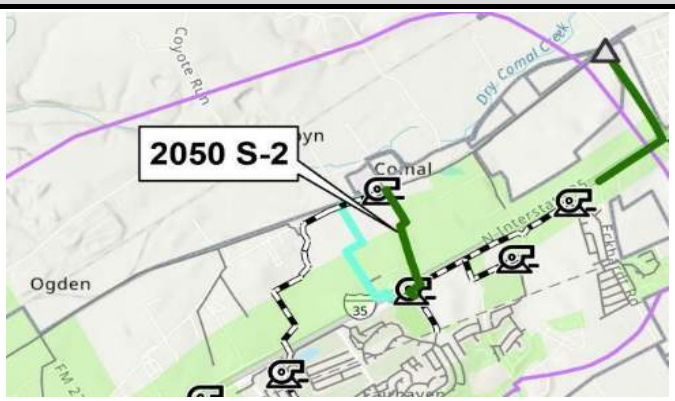
**Date:** August 2024
**Phase:** 2050

**Project Description:**
Approximately 4,460 LF of 8-inch gravity line, along Friesenhahn Ln.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 4,460 | $ 230 | $ 1,028,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 9 | $ 46,100 | $ 415,000 |
| 3 | Surface Replacement | LF | 4,460 | $ 515 | $ 2,298,000 |
| 4 | Traffic Control | LS | 1 | $ 35,000 | $ 35,000 |
| 5 | SWPPP | LS | 1 | $ 68,000 | $ 68,000 |
| | | | | **SUBTOTAL** | **$ 3,844,000** |
| | | | | MOBILIZATION (5%) | $193,000 |
| | | | | CONTINGENCY (30%) | $1,154,000 |
| | | | | **TOTAL CONSTRUCTION** | **$5,200,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,300,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$6,500,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Schaefer Road 8" - Section 3
**Project Number:** 2050-S3
**Project Category:** Waste Water
**CIP Type:** Growth

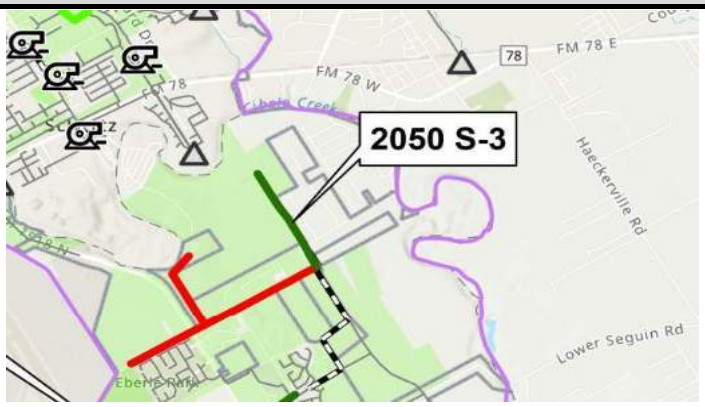
**Date:** August 2024
**Phase:** 2050

**Project Description:**
Approximately 3,910 LF of 8-inch gravity line from Schaefer Rd north parallel to Authority Ln.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 3,910 | $ 230 | $ 901,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 8 | $ 46,100 | $ 369,000 |
| 3 | Surface Replacement | LF | 3,910 | $ 515 | $ 2,014,000 |
| 4 | Traffic Control | LS | 1 | $ 31,000 | $ 31,000 |
| 5 | SWPPP | LS | 1 | $ 68,000 | $ 68,000 |
| | | | | **SUBTOTAL** | **$ 3,383,000** |
| | | | | MOBILIZATION (5%) | $170,000 |
| | | | | CONTINGENCY (30%) | $1,015,000 |
| | | | | **TOTAL CONSTRUCTION** | **$4,570,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $1,143,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$5,713,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Corbett JH 8"
**Project Number:** 2050-S4
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2050

**Project Description:**
Approximately 1,930 LF of 8-inch gravity line, south of Corbett Junior High School and north of Lower Seguin Rd.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 1,930 | $ 230 | $ 445,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 4 | $ 46,100 | $ 185,000 |
| 3 | Surface Replacement | LF | 1,930 | $ 515 | $ 995,000 |
| 4 | Traffic Control | LS | 1 | $ 15,000 | $ 15,000 |
| 5 | SWPPP | LS | 1 | $ 68,000 | $ 68,000 |
| | | | | **SUBTOTAL** | **$ 1,708,000** |
| | | | | MOBILIZATION (5%) | $86,000 |
| | | | | CONTINGENCY (30%) | $513,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,310,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $578,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$2,888,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Lower Seguin Road 8"
**Project Number:** 2050-S5
**Project Category:** Waste Water
**CIP Type:** Growth

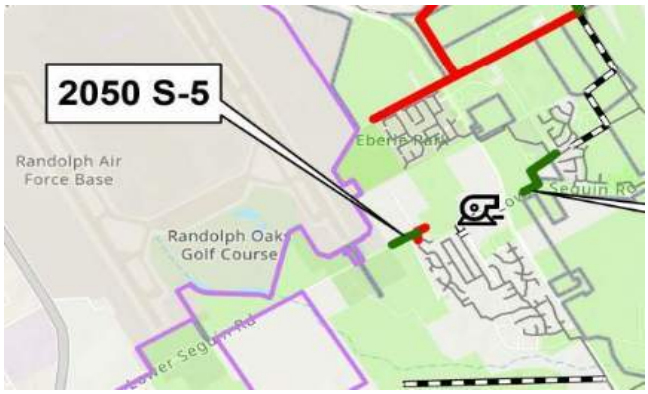
**Date:** August 2024
**Phase:** 2050

**Project Description:**
Approximately 830 LF of 8-inch gravity line along Lower Seguin Rd.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 830 | $ 230 | $ 192,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 2 | $ 46,100 | $ 93,000 |
| 3 | Surface Replacement | LF | 830 | $ 515 | $ 428,000 |
| 4 | Traffic Control | LS | 1 | $ 8,000 | $ 8,000 |
| 5 | SWPPP | LS | 1 | $ 68,000 | $ 68,000 |
| | | | | **SUBTOTAL** | **$ 789,000** |
| | | | | MOBILIZATION (5%) | $40,000 |
| | | | | CONTINGENCY (30%) | $237,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,070,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $268,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,338,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** I-10 8" - Section 2
**Project Number:** 2050-S6
**Project Category:** Waste Water
**CIP Type:** Growth

**Date:** August 2024
**Phase:** 2050

**Project Description:**
Approximately 2,220 LF of 8-inch gravity line north of and parallel to IH-10.

**Justification:**
Anticipated growth based on Land Use Plan.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | 8" Gravity Line | LF | 2,220 | $ 230 | $ 512,000 |
| 2 | Standard Manhole (60" DIA.) | EA | 5 | $ 46,100 | $ 231,000 |
| 3 | Surface Replacement | LF | 2,220 | $ 515 | $ 1,144,000 |
| 4 | Traffic Control | LS | 1 | $ 18,000 | $ 18,000 |
| 5 | SWPPP | LS | 1 | $ 68,000 | $ 68,000 |
| | | | | **SUBTOTAL** | **$ 1,973,000** |
| | | | | MOBILIZATION (5%) | $99,000 |
| | | | | CONTINGENCY (30%) | $592,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,670,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $668,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$3,338,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Cypress Point Lift Station Upgrade
**Project Number:** 2050 SI-1
**Project Category:** Waste Water
**CIP Type:** System Improvement

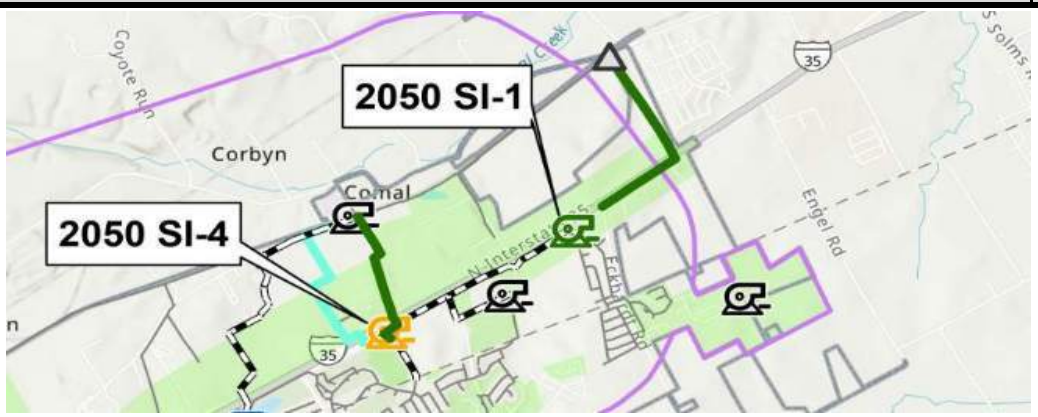
**Date:** August 2024
**Phase:** 2050

**Project Description:**
Cypress Point LS upgrade to firm capacity of 1,250 gpm.

**Justification:**
To follow TCEQ requirement of Peak flow not to exceed firm capacity. This upgrade is based on buildout flow of 1,233 gpm.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | Upgrade Lift Station (~250 gpm) | LS | 1 | $ 865,000 | $ 865,000 |
| | | | | **SUBTOTAL** | **$ 865,000** |
| | | | | MOBILIZATION (5%) | $44,000 |
| | | | | CONTINGENCY (30%) | $260,000 |
| | | | | **TOTAL CONSTRUCTION** | **$1,170,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $293,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$1,463,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Decommission Schertz Parkway Lift Station
**Project Number:** 2050 SI-2
**Project Category:** Waste Water
**CIP Type:** Lift Station Removal

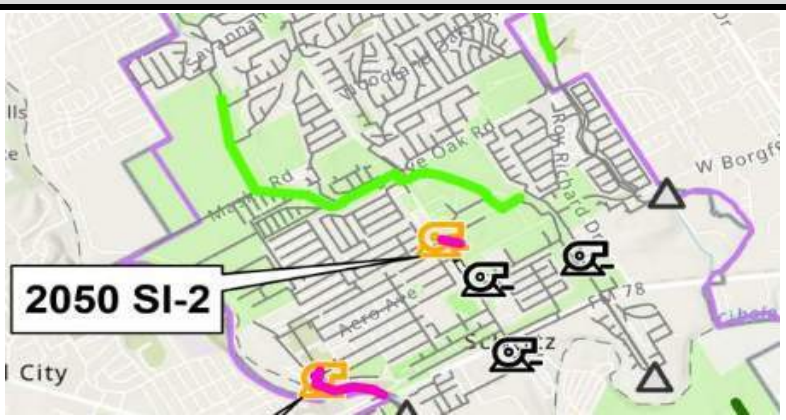
**Date:** August 2024
**Phase:** 2050

**Project Description:**
Schertz Pkwy LS to go offline.

**Justification:**
To convey flow to a new CCMA's line which will be built by 2050.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | Decommission Lift Station | LS | 1 | $ 136,000 | $ 136,000 |
| | | | | **SUBTOTAL** | **$ 136,000** |
| | | | | MOBILIZATION (5%) | $7,000 |
| | | | | CONTINGENCY (30%) | $41,000 |
| | | | | **TOTAL CONSTRUCTION** | **$190,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $48,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$238,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Decommission Park Lift Station
**Project Number:** 2050 SI-3
**Project Category:** Waste Water
**CIP Type:** Lift Station Removal

**Date:** August 2024
**Phase:** 2050

**Project Description:**
Park LS to go offline; install approximately 2,300 LF of 8-inch gravity line to connect to the line along E Aviation Blvd.

**Justification:**
Per City request.

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | Decommission Lift Station | LS | 1 | $ 136,000 | $ 136,000 |
| 2 | 8" Gravity Line | LF | 2,300 | $ 230 | $ 530,000 |
| 3 | Standard Manhole (60" DIA.) | EA | 5 | $ 46,100 | $ 231,000 |
| 4 | Surface Replacement | LF | 2,300 | $ 515 | $ 1,185,000 |
| 5 | Traffic Control | LS | 1 | $ 18,000 | $ 18,000 |
| 6 | SWPPP | LS | 1 | $ 68,000 | $ 68,000 |
| | | | | **SUBTOTAL** | **$ 2,168,000** |
| | | | | MOBILIZATION (5%) | $109,000 |
| | | | | CONTINGENCY (30%) | $651,000 |
| | | | | **TOTAL CONSTRUCTION** | **$2,930,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $733,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$3,663,000** |

**Project Location:**



SCHERTZ

## Capital Improvement Plan Estimate of Probable Cost

**Project Name:** Decommission Cover's Cove Lift Station
**Project Number:** 2050 SI-4
**Project Category:** Waste Water
**CIP Type:** Lift Station Removal

**Date:** August 2024
**Phase:** 2050

| Project Description: | Justification: |
|---|---|
| Cover's Cove LS to go offline. | Per City request. |

| ITEM NO. | ITEM DESCRIPTION | UNIT | ESTIMATED QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|---|
| 1 | Decommission Lift Station | LS | 1 | $ 136,000 | $ 136,000 |
| | | | | **SUBTOTAL** | **$ 136,000** |
| | | | | MOBILIZATION (5%) | $7,000 |
| | | | | CONTINGENCY (30%) | $41,000 |
| | | | | **TOTAL CONSTRUCTION** | **$190,000** |
| | | | | PS&E & CONSTRUCTION MANAGEMENT (25%) | $48,000 |
| | | | | **ESTIMATE TOTAL PROJECT COST** | **$238,000** |

**Project Location:**



# APPENDIX 30 - CIP PROJECTS UTILIZATION CALCULATIONS

**City of Schertz**
**2024 Impact Fee Update**
**Water CIP Project Growth Utilization Calculations**

| Project Number | Project Name | Existing Peak Flow (gpm) | 2030 Peak Flow (gpm) | 2050 Peak Flow (gpm) | 2020-2030 % Utilization |
|---|---|---|---|---|---|
| **Near Term CIP** | | | | | |
| **System Improvement Projects** | | | | | |
| NT-W1** | Bubbling Springs 6" WL Replacement | 185.86 | 269.83 | 309.94 | 27% |
| NT-W2 | Corbett Pump Station & 3.0 MG GST | N/A | N/A | N/A | N/A |
| NT-W3 | Ware Seguin Pump Station Operational Improvement | N/A | N/A | N/A | N/A |
| NT-W4 | 12" WL from Ware Seguin to Lower Seguin | N/A | N/A | N/A | N/A |
| NT-W5 | Fred Couples to Schwab | N/A | N/A | N/A | N/A |
| NT-W6 | Schwab to Eckhardt | N/A | N/A | N/A | N/A |
| NT-W7** | Graytown to Pfeil | - | 32.61 | 46.93 | 69% |
| NT-W8** | FM 78 Water Line Replacement | 369.10 | 500.30 | 589.39 | 22% |
| NT-W9** | Moonlight Meadow Dr & Lost Meadow Dr WL Replacement | 18.83 | 18.83 | 18.83 | 0% |
| NT-W10** | Robinhood Way WL Replacement | 46.06 | 46.06 | 46.06 | 0% |
| **Proposed 2030 CIP** | | | | | |
| **Growth Projects** | | | | | |
| 2030-W1 | 12" WL from Tri-County Extension to Cibolo Valley Drive | - | 316.47 | 229.95 | 100% |
| 2030-W2 | Raf Burnette Rd 12" WL Improvements | - | 177.06 | 200.02 | 89% |
| 2030-W3 | 8" WL from Ray Corbett Dr to Lower Seguin Rd | - | 594.20 | 613.97 | 97% |
| 2030-W4** | Trainer Hale Rd 2" WL Replacement & 8" WL Improvement | - | 530.42 | 568.37 | 93% |
| 2030-W5** | Boenig Dr S 6" WL Replacement & 8" WL Improvement | 2.43 | 117.51 | 166.63 | 69% |
| 2030-W6 | Live Oak to IH-35 24" Transmission Main | - | 5,346.49 | 4,000.00 | 100% |
| 2030-W7 | Ware Seguin Pump Station Expansion Phase 1 | 600.00 | 1,000.00 | 1,200.00 | 33% |
| 2030-W8 | IH-10 8" WL Improvements | - | 15.11 | 11.35 | 100% |
| **System Improvement Projects** | | | | | |
| 2030-W9 | PRV Installation for Proposed Southwest Pressure Plane | N/A | N/A | N/A | N/A |
| 2030-W10** | River Rd 6" WL Replacement | 115.65 | 311.01 | 335.23 | 58% |

N/A indicates that the project is not eligble to be included for impact fees.

Utilizations in red indicate that it is an adjusted value because it was over 100% due to the build out flow occuring in 2030 instead of 2050.

**City of Schertz**
**2024 Impact Fee Update**
**Wastewater CIP Project Growth Utilization Calculations**

| Project Number | Project Name | Existing Peak Flow (gpm) | 2030 Peak Flow (gpm) | 2050 Peak Flow (gpm) | 2020-2030 % Utilization |
|---|---|---|---|---|---|
| **Near Term CIP** | | | | | |
| **Growth Projects** | | | | | |
| NT-S1 | Town Creek Phase IV 24" - Section 1 | - | 33.20 | 158.4 | 21% |
| NT-S2 | Town Creek Phase IV 12" - Section 2 | - | - | 11.6 | 0% |
| NT-S3 | Town Creek Phase V 24" | - | 33.20 | 145.5 | 23% |
| NT-S4** | Upsize Lookout Line | 275.40 | 223.80 | 256.6 | 20% |
| NT-S5** | Upsize Tri County Line | 273.90 | 216.00 | 229.1 | 25% |
| NT-S6 | Cibolo West Main | - | 1,052.90 | 1,262.3 | 83% |
| NT-S7 | Woman Hollering Creek Lift Station, Gravity Lines, and Force Main | - | 702.60 | 785.2 | 89% |
| **System Improvement Projects** | | | | | |
| NT SI-1 | Decommission Tri County Lift Station | N/A | N/A | N/A | N/A |
| NT SI-2 | Decommission Corbett Lift Station | N/A | N/A | N/A | N/A |
| NT SI-3 | Decommission Sedona Lift Station & Woman Hollering Creek WWTP | N/A | N/A | N/A | N/A |
| **Proposed 2030 CIP** | | | | | |
| **Growth Projects** | | | | | |
| 2030-S1 | Hope Lane 8" Gravity Line | - | 59.40 | 88.50 | 67% |
| 2030-S2 | Old Wiederstein Road 8" | - | 0.53 | 10.30 | 5% |
| 2030-S3 | Union Pacific Railroad 8" - Section 1 | - | 11.60 | 119.30 | 10% |
| 2030-S4 | Union Pacific Railroad 8" - Section 2 | - | 5.50 | 46.10 | 12% |
| 2030-S5 | Wiederstein Road 8" | - | 160.90 | 195.00 | 83% |
| 2030-S6 | Schaefer Road 8" - Section 1 | - | 42.30 | 128.80 | 33% |
| 2030-S7 | Schaefer Road 8" - Section 2 | - | 7.20 | 7.20 | 100% |
| 2030-S8 | Aranda 8" | - | 3.20 | 3.20 | 100% |
| 2030-S9 | Weir Road 10" | - | 597.00 | 597.60 | 100% |
| 2030-S10 | Trainer Hale Road 10" | - | 31.90 | 32.00 | 100% |
| 2030-S11 | Ware Seguin Road 8" | - | 122.60 | 126.70 | 97% |
| 2030-S12 | FM 1518 8" | - | 9.80 | 24.50 | 40% |
| 2030-S13 | I-10 8" - Section 1 | - | 67.20 | 68.10 | 99% |
| 2030-S14 | Boenig Drive 8" | - | 12.30 | 42.90 | 29% |
| 2030-S15 | N Greytown Road 8" | - | 45.70 | 88.10 | 52% |
| **System Improvement Projects** | | | | | |
| 2030 SI-1** | Friesenhahn West Line WW Upsize | 769.20 | 1,114.10 | 1,538.10 | 22% |
| 2030 SI-2** | Fairlawn WW Upsize | 658.40 | 722.70 | 727.20 | 9% |
| 2030 SI-3** | Cibolo Crossing WW Line Upsize | 1,439.40 | 1,382.60 | 1,576.50 | 4% |
| 2030 SI-4** | Woodland Oak Drive Replacements | 784.00 | 820.60 | 900.30 | 4% |
| 2030 SI-5** | Old Wiederstein WW Upsize | 1,908.30 | 5,034.00 | 5,092.50 | 61% |
| 2030 SI-6** | Northcliffe Lift Station Upgrade | 3,824.00 | 4,048.70 | 4,485.00 | 5% |
| 2030 SI-7 | Decommission Belmont Park Lift Station | N/A | N/A | N/A | N/A |

N/A indicates that the project is not eligble to be included for impact fees.

Utilizations in red indicate that it is an adjusted value because it was over 100% due to the build out flow occuring in 2030 instead of 2050.

# APPENDIX 31 - OCTAVE METER SPECIFICATIONS



Master Meter's Multi-Jet meter exceeds the AWWA C708 standard. With sensitivity to measure water flowing as low as 1/8 gallon per minute and accuracy unaffected by common particulates and build-up that would freeze other types, you can count on our Multi-Jet technology.

## Technical Specifications:

**AWWA Standard** -Meets or exceeds all sections of AWWA Standard C-708, most recent revision. Compliant with SDWA, NSF ANSI 372 and NSF ANSI 61 standards.

**Register** - Standard Direct Read, DIALOG® 3G AMR System registers, AccuLinx Encoder, and IP 68 Electrical Output registers available. Together, an integrated and migratable technology environment is attained; direct, proximity (touch), mobile AMR, and Fixed Network AMI.

**Register Sealing** - Direct Read and DIALOG registers are permanently sealed with a scratch resistant glass lens, stainless steel base and wrap-around gasket to prevent intrusion of dirt or moisture.

## Features & Benefits:

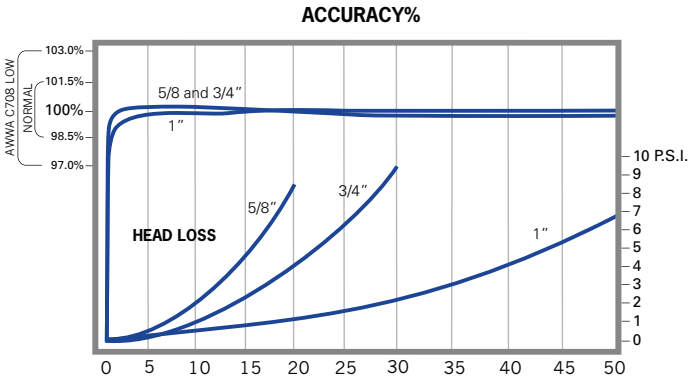
- Rugged basket strainer built from advanced polymer materials for superior wear mitigation.
- Proprietary design produces smooth, laminar flow profile for improved accuracy
- Award-winning DIALOG 3G register design houses all vital components — encoder, RF transmitter, battery and antennae — safely within the register's stainless steel and tempered glass enclosure. Free of external wires, components and connections — the #1 cause of field related issues on competitive designs.
- Assures compliance with the Safe Drinking Water Act (SDWA).
- Measures with only one moving part that is hydro-dynamically balanced on a sapphire bearing to preserve accuracy and promote a positive bottom line.
- Exceptional performance in passing entrained solids and operating in environments with high mineral content.
- Clean, elegant measurement design is highly sensitive to leaks and low flow while limiting wear for excellent revenue protection.

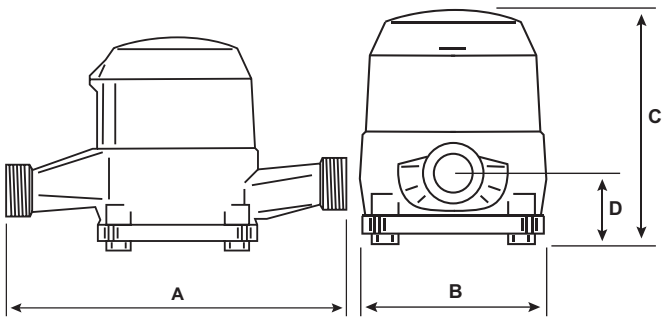
## Technical Specs (Cont'd):

- **Register Unit** - Registration available in U.S. gallons, cubic feet or cubic meters.
- **Test Circle** - Large center sweep hand with one hundred (100) clearly marked gradations on the periphery of the dial face (available on Direct Read and DIALOG 3G registers).
- **Design/Operation** - Velocity-type flow measurement. Water that is evenly distributed by multiple converging inlet ports flows past an impeller in the measuring chamber, creating an impeller velocity directly proportional to water flow rate. The meter's register integrates that velocity into totalized flow. An inherent advantage for this design is unparalleled wear mitigation leading to sustained revenues. The register assembly is removable under line pressure permitting seamless, simplified upgrades in reading technology.
- **Strainer** - A rugged, 360-degree advance polymer basket strainer protects the critical measuring element from damage. The unique strainer design smoothes the flow of water entering into the meter creating a laminar flow that is gentle on the meter's internal components. Tough materials operating in a smooth, balanced environment enable the meters to perform more accurately over time. Utilities' investments last longer while capturing more revenue.
- **Measuring Chamber** - The measuring chamber housing and measurement element are built with an advanced synthetic polymer. Measurement surfaces are not wear surfaces, providing sustained accuracy despite the presence of entrained solids in the water. A long life, synthetic sapphire bearing serves as a wear surface with radially balanced water flows. The chamber housing is constructed in two parts to allow access to the impeller. Bottom plates available in Bronze, Cast Iron (CI) or Engineered Plastic.

| *METER OPERATING CHARACTERISTIC/DIMENSION* | *5/8"* | *3/4" x 7-1/2"* | *3/4" x 9"* | *3/4" x 9" x 1"* | *1"* |
|---|---|---|---|---|---|
| **Flow Rating** (gpm) | **20** | **30** | **30** | **30** | **50** |
| **Continuous Flow** (gpm) | **15** | **20** | **20** | **20** | **30** |
| **Normal Flow Range** (gpm) | **1-20** | **2-30** | **2-30** | **2-30** | **3-50** |
| **Extended Low Flow** (gpm) | **1/4** | **1/2** | **1/2** | **1/2** | **3/4** |
| **Maximum Working Pressure** (psi) | **150** | **150** | **150** | **150** | **150** |
| **Maximum Working Temperature** (F) | **120** | **120** | **120** | **120** | **120** |
| **Length** (A below) | **7-1/2"** | **7-1/2"** | **9"** | **9"** | **10-3/4"** |
| **Width** (B below) | **3-5/8"** | **3-5/8"** | **3-5/8"** | **3-5/8"** | **4"** |
| **Height, standard register with lid** (C below) | **5"** | **5"** | **5"** | **5"** | **5-1/4"** |
| **Height, bottom to center line** (D below) | **1-1/2"** | **1-1/2"** | **1-1/2"** | **1-1/2"** | **1-3/4"** |
| **Weight** (lbs) | **3.95** | **4.0** | **4.1** | **4.6** | **5.25** |
| **Packed To Carton** | **6** | **6** | **6** | **4** | **4** |
| **Carton Weight** (lbs) | **25.1** | **25.4** | **26** | **19.8** | **22.4** |

## Accuracy and Head Loss Chart



# OCTAVE® ULTRASONIC METER



Available in sizes 1.5", 2", 3", 4", 6", 8", 10", and 12"

UL Certification is available on 1.5" through 8" only.
FM Approval is available on all sizes.

Octave brings the latest in ultrasonic metering technology to Commercial/Industrial (C&I) water meters and puts precise measurement where the real flows exist. An excellent alternative to mechanical compound, single-jet, floating ball, fire-service type and turbine meters, Octave excels at maintaining sustained accuracy for the life of the meter while providing smart AMR capabilities.

## Technical Specifications:

**Working Pressure** - 175 PSI

**Liquid Temperature** - 33° - 122 °F

**Metrological Characteristics** - Meets ANSI/AWWA Standards C715-18, C750-19, ISO 4064 rev. 2014

**Configuration** - Compact-Display built into unit

**Power Source** - 2 x D Size Lithium Thionyl Chloride batteries - 10 year warranted life time

**Environmental Protection** - NEMA 6P+ (IP68+), Ambient operation temp. -13 °F / +131 °F for the display

**Display Units** - Multi line 12 digit LCD (Programmable USG, Cubic Feet, Cubic Meters, Acre Feet for volume and GPM, Lt/s, or M³/h for rate of flow)

**Output** - Programmable Encoder, Pulse, 4-20, or Modbus; Optional dual output available in encoder + pulse

## Features & Benefits:

- Grade 316 Stainless Steel (2"-8") or Epoxy Coated Ductile Iron (10"-12") body design provides full compliance with ANSI/NSF 372 (AB1953 or NSF61G).
- No moving parts. Minimal flow intrusion. Enduring accuracy.
- Easy to install Floating Flanges on 2"-8" and Integrated Flanges on 10"-12".
- No required strainer.
- Wide beam ultrasonic measurement sensors for high accuracy and reliable operation.
- Industry standard communication protocol for integration with most third-party AMR/AMI systems.
- Active leak, burst, reverse flow, empty pipe, measurement failure, and low battery. LCD also displays rate of flow and water temperature.
- Ruggedized NEMA 6P/IP-68+ construction; fully submersible design.
- Designed to meet standards for both North American and International C&I water meters.
- Optional flow measurements; Forward Only, Net Volume or Alternating Display (Forward and Reverse Consumption displayed separately).

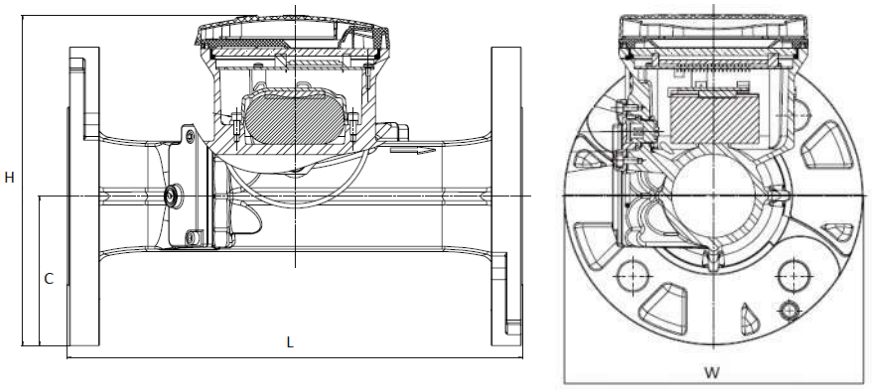
## Performance Data & Dimensions

| Octave Operating Characteristics and Dimensions | 1.5"x13" (40 mm) | 2"x10" (50 mm) | 2"x15.25" (50 mm) | 2"x17" (50 mm) |
|---|---|---|---|---|
| **Safe Maximum Operating Capacity** | 250 GPM ($57\ m^3/h$) | 250 GPM ($57\ m^3/h$) | 250 GPM ($57\ m^3/h$) | 250 GPM ($57\ m^3/h$) |
| **Normal Operating Range** (98.5% - 101.5% Accuracy)* | 0.50 – 250 GPM ($0.11 – 57\ m^3/h$) | 0.50 – 250 GPM ($0.11 – 57\ m^3/h$) | 0.50 – 250 GPM ($0.11 – 57\ m^3/h$) | 0.50 – 250 GPM ($0.11 – 57\ m^3/h$) |
| **Extended Low Flow** (95% - 105% Accuracy) | 0.25 GPM ($0.06\ m^3/h$) | 0.25 GPM ($0.06\ m^3/h$) | 0.25 GPM ($0.06\ m^3/h$) | 0.25 GPM ($0.06\ m^3/h$) |
| **Length** | 13" (330 mm) | 10" (250 mm) | 15.25" (390 mm) | 17" (432 mm) |
| **Width** | 5-3/4" (146 mm) | 5-3/4" (146 mm) | 5-3/4" (146 mm) | 5-3/4" (146 mm) |
| **Height** | 6-3/4" (172 mm) | 6-3/4" (172 mm) | 6-3/4" (172 mm) | 6-3/4" (172 mm) |
| **Height from Center Pipe** | 2-1/8" (54 mm) | 2-1/8" (54 mm) | 2-1/8" (54 mm) | 2-1/8" (54 mm) |
| **Weight** | 20 lbs (9 kg) | 15 lbs (7 kg) | 22 lbs (10 kg) | 24 lbs (11 kg) |

* In the water temperature of 45° to 85° F (7° to 30° C), meter consumption is accurately measured at:
- +/- 1.5% in the Normal Operating Range
- +/- 5% in the Extended Low Flow

| Octave Operating Characteristics and Dimensions | 3" (80 mm) | 4" (100 mm) | 6" (150 mm) | 8" (200 mm) | 10" (250 mm) | 12" (300 mm) |
|---|---|---|---|---|---|---|
| **Safe Maximum Operating Capacity** | 500 GPM ($114\ m^3/h$) | 1,000 GPM ($227\ m^3/h$) | 1,600 GPM ($363\ m^3/h$) | 2,800 GPM ($636\ m^3/h$) | 5,500 GPM ($1,250\ m^3/h$) | 5,500 GPM ($1,250\ m^3/h$) |
| **Normal Operating Range** (98.5% - 101.5% Accuracy)* | 1 – 500 GPM ($0.23 – 114$ m3/h) | 1.5 – 1,000 GPM ($0.34 – 227\ m^3/h$) | 3 – 1,600 GPM ($0.68 – 363\ m^3/h$) | 5 – 2,800 GPM ($1.5 – 636\ m^3/h$) | 14 – 5,500 GPM ($3.2 – 1,250\ m^3/h$) | 14 – 5,500 GPM ($3.2 – 1,250\ m^3/h$) |
| **Extended Low Flow** (95% - 105% Accuracy) | 0.5 GPM ($0.11\ m^3/h$) | 0.75 GPM ($0.17\ m^3/h$) | 2 GPM ($0.45\ m^3/h$) | 4 GPM (0.9 m3/h) | 8 GPM (1.8 m3/h) | 8 GPM (1.8 m3/h) |
| **Length** | 12" (305 mm) | 14" (356 mm) | 18" (457 mm) | 20" (508 mm) | 17-3/4" (451 mm) | 19-3/4" (502 mm) |
| **Width** | 7-1/2" (190 mm) | 9" (229 mm) | 11" (280 mm) | 13-1/2" (343 mm) | 16" (406 mm) | 19-3/4" (502 mm) |
| **Height** | 8-1/2" (216 mm) | 9-7/8" (250 mm) | 10-7/8" (276 mm) | 12-7/8" (327 mm) | 16-1/2" (419 mm) | 19-3/4" (502 mm) |
| **Height from Center Pipe** | 3-1/2" (90 mm) | 4-1/2" (115 mm) | 5-1/8" (130 mm) | 6-3/8" (162 mm) | 8" (203 mm) | 9-7/8" (251 mm) |
| **Weight** | 23 lbs (10.5 kg) | 35 lbs (16 kg) | 51 lbs (23 kg) | 78 lbs (35 kg) | 150 lbs (68 kg) | 210 lbs (96 kg) |

* In the water temperature of 45° to 85° F (7° to 30° C), meter consumption is accurately measured at:
- +/- 1.5% in the Normal Operating Range
- +/- 5% in the Extended Low Flow




**NOTE** — For Performance charts please see **Engineering Document - Octave | Version 10.17**.

## The Octave vs. Compounds & Turbines

### Product Comparison Sheet

The origin of the modern day turbine meter dates back to the late 18th century and has evolved into a reliable way of measuring high volumes of water. Since 1914 compound meters have served a place in the market by capturing unaccounted for water in many applications when compared to traditional turbine meters.

While changes in both designs have improved meter accuracy there is still room for improvement due to poor low flow registration (in turbines), costly repairs, head loss, decreased accuracy in the changeover flow rates (in compounds), and short term sustained accuracy. With the introduction of the Octave ultrasonic water meter, the industry now has a meter capable of accurately measuring both high volume water usage while still capturing low flows and providing leakage alerts with none of the limitations of a compound or turbine.

**Benefits:**

1. **No moving parts:** Compound meters require water to be measured through 2 separate measuring elements; one for high flows and a secondary meter for low flows. In addition the compound meter requires an automatic valve mechanism for diverting flow through the appropriate measuring device. **Traditional compound meters can have upwards of 50-75 moving parts**. Turbine meters have one measuring element for capturing intermediate and high flows. **Most turbine meters can have upwards of 25 moving parts.**

   **The Octave meter has absolutely no moving parts** and thus eliminates the need of any maintenance or repair or the requirement of installing a strainer. However if the utility would like to prevent larger suspended particles from entering the customer's line a strainer may be installed without adversely affecting the meter.

2. **Sustained meter accuracy:** As with all mechanical devices, compound and turbine meters are subject to damage or wear which has a negative effect on meter accuracy and the utility's revenue. Using the latest in ultrasonic transit time technology **the Octave meter is capable of maintaining new meter accuracy for the life of the meter** without the need for calibration or routine maintenance.

3. **Low flow accuracy & starting flow:** With flow sensitivity starting as low as 1/16 gpm, the Octave is the only solid state meter capable of matching the minimum test flow rates of the AWWA standard for compound meters (2" – 4") and far exceeds the low flow rates of the AWWA standard for typical turbines (all sizes).

| Size | Octave Low Flow | *C701 Low Flow | ** C702 Low Flow |
|---|---|---|---|
| 2" | ¼ gpm @ 95% | 4 gpm @ 98.5% | ¼ gpm @ 95% |
| 3" | ½ gpm @95% | 8 gpm @ 98.5% | ½ gpm @ 95 % |
| 4" | ¾ gpm @95% | 15 gpm @ 98.5% | ¾ gpm @ 95% |
| 6" | 2 gpm @ 95% | 30 gpm @ 98.5% | 1 ½ gpm @ 95% |
| 8" | 4 gpm @ 95% | 50 gpm @ 98.5% | 2 gpm @ 95% |

**C701 is the AWWA Standard for Cold Water Meters, Turbine Type*
***C702 is the AWWA Standard for Cold Water Meters, Compound Type*

4. **No changeover:** An inherent weakness with compound meters is the point when flow begins to changeover from one chamber to the other. Depending on the make and model, **meter accuracy can drop as low as 90% on older compound models and approximately 94% - 97% on newer compound models. The Octave eliminates changeover** and provides optimal meter accuracy at all flow that should result in more revenue for the utility.

5. **High flow:** Occasionally a compound is not the right meter for the job when a customer's flow demand exceeds the meter's safe maximum flow. To prevent unwanted wear to the compound the utility would typically install a turbine meter and hope the customer was not also operating below the meter's low flow capacity during non-peak demand.

   **The Octave meter allows you to accurately measure both low and high flows without sacrificing meter accuracy.**

| Size | Octave Safe Maximum Flow | *C701 Safe Maximum Flow | *C701 % of Improvement | **C702 Safe Maximum Flow | **C702 % of Improvement |
|---|---|---|---|---|---|
| 2" | 250 gpm | 190 gpm | 24% | 160 gpm | 36% |
| 3" | 500 gpm | 435 gpm | 13% | 350 gpm | 30% |
| 4" | 1,000 gpm | 750 gpm | 25% | 600 gpm | 40% |
| 6" | 1,600 gpm | 1,600 gpm | 20% | 1,350 gpm | 32.5% |
| 8" | 2,800 gpm | 2,800 gpm | 20% | 1,600 gpm | 54.3% |

**C701 is the AWWA Standard for Cold Water Meters, Turbine Type*
***C702 is the AWWA Standard for Cold Water Meters, Compound Type*

6. **Head loss:** With no internal parts to cause friction the Octave by design decreases head loss which in turn **lowers pumping costs for the utility and decreases the number of complaints of poor pressure by the customer.** Compared to a typical compound meter, the head loss of the Octave can decrease head loss by up to 93% at comparable flow rates and up to 90% in turbines.

| Size | At C701 Safe Max Flow Turbines | vs. Octave | Improvement vs. Turbines | At C702 Safe Max Flow Compounds | vs. Octave | Improvement vs. Compounds |
|---|---|---|---|---|---|---|
| 2" | 5.08 PSI | 0.80 PSI | 84% | 7.05 PSI | 0.74 PSI | 90% |
| 3" | 5.44 PSI | 2.00 PSI | 63% | 6.88 PSI | 1.15 PSI | 83% |
| 4" | 7.30 PSI | 3.00 PSI | 59% | 8.90 PSI | 1.89 PSI | 79% |
| 6" | 6.14 PSI | 0.69 PSI | 89% | 8.32 PSI | 0.55 PSI | 93% |
| 8" | 3.48 PSI | 1.87 PSI | 46% | 7.70 PSI | 0.66 PSI | 91% |

*#Head loss improvements are determined by taking an average head loss for each meter type at the Safe Maximum Flow per the applicable standard then comparing it to the Octave at the same rate of flow. Results vary based on the specific model when compared to the Octave.*

7. **Meter Oversizing / Undersizing / Improper Application:** Lost revenue and/or meter damage can occur if the meter is not sized properly or if the meter installed is not best suited for the customer's usage profile. **The Octave operates well in almost every application, eliminating the question of which meter to use or what size to use.**

8. **Technology:** The Octave comes with built in standard display alerts such as **leak detection, flow direction, empty pipe, and battery level icon**, and offers the scalability to include **data logging, impact alerts such as tampering, backflow, theft and zero consumption** when connected to Master Meter's XTR endpoint. The technology advantages of the Octave far exceed the capabilities of today's compound and turbine meters.

9. **Weight:** Less parts needed to build a meter equates to manufacturing a meter that weighs considerably less than compounds and turbines resulting in **reducing the number of field staff and equipment needed to install or replace meters and environmental benefits such as reducing your carbon footprint.**

| Size | Octave Weight | ##Turbine Avg. Weight | Improvement vs. Turbine | ##Compound Avg. Weight | Improvement vs. Compound |
|---|---|---|---|---|---|
| 2" | 26 lbs | 25 lbs | +4% | 39 lbs | 33% |
| 3" | 36 lbs | 40 lbs | 10% | 68 lbs | 47% |
| 4" | 48.5 lbs | 54 lbs | 10% | 86 lbs | 44% |
| 6" | 99 lbs | 108 lbs | 8% | 155 lbs | 36% |
| 8" | 136 lbs | 186 lbs | 27% | 379 lbs | 64% |

*## Comparisons of weight are between various compound and turbine models. The level of improvement was based on average weight per size and type. Results vary based on the specific model when compared to the Octave.*

10. **Price:** For all of these added features you would expect to pay much more for a superior product but that is not the case. **Priced between a turbine and a compound the Octave exceeds all the advantages of a traditional compound or turbine**.

# Octave Installation Guide

**Category:** C & I Metering

**Type:** Installation Manual

**Issue:** Operation




**Version 01.19**

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## 1.1 Introduction

Thank you for choosing Master Meter's Octave Ultrasonic Meter. This unique design delivers precise flow measurement without any moving parts for long life, sustained accuracy and exceptional performance. The following information within this guide will help you gain a better understanding of the many features and capabilities your new Octave Ultrasonic meter has to offer.

## 1.2 Package Contents and Documentation

- One complete Octave Ultrasonic Flow Meter (meter body with integral electronics), size as indicated on the packaging box.
- Octave User Installation Guide
- Certificate of calibration data (adhered to the inside of the meter lid)
- (Optional) If specified at the time of order; one output module

## 1.3 General Safety

Prior to installation of your new Octave Ultrasonic Meter please consider the following;

- Do not install, operate or maintain this flow meter without reading, understanding and following the factory-supplied instructions. Otherwise, injury or damage may result.
- Read instructions carefully before beginning installation and save them for future reference.
- Observe all warnings and instructions marked on the product.
- Consider handling and lifting instructions to avoid damage.
- If the product does not operate normally, refer to the service instructions or to a qualified Master Meter representative.
- There are no operator-serviceable parts inside this product.

## 1.4 Unpacking Instructions and Inspection

This product has been thoroughly inspected and tested prior to shipment and is ready for operation. After carefully unpacking the meter, inspect all contents for shipping damage before attempting to install. If here is any indication of physical damage found, immediately contact the responsible transportation service and your local Master Meter representative. **Note**: *The LCD display remains active for the life of the meter. If the display is not on, this may be an indication of damage during shipment.*

## 2.1 Measurement Method

The Octave's measurement method is based on an ultrasonic, transit time, dual beam sensor array which determines the length of time it takes an ultrasonic sound wave to travel the distance between the two sensors located in the meter's body. The two sensors function as both the transmitter and the receiver, each one alternating these functions so that the ultrasonic wave travels both with and against the direction of the flow. Ultrasonic waves travel slower against the flow than with the flow, thus the time difference of two waves traveling with and against the flow leads to determining the velocity and volume of the water.

**Note: These sensors are ultra-sensitive; they are not designed to be modified by the user. Any modifications void warranty on this product.**

- The Octave ultrasonic flow meter is a battery-powered, precision flow meter designed for linear, bidirectional flow measurement of water.
- Flow measurement data is communicated through the output module.
- The Octave can be set up for a wide range of applications.

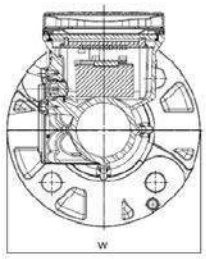
## 2.2 Mechanical Data

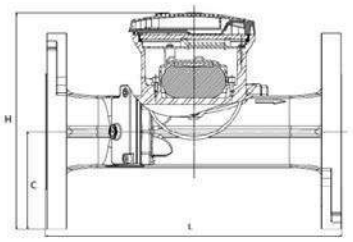
| | |
|---|---|
| **Maximum Working Pressure** | 175 PSI |
| **Liquid Temperature** | 32.1° F - 122° F (0.1° C to 50° C) |
| **Referenced Standards** | Meets ANSI / AWWA Standard C715-18 & C750-10; ISO 4064 rev. 2005 |
| **Configuration** | Compact - Display built into unit |
| **Power Source** | 2 x D size Lithium Thionyl Chloride batteries - 10 year warranted life time |
| **Environmental Protection** | NEMA 6P (IP68), Ambient operation temperature -13° F to 131° F (- 25° C to 55° C) |
| **Data Units** | Multi-line 12 digit Liquid Crystal Display (LCD) - *Programmable USG, Imperial Gallons, Cubic Feet, Cubic Meters, Barrels, Acre Feet or Acre Inch for Volume and GPM, Lt/s,Lt/m or $M^3$/h for rate of flow.* |
| **Volume Display Options** | 1. Net Volume (Forward measurement minus reverse)<br>2. Forward Only<br>3. Alternating Flow (Forward and Reverse flow displayed separately) |
| **Flanges** | ANSI / AWWA C702<br>• 2" Oval Type – Cast Iron Floating Flange<br>• 3" – 8" Round Type – Cast Iron Floating Flange<br>• 8 – 12" Round Type – Cast Iron Fixed Flange |
| **Meter Body Construction** | 2" – 8" Grade 316 Stainless Steel<br>10" – 12" Ductile Iron Epoxy Coated |
| **Output (optional)** | 1. Dual Digital Pulses (Open Drain or Dry Contact)<br>2. 4-20 mA (Powered loop)<br>3. Encoder Output (up to 8 digit encoded readings) |
| **Certifications/Listings** | • UL Certified – Safety US EX29710 on 2" – 8" Stainless Steel Floating Flange<br>• FM Approved on 2" – 12" Stainless Steel and Ductile Iron<br>• ANSI / NSF 372 (AB1953 or NSF61G) |

## 2.3 Dimensions

| Octave | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Model** | **Floating Flanges** | | | | | | | | **Solid Flange** | |
| **Nominal Size** | 2" x 10" (50 mm) | 2"x13" (50 mm) | 2"x15.25" (50 mm) | 2"x17" (50 mm) | 3" (80 mm) | 4" (100 mm) | 6" (150 mm) | 8" (200 mm) | 10" (250 mm) | 12" (300 mm) |
| **L - Length** | 10" (250 mm) | 13" (330 mm) | 15.25" (390 mm) | 17" (432 mm) | 12" (305 mm) | 14" (356 mm) | 18" (457 mm) | 20" (508 mm) | 17 3/4" (451 mm) | 19 3/4" (502 mm) |
| **W - Width** | 5 3/4" (146 mm) | 5 3/4" (146 mm) | 5 3/4" (146 mm) | 5 3/4" (146 mm) | 7 1/2" (190 mm) | 9" (229 mm) | 11" (280 mm) | 13 1/2" (343 mm) | 16" (406 mm) | 19 3/4" (502 mm) |
| **H - Height** | 6 3/4" (172 mm) | 6 3/4" (172 mm) | 6 3/4" (172 mm) | 6 3/4" (172 mm) | 8 1/2" (216 mm) | 9 7/8" (250 mm) | 10 7/8" (276 mm) | 12 7/8" (327 mm) | 16 1/2" (419 mm) | 19 3/4" (502 mm) |
| **C - Center Pipe Height** | 2 1/8" (54 mm) | 2 1/8" (54 mm) | 2 1/8" (54 mm) | 2 1/8" (54 mm) | 3 1/2" (90 mm) | 4 1/2" (115 mm) | 5 1/8" (130 mm) | 6 3/8" (162 mm) | 8" (203 mm) | 9 7/8" (251 mm) |
| **Weight - Ductile Iron** | - | - | - | - | - | - | - | - | 150 lbs. (68 kg) | 210 lbs. (96 kg) |
| **Weight - Stainless Steel** | 15 lbs (7 kg) | 20 lbs (9 kg) | 22 lbs (10 kg) | 24 lbs (11 kg) | 23 lbs (10.5 kg) | 35 lbs. (16 kg) | 51 lbs. (23 kg) | 78 lbs. (35 kg) | - | - |

2" Octave is offered in 10" length with an optional add-on of a 3", a 5.25" or a 7" spool. Gaskets, nuts, bots, & washers are included in weights of 13", 15.25" and 17".



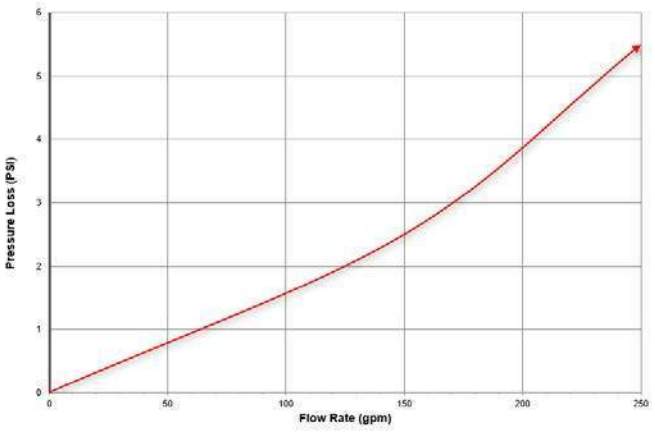

## 2.4 Performance Data

| Octave Nominal Size inch (mm) | Extended Low Flow 95% - 105% Accuracy GPM (Lt/s) | Normal Flow Range 98.5% - 101.5% Accuracy GPM (Lt/s) | ‡ Continuous Safe Max Flow GPM (Lt/s) | Linearity Range +/- 0.5% Maximum Deviation GPM (Lt/s) |
|---|---|---|---|---|
| 2" (50mm) | 1/4 (.016) | 1/2 - 250 (.032 - 15.77) | 250 (15.77) | 4 - 200 (.25 - 12.62) |
| 3" (80 mm) | 1/2 (.032) | 1 - 500 (.06 - 31.54) | 500 (31.54) | 5 - 350 (.32 - 22.08) |
| 4" (100 mm) | 3/4 (.047) | 1-1/2 - 1,000 (.09 - 63.09) | 1000 (63.09) | 15 - 700 (.94 - 44.16) |
| 6" (150 mm) | 2 (.13) | 3 - 1,600 (.19 - 100.94) | 1,600 (100.94) | 20 - 1,150 (1.26 - 72.55) |
| 8" (200 mm) | 4 (.25) | 5 - 2,800 (.32 - 176.65) | 2,800 (176.65) | 50 - 2,000 (3.15 - 126.18) |
| 10" (250 mm) | 8 (.50) | 14 - 5,500 (.88 - 346.99) | 5,500 (346.99) | 400 - 4,000 (25.24 - 252.36) |
| 12" (300 mm) | 8 (.50) | 14 - 5,500 (.88 - 346.99) | 5,500 (346.99) | 400 - 4,000 (25.24 - 252.36) |

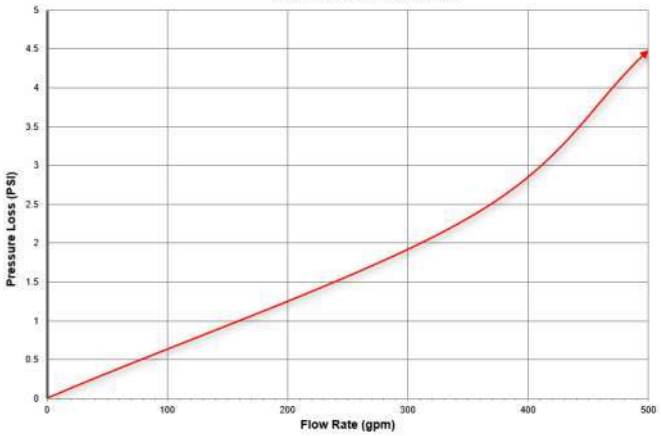
‡ Continuous Safe Max Flow ranges listed for the Octave are for accurate flow measurement only and do not limit the Octave from meeting the Short-term Deluge Flow for fire services.

## 2.5 Pressure Loss Charts

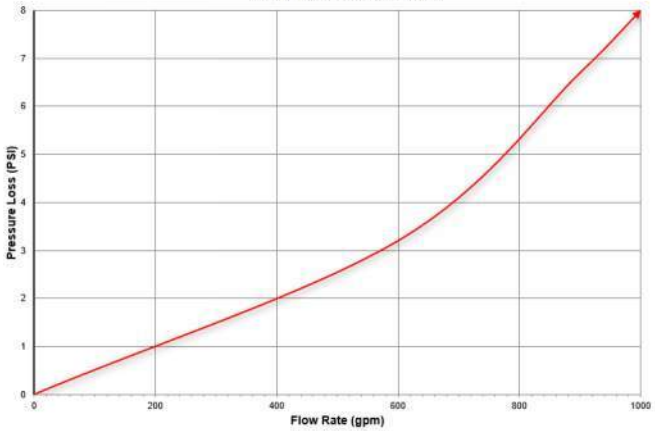
2" OCTAVE SS FF (standard ports)
*Pressure Loss Performance Chart*



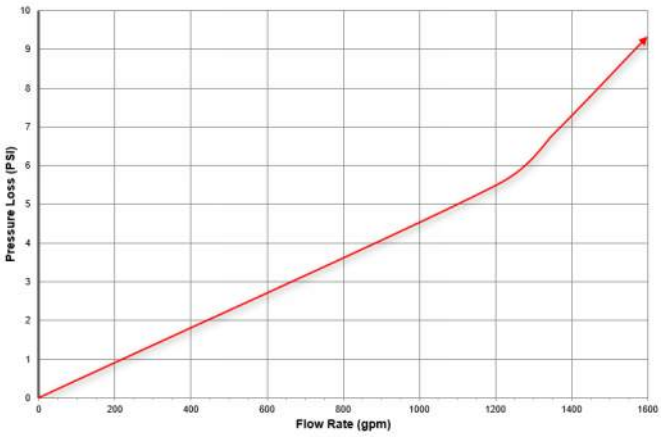

3" OCTAVE SS FF (sculpted ports)
*Pressure Loss Performance Chart*



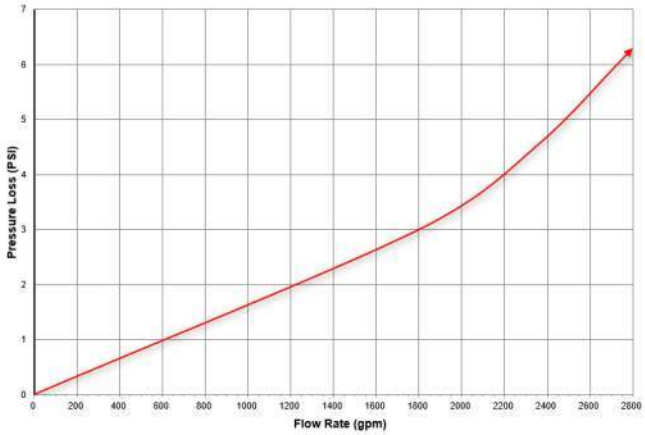

4" OCTAVE SS FF (sculpted ports)
*Pressure Loss Performance Chart*



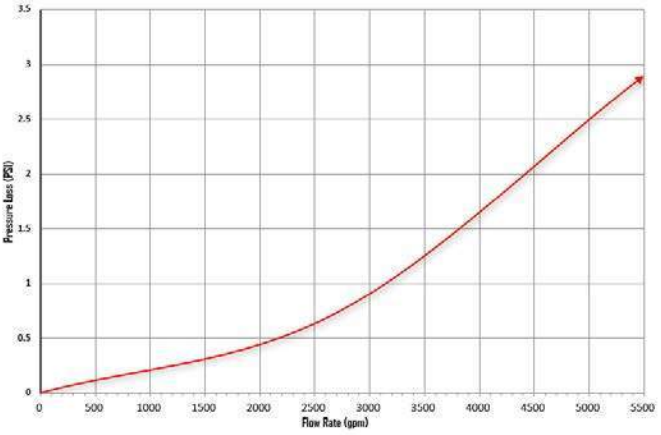

6" OCTAVE SS FF (sculpted and standard ports)
*Pressure Loss Performance Chart*




8" OCTAVE SS FF (sculpted ports)
*Pressure Loss Performance Chart*




10" and 12" OCTAVE - DUCTILE IRON
*Pressure Loss Performance Chart*



## 3.1 Pre-Installation

**Prior to installation check the following:**

- Flow rate and volume units are correctly programmed.
- The flow meter is correctly installed per the installation location and position recommendations.
- Output modules are correctly attached.

## 3.2 Handling of Octave

**IMPORTANT:**



- **DO NOT** use chains or wire cable to lift the Octave. To protect the epoxy coating, *only use a nylon lifting strap* with appropriate weight capacity.
- **DO NOT** lift the Octave by the electronic housing unit.
- **DO NOT** carry the Octave by its lid.
- **DO NOT** use bolt holes for grip when carrying the Octave.
- **DO NOT** position the flow meter on its electronic housing unit.
- When bolting the meter to pipe flanges, **use washers on both nuts and bolts** to protect the epoxy coating of the Octave.
- When handling the flow meter **avoid hard blows**, jolts or impact.

## 3.3 Installation Notes

The measuring tube should be completely full at all times for proper flow measurements. When sensors are not wet this will show a loss of signal. Though this will not cause damage to the meter, it will however not measure flow.

FLOW DIRECTION: The Octave is a bi-directional flow meter. **Note** the indicating arrow for forward and backward flows.

Master Meter recommends keeping the lid closed in case of direct sunlight exposure. However, no direct damage will occur while the lid is open temporarily.

Do not expose the meter to excessive vibration. To prevent this from occurring, support the connection pipe spools on both ends of the flow meter.

To avoid measuring errors due to air or an empty pipe, please observe the following precautions:

- Installation of the flow meter should be at the lowest point of the system, if possible, since air will be collected at the highest point of a system.
- If possible, maintain positive back pressure in meter outlet piping.
- In order to avoid cavitation, always install control valves downstream of the flow meter and never install the flow meter on a pump suction side.

## 3.4 Installation Location & Position

### Proper Installation



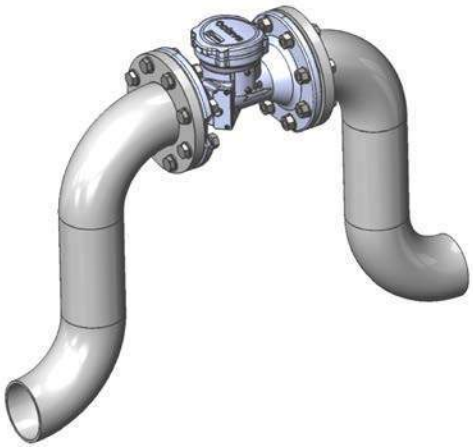




### Improper Installation



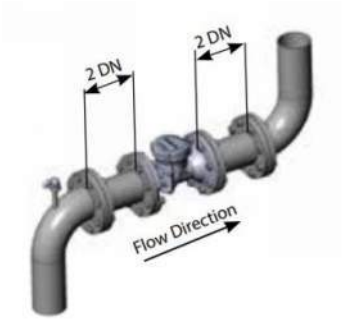

### Conditional Installation



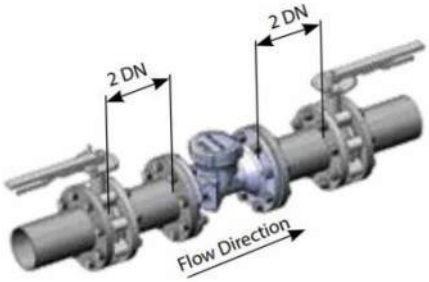
**Recommended:** If this is not the highest point in the system or a hydraulic jump has been installed to keep the flow meter full. **T**he system has back pressured.

**Not recommended:** If this is the highest point in a system or if pipeline and/or flow meter is subject to being emptied between uses avoid this installation.

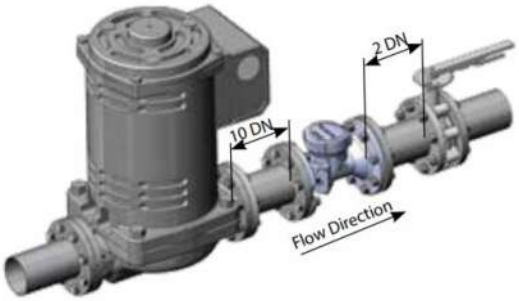
## 3.5 Additional installation requirements



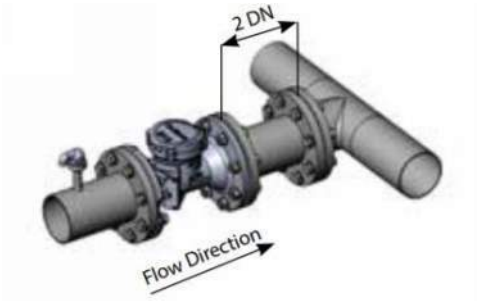

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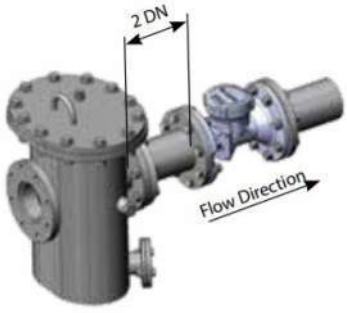

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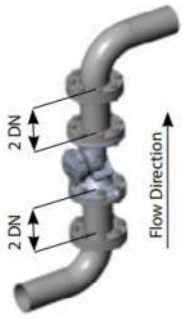

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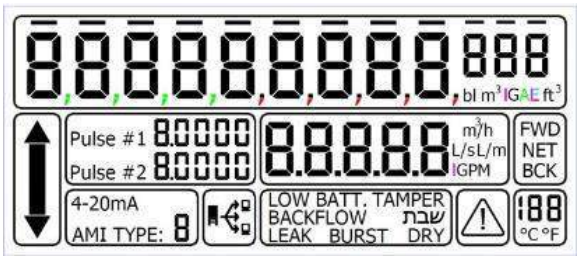



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## 4.1 Digital Display

The Octave meter comes with a factory programmable digital display built to your specifications. At the time of order you can select:

- **Volume units** in US gallons, Imperial gallons, Cubic Feet, Cubic Meters, Barrels, Acre Feet or Acre Feet
  - US Gallons will display a constant GAL on the LCD
  - Imperial Gallons will display a constant IGAL on the LCD
- **Rate of flow measurement** in US Gallons per Minute, Imperial Gallons per Minute, Liters per Second, Liters per Minute or Cubic Meters per Hour
- **A programmable decimal** with flow measurement as low as 1/1000$^{th}$ of a measurement unit.
- **Single output mode** in either encoder (UI1203), digital pulse (open drain or dry contact), 4-20 mA, or no output mode
- **Dual output mode** (optional) in encoder + open drain digital pulse
- **Volume Display Option** in either Net Flow, Forward Only, or Alternating.
  - **Net Volume** – The meter measures both forward and reverse flow. If backward flow is detected, the totalizer will begin to decrease.
  - **Forward Flow Only** – The meter measures forward flow only. Reverse flow is disregarded.
  - **Alternating Flow** – The totalizer will display only forward flow, then toggle to display only reverse flow. The timing of the how long each measurement is displayed is programmable with this software version.







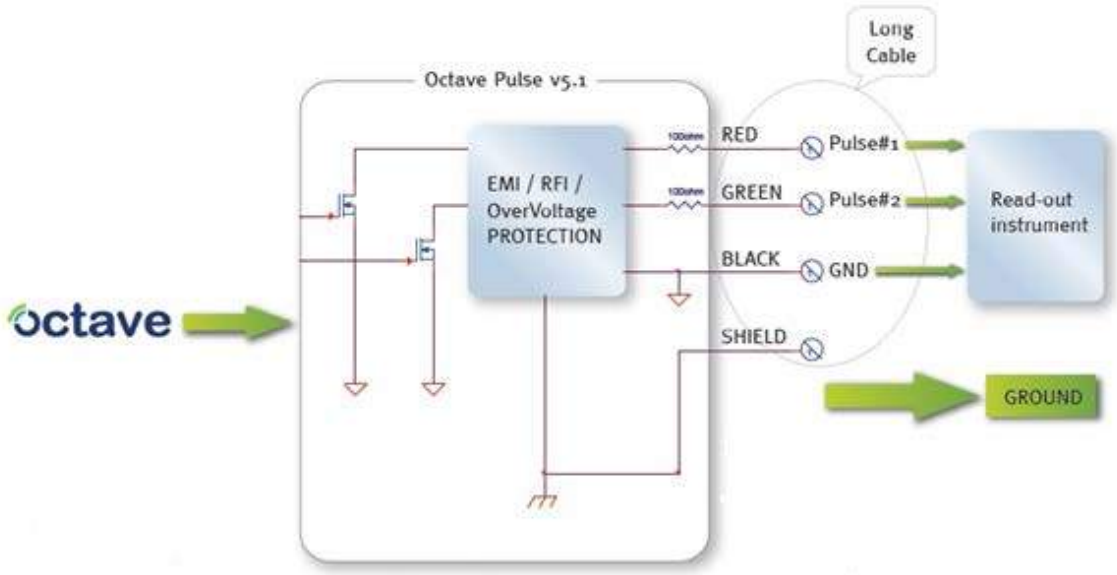





## 4.2 Pulse Output (Open Drain)




Pulse Type: Open Drain that allows current loading of 200 mA, and up to 30 VDC.




| | Wire Color | Function |
|---|---|---|
| **Long cable** | Red | Pulse Out #1 |
| | Green | Pulse Out #2 |
| | Black | Common |
| | Bare Wire | Shield |

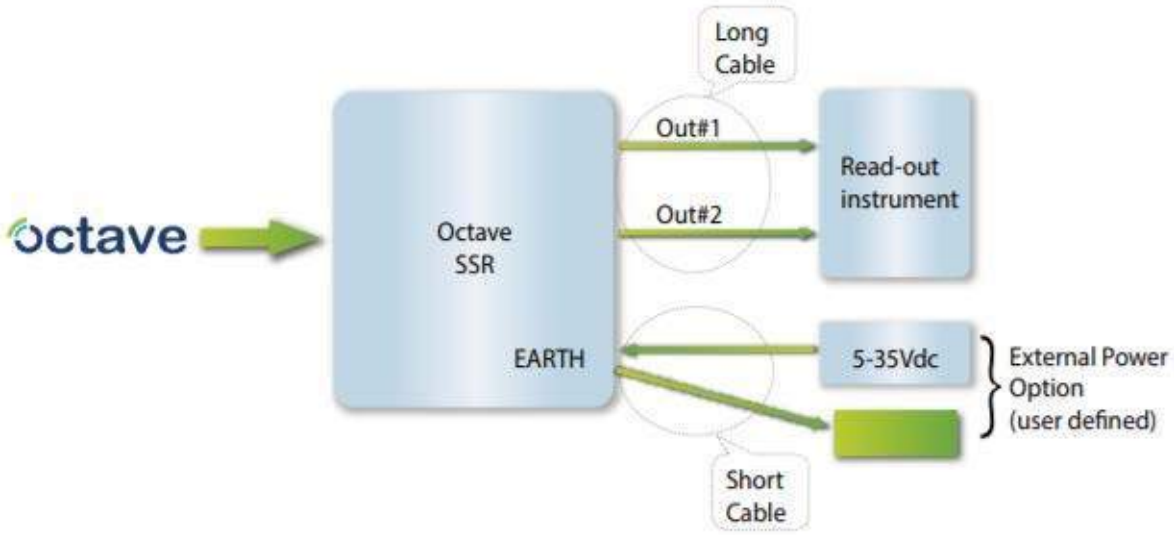
**Warning: Signal connection polarity is mandatory**

| | |
|---|---|
| **Output Type** | Open drain |
| **Cable Length - Supplied** | 9 feet |
| **Maximum Cable Length*** | 1,640 feet |
| **Maximum Supply Voltage** | 30 VDC |

## 4.3 Pulse Output (SSR Dry Contact)




Pulse Type: Dry Contact that allows current loading of 120 mA, and up to 35 volts.




| | Wire Color | Function |
|---|---|---|
| **Long cable** | Red | Output #1 |
| | Orange | Output #1 |
| | Black | Output #2 |
| | Brown | Output #2 |
| **Short cable** | Red | 24V + |
| | Black | 24V - |
| | Yellow | GROUND |

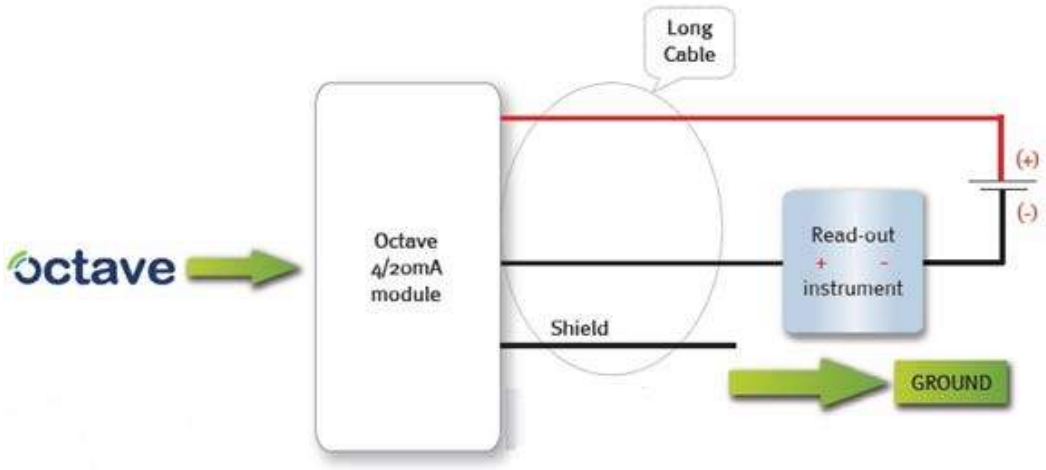
| | |
|---|---|
| **Output Type** | SSR Dry Contact |
| **Cable Length - Supplied** | 9 feet |
| **Maximum Cable Length*** | 1,640 feet |
| **Output Voltage max.** | ± 400 (V) |
| **Output Current max.** | 120 mA (.12 A) |
| **Supply Voltage** | 3-35 VDC |

**Warning: Signal Polarity is mandatory on Short Cable wires but is not mandatory on Long Cable wires.**

## 4.4 4-20 mA Output (Analog Communication)

4-20mA

The current output is a passive 4-20 mA. Power must be provided by the customer. 4 mA is always "0" (zero) flow and the 20 mA is factory programmable according to the customer's requirements. (If the customer has not specified the 20 mA at the time of order, the Octave will be programmed with the 20 mA at the max flow of the meter.)




| | Wire Color | Function |
|---|---|---|
| **Long cable** | Red | Current loop + |
| | Black | Current loop - |
| | Bare Wire | Shield |

**Warning: Signal connection polarity is mandatory**

| | |
|---|---|
| **Output Type** | 4-20 mA passive current output |
| **Cable Length - Supplied** | 9 feet |
| **Maximum Cable Length*** | 1,640 feet |
| **Loop Supply Voltage** | 12 - 24 VDC |
| **Output Impedance** | 25 (mΩ) typ. |

* The maximum cable length depends on: cable type, controller, and electrical noise level.

## 4.5 Encoder Output

AMI TYPE: 8

- UI1203 encoder open communication, with a maximum reading up to 8 digits, depending on the programming of the attached output module
- Encoder digits are represented by lines above each digit transmitted to an AMR or AMI on the volume totalizer.
- Serial communication collector
- Data output line is a solid state switch requiring external pull-up
- AMI Type for Encoder is : 0

| Wire | Function |
|---|---|
| Red | **Power** |
| **Green** | **Data** |
| **Black** | **Ground** |

| | |
|---|---|
| **Output Type** | Encoder |
| **Cable Length - Supplied** | 9 feet |
| **Maximum Supply Voltage** | 15 Vdc |
| **Maximum Power Load** | .04 Vdc |

## 4.6 No Output (Manual Read)

The Octave meter can be programmed to not send a communication signal at the customer's request; however Master Meter recommends selecting a communication mode for future migration to AMR or AMI.

## 4.7 Output Module Installation (Optional)

All Octave water meters are shipped with either a cover plate or communication module installed on the side of each meter. Even if the meter is not going to be read by radio or some other electronic unit, it is important to leave one of these devices installed on the Octave to prevent damage to the communication port. **Installing an Octave without a cover plate or communication module would void any warranty.**

If you received an Output Module separate from your Octave meter, please follow the steps below to ensure proper installation of the module. Read through these instructions before attempting to remove the cover plate. Your module came as a complete installation kit with the supplies shown in Pic. 1.

**Octave Output Module Installation Parts**




**Step 1:** Remove the Sealing Cap from the cover plate (Pic. 2).

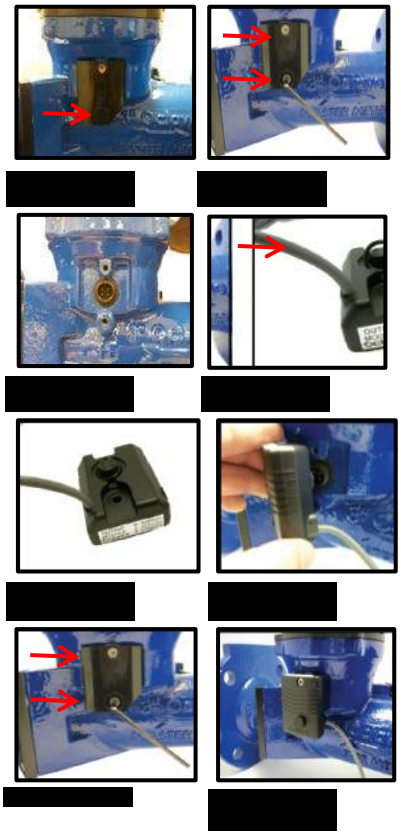
**Step 2:** Using the 3mm Allen Key provided, remove the cover plate (Pic. 3). Keep the cover plate and 3mm x 15mm screws for future use. The communication port is now exposed. (Pic. 4)

**Step 3:** Place washer around the 4-prong plug of the output module. (Pic. 5 & 6)

**Step 4:** Insert Output Module into the communication port (Pic. 7), with the cable pointing down. This will allow the slot inside the communication port to align with the groove on the module. Do not force the module into the communication port. This may cause damage to the pins. Secure into place using the 3mm x 20mm screws provided. Tighten until the screws stop. (Pic. 8)

**Step 5:** Push the Sealing Cap into the lower screw hole (Pic. 9). Lock the Sealing Cap in place by firmly pushing in into place or gently tapping it in with a small hammer.

**Note:** If at any time the module needs to be removed, take caution not to allow dirt or water into the communication port. If the module is going to be removed for an extended period of time, reinstall the cover plate and the 3mm x 15mm screws.



## 4.8 Wire Connectivity Chart

The following chart is designed to assist in wiring the Octave module to various AMR/AMI Radios. The Octave transmits up to 8 digit output encoder output. Pulse output resolution is available in resolutions of x0.1, x1, x10, x1,000, or x10,000.

By default Octave encoder modules are provided with Nicor connectors, however you may also select Itron Connectors, magnetic inductor coils for wall or pit mount, for bare wire. Nicor connectors are factory potted. All other connectors are spliced with water resistant heat shrink wrap.

| Manufacturer | Model | Communication Type | Octave Red Wire | Octave Green Wire | Octave Black Wire |
|---|---|---|---|---|---|
| **Aclara** | Star 3000 Series | Encoder | Red | White | Black |
| | Star 3000 Series | Pulse | Red | N/A | Black or White |
| **Badger** | Orion | Encoder | Red | Green | Black |
| **Datamatic** | Firefly | Encoder | Red | White | Black |
| | Mosaic | Encoder | Red | Green | Black |
| **Elster** | MTU | Encoder | White | Red | Black |
| | MTU | Pulse | Red | White | Green |
| **Hersey** | Hot Rod | Encoder | Red | Green or White | Black |
| **Itron** | 60w | Encoder | Green | Red | Unshielded |
| | 60wp | Pulse | Red | N/A | White |
| | 100w | Encoder | Grey | Brown | Yellow |
| **Kemp Meeks** | Visu-Link VL-9S | Pulse | Polarity does not matter - Connect Red and Black Wires to either terminal, disregard green wire | | |
| | Visu-Link VL-9 | Encoder | Red | Green | Black |
| **Master Meter** | Allegro PT | Encoder | Red | Green | Black |
| | Universal XTR | Encoder | Red | Green | Black |
| | Fast Pulse XTR | Pulse | Red | N/A | Black |
| **Metron Farnier (T2)** | T2 M2w | Encoder | Red | Green | Black |
| **Neptune** | R900 | Encoder | Black | Red | Green |
| **Sensus** | MXU Pit Unit | Encoder | Red | Green | Black |
| | MXU Wall Unit | Encoder | Red | Green | Black |
| | Touch Pad | Encoder | Red | Green | Black |

**Note – when connecting to Master Meter's Allegro PT or 3G XTR, the Octave will typically output an 8 digit reading, unless otherwise specified. When connecting to another manufacturer's radio or read device, it is recommended to confirm with that provider what the actual reading resolution of the connecting device is.*

# APPENDIX 32 - WILLDAN REVENUE CREDIT CALCULATIONS & SUMMARY

November 25 2024

Mr. James Walters
Finance Director
City of Schertz
1400 Schertz Parkway Bldg. 2
Schertz TX 78154

Dear Mr. Walters:

Per your request, we have completed a calculation of the credit from utility revenues that would be generated by new service units during the ten-year period of the City's proposed water and wastewater impact fees. This credit to the growth-related cost component of the impact fee calculation is required under Local Government Code Chapter 395 to ensure that new service units are not double-charged for impact fee related capital improvements. Our scope of services is limited to this credit calculation; the City's total water and wastewater impact fees are calculated by its consulting engineers.

**Summary Calculation**

Our credit calculation is summarized in the model presented as **Appendix A** to this letter. As shown in the appendix, we calculate the following impact-fee direct revenue credits:

| | | |
|---|---|---|
| WATER Revenue Credit | -- | **$3,365,530** |
| WASTEWATER Revenue Credit | -- | **$4,611,802** |

**Key Assumptions**

As stated above, our contribution to the City's impact fee calculations is limited to the water and wastewater revenue credit only; we bear no responsibility for the overall impact fee calculations. However, we coordinated our assumptions and calculations with City staff and the City's consulting engineers. Specifically, we relied on the following critical assumptions in developing our revenue credits:

1) We assumed a ten-year period for the calculation, FY 2025 – FY 2034, consistent with guidelines set by Chapter 395.

2) We utilized Capital Improvement Plan cost estimates and percentages of each project allocable to growth developed by City staff and its consulting engineers.

3) Growth estimates were based on the latest forecasts as presented by the City's consulting engineers.

4) Terms and interest rates for new debt forecast to be issued for growth-related improvements were based on estimates used in the City's 2023 water and wastewater rate study.

5) We are interpreting Chapter 395 so that the debt allocable to growth-related projects includes both principal and interest.

6) Current debt allocable to growth-related projects was based on estimates provided by City staff.

7) The totals represent Net Present Values of the ten year cash flows utilizing a discount rate of 6.0%.

In summary, we believe that the use of the revenue credits estimated in this summary letter and detailed in Appendix A are reasonable and in accordance with Chapter 395 guidelines.

Thank you for this opportunity to serve you and the City of Schertz. Please let me know if you have any comments or questions.

Respectfully submitted,
**WILLDAN FINANCIAL SERVICES**



**Dan V. Jackson**
**Vice President**

# APPENDIX A

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
| ***Revenue Credit Summary Calculation*** | | | | | | | | | | | | |
| ***Scenario:*** | | ***2023 11 21 -- Scenario 1*** | | | | | | | | | | |
| **WATER REVENUE CREDIT CALCULATION** | | | | | | | | | | | | |
| **WATER LUEs** | | | | | | | | | | | | |
| Total LUEs | | | 30,182 | 31,054 | 31,951 | 32,875 | 33,825 | 34,802 | 35,808 | 36,843 | 37,908 | 39,003 |
| New LUEs | | | | | | | | | | | | |
| Annual | | | 848 | 872 | 897 | 923 | 950 | 978 | 1,006 | 1,035 | 1,065 | 1,096 |
| Cumulative | | | 848 | 1,720 | 2,617 | 3,541 | 4,491 | 5,468 | 6,474 | 7,509 | 8,574 | 9,669 |
| **WATER Debt Service** | | | | | | | | | | | | |
| Current | | | | | | | | | | | | |
| Principal | | | $ 1,057,500 | $ 880,000 | $ 450,000 | $ 470,000 | $ 492,500 | $ 515,000 | $ 537,500 | $ 560,000 | $ 562,500 | $ 495,000 |
| Interest | | | 382,755 | 338,481 | 306,869 | 286,019 | 265,281 | 243,956 | 221,931 | 200,019 | 178,519 | 157,806 |
| Reserve | | | - | - | - | - | - | - | - | - | - | - |
| Total | | | 1,440,255 | 1,218,481 | 756,869 | 756,019 | 757,781 | 758,956 | 759,431 | 760,019 | 741,019 | 652,806 |
| Future | | | | | | | | | | | | |
| Principal | | | - | 185,227 | 190,784 | 884,493 | 911,028 | 2,049,721 | 2,111,213 | 2,174,549 | 2,239,786 | 2,306,979 |
| Interest | | | - | 149,314 | 143,757 | 692,627 | 666,092 | 1,534,643 | 1,473,151 | 1,409,814 | 1,344,578 | 1,277,384 |
| Reserve | | | - | - | - | - | - | - | - | - | - | - |
| Total | | | - | 334,541 | 334,541 | 1,577,120 | 1,577,120 | 3,584,364 | 3,584,364 | 3,584,364 | 3,584,364 | 3,584,364 |
| Total | | | | | | | | | | | | |
| Principal | | | 1,057,500 | 1,065,227 | 640,784 | 1,354,493 | 1,403,528 | 2,564,721 | 2,648,713 | 2,734,549 | 2,802,286 | 2,801,979 |
| Interest | | | 382,755 | 487,795 | 450,625 | 978,645 | 931,373 | 1,778,599 | 1,695,082 | 1,609,833 | 1,523,097 | 1,435,190 |
| Reserve | | | - | - | - | - | - | - | - | - | - | - |
| Total | | | 1,440,255 | 1,553,022 | 1,091,409 | 2,333,139 | 2,334,901 | 4,343,320 | 4,343,795 | 4,344,382 | 4,325,382 | 4,237,170 |
| **Utility Revenue Credit Calculation** | | | | | | | | | | | | |
| Total Debt Service | | | $ 1,440,255 | $ 1,553,022 | $ 1,091,409 | $ 2,333,139 | $ 2,334,901 | $ 4,343,320 | $ 4,343,795 | $ 4,344,382 | $ 4,325,382 | $ 4,237,170 |
| Total LUEs | | | 30,182 | 31,054 | 31,951 | 32,875 | 33,825 | 34,802 | 35,808 | 36,843 | 37,908 | 39,003 |
| Debt Service Per LUE | | | | | | | | | | | | |
| Annual | | | $ 47.72 | $ 50.01 | $ 34.16 | $ 70.97 | $ 69.03 | $ 124.80 | $ 121.31 | $ 117.92 | $ 114.10 | $ 108.64 |
| Monthly | | | $ 3.98 | $ 4.17 | $ 2.85 | $ 5.91 | $ 5.75 | $ 10.40 | $ 10.11 | $ 9.83 | $ 9.51 | $ 9.05 |
| New LUEs -- Cumulative | | | 848 | 1,720 | 2,617 | 3,541 | 4,491 | 5,468 | 6,474 | 7,509 | 8,574 | 9,669 |
| **Water Revenue Credit** | | | | | | | | | | | | |
| Current Dollars | | **$ 4,108,768** | $ 40,454 | $ 86,018 | $ 89,408 | $ 251,296 | $ 310,005 | $ 682,462 | $ 785,375 | $ 885,445 | $ 978,303 | $ 1,050,448 |
| Net Present Value | 6.0% | **$ 3,365,530** | | | | | | | | | | |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
| ***Revenue Credit Summary Calculation*** | | | | | | | | | | |
| ***Scenario:*** ***2023 11 21 -- Scenario 1*** | | | | | | | | | | |
| **WASTEWATER REVENUE CREDIT CALCULATION** | | | | | | | | | | |
| **WASTEWATER LUEs** | | | | | | | | | | |
| Total LUEs | 32,744 | 33,631 | 34,543 | 35,479 | 36,440 | 37,428 | 38,442 | 39,484 | 40,554 | 41,653 |
| New LUEs | | | | | | | | | | |
| Annual | 864 | 887 | 911 | 936 | 961 | 988 | 1,014 | 1,042 | 1,070 | 1,099 |
| Cumulative | 864 | 1,751 | 2,663 | 3,599 | 4,560 | 5,548 | 6,562 | 7,604 | 8,674 | 9,773 |
| **WASTEWATER Debt Service** | | | | | | | | | | |
| Current | | | | | | | | | | |
| Principal | $ 642,500 | $ 680,000 | $ 710,000 | $ 745,000 | $ 782,500 | $ 815,000 | $ 847,500 | $ 880,000 | $ 892,500 | $ 835,000 |
| Interest | 508,655 | 477,156 | 444,043 | 409,818 | 374,955 | 340,380 | 307,705 | 276,343 | 244,887 | 213,493 |
| Reserve | - | - | - | - | - | - | - | - | - | - |
| Total | 1,151,155 | 1,157,156 | 1,154,043 | 1,154,818 | 1,157,455 | 1,155,380 | 1,155,205 | 1,156,343 | 1,137,387 | 1,048,493 |
| Future | | | | | | | | | | |
| Principal | - | 846,752 | 872,155 | 1,771,533 | 1,824,679 | 2,726,171 | 2,807,956 | 2,892,195 | 2,978,961 | 3,068,330 |
| Interest | - | 682,576 | 657,174 | 1,334,916 | 1,281,770 | 1,909,606 | 1,827,821 | 1,743,582 | 1,656,817 | 1,567,448 |
| Reserve | - | - | - | - | - | - | - | - | - | - |
| Total | - | 1,529,329 | 1,529,329 | 3,106,449 | 3,106,449 | 4,635,777 | 4,635,777 | 4,635,777 | 4,635,777 | 4,635,777 |
| Total | | | | | | | | | | |
| Principal | 642,500 | 1,526,752 | 1,582,155 | 2,516,533 | 2,607,179 | 3,541,171 | 3,655,456 | 3,772,195 | 3,871,461 | 3,903,330 |
| Interest | 508,655 | 1,159,732 | 1,101,216 | 1,744,734 | 1,656,725 | 2,249,986 | 2,135,526 | 2,019,925 | 1,901,703 | 1,780,941 |
| Reserve | - | - | - | - | - | - | - | - | - | - |
| Total | 1,151,155 | 2,686,485 | 2,683,371 | 4,261,266 | 4,263,904 | 5,791,157 | 5,790,982 | 5,792,120 | 5,773,164 | 5,684,270 |
| **Utility Revenue Credit Calculation** | | | | | | | | | | |
| Total Debt Service | $ 1,151,155 | $ 2,686,485 | $ 2,683,371 | $ 4,261,266 | $ 4,263,904 | $ 5,791,157 | $ 5,790,982 | $ 5,792,120 | $ 5,773,164 | $ 5,684,270 |
| Total LUEs | 32,744 | 33,631 | 34,543 | 35,479 | 36,440 | 37,428 | 38,442 | 39,484 | 40,554 | 41,653 |
| Debt Service Per LUE | | | | | | | | | | |
| Annual | $ 35.16 | $ 79.88 | $ 77.68 | $ 120.11 | $ 117.01 | $ 154.73 | $ 150.64 | $ 146.70 | $ 142.36 | $ 136.47 |
| Monthly | $ 2.93 | $ 6.66 | $ 6.47 | $ 10.01 | $ 9.75 | $ 12.89 | $ 12.55 | $ 12.22 | $ 11.86 | $ 11.37 |
| New LUEs -- Cumulative | 864 | 1,751 | 2,663 | 3,599 | 4,560 | 5,548 | 6,562 | 7,604 | 8,674 | 9,773 |
| **Wastewater Revenue Credit** | | | | | | | | | | |
| Current Dollars | **$ 5,540,163** | $ 30,373 | $ 139,895 | $ 206,847 | $ 432,245 | $ 533,604 | $ 858,409 | $ 988,529 | $ 1,115,461 | $ 1,234,800 | $ 1,333,688 |
| Net Present Value 6.0% | **$ 4,611,802** | | | | | | | | | |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Current | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
| ***LUE and Account Totals*** | | | | | | | | | | | |
| ***Scenario:*** ***2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **WATER LUES** | | | | | | | | | | | |
| Forecast Annual Growth Rate | | 2.9% | 2.9% | 2.9% | 2.9% | 2.9% | 2.9% | 2.9% | 2.9% | 2.9% | 2.9% |
| Total LUEs | 29,334 | 30,182 | 31,054 | 31,951 | 32,875 | 33,825 | 34,802 | 35,808 | 36,843 | 37,908 | 39,003 |
| **Annual New LUEs** | | | | | | | | | | | |
| New LUEs | | 848 | 872 | 897 | 923 | 950 | 978 | 1,006 | 1,035 | 1,065 | 1,096 |
| Cumulative | | 848 | 1,720 | 2,617 | 3,541 | 4,491 | 5,468 | 6,474 | 7,509 | 8,574 | 9,669 |
| Monthly Bills | 352,008 | 362,181 | 372,648 | 383,418 | 394,498 | 405,899 | 417,630 | 429,699 | 442,118 | 454,895 | 468,041 |
| **WASTEWATER LUES** | | | | | | | | | | | |
| Forecast Annual Growth Rate | | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% |
| Total LUEs | 31,880 | 32,744 | 33,631 | 34,543 | 35,479 | 36,440 | 37,428 | 38,442 | 39,484 | 40,554 | 41,653 |
| **Annual New LUEs** | | | | | | | | | | | |
| New LUEs | | 864 | 887 | 911 | 936 | 961 | 988 | 1,014 | 1,042 | 1,070 | 1,099 |
| Cumulative | | 864 | 1,751 | 2,663 | 3,599 | 4,560 | 5,548 | 6,562 | 7,604 | 8,674 | 9,773 |
| Monthly Bills | 382,561 | 392,929 | 403,577 | 414,514 | 425,747 | 437,285 | 449,136 | 461,307 | 473,809 | 486,649 | 499,837 |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Current Debt Service*** | | | | | | | | | | | |
| ***Scenario:*** | ***2023 11 21 -- Scenario 1*** | | | | | | | | | | |
| **1 Series: 2013 GO Refunding Bonds** | | | | | | | | | | | |
| 1A Total Bond | $ 2,160,000 | | | | | | | | | | |
| Principal | $ 215,000 | $ 215,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Interest | | 2,774 | - | - | - | - | - | - | - | - | - |
| Reserve | | - | - | - | - | - | - | - | - | - | - |
| Total | | $ 217,774 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 1B Percent Water/WW | | | | | | | | | | | |
| Water | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Wastewater | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 1C Water Debt Service | | | | | | | | | | | |
| Principal | | $ 215,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Interest | | 2,774 | - | - | - | - | - | - | - | - | - |
| Reserve | | - | - | - | - | - | - | - | - | - | - |
| Total | | $ 217,774 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 1D Water Percent Growth and Replacement | | | | | | | | | | | |
| Growth | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Replacement | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 1E Water Growth-Related Debt Service | | | | | | | | | | | |
| Principal | | $ 215,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Interest | | 2,774 | - | - | - | - | - | - | - | - | - |
| Reserve | | - | - | - | - | - | - | - | - | - | - |
| Total | | 217,774 | - | - | - | - | - | - | - | - | - |
| 1F Wastewater Debt Service | | | | | | | | | | | |
| Principal | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Interest | | - | - | - | - | - | - | - | - | - | - |
| Reserve | | - | - | - | - | - | - | - | - | - | - |
| Total | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 1G Wastewater Percent Growth and Replacement | | | | | | | | | | | |
| Growth | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Replacement | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 1H Wastewater Growth-Related Debt Service | | | | | | | | | | | |
| Principal | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Interest | | - | - | - | - | - | - | - | - | - | - |
| Reserve | | - | - | - | - | - | - | - | - | - | - |
| Total | | - | - | - | - | - | - | - | - | - | - |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Current Debt Service*** | | | | | | | | | | | | |
| ***Scenario:*** | | ***2023 11 21 -- Scenario 1*** | | | | | | | | | | |
| **2** | **Series:** | **2018 CO's** | | | | | | | | | | |
| 2A | Total Bond | $ 10,440,000 | | | | | | | | | | |
| | Principal | $ 2,910,000 | $ 235,000 | $ 250,000 | $ 260,000 | $ 275,000 | $ 290,000 | $ 300,000 | $ 310,000 | $ 320,000 | $ 330,000 | $ 340,000 |
| | Interest | | 162,049 | 149,925 | 137,174 | 123,799 | 109,674 | 96,424 | 85,774 | 76,324 | 66,368 | 55,687 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 397,049 | $ 399,925 | $ 397,174 | $ 398,799 | $ 399,674 | $ 396,424 | $ 395,774 | $ 396,324 | $ 396,368 | $ 395,687 |
| 2B | Percent Water/WW | | | | | | | | | | | |
| | Water | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Wastewater | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 2C | Water Debt Service | | | | | | | | | | | |
| | Principal | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | Interest | | - | - | - | - | - | - | - | - | - | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 2D | Water Allocation Percentages | | | | | | | | | | | |
| | Growth | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Replacement | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 2E | Water Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | Interest | | - | - | - | - | - | - | - | - | - | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | - | - | - | - | - | - | - | - | - | - |
| 2F | Wastewater Debt Service | | | | | | | | | | | |
| | Principal | | $ 235,000 | $ 250,000 | $ 260,000 | $ 275,000 | $ 290,000 | $ 300,000 | $ 310,000 | $ 320,000 | $ 330,000 | $ 340,000 |
| | Interest | | 162,049 | 149,925 | 137,174 | 123,799 | 109,674 | 96,424 | 85,774 | 76,324 | 66,368 | 55,687 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 397,049 | $ 399,925 | $ 397,174 | $ 398,799 | $ 399,674 | $ 396,424 | $ 395,774 | $ 396,324 | $ 396,368 | $ 395,687 |
| 2G | Wastewater Allocation Percentages | | | | | | | | | | | |
| | Growth | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Replacement | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 2H | Wastewater Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | Interest | | - | - | - | - | - | - | - | - | - | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | - | - | - | - | - | - | - | - | - | - |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Current Debt Service*** | | | | | | | | | | | | |
| ***Scenario:*** | | ***2023 11 21 -- Scenario 1*** | | | | | | | | | | |
| **3** | **Series:** | **2018 GO and Refunding Bonds** | | | | | | | | | | |
| 3A | Total Bond | $ 8,570,000 | | | | | | | | | | |
| | Principal | $ 885,000 | $ 435,000 | $ 450,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | Interest | | 33,375 | 11,250 | - | - | - | - | - | - | - | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 468,375 | $ 461,250 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 3B | Percent Water/WW | | | | | | | | | | | |
| | Water | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | Wastewater | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 3C | Water Debt Service | | | | | | | | | | | |
| | Principal | | $ 435,000 | $ 450,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | Interest | | 33,375 | 11,250 | - | - | - | - | - | - | - | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 468,375 | $ 461,250 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 3D | Water Allocation Percentages | | | | | | | | | | | |
| | Growth | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | Replacement | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 3E | Water Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ 435,000 | $ 450,000 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | Interest | | 33,375 | 11,250 | - | - | - | - | - | - | - | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | 468,375 | 461,250 | - | - | - | - | - | - | - | - |
| 3F | Wastewater Debt Service | | | | | | | | | | | |
| | Principal | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | Interest | | - | - | - | - | - | - | - | - | - | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 3G | Wastewater Allocation Percentages | | | | | | | | | | | |
| | Growth | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | Replacement | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 3H | Wastewater Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | Interest | | - | - | - | - | - | - | - | - | - | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | - | - | - | - | - | - | - | - | - | - |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Current Debt Service*** | | | | | | | | | | | | |
| ***Scenario:*** | | ***2023 11 21 -- Scenario 1*** | | | | | | | | | | |
| **4** | **Series:** | **2019 CO's** | | | | | | | | | | |
| 4A | Total Bond | $ 7,495,000 | | | | | | | | | | |
| | Principal | $ 1,730,000 | $ 145,000 | $ 155,000 | $ 160,000 | $ 165,000 | $ 170,000 | $ 175,000 | $ 180,000 | $ 185,000 | $ 195,000 | $ 200,000 |
| | Interest | | 87,100 | 81,100 | 74,800 | 68,300 | 62,875 | 58,125 | 52,800 | 47,325 | 41,625 | 35,700 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 232,100 | $ 236,100 | $ 234,800 | $ 233,300 | $ 232,875 | $ 233,125 | $ 232,800 | $ 232,325 | $ 236,625 | $ 235,700 |
| 4B | Percent Water/WW | | | | | | | | | | | |
| | Water | | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | Wastewater | | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 4C | Water Debt Service | | | | | | | | | | | |
| | Principal | | $ 72,500 | $ 77,500 | $ 80,000 | $ 82,500 | $ 85,000 | $ 87,500 | $ 90,000 | $ 92,500 | $ 97,500 | $ 100,000 |
| | Interest | | 43,550 | 40,550 | 37,400 | 34,150 | 31,438 | 29,063 | 26,400 | 23,663 | 20,813 | 17,850 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 116,050 | $ 118,050 | $ 117,400 | $ 116,650 | $ 116,438 | $ 116,563 | $ 116,400 | $ 116,163 | $ 118,313 | $ 117,850 |
| 4D | Water Allocation Percentages | | | | | | | | | | | |
| | Growth | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | Replacement | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 4E | Water Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ 72,500 | $ 77,500 | $ 80,000 | $ 82,500 | $ 85,000 | $ 87,500 | $ 90,000 | $ 92,500 | $ 97,500 | $ 100,000 |
| | Interest | | 43,550 | 40,550 | 37,400 | 34,150 | 31,438 | 29,063 | 26,400 | 23,663 | 20,813 | 17,850 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | 116,050 | 118,050 | 117,400 | 116,650 | 116,438 | 116,563 | 116,400 | 116,163 | 118,313 | 117,850 |
| 4F | Wastewater Debt Service | | | | | | | | | | | |
| | Principal | | $ 72,500 | $ 77,500 | $ 80,000 | $ 82,500 | $ 85,000 | $ 87,500 | $ 90,000 | $ 92,500 | $ 97,500 | $ 100,000 |
| | Interest | | 43,550 | 40,550 | 37,400 | 34,150 | 31,438 | 29,063 | 26,400 | 23,663 | 20,813 | 17,850 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 116,050 | $ 118,050 | $ 117,400 | $ 116,650 | $ 116,438 | $ 116,563 | $ 116,400 | $ 116,163 | $ 118,313 | $ 117,850 |
| 4G | Wastewater Allocation Percentages | | | | | | | | | | | |
| | Growth | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | Replacement | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 4H | Wastewater Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ 72,500 | $ 77,500 | $ 80,000 | $ 82,500 | $ 85,000 | $ 87,500 | $ 90,000 | $ 92,500 | $ 97,500 | $ 100,000 |
| | Interest | | 43,550 | 40,550 | 37,400 | 34,150 | 31,438 | 29,063 | 26,400 | 23,663 | 20,813 | 17,850 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | 116,050 | 118,050 | 117,400 | 116,650 | 116,438 | 116,563 | 116,400 | 116,163 | 118,313 | 117,850 |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Current Debt Service*** | | | | | | | | | | | | |
| ***Scenario:*** | | ***2023 11 21 -- Scenario 1*** | | | | | | | | | | |
| **5** | **Series:** | **2021 GO Refunding Bonds** | | | | | | | | | | |
| 5A | Total Bond | $ 6,015,000 | | | | | | | | | | |
| | Principal | $ 1,650,000 | $ 160,000 | $ 165,000 | $ 175,000 | $ 180,000 | $ 190,000 | $ 195,000 | $ 205,000 | $ 210,000 | $ 170,000 | $ - |
| | Interest | | 45,450 | 38,950 | 32,150 | 25,950 | 20,400 | 14,625 | 9,650 | 5,500 | 1,700 | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 205,450 | $ 203,950 | $ 207,150 | $ 205,950 | $ 210,400 | $ 209,625 | $ 214,650 | $ 215,500 | $ 171,700 | $ - |
| 5B | Percent Water/WW | | | | | | | | | | | |
| | Water | | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | Wastewater | | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 5C | Water Debt Service | | | | | | | | | | | |
| | Principal | | $ 80,000 | $ 82,500 | $ 87,500 | $ 90,000 | $ 95,000 | $ 97,500 | $ 102,500 | $ 105,000 | $ 85,000 | $ - |
| | Interest | | 22,725 | 19,475 | 16,075 | 12,975 | 10,200 | 7,313 | 4,825 | 2,750 | 850 | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 102,725 | $ 101,975 | $ 103,575 | $ 102,975 | $ 105,200 | $ 104,813 | $ 107,325 | $ 107,750 | $ 85,850 | $ - |
| 5D | Water Allocation Percentages | | | | | | | | | | | |
| | Growth | | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% |
| | Replacement | | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 5E | Water Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ 26,400 | $ 27,225 | $ 28,875 | $ 29,700 | $ 31,350 | $ 32,175 | $ 33,825 | $ 34,650 | $ 28,050 | $ - |
| | Interest | | 7,499 | 6,427 | 5,305 | 4,282 | 3,366 | 2,413 | 1,592 | 908 | 281 | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | 33,899 | 33,652 | 34,180 | 33,982 | 34,716 | 34,588 | 35,417 | 35,558 | 28,331 | - |
| 5F | Wastewater Debt Service | | | | | | | | | | | |
| | Principal | | $ 80,000 | $ 82,500 | $ 87,500 | $ 90,000 | $ 95,000 | $ 97,500 | $ 102,500 | $ 105,000 | $ 85,000 | $ - |
| | Interest | | 22,725 | 19,475 | 16,075 | 12,975 | 10,200 | 7,313 | 4,825 | 2,750 | 850 | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 102,725 | $ 101,975 | $ 103,575 | $ 102,975 | $ 105,200 | $ 104,813 | $ 107,325 | $ 107,750 | $ 85,850 | $ - |
| 5G | Wastewater Allocation Percentages | | | | | | | | | | | |
| | Growth | | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% | 33.0% |
| | Replacement | | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% | 67.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 5H | Wastewater Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ 26,400 | $ 27,225 | $ 28,875 | $ 29,700 | $ 31,350 | $ 32,175 | $ 33,825 | $ 34,650 | $ 28,050 | $ - |
| | Interest | | 7,499 | 6,427 | 5,305 | 4,282 | 3,366 | 2,413 | 1,592 | 908 | 281 | - |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | 33,899 | 33,652 | 34,180 | 33,982 | 34,716 | 34,588 | 35,417 | 35,558 | 28,331 | - |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Current Debt Service*** | | | | | | | | | | | | |
| ***Scenario:*** | | ***2023 11 21 -- Scenario 1*** | | | | | | | | | | |
| **6** | **Series:** | **2022 CO's** | | | | | | | | | | |
| 6A | Total Bond | $ 9,390,000 | | | | | | | | | | |
| | Principal | $ 2,095,000 | $ 165,000 | $ 175,000 | $ 185,000 | $ 195,000 | $ 205,000 | $ 215,000 | $ 225,000 | $ 235,000 | $ 245,000 | $ 250,000 |
| | Interest | | 141,837 | 133,337 | 124,337 | 114,837 | 104,837 | 94,337 | 83,337 | 73,012 | 64,637 | 57,212 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 306,837 | $ 308,337 | $ 309,337 | $ 309,837 | $ 309,837 | $ 309,337 | $ 308,337 | $ 308,012 | $ 309,637 | $ 307,212 |
| 6B | Percent Water/WW | | | | | | | | | | | |
| | Water | | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | Wastewater | | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 6C | Water Debt Service | | | | | | | | | | | |
| | Principal | | $ 82,500 | $ 87,500 | $ 92,500 | $ 97,500 | $ 102,500 | $ 107,500 | $ 112,500 | $ 117,500 | $ 122,500 | $ 125,000 |
| | Interest | | 70,919 | 66,669 | 62,169 | 57,419 | 52,419 | 47,169 | 41,669 | 36,506 | 32,319 | 28,606 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 153,419 | $ 154,169 | $ 154,669 | $ 154,919 | $ 154,919 | $ 154,669 | $ 154,169 | $ 154,006 | $ 154,819 | $ 153,606 |
| 6D | Water Allocation Percentages | | | | | | | | | | | |
| | Growth | | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% |
| | Replacement | | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 6E | Water Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ 35,144 | $ 37,274 | $ 39,404 | $ 41,534 | $ 43,663 | $ 45,793 | $ 47,923 | $ 50,053 | $ 52,183 | $ 53,248 |
| | Interest | | 30,210 | 28,400 | 26,483 | 24,459 | 22,329 | 20,093 | 17,750 | 15,551 | 13,767 | 12,186 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | 65,354 | 65,673 | 65,886 | 65,993 | 65,993 | 65,886 | 65,673 | 65,604 | 65,950 | 65,434 |
| 6F | Wastewater Debt Service | | | | | | | | | | | |
| | Principal | | $ 82,500 | $ 87,500 | $ 92,500 | $ 97,500 | $ 102,500 | $ 107,500 | $ 112,500 | $ 117,500 | $ 122,500 | $ 125,000 |
| | Interest | | 70,919 | 66,669 | 62,169 | 57,419 | 52,419 | 47,169 | 41,669 | 36,506 | 32,319 | 28,606 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 153,419 | $ 154,169 | $ 154,669 | $ 154,919 | $ 154,919 | $ 154,669 | $ 154,169 | $ 154,006 | $ 154,819 | $ 153,606 |
| 6G | Wastewater Allocation Percentages | | | | | | | | | | | |
| | Growth | | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% | 42.6% |
| | Replacement | | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% | 57.4% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 6H | Wastewater Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ 35,144 | $ 37,274 | $ 39,404 | $ 41,534 | $ 43,663 | $ 45,793 | $ 47,923 | $ 50,053 | $ 52,183 | $ 53,248 |
| | Interest | | 30,210 | 28,400 | 26,483 | 24,459 | 22,329 | 20,093 | 17,750 | 15,551 | 13,767 | 12,186 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | 65,354 | 65,673 | 65,886 | 65,993 | 65,993 | 65,886 | 65,673 | 65,604 | 65,950 | 65,434 |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Current Debt Service*** | | | | | | | | | | | | |
| ***Scenario:*** | | ***2023 11 21 -- Scenario 1*** | | | | | | | | | | |
| **7** | **Series:** | **2022A CO's** | | | | | | | | | | |
| 7A | Total Bond | $ 18,530,000 | | | | | | | | | | |
| | Principal | $ 4,365,000 | $ 345,000 | $ 365,000 | $ 380,000 | $ 400,000 | $ 420,000 | $ 445,000 | $ 465,000 | $ 490,000 | $ 515,000 | $ 540,000 |
| | Interest | | 418,825 | 401,075 | 382,450 | 362,950 | 342,450 | 320,825 | 298,075 | 274,200 | 249,075 | 222,700 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 763,825 | $ 766,075 | $ 762,450 | $ 762,950 | $ 762,450 | $ 765,825 | $ 763,075 | $ 764,200 | $ 764,075 | $ 762,700 |
| 7B | Percent Water/WW | | | | | | | | | | | |
| | Water | | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | Wastewater | | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 7C | Water Debt Service | | | | | | | | | | | |
| | Principal | | $ 172,500 | $ 182,500 | $ 190,000 | $ 200,000 | $ 210,000 | $ 222,500 | $ 232,500 | $ 245,000 | $ 257,500 | $ 270,000 |
| | Interest | | 209,413 | 200,538 | 191,225 | 181,475 | 171,225 | 160,413 | 149,038 | 137,100 | 124,538 | 111,350 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 381,913 | $ 383,038 | $ 381,225 | $ 381,475 | $ 381,225 | $ 382,913 | $ 381,538 | $ 382,100 | $ 382,038 | $ 381,350 |
| 7D | Water Allocation Percentages | | | | | | | | | | | |
| | Growth | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | Replacement | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 6E | Water Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ 172,500 | $ 182,500 | $ 190,000 | $ 200,000 | $ 210,000 | $ 222,500 | $ 232,500 | $ 245,000 | $ 257,500 | $ 270,000 |
| | Interest | | 209,413 | 200,538 | 191,225 | 181,475 | 171,225 | 160,413 | 149,038 | 137,100 | 124,538 | 111,350 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | 381,913 | 383,038 | 381,225 | 381,475 | 381,225 | 382,913 | 381,538 | 382,100 | 382,038 | 381,350 |
| 7E | Wastewater Debt Service | | | | | | | | | | | |
| | Principal | | $ 172,500 | $ 182,500 | $ 190,000 | $ 200,000 | $ 210,000 | $ 222,500 | $ 232,500 | $ 245,000 | $ 257,500 | $ 270,000 |
| | Interest | | 209,413 | 200,538 | 191,225 | 181,475 | 171,225 | 160,413 | 149,038 | 137,100 | 124,538 | 111,350 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | $ 381,913 | $ 383,038 | $ 381,225 | $ 381,475 | $ 381,225 | $ 382,913 | $ 381,538 | $ 382,100 | $ 382,038 | $ 381,350 |
| 7F | Wastewater Allocation Percentages | | | | | | | | | | | |
| | Growth | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | Replacement | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Total | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| 6H | Wastewater Growth-Related Debt Service | | | | | | | | | | | |
| | Principal | | $ 172,500 | $ 182,500 | $ 190,000 | $ 200,000 | $ 210,000 | $ 222,500 | $ 232,500 | $ 245,000 | $ 257,500 | $ 270,000 |
| | Interest | | 209,413 | 200,538 | 191,225 | 181,475 | 171,225 | 160,413 | 149,038 | 137,100 | 124,538 | 111,350 |
| | Reserve | | - | - | - | - | - | - | - | - | - | - |
| | Total | | 381,913 | 383,038 | 381,225 | 381,475 | 381,225 | 382,913 | 381,538 | 382,100 | 382,038 | 381,350 |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Current Debt Service*** | | | | | | | | | | | |
| ***Scenario:*** | ***2023 11 21 -- Scenario 1*** | | | | | | | | | | |
| **11 Series:** | **Total Current Debt Service** | | | | | | | | | | |
| **11A** | **Total Current Debt Service** | | | | | | | | | | |
| | Principal | $ 1,700,000 | $ 1,560,000 | $ 1,160,000 | $ 1,215,000 | $ 1,275,000 | $ 1,330,000 | $ 1,385,000 | $ 1,440,000 | $ 1,455,000 | $ 1,330,000 |
| | Interest | 891,410 | 815,637 | 750,911 | 695,836 | 640,236 | 584,336 | 529,636 | 476,361 | 423,405 | 371,299 |
| | Reserve | - | - | - | - | - | - | - | - | - | - |
| | Total | $ 2,591,410 | $ 2,375,637 | $ 1,910,911 | $ 1,910,836 | $ 1,915,236 | $ 1,914,336 | $ 1,914,636 | $ 1,916,361 | $ 1,878,405 | $ 1,701,299 |
| | **Water Total Debt Service** | | | | | | | | | | |
| | Principal | $ 1,057,500 | $ 880,000 | $ 450,000 | $ 470,000 | $ 492,500 | $ 515,000 | $ 537,500 | $ 560,000 | $ 562,500 | $ 495,000 |
| | Interest | 382,755 | 338,481 | 306,869 | 286,019 | 265,281 | 243,956 | 221,931 | 200,019 | 178,519 | 157,806 |
| | Reserve | - | - | - | - | - | - | - | - | - | - |
| | Total | $ 1,440,255 | $ 1,218,481 | $ 756,869 | $ 756,019 | $ 757,781 | $ 758,956 | $ 759,431 | $ 760,019 | $ 741,019 | $ 652,806 |
| | **Water Growth-Related Debt Service** | | | | | | | | | | |
| | Principal | $ 956,544 | $ 774,499 | $ 338,279 | $ 353,734 | $ 370,013 | $ 387,968 | $ 404,248 | $ 422,203 | $ 435,233 | $ 423,248 |
| | Interest | 326,821 | 287,164 | 260,413 | 244,366 | 228,358 | 211,981 | 194,780 | 177,221 | 159,398 | 141,386 |
| | Reserve | - | - | - | - | - | - | - | - | - | - |
| | Total | $ 1,283,365 | $ 1,061,663 | $ 598,691 | $ 598,100 | $ 598,371 | $ 599,950 | $ 599,028 | $ 599,424 | $ 594,631 | $ 564,634 |
| | **Wastewater Total Debt Service** | | | | | | | | | | |
| | Principal | $ 642,500 | $ 680,000 | $ 710,000 | $ 745,000 | $ 782,500 | $ 815,000 | $ 847,500 | $ 880,000 | $ 892,500 | $ 835,000 |
| | Interest | 508,655 | 477,156 | 444,043 | 409,818 | 374,955 | 340,380 | 307,705 | 276,343 | 244,887 | 213,493 |
| | Reserve | - | - | - | - | - | - | - | - | - | - |
| | Total | $ 1,151,155 | $ 1,157,156 | $ 1,154,043 | $ 1,154,818 | $ 1,157,455 | $ 1,155,380 | $ 1,155,205 | $ 1,156,343 | $ 1,137,387 | $ 1,048,493 |
| | **Wastewater Growth-Related Debt Service** | | | | | | | | | | |
| | Principal | $ 306,544 | $ 324,499 | $ 338,279 | $ 353,734 | $ 370,013 | $ 387,968 | $ 404,248 | $ 422,203 | $ 435,233 | $ 423,248 |
| | Interest | 290,672 | 275,914 | 260,413 | 244,366 | 228,358 | 211,981 | 194,780 | 177,221 | 159,398 | 141,386 |
| | Reserve | - | - | - | - | - | - | - | - | - | - |
| | Total | $ 597,216 | $ 600,413 | $ 598,691 | $ 598,100 | $ 598,371 | $ 599,950 | $ 599,028 | $ 599,424 | $ 594,631 | $ 564,634 |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

***Input Area -- UNFUNDED Capital Improvement Plan***
***Scenario: 2023 11 21 -- Scenario 1***

WATER CIP

| | | Percent Growth | Percent Replacement | Total CIP/ Project | Total Growth | Total Replacement | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NT-W1 | Bubbling Springs 6" WL Replacement | 27.0% | 73.0% | $ 763,000 | $ 206,010 | $ 556,990 | $ 254,333 | $ 254,333 | $ 254,333 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| NT-W2 | Corbett Pump Station and 3.0 MGD GST | 0.0% | 100.0% | 8,600,000 | - | 8,600,000 | 2,866,667 | 2,866,667 | 2,866,667 | - | - | - | - | - | - | - |
| NT-W3 | Ware - Seguin and Pump Station Operation Ir | 0.0% | 100.0% | 175,000 | - | 175,000 | 58,333 | 58,333 | 58,333 | - | - | - | - | - | - | - |
| NT-W4 | 12" WL from Ware Seguin to Lower Seguin | 0.0% | 100.0% | 1,538,000 | - | 1,538,000 | 512,667 | 512,667 | 512,667 | - | - | - | - | - | - | - |
| NT-W5 | Fred Couples to Schwab | 0.0% | 100.0% | 455,556 | - | 455,556 | 151,852 | 151,852 | 151,852 | - | - | - | - | - | - | - |
| NT-W6 | Schwab to Eckhardt | 0.0% | 100.0% | 1,600,000 | - | 1,600,000 | 533,333 | 533,333 | 533,333 | - | - | - | - | - | - | - |
| NT-W7 | Graytown to Pfeil | 69.0% | 31.0% | 1,550,000 | 1,069,500 | 480,500 | 516,667 | 516,667 | 516,667 | - | - | - | - | - | - | - |
| NT-W8 | FM 78 Water Line Replacement | 22.0% | 78.0% | 875,000 | 192,500 | 682,500 | 291,667 | 291,667 | 291,667 | - | - | - | - | - | - | - |
| NT-W9 | Moonlight Meadow Dr & Lost Meadow WL Re | 0.0% | 100.0% | 3,000,000 | - | 3,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | - | - | - | - | - | - | - |
| NT-W10 | Robinhood Way WL Replacement | 0.0% | 100.0% | 4,650,000 | - | 4,650,000 | 1,550,000 | 1,550,000 | 1,550,000 | - | - | - | - | - | - | - |
| 2030-W1 | 12" WL from Tri-County Extension | 100.0% | 0.0% | 4,788,000 | 4,788,000 | - | - | - | - | 1,596,000 | 1,596,000 | 1,596,000 | - | - | - | - |
| 2030-W2 | Raf Burnette Rd 12" WL Imp | 89.0% | 11.0% | 1,438,000 | 1,279,820 | 158,180 | - | - | - | 479,333 | 479,333 | 479,333 | - | - | - | - |
| 2030-W3 | 8" WL from Ray Corbett DL to Lower Seguin | 97.0% | 3.0% | 3,688,000 | 3,577,360 | 110,640 | - | - | - | 1,229,333 | 1,229,333 | 1,229,333 | - | - | - | - |
| 2030-W4 | Trainer Hale Rd 2" WL Replace & Imp | 93.0% | 7.0% | 9,850,000 | 9,160,500 | 689,500 | - | - | - | 3,283,333 | 3,283,333 | 3,283,333 | - | - | - | - |
| 2030-W5 | Boenig Dr 6" WL Replace & Imp | 69.0% | 31.0% | 6,388,000 | 4,407,720 | 1,980,280 | - | - | - | 2,129,333 | 2,129,333 | 2,129,333 | - | - | - | - |
| 2030-W6 | Live Oak to IH-35 24" Trans Main | 100.0% | 0.0% | 32,075,000 | 32,075,000 | - | - | - | - | 10,691,667 | 10,691,667 | 10,691,667 | - | - | - | - |
| 2030-W7 | Ware Seguin Pump Station Expansion I | 33.0% | 67.0% | 5,213,000 | 1,720,290 | 3,492,710 | - | - | - | 1,737,667 | 1,737,667 | 1,737,667 | - | - | - | - |
| 2030-W8 | IH-10 8" WL Imp | 100.0% | 0.0% | 6,063,000 | 6,063,000 | - | - | - | - | 2,021,000 | 2,021,000 | 2,021,000 | - | - | - | - |
| 2030-W9 | PRV Installation for SW Pressure Plane | 0.0% | 100.0% | 413,000 | - | 413,000 | - | - | - | 137,667 | 137,667 | 137,667 | - | - | - | - |
| 2030-W10 | River Rd WL Replace | 58.0% | 42.0% | 2,325,000 | 1,348,500 | 976,500 | - | - | - | 775,000 | 775,000 | 775,000 | - | - | - | - |
| 2030-W11 | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2030-W12 | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2030-W13 | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2030-W14 | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2030-W15 | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2030-W16 | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 100.0% | 0.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | **Total Unfunded Water CIP** | | | **95,447,556** | **65,888,200** | **29,559,356** | **7,735,519** | **7,735,519** | **7,735,519** | **24,080,333** | **24,080,333** | **24,080,333** | **-** | **-** | **-** | **-** |
| | | | | | **69.0%** | **31.0%** | | | | | | | | | | |
| | | | | 95,447,556 | 68,347,605 | | | | | | | | | | | |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Percent Growth | Percent Replacement | Total CIP/ Project | Total Growth | Total Replacement | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- UNFUNDED Capital Improvement Plan*** | | | | | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | | | | | |
| **Water and Sewer Fund 202 -- Financing** | | | | | | | | | | | | | | | |
| Beginning Balance | | | | | | $ 3,320,378 | $ 5,171,777 | $ 150,601 | $ 21,052,750 | $ 313,247 | $ 21,029,856 | $ 448,524 | $ 3,412,973 | $ 6,551,639 | $ 9,872,214 |
| Plus Interest | | | | | | 99,611 | 155,153 | 4,518 | 631,582 | 9,397 | 630,896 | 13,456 | 102,389 | 196,549 | 296,166 |
| Impact Fee Revenue | | | | | | | | | | | | | | | |
| Estimated Impact Fee | | | | | | $ 2,934 | $ 2,934 | $ 2,934 | $ 2,934 | $ 2,934 | $ 2,934 | $ 2,934 | $ 2,934 | $ 2,934 | $ 2,934 |
| Annual LUEs | | | | | | 848 | 872 | 897 | 923 | 950 | 978 | 1,006 | 1,035 | 1,065 | 1,096 |
| Total Impact Fees | | | | | | 2,487,306 | 2,559,189 | 2,633,150 | 2,709,248 | 2,787,545 | 2,868,105 | 2,950,993 | 3,036,277 | 3,124,026 | 3,214,310 |
| Plus Contributions from Developers | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus ARP | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Contributions from Water Impact Fees | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Contributions from Sewer Impact Fees | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Conributions from Water Reserves | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Conributions from Sewer Reserves | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Amount Funded by W/WW Rate Revenue | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Funded from EDC | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Funded from TxDOT | | | | | | - | - | - | - | - | - | - | - | - | - |
| Sub-Total | | | | | | 5,907,295 | 7,886,119 | 2,788,269 | 24,393,580 | 3,110,190 | 24,528,857 | 3,412,973 | 6,551,639 | 9,872,214 | 13,382,690 |
| Plus Amount Funded by Long-Term Debt | | | | | | 7,000,000 | - | 26,000,000 | - | 42,000,000 | - | - | - | - | - |
| Total Funds Available | | | | | | 12,907,295 | 7,886,119 | 28,788,269 | 24,393,580 | 45,110,190 | 24,528,857 | 3,412,973 | 6,551,639 | 9,872,214 | 13,382,690 |
| Less Capital Improvement Plan | | | **95,447,556** | **65,888,200** | **29,559,356** | **7,735,519** | **7,735,519** | **7,735,519** | **24,080,333** | **24,080,333** | **24,080,333** | **-** | **-** | **-** | **-** |
| Ending Balance | | | | | | 5,171,777 | 150,601 | 21,052,750 | 313,247 | 21,029,856 | 448,524 | 3,412,973 | 6,551,639 | 9,872,214 | 13,382,690 |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

***Input Area -- UNFUNDED Capital Improvement Plan***
***Scenario: 2023 11 21 -- Scenario 1***

**WASTEWATER CIP**

| | | Percent Growth | Percent Replacement | Total CIP/ Project | Total Growth | Total Replacement | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NT-S1 | Town Creek Phase IV 24" Section 1 | 21.0% | 79.0% | $ 6,875,000 | $ 1,443,750 | $ 5,431,250 | $ 2,291,667 | $ 2,291,667 | $ 2,291,667 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| NT-S2 | Town Creek Phase IV 12" Section 2 | 0.0% | 100.0% | 2,925,000 | - | 2,925,000 | 975,000 | 975,000 | 975,000 | - | - | - | - | - | - | - |
| NT-S3 | Town Creek V 24" | 23.0% | 77.0% | 10,425,000 | 2,397,750 | 8,027,250 | 3,475,000 | 3,475,000 | 3,475,000 | - | - | - | - | - | - | - |
| NT-S4 | Upsize Lookout Line | 20.0% | 80.0% | 3,838,000 | 767,600 | 3,070,400 | 1,279,333 | 1,279,333 | 1,279,333 | - | - | - | - | - | - | - |
| NT-S5 | Upsize Tri County Line | 25.0% | 75.0% | 2,084,800 | 521,200 | 1,563,600 | 694,933 | 694,933 | 694,933 | - | - | - | - | - | - | - |
| NT-S6 | Cibolo West Main | 83.0% | 17.0% | 16,213,000 | 13,456,790 | 2,756,210 | 5,404,333 | 5,404,333 | 5,404,333 | - | - | - | - | - | - | - |
| NT-S7 | Woman Hollering Creek Lift Station, Gravity Li | 89.0% | 11.0% | 13,000,000 | 11,570,000 | 1,430,000 | 4,333,333 | 4,333,333 | 4,333,333 | - | - | - | - | - | - | - |
| NT-SI-1 | Decommission Tri County Lift Station | 0.0% | 100.0% | 88,000 | - | 88,000 | 29,333 | 29,333 | 29,333 | - | - | - | - | - | - | - |
| NT-SI-2 | Decommission Corbett Lift Station | 0.0% | 100.0% | 1,500,000 | - | 1,500,000 | 500,000 | 500,000 | 500,000 | - | - | - | - | - | - | - |
| NT-SI-3 | Decommission Sedona Lift Station | 0.0% | 100.0% | 175,000 | - | 175,000 | 58,333 | 58,333 | 58,333 | - | - | - | - | - | - | - |
| 2030-S1 | Hope Lane 8" Gravity Line | 67.0% | 33.0% | 2,025,000 | 1,356,750 | 668,250 | - | - | - | 675,000 | 675,000 | 675,000 | - | - | - | - |
| 2030-S2 | Old Wiederstein Rd 8" | 5.0% | 95.0% | 1,338,000 | 66,900 | 1,271,100 | - | - | - | 446,000 | 446,000 | 446,000 | - | - | - | - |
| 2030-S3 | Union Pacific RR 8" - Sec 1 | 10.0% | 90.0% | 2,563,000 | 256,300 | 2,306,700 | - | - | - | 854,333 | 854,333 | 854,333 | - | - | - | - |
| 2030-S4 | Union Pacific RR 8" - Sec 2 | 12.0% | 88.0% | 400,000 | 48,000 | 352,000 | - | - | - | 133,333 | 133,333 | 133,333 | - | - | - | - |
| 2030-S5 | Wiederstein Rd -- 8" | 83.0% | 17.0% | 1,663,000 | 1,380,290 | 282,710 | - | - | - | 554,333 | 554,333 | 554,333 | - | - | - | - |
| 2030-S6 | Schaefer Rd 8" Sec 1 | 33.0% | 67.0% | 4,913,000 | 1,621,290 | 3,291,710 | - | - | - | 1,637,667 | 1,637,667 | 1,637,667 | - | - | - | - |
| 2030-S7 | Schaefer Rd 8" Sec 2 | 100.0% | 0.0% | 1,938,000 | 1,938,000 | - | - | - | - | 646,000 | 646,000 | 646,000 | - | - | - | - |
| 2030-S8 | Aranda 8" | 100.0% | 0.0% | 475,000 | 475,000 | - | - | - | - | 158,333 | 158,333 | 158,333 | - | - | - | - |
| 2030-S9 | Weir Rd 10" | 100.0% | 0.0% | 2,525,000 | 2,525,000 | - | - | - | - | 841,667 | 841,667 | 841,667 | - | - | - | - |
| 2030-S10 | Trainer Hale Rd 10" | 100.0% | 0.0% | 1,038,000 | 1,038,000 | - | - | - | - | 346,000 | 346,000 | 346,000 | - | - | - | - |
| 2030-S11 | Ware Seguin Rd 8" | 97.0% | 3.0% | 3,113,000 | 3,019,610 | 93,390 | - | - | - | 1,037,667 | 1,037,667 | 1,037,667 | - | - | - | - |
| 2030-S12 | FM 1518 8" | 40.0% | 60.0% | 400,000 | 160,000 | 240,000 | - | - | - | 133,333 | 133,333 | 133,333 | - | - | - | - |
| 2030-S13 | I-10 8" Section 1 | 99.0% | 1.0% | 2,713,000 | 2,685,870 | 27,130 | - | - | - | 904,333 | 904,333 | 904,333 | - | - | - | - |
| 2030-S14 | Boenig Drive 8" | 29.0% | 71.0% | 2,963,000 | 859,270 | 2,103,730 | - | - | - | 987,667 | 987,667 | 987,667 | - | - | - | - |
| 2030-S15 | N Greytown Rd 8" | 52.0% | 48.0% | 1,275,000 | 663,000 | 612,000 | - | - | - | 425,000 | 425,000 | 425,000 | - | - | - | - |
| 2030-SI - 1 | Friesenhahn West Line WW Upsize | 22.0% | 78.0% | 8,175,000 | 1,798,500 | 6,376,500 | - | - | - | 2,725,000 | 2,725,000 | 2,725,000 | - | - | - | - |
| 2030-SI - 2 | Fairlawn WW Upsize | 9.0% | 91.0% | 1,375,000 | 123,750 | 1,251,250 | - | - | - | 458,333 | 458,333 | 458,333 | - | - | - | - |
| 2030-SI - 3 | Cibolo Crossing WW Line Upsize | 4.0% | 96.0% | 1,288,000 | 51,520 | 1,236,480 | - | - | - | 429,333 | 429,333 | 429,333 | - | - | - | - |
| 2030-SI - 4 | Woodland Oak Drive Replacement | 4.0% | 96.0% | 338,000 | 13,520 | 324,480 | - | - | - | 112,667 | 112,667 | 112,667 | - | - | - | - |
| 2030-SI - 5 | Old Wiederstein WW Upsize | 61.0% | 39.0% | 5,050,000 | 3,080,500 | 1,969,500 | - | - | - | 1,683,333 | 1,683,333 | 1,683,333 | - | - | - | - |
| 2030-SI - 6 | Northcliffe Lift Station Upgrade | 5.0% | 95.0% | 7,838,000 | 391,900 | 7,446,100 | - | - | - | 2,612,667 | 2,612,667 | 2,612,667 | - | - | - | - |
| 2030-SI - 7 | Decommission Belmont Park Lift Station | 0.0% | 100.0% | 463,000 | - | 463,000 | - | - | - | 154,333 | 154,333 | 154,333 | - | - | - | - |
| | Future Project | 0.0% | 100.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 0.0% | 100.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Future Project | 0.0% | 100.0% | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | **Total Unfunded Wastewater CIP** | | | **110,992,800** | **53,710,060** | **57,282,740** | **19,041,267** | **19,041,267** | **19,041,267** | **17,956,333** | **17,956,333** | **17,956,333** | **-** | **-** | **-** | **-** |
| | | | | 110,992,800 | | | | | | | | | | | | |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Percent Growth | Percent Replacement | Total CIP/ Project | Total Growth | Total Replacement | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- UNFUNDED Capital Improvement Plan*** | | | | | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | | | | | |
| **Water and Sewer Fund 202 -- Financing** | | | | | | | | | | | | | | | |
| Beginning Balance | | | | | | $ 3,320,378 | $ 17,819,793 | $ 793,244 | $ 16,296,010 | $ 389,990 | $ 16,049,104 | $ 221,454 | $ 1,919,947 | $ 3,715,243 | $ 5,611,490 |
| Plus Interest | | | | | | 99,611 | 534,594 | 23,797 | 488,880 | 11,700 | 481,473 | 6,644 | 57,598 | 111,457 | 168,345 |
| Impact Fee Revenue | | | | | | | | | | | | | | | |
| Estimated Impact Fee | | | | | | $ 1,668 | $ 1,668 | $ 1,668 | $ 1,668 | $ 1,668 | $ 1,668 | $ 1,668 | $ 1,668 | $ 1,668 | $ 1,668 |
| Annual LUEs | | | | | | 864 | 887 | 911 | 936 | 961 | 988 | 1,014 | 1,042 | 1,070 | 1,099 |
| Total Impact Fees | | | | | | 1,441,071 | 1,480,124 | 1,520,235 | 1,561,433 | 1,603,748 | 1,647,210 | 1,691,849 | 1,737,698 | 1,784,790 | 1,833,158 |
| Plus Contributions from Developers | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus ARP | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Contributions from Water Impact Fees | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Contributions from Sewer Impact Fees | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Conributions from Water Reserves | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Conributions from Sewer Reserves | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Amount Funded by W/WW Rate Revenue | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Funded from EDC | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Funded from TxDOT | | | | | | - | - | - | - | - | - | - | - | - | - |
| Sub-Total | | | | | | 4,861,060 | 19,834,511 | 2,337,276 | 18,346,323 | 2,005,438 | 18,177,787 | 1,919,947 | 3,715,243 | 5,611,490 | 7,612,993 |
| Plus Amount Funded by Long-Term Debt | | | | | | 32,000,000 | - | 33,000,000 | - | 32,000,000 | - | - | - | - | - |
| Total Funds Available | | | | | | 36,861,060 | 19,834,511 | 35,337,276 | 18,346,323 | 34,005,438 | 18,177,787 | 1,919,947 | 3,715,243 | 5,611,490 | 7,612,993 |
| Less Capital Improvement Plan | | | **110,992,800** | **53,710,060** | **57,282,740** | **19,041,267** | **19,041,267** | **19,041,267** | **17,956,333** | **17,956,333** | **17,956,333** | **-** | **-** | **-** | **-** |
| Ending Balance | | | | | | 17,819,793 | 793,244 | 16,296,010 | 389,990 | 16,049,104 | 221,454 | 1,919,947 | 3,715,243 | 5,611,490 | 7,612,993 |

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Percent Growth | Percent Replacement | Total CIP/ Project | Total Growth | Total Replacement | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- UNFUNDED Capital Improvement Plan*** | | | | | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | | | | | |
| **Total CIP** | | | | | | | | | | | | | | | |
| Total Water Unfunded CIP | | | $ 95,447,556 | $ 65,888,200 | $ 29,559,356 | $ 7,735,519 | $ 7,735,519 | $ 7,735,519 | $ 24,080,333 | $ 24,080,333 | $ 24,080,333 | $ - | $ - | $ - | $ - |
| Total Wastewater Unfunded CIP | | | 110,992,800 | 53,710,060 | 57,282,740 | 19,041,267 | 19,041,267 | 19,041,267 | 17,956,333 | 17,956,333 | 17,956,333 | - | - | - | - |
| **Total Unfunded CIP** | | | **206,440,356** | **119,598,260** | **86,842,096** | **26,776,785** | **26,776,785** | **26,776,785** | **42,036,667** | **42,036,667** | **42,036,667** | **-** | **-** | **-** | **-** |
| **Water and Sewer Fund 202 -- Financing** | | | | | | | | | | | | | | | |
| Beginning Balance | | | | | | $ 6,640,756 | $ 22,991,570 | $ 943,845 | $ 37,348,760 | $ 703,237 | $ 37,078,961 | $ 669,978 | $ 5,332,920 | $ 10,266,883 | $ 15,483,704 |
| Plus Interest | | | | | | 199,223 | 689,747 | 28,315 | 1,120,463 | 21,097 | 1,112,369 | 20,099 | 159,988 | 308,006 | 464,511 |
| Impact Fee Revenue | | | | | | | | | | | | | | | |
| Estimated Impact Fee | | | | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Annual LUEs | | | | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Impact Fees | | | | | | 3,928,377 | 4,039,313 | 4,153,385 | 4,270,681 | 4,391,293 | 4,515,315 | 4,642,843 | 4,773,975 | 4,908,815 | 5,047,468 |
| Plus Contributions from Developers | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus ARP | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Contributions from Water Impact Fees | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Contributions from Sewer Impact Fees | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Conributions form Water Reserves | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Conributions form Sewer Reserves | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Amount Funded by W/WW Rate Revenue | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Funded from EDC | | | | | | - | - | - | - | - | - | - | - | - | - |
| Plus Funded from TxDOT | | | | | | - | - | - | - | - | - | - | - | - | - |
| Sub-Total | | | | | | 10,768,355 | 27,720,630 | 5,125,545 | 42,739,904 | 5,115,627 | 42,706,644 | 5,332,920 | 10,266,883 | 15,483,704 | 20,995,683 |
| **Plus Amount Funded by Long-Term Debt** | | | | | | **39,000,000** | **-** | **59,000,000** | **-** | **74,000,000** | **-** | **-** | **-** | **-** | **-** |
| Total Funds Available | | | | | | 49,768,355 | 27,720,630 | 64,125,545 | 42,739,904 | 79,115,627 | 42,706,644 | 5,332,920 | 10,266,883 | 15,483,704 | 20,995,683 |
| Less Capital Improvement Plan | | | 206,440,356 | 119,598,260 | 86,842,096 | 26,776,785 | 26,776,785 | 26,776,785 | 42,036,667 | 42,036,667 | 42,036,667 | - | - | - | - |
| **Ending Balance** | | | | | | **22,991,570** | **943,845** | **37,348,760** | **703,237** | **37,078,961** | **669,978** | **5,332,920** | **10,266,883** | **15,483,704** | **20,995,683** |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Debt Financing Variables** | | | | | | | | | | | |
| Issuing Cost Percentage | 1.0% | | | | | | | | | | |
| Initial Reserve Cost Percentage | 2.0% | | | | | | | | | | |
| Interest Rate | 3.00% | | | | | | | | | | |
| Term (Years) | 20 | | | | | | | | | | |
| Annual Reserve Years Funded | - | | | | | | | | | | |
| **Debt Issues** | | | | | | | | | | | |
| Total | | | | | | | | | | | |
| Water | $ 75,000,000 | $ 7,000,000 | $ - | $ 26,000,000 | $ - | $ 42,000,000 | $ - | $ - | $ - | $ - | $ - |
| Wastewater | 97,000,000 | 32,000,000 | - | 33,000,000 | - | 32,000,000 | - | - | - | - | - |
| Total | 172,000,000 | 39,000,000 | - | 59,000,000 | - | 74,000,000 | - | - | - | - | - |
| **Percent Growth-Related** | | 69.0% | 69.0% | 69.0% | 69.0% | 69.0% | 69.0% | 69.0% | 69.0% | 69.0% | 69.0% |
| Growth-Related Debt Issues | | | | | | | | | | | |
| Water | $ 51,773,091 | $ 4,832,155 | $ - | $ 17,948,005 | $ - | $ 28,992,931 | $ - | $ - | $ - | $ - | $ - |
| Wastewater | 66,959,864 | 22,089,852 | - | 22,780,160 | - | 22,089,852 | - | - | - | - | - |
| **Total** | **118,732,955** | **26,922,007** | **-** | **40,728,165** | **-** | **51,082,783** | **-** | **-** | **-** | **-** | **-** |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Series:** | **2025** | | | | | | | | | | |
| Principal | $ 26,922,007 | $ - | | | | | | | | | |
| Issuing/Initial Reserve Costs | 807,660 | | | | | | | | | | |
| Total Debt | 27,729,668 | | | | | | | | | | |
| Interest Rate | 3.0% | | | | | | | | | | |
| Term | 20 | | | | | | | | | | |
| P&I | 1,863,869 | | | | | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Beginning Principal | | | 27,729,668 | 26,697,688 | 25,634,750 | 24,539,923 | 23,412,251 | 22,250,750 | 21,054,403 | 19,822,166 | 18,552,962 |
| Interest | | | 831,890 | 800,931 | 769,042 | 736,198 | 702,368 | 667,522 | 631,632 | 594,665 | 556,589 |
| Principal | | | $ 1,031,979 | $ 1,062,939 | $ 1,094,827 | $ 1,127,672 | $ 1,161,502 | $ 1,196,347 | $ 1,232,237 | $ 1,269,204 | $ 1,307,280 |
| Interest | | | 831,890 | 800,931 | 769,042 | 736,198 | 702,368 | 667,522 | 631,632 | 594,665 | 556,589 |
| Annual Reserve | | | - | - | - | - | - | - | - | - | - |
| Total | | | $ 1,863,869 | $ 1,863,869 | $ 1,863,869 | $ 1,863,869 | $ 1,863,869 | $ 1,863,869 | $ 1,863,869 | $ 1,863,869 | $ 1,863,869 |
| Percent Water/WW | | | | | | | | | | | |
| Water | | | 17.9% | 17.9% | 17.9% | 17.9% | 17.9% | 17.9% | 17.9% | 17.9% | 17.9% |
| Wastewater | | | 82.1% | 82.1% | 82.1% | 82.1% | 82.1% | 82.1% | 82.1% | 82.1% | 82.1% |
| Total | | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Water Debt Service | | | | | | | | | | | |
| Principal | | | $ 185,227 | $ 190,784 | $ 196,507 | $ 202,403 | $ 208,475 | $ 214,729 | $ 221,171 | $ 227,806 | $ 234,640 |
| Interest | | | 149,314 | 143,757 | 138,033 | 132,138 | 126,066 | 119,812 | 113,370 | 106,735 | 99,901 |
| Annual Reserve | | | - | - | - | - | - | - | - | - | - |
| Total | | | $ 334,541 | $ 334,541 | $ 334,541 | $ 334,541 | $ 334,541 | $ 334,541 | $ 334,541 | $ 334,541 | $ 334,541 |
| Wastewater Debt Service | | | | | | | | | | | |
| Principal | | | $ 846,752 | $ 872,155 | $ 898,319 | $ 925,269 | $ 953,027 | $ 981,618 | $ 1,011,066 | $ 1,041,398 | $ 1,072,640 |
| Interest | | | 682,576 | 657,174 | 631,009 | 604,060 | 576,302 | 547,711 | 518,262 | 487,930 | 456,688 |
| Annual Reserve | | | - | - | - | - | - | - | - | - | - |
| Total | | | $ 1,529,329 | $ 1,529,329 | $ 1,529,329 | $ 1,529,329 | $ 1,529,329 | $ 1,529,329 | $ 1,529,329 | $ 1,529,329 | $ 1,529,329 |
| Total Less Principal | | | 682,576 | 657,174 | 631,009 | 604,060 | 576,302 | 547,711 | 518,262 | 487,930 | 456,688 |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Series:** | **2026** | | | | | | | | | | |
| Principal | $ - | | | | | | | | | | |
| Issuing/Initial Reserve Costs | - | | | | | | | | | | |
| Total Debt | - | | | | | | | | | | |
| Interest Rate | 3.0% | | | | | | | | | | |
| Term | 20 | | | | | | | | | | |
| P&I | - | | | | | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| Beginning Principal | | | - | - | - | - | - | - | - | - | |
| Interest | | | - | - | - | - | - | - | - | - | |
| Principal | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | |
| Interest | | | - | - | - | - | - | - | - | - | |
| Annual Reserve | | | - | - | - | - | - | - | - | - | |
| Total | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | |
| Percent Water/WW | | | | | | | | | | | |
| Water | | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| Wastewater | | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | |
| Total | | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | |
| Water Debt Service | | | | | | | | | | | |
| Principal | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | |
| Interest | | | - | - | - | - | - | - | - | - | |
| Annual Reserve | | | - | - | - | - | - | - | - | - | |
| Total | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | |
| Wastewater Debt Service | | | | | | | | | | | |
| Principal | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | |
| Interest | | | - | - | - | - | - | - | - | - | |
| Annual Reserve | | | - | - | - | - | - | - | - | - | |
| Total | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | |
| Total Less Principal | | - | - | - | - | - | - | - | - | - | |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Series:** | **2027** | | | | | | | | | | |
| Principal | $ 40,728,165 | | | | | | | | | | |
| Issuing/Initial Reserve Costs | 1,221,845 | | | | | | | | | | |
| Total Debt | 41,950,010 | | | | | | | | | | |
| Interest Rate | 3.0% | | | | | | | | | | |
| Term | 20 | | | | | | | | | | |
| P&I | 2,819,700 | | | | | | | | | | |
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Beginning Principal | | | | | 41,950,010 | 40,388,811 | 38,780,775 | 37,124,499 | 35,418,534 | 33,661,391 | 31,851,533 |
| Interest | | | | | 1,258,500 | 1,211,664 | 1,163,423 | 1,113,735 | 1,062,556 | 1,009,842 | 955,546 |
| Principal | | | | | $ 1,561,199 | $ 1,608,035 | $ 1,656,276 | $ 1,705,965 | $ 1,757,144 | $ 1,809,858 | $ 1,864,154 |
| Interest | | | | | 1,258,500 | 1,211,664 | 1,163,423 | 1,113,735 | 1,062,556 | 1,009,842 | 955,546 |
| Annual Reserve | | | | | - | - | - | - | - | - | - |
| Total | | | | | $ 2,819,700 | $ 2,819,700 | $ 2,819,700 | $ 2,819,700 | $ 2,819,700 | $ 2,819,700 | $ 2,819,700 |
| Percent Water/WW | | | | | | | | | | | |
| Water | | | | | 44.1% | 44.1% | 44.1% | 44.1% | 44.1% | 44.1% | 44.1% |
| Wastewater | | | | | 55.9% | 55.9% | 55.9% | 55.9% | 55.9% | 55.9% | 55.9% |
| Total | | | | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Water Debt Service | | | | | | | | | | | |
| Principal | | | | | $ 687,986 | $ 708,626 | $ 729,884 | $ 751,781 | $ 774,334 | $ 797,564 | $ 821,491 |
| Interest | | | | | 554,593 | 533,954 | 512,695 | 490,798 | 468,245 | 445,015 | 421,088 |
| Annual Reserve | | | | | - | - | - | - | - | - | - |
| Total | | | | | $ 1,242,579 | $ 1,242,579 | $ 1,242,579 | $ 1,242,579 | $ 1,242,579 | $ 1,242,579 | $ 1,242,579 |
| Wastewater Debt Service | | | | | | | | | | | |
| Principal | | | | | $ 873,213 | $ 899,410 | $ 926,392 | $ 954,184 | $ 982,809 | $ 1,012,293 | $ 1,042,662 |
| Interest | | | | | 703,907 | 677,711 | 650,728 | 622,937 | 594,311 | 564,827 | 534,458 |
| Annual Reserve | | | | | - | - | - | - | - | - | - |
| Total | | | | | $ 1,577,120 | $ 1,577,120 | $ 1,577,120 | $ 1,577,120 | $ 1,577,120 | $ 1,577,120 | $ 1,577,120 |
| Total Less Principal | | | | | 703,907 | 677,711 | 650,728 | 622,937 | 594,311 | 564,827 | 534,458 |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Series:** | **2028** | | | | | | | | | | |
| Principal | $ - | | | | | | | | | | |
| Issuing/Initial Reserve Costs | - | | | | | | | | | | |
| Total Debt | - | | | | | | | | | | |
| Interest Rate | 3.0% | | | | | | | | | | |
| Term | 20 | | | | | | | | | | |
| P&I | - | | | | | | | | | | |
| | | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| Beginning Principal | | | | | | - | - | - | - | - | - |
| Interest | | | | | | - | - | - | - | - | - |
| Principal | | | | | | $ - | $ - | $ - | $ - | $ - | $ - |
| Interest | | | | | | - | - | - | - | - | - |
| Annual Reserve | | | | | | - | - | - | - | - | - |
| Total | | | | | | $ - | $ - | $ - | $ - | $ - | $ - |
| Percent Water/WW | | | | | | | | | | | |
| Water | | | | | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Wastewater | | | | | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Total | | | | | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Water Debt Service | | | | | | | | | | | |
| Principal | | | | | | $ - | $ - | $ - | $ - | $ - | $ - |
| Interest | | | | | | - | - | - | - | - | - |
| Annual Reserve | | | | | | - | - | - | - | - | - |
| Total | | | | | | $ - | $ - | $ - | $ - | $ - | $ - |
| Wastewater Debt Service | | | | | | | | | | | |
| Principal | | | | | | $ - | $ - | $ - | $ - | $ - | $ - |
| Interest | | | | | | - | - | - | - | - | - |
| Annual Reserve | | | | | | - | - | - | - | - | - |
| Total | | | | | | $ - | $ - | $ - | $ - | $ - | $ - |
| Total Less Principal | | | | | | - | - | - | - | - | - |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Series:** | **2029** | | | | | | | | | | |
| Principal | $ 51,082,783 | | | | | | | | | | |
| Issuing/Initial Reserve Costs | 1,532,483 | | | | | | | | | | |
| Total Debt | 52,615,267 | | | | | | | | | | |
| Interest Rate | 3.0% | | | | | | | | | | |
| Term | 20 | | | | | | | | | | |
| P&I | 3,536,572 | | | | | | | | | | |
| | | | | | | | 1 | 2 | 3 | 4 | 5 |
| Beginning Principal | | | | | | | 52,615,267 | 50,657,152 | 48,640,294 | 46,562,931 | 44,423,246 |
| Interest | | | | | | | 1,578,458 | 1,519,715 | 1,459,209 | 1,396,888 | 1,332,697 |
| Principal | | | | | | | $ 1,958,114 | $ 2,016,858 | $ 2,077,364 | $ 2,139,684 | $ 2,203,875 |
| Interest | | | | | | | 1,578,458 | 1,519,715 | 1,459,209 | 1,396,888 | 1,332,697 |
| Annual Reserve | | | | | | | - | - | - | - | - |
| Total | | | | | | | $ 3,536,572 | $ 3,536,572 | $ 3,536,572 | $ 3,536,572 | $ 3,536,572 |
| Percent Water/WW | | | | | | | | | | | |
| Water | | | | | | | 56.8% | 56.8% | 56.8% | 56.8% | 56.8% |
| Wastewater | | | | | | | 43.2% | 43.2% | 43.2% | 43.2% | 43.2% |
| Total | | | | | | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Water Debt Service | | | | | | | | | | | |
| Principal | | | | | | | $ 1,111,362 | $ 1,144,703 | $ 1,179,044 | $ 1,214,415 | $ 1,250,848 |
| Interest | | | | | | | 895,882 | 862,541 | 828,200 | 792,828 | 756,396 |
| Annual Reserve | | | | | | | - | - | - | - | - |
| Total | | | | | | | $ 2,007,244 | $ 2,007,244 | $ 2,007,244 | $ 2,007,244 | $ 2,007,244 |
| Wastewater Debt Service | | | | | | | | | | | |
| Principal | | | | | | | $ 846,752 | $ 872,155 | $ 898,319 | $ 925,269 | $ 953,027 |
| Interest | | | | | | | 682,576 | 657,174 | 631,009 | 604,060 | 576,302 |
| Annual Reserve | | | | | | | - | - | - | - | - |
| Total | | | | | | | $ 1,529,329 | $ 1,529,329 | $ 1,529,329 | $ 1,529,329 | $ 1,529,329 |
| Total Less Principal | | | | | | | 682,576 | 657,174 | 631,009 | 604,060 | 576,302 |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Series:** | **2030** | | | | | | | | | | |
| Principal | $ - | | | | | | | | | | |
| Issuing/Initial Reserve Costs | - | | | | | | | | | | |
| Total Debt | - | | | | | | | | | | |
| Interest Rate | 3.0% | | | | | | | | | | |
| Term | 20 | | | | | | | | | | |
| P&I | - | | | | | | | | | | |
| | | | | | | | | 1 | 2 | 3 | 4 |
| Beginning Principal | | | | | | | | - | - | - | - |
| Interest | | | | | | | | - | - | - | - |
| Principal | | | | | | | | $ - | $ - | $ - | $ - |
| Interest | | | | | | | | - | - | - | - |
| Annual Reserve | | | | | | | | - | - | - | - |
| Total | | | | | | | | $ - | $ - | $ - | $ - |
| Percent Water/WW | | | | | | | | | | | |
| Water | | | | | | | | 0.0% | 0.0% | 0.0% | 0.0% |
| Wastewater | | | | | | | | 100.0% | 100.0% | 100.0% | 100.0% |
| Total | | | | | | | | 100.0% | 100.0% | 100.0% | 100.0% |
| Water Debt Service | | | | | | | | | | | |
| Principal | | | | | | | | $ - | $ - | $ - | $ - |
| Interest | | | | | | | | - | - | - | - |
| Annual Reserve | | | | | | | | - | - | - | - |
| Total | | | | | | | | $ - | $ - | $ - | $ - |
| Wastewater Debt Service | | | | | | | | | | | |
| Principal | | | | | | | | $ - | $ - | $ - | $ - |
| Interest | | | | | | | | - | - | - | - |
| Annual Reserve | | | | | | | | - | - | - | - |
| Total | | | | | | | | $ - | $ - | $ - | $ - |
| Total Less Principal | | | | | | | | - | - | - | - |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Series:** | **2031** | | | | | | | | | | |
| Principal | $ - | | | | | | | | | | |
| Issuing/Initial Reserve Costs | - | | | | | | | | | | |
| Total Debt | - | | | | | | | | | | |
| Interest Rate | 3.0% | | | | | | | | | | |
| Term | 20 | | | | | | | | | | |
| P&I | - | | | | | | | | | | |
| | | | | | | | | | 1 | 2 | 3 |
| Beginning Principal | | | | | | | | | - | - | - |
| Interest | | | | | | | | | - | - | - |
| Principal | | | | | | | | | $ - | $ - | $ - |
| Interest | | | | | | | | | - | - | - |
| Annual Reserve | | | | | | | | | - | - | - |
| Total | | | | | | | | | $ - | $ - | $ - |
| Percent Water/WW | | | | | | | | | | | |
| Water | | | | | | | | | 0.0% | 0.0% | 0.0% |
| Wastewater | | | | | | | | | 100.0% | 100.0% | 100.0% |
| Total | | | | | | | | | 100.0% | 100.0% | 100.0% |
| Water Debt Service | | | | | | | | | | | |
| Principal | | | | | | | | | $ - | $ - | $ - |
| Interest | | | | | | | | | - | - | - |
| Annual Reserve | | | | | | | | | - | - | - |
| Total | | | | | | | | | $ - | $ - | $ - |
| Wastewater Debt Service | | | | | | | | | | | |
| Principal | | | | | | | | | $ - | $ - | $ - |
| Interest | | | | | | | | | - | - | - |
| Annual Reserve | | | | | | | | | - | - | - |
| Total | | | | | | | | | $ - | $ - | $ - |
| Total Less Principal | | | | | | | | | - | - | - |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Series:** | **2032** | | | | | | | | | | |
| Principal | $ - | | | | | | | | | | |
| Issuing/Initial Reserve Costs | - | | | | | | | | | | |
| Total Debt | - | | | | | | | | | | |
| Interest Rate | 3.0% | | | | | | | | | | |
| Term | 20 | | | | | | | | | | |
| P&I | - | | | | | | | | | | |
| | | | | | | | | | | 1 | 2 |
| Beginning Principal | | | | | | | | | | - | - |
| Interest | | | | | | | | | | - | - |
| Principal | | | | | | | | | | $ - | $ - |
| Interest | | | | | | | | | | - | - |
| Annual Reserve | | | | | | | | | | - | - |
| Total | | | | | | | | | | $ - | $ - |
| Percent Water/WW | | | | | | | | | | | |
| Water | | | | | | | | | | 0.0% | 0.0% |
| Wastewater | | | | | | | | | | 100.0% | 100.0% |
| Total | | | | | | | | | | 100.0% | 100.0% |
| Water Debt Service | | | | | | | | | | | |
| Principal | | | | | | | | | | $ - | $ - |
| Interest | | | | | | | | | | - | - |
| Annual Reserve | | | | | | | | | | - | - |
| Total | | | | | | | | | | $ - | $ - |
| Wastewater Debt Service | | | | | | | | | | | |
| Principal | | | | | | | | | | $ - | $ - |
| Interest | | | | | | | | | | - | - |
| Annual Reserve | | | | | | | | | | - | - |
| Total | | | | | | | | | | $ - | $ - |
| Total Less Principal | | | | | | | | | | - | - |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Series:** | **2033** | | | | | | | | | | |
| Principal | $ - | | | | | | | | | | |
| Issuing/Initial Reserve Costs | - | | | | | | | | | | |
| Total Debt | - | | | | | | | | | | |
| Interest Rate | 3.0% | | | | | | | | | | |
| Term | 20 | | | | | | | | | | |
| P&I | - | | | | | | | | | | |
| | | | | | | | | | | | 1 |
| Beginning Principal | | | | | | | | | | | - |
| Interest | | | | | | | | | | | - |
| Principal | | | | | | | | | | | $ - |
| Interest | | | | | | | | | | | - |
| Annual Reserve | | | | | | | | | | | - |
| Total | | | | | | | | | | | $ - |
| Percent Water/WW | | | | | | | | | | | |
| Water | | | | | | | | | | | 0.0% |
| Wastewater | | | | | | | | | | | 100.0% |
| Total | | | | | | | | | | | 100.0% |
| Water Debt Service | | | | | | | | | | | |
| Principal | | | | | | | | | | | $ - |
| Interest | | | | | | | | | | | - |
| Annual Reserve | | | | | | | | | | | - |
| Total | | | | | | | | | | | $ - |
| Wastewater Debt Service | | | | | | | | | | | |
| Principal | | | | | | | | | | | $ - |
| Interest | | | | | | | | | | | - |
| Annual Reserve | | | | | | | | | | | - |
| Total | | | | | | | | | | | $ - |
| Total Less Principal | | | | | | | | | | | - |

Date: 11/25/2024

**CITY OF SCHERTZ**
**WATER/WW IMPACT FEE UTILITY REVENUE CREDIT CALCULATION**

| | Input Area | 1 2025 | 2 2026 | 3 2027 | 4 2028 | 5 2029 | 6 2030 | 7 2031 | 8 2032 | 9 2033 | 10 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Input Area -- Future Debt Service*** | | | | | | | | | | | |
| ***Scenario: 2023 11 21 -- Scenario 1*** | | | | | | | | | | | |
| **Series:** | **Total Future Debt Service** | | | | | | | | | | |
| **Water Future Debt Service** | | | | | | | | | | | |
| **Total** | | | | | | | | | | | |
| Principal | | $ - | $ 185,227 | $ 190,784 | $ 884,493 | $ 911,028 | $ 2,049,721 | $ 2,111,213 | $ 2,174,549 | $ 2,239,786 | $ 2,306,979 |
| Interest | | - | 149,314 | 143,757 | 692,627 | 666,092 | 1,534,643 | 1,473,151 | 1,409,814 | 1,344,578 | 1,277,384 |
| Annual Reserve | | - | - | - | - | - | - | - | - | - | - |
| Total | | - | 334,541 | 334,541 | 1,577,120 | 1,577,120 | 3,584,364 | 3,584,364 | 3,584,364 | 3,584,364 | 3,584,364 |
| **Wastewater Future Debt Service** | | | | | | | | | | | |
| **Total** | | | | | | | | | | | |
| Principal | | $ - | $ 846,752 | $ 872,155 | $ 1,771,533 | $ 1,824,679 | $ 2,726,171 | $ 2,807,956 | $ 2,892,195 | $ 2,978,961 | $ 3,068,330 |
| Interest | | - | 682,576 | 657,174 | 1,334,916 | 1,281,770 | 1,909,606 | 1,827,821 | 1,743,582 | 1,656,817 | 1,567,448 |
| Annual Reserve | | - | - | - | - | - | - | - | - | - | - |
| Total | | - | 1,529,329 | 1,529,329 | 3,106,449 | 3,106,449 | 4,635,777 | 4,635,777 | 4,635,777 | 4,635,777 | 4,635,777 |

# APPENDIX 33 - IMPACT FEE COMPARISON SOURCES

# CITY OF BOERNE - 2023

## EXHIBIT C

## SCHEDULE OF MAXIMUM IMPACT FEES

| UTILITY | CALCULATED FEE | RATE CREDIT | MAXIMUM FEE |
|---|---|---|---|
| WATER | $3,294 | $786 | $2,509 |
| WASTEWATER | $5,637 | $517 | $5,120 |

## EXHIBIT C1
## IMPACT FEES BY METER SIZE
ASSESSED BEGINNING May 23, 2023

| METER SIZE | LUE'S PER METER | WATER FEE | WASTEWATER FEE | TOTAL FEE |
|---|---|---|---|---|
| 5/8" | 1.0 | $2,509.00 | $5,120.00 | $7,629.00 |
| 3/4" | 1.5 | $3,763.50 | $7,680.00 | $11,443.50 |
| 1" | 2.5 | $6,272.50 | $12,800.00 | $19,072.50 |
| 1 1/2" | 5.0 | $12,545.00 | $25,600.00 | $38,145.00 |
| 2" Non-turbine | 8.0 | $20,072.00 | $40,960.00 | $61,032.00 |
| 2" Compound | 8.0 | $20,072.00 | $40,960.00 | $61,032.00 |
| 2" Turbine | 10.0 | $25,090.00 | $51,200.00 | $76,290.00 |
| 3" Compound | 16.0 | $40,144.00 | $81,920.00 | $122,064.00 |
| 3" Turbine | 25.0 | $62,725.00 | $128,000.00 | $190,725.00 |
| 4" Compound | 25.0 | $62,725.00 | $128,000.00 | $190,725.00 |
| 4" Turbine | 42.0 | $105,378.00 | $215,040.00 | $320,418.00 |
| 6" Compound | 50.0 | $125,450.00 | $256,000.00 | $381,450.00 |
| 6" Turbine | 92.0 | $230,828.00 | $471,040.00 | $701,868.00 |
| 8" Turbine | 160.0 | $401,440.00 | $819,200.00 | $1,220,640.00 |
| 10" Turbine | 250.0 | $627,250.00 | $1,280,000.00 | $1,907,250.00 |
| 12" Turbine | 330.0 | $827,970.00 | $1,689,600.00 | $2,517,570.00 |

## EXHIBIT C2
## IMPACT FEES BY METER SIZE
ASSESSED DECEMBER 10, 2019, to May 22, 2023

| METER SIZE | LUE'S PER METER | WATER FEE | WASTEWATER FEE | TOTAL FEE |
|---|---|---|---|---|
| 5/8" | 1.0 | $5,743.00 | $3,814.00 | $9,557.00 |
| 3/4" | 1.5 | $8,614.50 | $5,721.00 | $14,335.50 |
| 1" | 2.5 | $14,357.50 | $9,535.00 | $23,892.50 |
| 1 1/2" | 5.0 | $28,715.00 | $19,070.00 | $47,785.00 |
| 2" Non-turbine | 8.0 | $45,944.00 | $30,512.00 | $76,456.00 |
| 2" Compound | 8.0 | $45,944.00 | $30,512.00 | $76,456.00 |
| 2" Turbine | 10.0 | $57,430.00 | $38,140.00 | $95,570.00 |

# NEW BRAUNFELS UTILITIES - 2022

# EXECUTIVE SUMMARY

In 2021, New Braunfels Utilities (NBU), authorized Freese and Nichols, Inc. (FNI) to perform an impact fee analysis on the water and wastewater systems. The purpose of this report is to summarize the methodology used in the development and calculation of water and wastewater impact fees for NBU. The methodology used herein satisfies the requirements of the Texas Local Government Code Section 395 for the update of water and wastewater impact fees.

As part of this study, land use assumptions, growth projections, and water/wastewater loading criteria from the *2021 Water & Wastewater Master Plan Update* by FNI were used to develop 10-year load projections for both the water and wastewater systems. Impact fee capital improvements plans (CIP) were developed for both systems to serve projected growth through 2032. The hydraulic models of the water and wastewater systems, along with pumping and storage planning criteria developed by FNI, were employed to calculate the percentage of each project's capacity projected to be utilized in the 10-year planning period (2022-2032). A summation of each project's estimated cost, including financing costs less credits for existing projects partially funded through rate increases, multiplied by the percentage of that project being utilized in the 10-year planning period was used to calculate a total impact fee eligible CIP cost for both water and wastewater. These costs were divided by the projected growth in living unit equivalents (LUE) for water and wastewater, respectively, to determine the maximum allowable impact fees. **Table ES-1** and **Table ES-2** summarize the maximum allowable impact fee calculations for water and wastewater, respectively. **Table ES-3** shows the maximum allowable impact fee for each meter size distributed by NBU.

**Table ES-1 Maximum Water Impact Fee Calculation**

| Water Impact Fee | |
|---|---|
| Total Eligible Capital Improvement Costs | $228,540,978 |
| Total Eligible Financing Costs | $168,389,936 |
| Total Eligible Impact Fee Costs | $396,930,914 |
| Total Impact Fee Credits | ($837,433) |
| Maximum Allowable Cost | $396,093,481 |
| Growth in Service Units | 20,367 |
| **Maximum Allowable Water Impact Fee** | **$19,448** |

**Table ES-2 Maximum Wastewater Impact Fee Calculation**

| Wastewater Impact Fee | |
|---|---|
| Total Eligible Capital Improvement Costs | $85,710,012 |
| Total Eligible Financing Costs | $37,415,837 |
| Total Eligible Impact Fee Costs | $123,125,849 |
| Total Impact Fee Credits | ($2,813,220) |
| Maximum Allowable Cost | $120,312,629 |
| Growth in Service Units | 19,269 |
| **Maximum Allowable Wastewater Impact Fee** | **$6,244** |

**Table ES-3 Maximum Allowable Impact Fee by Meter Size**

| Meter Size | Maximum Flow Rate for Continuous Duty (gallons per minute) | Service Unit Equivalent | Maximum Allowable Water | Maximum Allowable Wastewater | Maximum Allowable Total |
|---|---|---|---|---|---|
| 5/8" | 10 | 1.0 | $19,448 | $6,244 | $25,692 |
| 1" | 25 | 2.5 | $48,620 | $15,610 | $64,230 |
| 1 1/2" | 50 | 5.0 | $97,240 | $31,220 | $128,460 |
| 2" | 80 | 8.0 | $155,584 | $49,952 | $205,536 |
| 3" | 175 | 17.5 | $340,340 | $109,270 | $449,610 |
| 4" | 300 | 30.0 | $583,440 | $187,320 | $770,760 |
| 6" | 675 | 67.5 | $1,312,740 | $421,470 | $1,734,210 |
| 8" | 2,400 | 240.0 | $4,667,520 | $1,498,560 | $6,166,080 |
| 10" | 3,500 | 350.0 | $6,806,800 | $2,185,400 | $8,992,200 |

# CITY OF SEGUIN - 2023

# EXECUTIVE SUMMARY

## 1.0 Background

In August 2022, the City of Seguin, Texas (City), authorized Freese and Nichols, Inc. (FNI) to perform an impact fee analysis on the City's water and wastewater systems, including a portion of the Spring Hills Water Supply Corporation (SHWSC) Service Area that will be transferred to the City as part of the ongoing Certificate of Convenience and Necessity (CCN) Transfer. The purpose of this report is to summarize the methodology used in the development and calculation of water and wastewater impact fees for the City of Seguin. The methodology used herein satisfies the requirements of the Texas Local Government Code Section 395 for the establishment and update of water and wastewater impact fees.

## 2.0 Land Use Assumptions

Population and land use are important elements in the analysis of water and wastewater systems. Through collaboration between FNI and the City, FNI developed growth projections using land use assumptions from the ongoing Seguin Comprehensive Plan and proposed development according to the City's Planning Department to estimate service connections for the 2023 and 2033 planning periods. **Table ES-1** presents the growth projections for the City of Seguin Water and Wastewater Service Areas including the CCN area to be transferred from SHWSC to the City, hereafter referred to as the "Transfer Area."

**Table ES-1: Growth Projections**

| Service Area | 2023 Connections | 2033 Connections | Growth Rate |
|---|---|---|---|
| *Existing Water* | *8,272* | *11,012* | *2.90%* |
| *Transfer Area* | *1,305* | *7,370* | *18.90%* |
| **Water Total** | **9,577** | **18,382** | **6.74%** |
| **Wastewater Total** | **10,741** | **28,319** | **10.18%** |

## 3.0 Capital Improvement Plan

Water and wastewater impact fee capital improvement plans (CIP) were developed for the City of Seguin based on the land use assumptions and growth projections. The recommended improvements will provide the required capacity to meet projected water demands and wastewater flows through 2033. The CIPs are based on recommendations from the 2022 Water and Wastewater Master Plans and include improvements identified to provide service to the Transfer Area. For each existing or proposed project, the impact fee eligible cost is calculated as a percentage of the project cost, based upon the portion of

the project's capacity required to serve growth projected to occur between 2023 and 2033, the 10-year period used for impact fee analysis. The cost associated with the portion of projects required to serve growth beyond this 10-year period are not included in the current impact fee calculations but will be eligible for impact fee cost recovery in the next impact fee update. The total cost for each eligible project includes the project's capital cost to serve 10-year growth, the projected finance cost for the capital improvements, and the consultant cost for preparing and updating the CIP. **Table ES-2** shows a summary of the total capital cost and impact fee-eligible cost for all Impact Fee CIP projects for the Water and Wastewater Service Areas.

**Table ES-2: CIP Cost Summary**

| Service Area | Total Capital Cost of Impact Fee Eligible Projects | Total 10-Year (2023-2032) Cost of Impact Fee Eligible Projects |
|---|---|---|
| Water | $173,881,062 | $87,766,441 |
| Wastewater | $339,567,626 | $194,769,279 |

## 4.0 Impact Fee Analysis

According to Chapter 395 of the Texas Local Government Code, the maximum impact fee may not exceed the amount determined by dividing the cost of required capital improvements by the total number of service units attributed to new development during the impact fee eligibility period. A water service unit is defined as the service equivalent to a water-only connection or a water/wastewater connection for a single-family residence. A wastewater service unit is defined as the service unit equivalent to a water/wastewater connection for a single-family residence. The current impact fee ordinance was adopted in 2020. This ordinance set the water impact fee for a single-family meter at $1,386.86 including a pass-through fee of $354.54 from Schertz-Seguin Local Government Corporation (SSLGC) and the wastewater impact fee for a single-family meter at $7,757.77. This project is an update to the 2020 ordinance. **Table ES-3** displays the updated maximum allowable impact fee per service unit for the Water and Wastewater Service Areas, including the $354.54 SSLGC pass-through fee.

**Table ES-3: Maximum Allowable Impact Fees**

| Service Area | Maximum Allowable Impact Fee Per Service Unit |
|---|---|
| Water | $7,308 |
| Wastewater | $9,250 |
| **Sub-Total** | **$16,558** |
| SSLGC Water Supply Impact Fee | $354 |
| **Total Maximum Allowable Impact Fee** | **$16,912** |

# CITY OF SAN MARCOS - 2018

***Table 8.***
***Derivation of Alternative Maximum Water and Wastewater Impact Fee Amounts***

| Item | Capital Cost of New Service per LUE | Optional Adjustments | | Option A | Option B | Highest of Option A or B |
|---|---|---|---|---|---|---|
| | | Option A Rate Credit | Option B 50% Cost Adjustment | | | |
| **WATER** | | | | | | |
| Supply | $ 2,495 | $ 208 | $ 1,247 | $ 2,287 | $ 1,247 | |
| Treatment | 609 | 10 | 305 | 599 | 305 | |
| Pumping | 128 | 18 | 64 | 110 | 64 | |
| Ground Storage | 298 | 1 | 149 | 297 | 149 | |
| Elevated Storage | 163 | 8 | 82 | 155 | 82 | |
| Transmission | 455 | 113 | 228 | 342 | 228 | |
| Allocated Impact Fee Study Cost | 10 | | | 10 | 10 | |
| Total Water | $4,159 | $358 | $2,074 | $3,801 | $2,085 | **$3,801** |
| **WASTEWATER** | | | | | | |
| Treatment | $ 1,470 | $ 86 | $ 735 | $ 1,385 | $ 735 | |
| Pumping | 705 | 78 | 352 | 627 | 352 | |
| Interceptors | 774 | 112 | 387 | 662 | 387 | |
| Allocated Impact Fee Study Cost | 10 | | | 10 | 10 | |
| Total Wastewater | $2,960 | $276 | $1,475 | $2,684 | $1,485 | **$2,684** |
| **TOTAL WATER/WASTEWATER** | $7,119 | $634 | $3,549 | $6,485 | $3,570 | **$6,485** |

The fee methodology was replicated for each major facility type in the utility system (e.g., supply, treatment, pumping, elevated storage, ground storage, and transmission) so that the total fee amount is the sum of the component facility fees. This provides a basis for extending the fee to wholesale customers of the City or granting fee offsets if a developer cost-participates with the City on CIP projects.

For comparison purposes, the current impact fees of other near-by cities are listed in Table 9.

# CITY OF AUSTIN - 2023

# I. INTRODUCTION

Austin Water (AW) has developed this periodic impact fee update in close collaboration with the Austin City Council appointed Impact Fee Advisory Committee (IFAC) and other City of Austin (City) departments in accordance with state law. This required 5-year update takes a fresh look at Land Use Assumptions (LUA) and the impact fee Capital Improvement Plan (CIP) that will serve new development in the next 10 years. The basic requirements for determining the costs "Necessitated by and attributed to" new development are prescribed in the Impact Fee Act, Section 395.016 of the Texas Local Government Code. These requirements state that facility capacity that will be used by new growth and its cost are determined by first projecting the demand on the system (the LUA), and then deriving the facility plan for serving that demand (the CIP). The end-products are the maximum allowable impact fees for water and wastewater, which reflect the calculated cost of serving new growth that is not recouped in new customer rate payments. The law also sets the terms of fee assessment for a given tract of land.

The actual fees collected, up to the maximum allowable fee, are the purview of the Austin City Council. AW is proposing new collected fees for consideration via the public hearing mandated by the impact fee regulations. These proposed fees are presented in Section III. Subsequent to the hearing, Austin City Council will consider enacting an ordinance adopting new fees and, if approved, that ordinance will be appended to this document.

As detailed in the LUA section of this report, Austin continues to be one of the fastest growing cities in the country, with the projected 10-year growth estimated to be approximately 88,000 service units, in an impact fee service area that has not changed significantly from the 2018 update.

As detailed in the CIP section of this report, Austin's investments in infrastructure necessitated by and attributed to growth are planned to exceed $678M for water and $524M for wastewater, a combined increase of 24% over the 2018 10-year capital improvements program plan, which includes a notable investment in new wastewater treatment plant capacity.

An additional factor in calculating the new maximum allowable fees is a credit for growth project revenues AW is projected to collect from projected 10-year growth customers for receiving water and wastewater services, which, within the context of impact fees, may be referred to as a rate revenue credit. To avoid double charging new customers, the law requires that monies paid by new users toward the growth projects in the form of rates be subtracted from the 10-year growth project costs. Similar to the previous update in 2018, the rate revenue credit amount is calculated for Austin-specific conditions resulting in a credit of approximately 41% and is detailed in the CIP document.

The final maximum allowable fee for a single service unit was calculated to be $4,882 for water and $2,969 for wastewater.

## II. ASSESSED FEES

The Impact Fee Act provides what is called fee assessment in order to set the timing for establishing fees for a given tract of land. It states that impact fees must be assessed on all property no later than the time of subdivision (with certain exceptions where development occurs without the need for subdivision). Accordingly, the assessed fees for a particular lot are those in effect at the time of subdivision recordation. After 1990 the impact fee update reports and ordinances included the assessed fee separate from the maximum allowable and collected fees. The assessed fee remained constant until the 2007 update. Since then, the assessed fee is deemed to be the maximum allowable amount, thereby keeping open the option of setting collected fees up to the maximum allowable fee in effect at the time a subdivision plat is recorded.

## III. COLLECTED FEES

After the required public hearing and Austin City Council's adoption of the LUA and CIP periodic update, Council considers the adoption of the ordinance that sets the impact fees to be assessed and collected at the time of tap sale for water meter purchase and/or wastewater service. The collected fees are generally referred to as Austin's water and wastewater impact fees. Historically, the collected amounts have been set by ordinance at amounts lower than the maximum allowable fees. The collected fees are proposed to be $4,800 for water and $2,900 for wastewater.

# SAWS - 2024

March 18, 2024

TO INTERESTED PARTIES:

Texas Local Government Code Chapter 395 necessitates the updating of the San Antonio Water System (SAWS) impact fees by June 2024. The Capital Improvements Advisory Committee (CIAC), SAWS staff, and consultant Carollo Engineers began the update process for all water and wastewater impact fees in July 2023, and the CIAC finalized its recommendations in a findings report on January 31, 2024. The findings report and all other CIAC meeting documents are available at: www.saws.org/CIAC .

The update involves a projection of increased demand and resulting increased capacity in the water and wastewater systems for the next ten-year planning period. The costs associated with the capacity necessary to serve the projected growth determine the impact fee rate. The CIAC recommended impact fees are show below.

SUMMARY OF RECOMMENDED IMPACT FEES

| Impact Fee Component | Impact Fee ($/EDU) | | Fee Change | |
|---|---|---|---|---|
| | Current | Recommended | $ | % |
| **Water Supply** | $ 2,706 | $ 2,592 | $ (114) | -4% |
| **Water Flow** | $ 1,188 | $ 1,368 | $ 180 | 15% |
| **Water System Development** | | | | |
| High Elevation | $ 1,203 | $ 2,027 | $ 824 | 68% |
| Middle Elevation | $ 1,014 | $ 1,744 | $ 730 | 72% |
| Low Elevation | $ 855 | $ 1,510 | $ 655 | 77% |
| **Wastewater Treatment** | | | | |
| Medio Creek | $ 1,222 | $ 1,527 | $ 305 | 25% |
| Clouse / Leon Creek | $ 651 | $ 1,105 | $ 454 | 70% |
| **Wastewater Collection** | | | | |
| Medio Creek | $ 861 | $ 1,836 | $ 976 | 113% |
| Upper Medina | $ 1,422 | $ 1,702 | $ 280 | 20% |
| Lower Medina | $ 520 | $ 768 | $ 248 | 48% |
| Upper Collection | $ 2,800 | $ 4,436 | $ 1,636 | 58% |
| Middle Collection | $ 2,013 | $ 2,792 | $ 779 | 39% |
| Lower Collection | $ 902 | $ 1,138 | $ 236 | 26% |
| **Totals** | **$ 7,227** | **$ 8,919** | **$ 1,692** | **23%** |

The recommended impact fees were approved by the SAWS Board of Trustees on March 5, 2024. It is anticipated that the San Antonio City Council will hold a public hearing and consider adoption of the recommended impact fees on May 16, 2024. When the recommended impact fees are approved by the San Antonio City Council, they are expected to become effective on June 1, 2024.

The determination on whether current impact fees or the recommended impact fees will be charged for service to a particular property is based on the date of plat recordation. In accordance with current state law, the impact fees in effect at the time the plat is recorded are the fees that will be charged. An individual may pay current impact fees for a property prior to plat recordation under the following conditions:

- The plat has been approved by the Planning Commission,
- All impact fees are paid prior to the effective date of the new impact fees.

If you have any questions concerning the update process, please do not hesitate to contact me at tlehmann@saws.org, 210-233-3492, or Bob Johnson at bobby.johnson@saws.org, 210-233-3493.

Sincerely,

Tracey B. Lehmann, P.E.
Interim Vice President
Engineering and Construction

# CITY OF PFLUGERVILLE - 2023

# Impact Fees

Effective January 10, 2023

Reference Ordinance No. 1577-23-01-10

Listed below are the Water and Wastewater Impact Fees, the water meter deposits and the Water and Wastewater tap fees

| Meter Size | Service Units |
|---|---|
| 5/8" Displacement | 1.0 |
| 3/4" Displacement | 1.7 |
| 1" Displacement | 2.7 |
| 1 1/2" Displacement | 3.3 |
| 2" Displacement | 6.7 |
| 3" Compound | 21.3 |
| 4" Compound | 33.3 |
| 4" Combination | 46.7 |
| 6" Compound | 66.7 |
| 6" Combination | 106.7 |
| 8" Combination | 186.7 |
| 10” Combination | 293.3 |

| Service Area | Maximum Allowable Impact Fee Per Service Unit |
|---|---|
| Water | $14,713 |
| Wastewater Service Area 1 | $1,316 |
| Wastewater Service Area 2 | $15,136 |
| **Total in Wastewater Service Area 1** | **$16,029** |
| **Total in Wastewater Service Area 2** | **$29,849** |

**City of Pflugerville Water and Wastewater Tap Fees:**

| | |
|---|---|
| Water Meter Deposit | $ 125 |
| Water Tap Fee | $ 250 |
| Wastewater Tap Fee | $ 250 |

# City of Schertz

## Water Distribution Impact Fee

| Meter Size | Meter Type | LUEs Water | | |
|---|---|---|---|---|
| 5/8" | MULTI-JET | 1.0 | $ | 2,934.00 |
| 3/4" | MULTI-JET | 1.5 | $ | 4,401.00 |
| 1" | MULTI-JET | 2.5 | $ | 7,335.00 |
| 2" | ULTRASONIC | 10.0 | $ | 29,340.00 |
| 3" | ULTRASONIC | 24.0 | $ | 70,416.00 |
| 4" | ULTRASONIC | 42.0 | $ | 123,228.00 |
| 6" | ULTRASONIC | 92.0 | $ | 269,928.00 |
| 8" | ULTRASONIC | 80.0 | $ | 234,720.00 |
| 10" | ULTRASONIC | 250.0 | $ | 733,500.00 |
| 12" | ULTRASONIC | 330.0 | $ | 968,220.00 |

**SEWER COLLECTION IMPACT FEE**

| | | |
|---|---|---|
| *Collection Impact Fee Per Living Unit Equivalent (LUE) | $ | 1,668.00 |

*Sewer based on LUE: LUE = 245 gallons per day
These are only City of Schertz impact fees.

Current January 2025