



"City of Choice"

Planning and Zoning Commission

6:30pm - 9:30pm

Wednesday, November 13, 2024, 6:30 PM

Est. Duration: 1 hr 25 min

200 S. Main St.
Cibolo, Texas 78108

1. Call to Order

2. Roll call and Excused Absences

3. Invocation/Moment of Silence

4. Pledge of Allegiance

5. Public Hearings

5A. Conduct a public hearing regarding a Conditional Use Permit request to allow a Manufactured Home Residential use for certain real property located at 2090 Pfannstiel Lane, legally described as ABS: 272 SUR: JOSE ROSA 8.6500 AC and ABS: 272 SUR: JOSE ROSA 1.5000 AC.

5B. Conduct a public hearing regarding a request to change zoning from Office/Retail (C-3) to Estate Residential (SF-1) for certain real property located at 210 Tolle Road and 633 Tolle Road, legally described as ABS: 210 SUR: JERONIMO LEAL 9.0000 AC, ABS: 210 SUR: JERONIMO LEAL 0.5000 AC, and ABS: 210 SUR: JERONIMO LEAL 0.5000 AC.

6. Citizens to be Heard

This is the only time during the Meeting that a citizen can address the Commission. It is the opportunity for visitors and guests to address the Commission on any issue to include agenda items. All visitors wishing to speak must fill out the Sign-In Roster prior to the start of the meeting. The Commission may not deliberate any non-agenda issue, nor may any action be taken on any non-agenda issue at this time; however, the Commission may present any factual response to items brought up by citizens. (Attorney General Opinion - JC-0169) (Limit of three minutes each.) All remarks shall be addressed to the Commission as a body. Remarks may also be addressed to any individual member of the Commission so long as the remarks are (i) about matters of local public concern and (ii) not disruptive to the meeting or threatening to the member or any attendee including City staff. Any person violating this policy may be requested to leave the meeting, but no person may be requested to leave or forced to leave the meeting because of the viewpoint expressed. This meeting is livestreamed. If anyone would like to make comments on any matter regarding the City of Cibolo or on an agenda item and have this item read at this meeting, please email citysecretary@cibolotx.gov or telephone 210-566-6111 before 5:00 pm the date of the meeting.

7. Consent Agenda

(All items listed below are considered to be routine and non-controversial by the commission and will be approved by one motion. There will be no separate discussion of these items unless a commission member requests, in which case the item will be removed from the consent agenda.)

7A. Approval of the minutes from the October 9, 2024, meeting.

8. Discussion/Action Items

8A. Discussion/Action regarding the Final Plat of Buffalo Crossing II Knights Crossing Phase 2 subdivision.

8B. Discussion/Action regarding the Preliminary Plat of Cibolo Farms Unit 3 subdivision.

8C. Discussion/Action regarding a proposed Land Study of the Schryver Tract subdivision.

8D. Discussion/Action regarding a proposed Land Study of the Neill Tract Subdivision.

8E. Discussion/Action regarding a proposed amendment to the Land Study of the Steele Creek subdivision.

8F. Discussion/Action regarding a Conditional Use Permit request to allow a Manufactured Home Residential use for certain real property located at 2090 Pfannstiel Lane, legally described as ABS: 272 SUR: JOSE ROSA 8.6500 AC and ABS: 272 SUR: JOSE ROSA 1.5000 AC.

8G. Discussion/Action regarding a request to change zoning from Office/Retail (C-3) to Estate Residential (SF-1) for certain real property located at 210 Tolle Road and 633 Tolle Road, legally described as ABS: 210 SUR: JERONIMO LEAL 9.0000 AC, ABS: 210 SUR: JERONIMO LEAL 0.5000 AC, and ABS: 210 SUR: JERONIMO LEAL 0.5000 AC.

9. UDC, CIP, Master Plan and Staff Updates

9A. Staff Update

10. Subcommittee Updates

11. Items for future agendas

12. Adjournment

This Notice of Meeting is posted and pursuant to the Texas Government Code 551.041 - .043 on the front bulletin board of the Cibolo Municipal Building, 200 South Main Street, Cibolo, Texas which is a place readily accessible to the public at all times and that said notice was posted on



Peggy Cimics, TRMC

City Secretary

Pursuant to Section 551.071, 551.072, 551.073, 551.074, 551.076, 551.077, 551.084 and 551.087 of the Texas Government Code, the City of Cibolo reserves the right to consult in closed session with the City Attorney regarding any item listed on this agenda. This agenda has been approved by the city's legal counsel and subject in any Executive Session portion of the agenda constitutes a written interpretation of Texas Government Code Chapter 551. This has been added to the agenda with the intent to meet all elements necessary to satisfy Texas Government Code Chapter 551.144.

A possible quorum of committees, commissions, boards and corporations may attend this meeting.

This facility is wheelchair accessible and accessible parking space is available. Request for accommodation or interpretive services must be made 48 hours prior to the meeting. Please contact the City Secretary at (210) 566-6111. All cell phones must be turned off before entering the meeting.

I certify that the attached notice and agenda of items to be considered by the Planning and Zoning Commission was removed by me from the City Hall bulletin board on the ____day of _____2024.

Name and Title

Date Posted: November 8, 2024



Planning and Zoning Commission Staff Report

A. Conduct a public hearing regarding a Conditional Use Permit request to allow a Manufactured Home Residential use for certain real property located at 2090 Pfannstiel Lane, legally described as ABS: 272 SUR: JOSE ROSA 8.6500 AC and ABS: 272 SUR: JOSE ROSA 1.5000 AC.

| Meeting | Agenda Group |
|---------------------------------------|---------------------------|
| Wednesday, November 13, 2024, 6:30 PM | Public Hearings Item: 5A. |
| From | |
| Lindsey Walker, Planner I | |
| Staff Contact(s) | |
| Lindsey Walker, | |

PLANNING & ZONING COMMISSION ACTION: Conduct 1st Public Hearing Discussion/Action and Recommendation regarding the above referenced petition

PROPERTY INFORMATION:

Project Name: CUP-24-09
 Owners: John Spillers
 Representative: John Spillers
 Location/Area: 2090 Pfannstiel Lane, 10.15 acres
 Location: North of Lower Seguin Road
 Council District: 7
 Future Land Use: Rural Residential/Agriculture
 Existing Zoning: Agricultural (AG)
 Requested Zoning: Conditional Use Permit (CUP)
 Proposed Use: Manufactured Home Residential

FINDINGS:

A zoning request is specifically about land use, not the future engineering of the land itself, and should meet criteria per UDC Article 4.3.1.5. Decisions regarding future engineering of the land occur with the platting process, where the property’s design is known. The applicant lot is located on Pfannstiel Lane, north of Lower Seguin Road. The property is within the Agriculture (AG) zoning district, with 95 acres of farmland surrounding the applicant property. The remaining nearby properties are within the ETJ. The requesting property is separated into two parcels totaling 10.15 acres. 1.5 acres is called out by the Guadalupe County for the homestead, and is where the existing historic home is situated. The remaining 8.65 acres contains other structures, including a tool shed, garage, and chicken coop.

Staff met with the applicant on August 20, 2024, to discuss the conversion of the existing home into an uninhabitable shed, while doing necessary repairs to preserve the structure for historic purposes. The City Building Official, Matt Hanson, inspected the property on August 26, 2024, and found that the home met the requirements for a dwelling unit. However, the applicant stated in their narrative that the stove has since been removed and is willing to sign an affidavit stating the building would not longer be used as a dwelling unit. The applicant is requesting a Conditional Use Permit for a manufactured home, which would be the new primary dwelling unit.

PUBLIC NOTICE:

Notice was published within the local newspaper (Seguin Gazette) on October 27, 2024, and the [City Website](#). Individual letters were sent by mail to 3 property owners within 200' of the site. To date, Staff has received two (2) in favor of and zero (0) in opposition. Public Hearings were scheduled on November 13, 2024 (Planning & Zoning Commission), and on December 10, 2024 (City Council). Approval/Disapproval of the zoning ordinance is tentatively scheduled for the January 14, 2025, City Council meeting.

STAFF CONCLUSIONS:

Staff recommends, should Council approve the CUP for Manufactured Home Residential use for property located at 2090 Pfannstiel, that it be subject to the following conditions:

1. Building & Fire Codes – Applicant must comply with all Building and Fire Code requirements.
2. Permits & Inspections – All required building permits and Certificate of Occupancy must be obtained. All permit applications submitted for this property are subject to the requirements of the Code.
3. Additional Uses – No other conditional uses are allowed under this conditional use permit.
4. Recordation of Plat – A subdivision plat must be submitted for review and approval with the City of Cibola and recorded upon completion.
5. AG Regulations – All regulations of the Agriculture Zoning District, other than those amended by the Conditional Use Permit, apply to the Property.
6. Affidavit from Owners – A signed affidavit from the property owner stating that the existing structure will not be used as a dwelling unit.

PLANNING & ZONING COMMISSION ACTION:

1. Recommend **Approval** to the Mayor and Council of the requested CUP for a Manufactured Home Residential use for property located at 2090 Pfannstiel Lane, legally described as ABS: 272 SUR: JOSE ROSA 8.6500 AC and ABS: 272 SUR: JOSE ROSA 1.5000 AC.
2. Recommend **Approval** to the Mayor and Council of the requested CUP for a Manufactured Home Residential use for property located at 2090 Pfannstiel Lane, legally described as ABS: 272 SUR: JOSE ROSA 8.6500 AC and ABS: 272 SUR: JOSE ROSA 1.5000 AC, *with conditions*.
3. Recommend **Denial** to the Mayor and Council the requested CUP for a Manufactured Home Residential use, *with findings*.

STAFF ANALYSIS:

Unified Development Code (UDC) Section 4.3.2 – Conditional Use Permit Approval Considerations

A CUP is intended to provide some flexibility to traditional zoning by offering a mechanism to balance specific site constraints and development plans with the larger interest of the community and the integrity of the UDC. An application for a CUP follows the same process as a Zoning Map Amendment Process (rezoning). The Permit, if granted, may include conditions placed upon the development of the property. The Planning & Zoning Commission and City Council shall consider the following, at a minimum, in conjunction with its deliberations for approval or denial of the application and the establishment of conditions: (*for reference, [UDC](#) and [Comprehensive/Master Plan](#)*)

A. Consistency with the Comprehensive Master Plan;

PlaceType: Rural Residential/Agriculture (pg. 39)

Character and Intent: Rural Residential/ Agricultural is intended for areas within the City which will maintain a rural character during the plan horizon and beyond. These areas are comprised of natural undeveloped space, agriculture, and large lots with large lot minimums.

Land Use Considerations:

- Primary Land Uses: Single-Family Detached Homes, Agricultural, Parks and Open Space

- Secondary Land Uses: Civic and Institutional, Agricultural Business
- Indicators and Assumptions: Lot size (range) more than 2 acres

Example Locations:

- Large tracts of undeveloped land between FM 78 & IH-10, Borgfeld property on Cibolo Valley Drive

STAFF FINDING: The request is consistent with the Comprehensive Master Plan. With the planned conversion of the existing structure to storage use, the placement of a new single-family detached home will align with the Land Use Considerations. The land will maintain its rural character as the owners continue to live on and work the land surrounding the homestead.

B. Conformance with applicable regulation in this UDC and standards established by the UDC;

STAFF FINDING: The Zoning Map Amendment will promote the health, safety, or general welfare of the City and the safe and orderly development of the City as it complies with the intent of the Comprehensive Master Plan and all applicable standards in the UDC.

C. Compatibility with existing or permitted uses on abutting sites, in terms of building height, bulk, scale, setbacks and open spaces, landscaping and site development, and access/circulation.

UDC Section 14.20 Agricultural

Intent – The Agricultural district is intended to serve as an initial temporary zoning designation for newly annexed properties into the City and as a permanent zoning designation for those rural properties of the City that are ideally suited for agricultural purposes. Since single-family residences are permitted in this district, this district is considered to be a very low-density residential district. Such acreage contributes to the rural to semi-rural setting of the City and is protected from incompatible uses.

| Lot Area | Lot Width | Front Setback | Rear Setback | Side Setback | Max Impervious Coverage | Maximum Height |
|----------|-----------|---------------|--------------|--------------|-------------------------|----------------|
| None | None | 35' | 10' | 10' | 35% | 35' |

STAFF FINDING: The UDC provides lot design guidelines within the Agriculture Zoning District that are designed in scale for compatibility with surrounding rural area.

D. Potential unfavorable impacts on existing or permitted uses on abutting sites, the extent that such impacts exceed those which reasonably may result from use of the site by a permitted use;

UDC Section 13.1 Uses allowed by right and with a Conditional Use Permit (CUP).

| AG uses allowed by right | AG allowed with CUP |
|---|---|
| Accessory Living Quarters | Manufactured Home Residential |
| Accessory Residential Units, Residential District | Campground |
| Greenhouse | Cemetery |
| Home Occupation* | Aviation Facilities |
| Manufactured Modular Housing | Day Care Services (Family)* |
| Single-family Residential | Day Care Services (Group)* |
| Kennel/Breeder | Day Care Services (General Commercial)* |
| Community Recreation | Concrete/Asphalt Batching Plant (Temporary) |

| | |
|----------------------------------|--|
| Life Care Services* | |
| Park and Recreation Services | |
| Local Utility Services | |
| Safety Services | |
| Secondary Educational Facilities | |

*Subject to supplemental use regulations of UDC Article 6.

STAFF FINDING: The proposed use is suitable for the zoning district and the surrounding rural area provided the CUP is approved.

E. Modifications to the site plan which would result in increased compatibility or would mitigate potentially unfavorable impacts or would be necessary to conform to applicable regulations and standards and to protect the public health, safety, morals and general welfare.

STAFF FINDING: The manufactured home as a "replacement" primary structure conforms with all applicable regulations as well as the intent of the Comprehensive Master Plan.

F. Safety and convenience of vehicular and pedestrian circulation in the vicinity, including traffic reasonably expected to be generated by the proposed use.

STAFF FINDING: Staff do not foresee major impacts to traffic as a result of granting the CUP. No additional traffic would be generated as the primary single-family dwelling unit is essentially being replaced.



Planning and Zoning Commission Staff Report

B. Conduct a public hearing regarding a request to change zoning from Office/Retail (C-3) to Estate Residential (SF-1) for certain real property located at 210 Tolle Road and 633 Tolle Road, legally described as ABS: 210 SUR: JERONIMO LEAL 9.0000 AC, ABS: 210 SUR: JERONIMO LEAL 0.5000 AC, and ABS: 210 SUR: JERONIMO LEAL 0.5000 AC.

| Meeting | Agenda Group |
|---------------------------------------|---------------------------|
| Wednesday, November 13, 2024, 6:30 PM | Public Hearings Item: 5B. |
| From | |
| Lindsey Walker, Planner I | |
| Staff Contact(s) | |
| Lindsey Walker, | |

PLANNING & ZONING COMMISSION ACTION: Conduct 1st Public Hearing Discussion/Action and Recommendation regarding the above referenced petition

PROPERTY INFORMATION:

Project Name: ZC-24-01
 Owners: Steven Krueger
 Representative: Steven Krueger
 Location/Area: 210 & 633 Tolle Road, 10 acres
 Location: North of the Tolle Road and Cibolo Tolle Road intersection
 Council District: 7
[Future Land Use:](#) Estate Residential
 Existing [Zoning:](#) Office/Retail (C-3)
 Requested Zoning: Estate Residential (SF-1)
 Proposed Use: Residential

FINDINGS:

A zoning request is specifically about land use, not the future engineering of the land itself, and should meet criteria per [UDC Article 4.3.1.5](#). Decisions regarding future engineering of the land occur with the platting process, where the property's design is known. 210 and 633 Tolle Road is a ten-acre property divided into three parcels, where two homesteads each sit on half-acre parcels. The property is currently zoned Office/Retail (C-3). North of the property are residentially used lots that are also within the C-3 zoning district. Steele High School, zoned PF-I, is located to the west of the applicant property. Directly south of the property is the Cibolo Tolle Residential Subdivision, which is within the Manufactured Home Residential (MH-1) zoning district. Across Tolle Road to the east is Cibolo's ETJ, notable uses include homesteads and a GVEC electrical station. After speaking with the City Manager, the applicant is requesting to change their zoning to the Estate Residential (SF-1) zoning district to align with the newly adopted Comprehensive Master Plan. In their narrative, the applicant mentioned that the property lost its agricultural tax exemption due to the commercial zoning. It is important to note, however, that the Guadalupe County Appraisal District considers only the use of the property, not the City's zoning classification, when appraising. Therefore, any change in zoning would have no bearing on how the property is taxed.

PUBLIC NOTICE:

Notice was published within the local newspaper (Seguin Gazette) on October 27, 2024, and the City Website. Individual letters were sent by mail to 18 property owners within 200' of the site. To date, Staff has received zero (0) in favor of and zero (0) in opposition. Public Hearings were scheduled on November 13, 2024 (Planning & Zoning Commission), and on December 10, 2024 (City Council). Approval/Disapproval of the zoning ordinance is tentatively scheduled for the January 14, 2025, City Council meeting.

PLANNING & ZONING COMMISSION ACTION:

1. Recommend **Approval** to the Mayor and Council of the requested rezone of 10 acres of property located at 210 Tolle Road and 633 Tolle Road, legally described as ABS: 210 SUR: JERONIMO LEAL 9.0000 AC, ABS: 210 SUR: JERONIMO LEAL 0.5000 AC, and ABS: 210 SUR: JERONIMO LEAL 0.5000 AC, from Office/Retail (C-3) to Estate Residential (SF-1).
2. Recommend **Denial** to the Mayor and Council of the requested rezone, *with findings*.

STAFF ANALYSIS:

Unified Development Code (UDC) Section 4.3.1.5 – Zoning Map Amendment Process Approval Criteria

In determining whether to approve, approve with modifications, or disapprove a proposed amendment, the Planning & Zoning and City Council shall consider the following: (*for reference, [UDC](#) and [Comprehensive/Master Plan](#)*)

- A. The application is complete, and the information contained within the application is sufficient and correct enough to allow adequate review and final action;**

UDC Section 4.3.1.1 (Submittal Requirements) of the UDC states “an application for Zoning Map Amendment shall be deemed complete when the applicant or agent has provided on or before the application submittal date prescribed by the City Planner or designee”:

- a. A letter or application form, signed by the property owner(s), stating the current and requested zoning classifications;
- b. A letter or application form, signed by the property owner(s), stating the current and requested zoning classifications;
- c. A copy of the current deed, indicating ownership and authority to file the application;
- d. A legal description of the property, whether by Lot and Block, or by metes and bounds;
- e. The full required fee for processing the application; and
- f. A list of property owners within two hundred (200) feet of the property for which the change in district boundary is proposed.

STAFF FINDING: A complete application was accepted by staff on October 16, 2024. This criteria has been satisfied.

- B. The Zoning Map Amendment is consistent with the City’s adopted Comprehensive Master Plan;**

PlaceType: Estate Residential (pg. 40)

Land Use Considerations:

- Primary Land Uses: Single-Family Detached Homes, Cluster Development, Parks and Open Space
- Secondary Land Uses: Civic and Institutional
- Indicators and Assumptions: Lot size (range) 1/2 to 2 acres

Example Locations:

- Single-Family Detached Homes: Persimmon Drive (south of Green Valley Road)
- Cluster Development: Spring Mesa in Arvada, CO

STAFF FINDING: The Amendment is consistent with the 2024 Comprehensive Master Plan. The Estate Residential (SF-1) zoning district is a low density residential district meant for single-family residences on lots that are a minimum of one acre.

It is important to note the difference between "Estate Residential" as a zoning district and "Estate Residential" as a PlaceType. While they share the same name, the PlaceType offers a broader range for land use, encompassing characteristics of the lower density zoning districts, such as SF-1, SF-2, and in some cases, AG. The homes along Persimmon Drive referenced in the example locations range in size from half-acre lots to over an acre. In contrast, only the properties an acre or more in size would fit the description of the Estate Residential zoning district, or SF-1, as shown below in item D. In short, the SF-1 zoning district aligns with the characteristics of the Estate Residential PlaceType, but the PlaceType is not limited in its application to only the SF-1 zoning district.

C. The Zoning Map Amendment promotes the health, safety, or general welfare of the city and the safe and orderly development of the City;

PlaceType: Estate Residential (pg. 40)

Character and Intent: Predominantly single-family housing on large lots located throughout the community. Residential uses are oriented with the front of the home facing the street and typically in a subdivision layout with access to some utilities. These kinds of lots may include farm and livestock uses. Cluster development, which involves the conservation of shared open space, natural areas, and scenic views, in exchange for smaller lot sizes, may be an alternative approach in certain circumstances.

STAFF FINDING: The applicant property is currently located in a predominantly residential area. The change in zoning would only fit the current use of the property. The request for the SF-1 zoning district also aligns with the character and intent of the Estate Residential PlaceType. Therefore, Zoning Map Amendment will promote the health, safety, or general welfare of the city and the safe and orderly development of the City.

D. The Zoning Map Amendment is compatible with the present zoning and conforming uses of nearby property and the character of the neighborhood; and

UDC Section 14.2.O.1 Estate Residential

- a. Intent - This district is established for large-lot single-family residential housing and agricultural use. It is consistent with a very low-density suburban/exurban environment with housing arranged in conventional detached format with a maximum density of one (1) unit per acre. These lots contribute to the semi-rural setting of the City and are protected from incompatible uses. Mobile/manufactured/ modular homes are not permitted.
- b. Permitted uses - one (1) dwelling unit per lot, community recreational facilities, and farms.
- c. Specific uses - subject to Site Plan approval, places of worship, schools, and private recreational amenities.

| Lot Area | Lot Width | Front Setback | Rear Setback | Side Setback | Max Impervious Coverage | Maximum Height |
|--------------|-----------|---------------|--------------|--------------|-------------------------|----------------|
| 43,560 sq ft | 100' | 40' | 25' | 25' | 35% | 35' |

STAFF FINDING: The existing homes are each located on half-acre parcels within the ten-acre tract. However, the applicant's lot currently meets the Lot Design Standards for the SF-1 zoning district and is compatible with the neighboring residential uses and zoning of surrounding properties.

E. The property to be rezoned is suitable for uses permitted by the district that would be applied by the proposed amendment.

UDC Section 13.1 Residential Uses allowed by right and with a Conditional Use Permit (CUP).

| | |
|-----------------------------------|------------------------------|
| SF-1 uses allowed by right | SF-1 allowed with CUP |
|-----------------------------------|------------------------------|

| | |
|---|---|
| Accessory Living Quarters | Kennel/Breeder |
| Accessory Residential Units, Residential District | Day Care Services (Family)* |
| Greenhouse | Day Care Services (Group)* |
| Home Occupation* | Day Care Services (General Commercial)* |
| Manufactured Modular Housing | Life Care Services* |
| Single-family Residential | Nursery School* |
| Assembly | Concrete/Asphalt Batching Plant (Temporary) |
| Community Recreation | |
| Local Utility Services | |
| Park and Recreation Services | |
| Primary Educational Facilities | |
| Safety Services | |
| Secondary Educational Facilities | |

*Subject to supplemental use regulations of UDC Article 6.

STAFF FINDING: The applicant property is suitable for the current and any future uses permitted within the SF-1 zoning district.



Planning and Zoning Commission Staff Report

A. Approval of the minutes from the October 9, 2024, meeting.

| Meeting | Agenda Group |
|---------------------------------------|--------------------------|
| Wednesday, November 13, 2024, 6:30 PM | Consent Agenda Item: 7A. |
| From | |
| Peggy Cimics, City Secretary | |

PRIOR CITY COUNCIL ACTION:

N/A

BACKGROUND:

N/A

STAFF RECOMMENDATION:

N/A

FINANCIAL IMPACT:

N/A

MOTION(S):

N/A

Attachments

[100924 PZ Minutes.pdf](#)



**PLANNING AND ZONING MEETING
CIBOLO MUNICIPAL BUILDING
200 S. Main Street
October 9, 2024
6:30 PM - 9:30 PM**

MINUTES

1. **Call to Order** – Meeting was called to order by the Chairman Ms. Greve at 6:31p.m.
2. **Roll call and Excused Absences** – Members Present: Ms. Greve, Ms. Dodd, Ms. Garcia, Ms. Fishback, Mr. Thompson, Ms. Beaver, Mr. Hines, and Ms. Hubbard. Member absent: Ms. Weimer. Ms. Fishback made the motion to excuse the absence of Ms. Weimer. Motion was seconded by Mr. Thompson. For: All; Against: None. Motion carried 7 to 0.
3. **Invocation/Moment of Silence** – Mr. Hinze gave the Invocation.
4. **Pledge of Allegiance** – All in attendance recited the Pledge of Allegiance.
5. **Public Hearing**
 - A, Conduct a public hearing regarding a Conditional Use Permit (CUP) request to allow an Accessory Living Quarters use in a Manufactured Home District (MH-1) for certain real property located at 432 Tolle Road, legally described as RABY ESTATES LOT 1, 1.93 AC.

Ms. Greve opened the public hearing at 6:37 p.m. Natalia Padilla spoke on behalf of her father who is the owner of the property explaining that the structure was believed to be grandfathered in since it was already on the property before it was in the City limits and would not need to pull any permits from the City. Ms. Greve closed the public hearing at 6:39 p.m.
 - B. Conduct a public hearing regarding a Comprehensive Sign Program application for certain real property located at 112 Rodeo Way, legally described as CIBOLO VALLEY RANCH #1 BLOCK 6, LOT 62R, 0.59 AC.

Ms. Greve opened the public hearing at 6:49 p.m. Larry Gottsman explained the reasoning behind the Comprehensive Sign Program application. Ms. Greve closed the public hearing at 6:51 p.m.
 - C. Conduct a public hearing regarding a Conditional Use Permit (CUP) request to allow Local Convenience Store with Fuel Sales (larger than 5,000 square feet) use in a General Commercial District (C-4) for certain real property located at 12880 IH-10, legally described as ABS: 134 SUR: JOSE FLORES 11.26 AC.

Ms. Greve opened the public hearing at 7:33 p.m. Ray Joy Pfannstiel spoke to the Commission about his concerns about having another truck stop on IH 10 and the traffic on Zuel Rd. He expressed concern with the business interrupting the safety of the homes adjacent to the

property and worried that the truck stop would end up being closed shortly after opening due to the construction on IH 10. Ms. Greve closed the public hearing at 7:37 p.m.

6. **Citizens to be Heard**

This is the only time during the Meeting that a citizen can address the Commission. It is the opportunity for visitors and guests to address the Commission on any issue to include agenda items. All visitors wishing to speak must fill out the Sign-In Roster prior to the start of the meeting. The Commission may not debate any non-agenda issue, nor may any action be taken on any non-agenda issue at this time; however, the Commission may present any factual response to items brought up by citizens. (Attorney General Opinion - JC-0169) (Limit of three minutes each.) All remarks shall be addressed to the Commission as a body. Remarks may also be addressed to any individual member of the Commission so long as the remarks are (i) about matters of local public concern and (ii) not disruptive to the meeting or threatening to the member or any attendee. Any person violating this policy may be requested to leave the meeting, but no person may be requested to leave or forced to leave the meeting because of the viewpoint expressed. **This meeting is livestreamed. If anyone would like to make comments on any matter regarding the City of Cibolo or on an agenda item and have this item read at this meeting, please email pcimics@cibolotx.gov or telephone 210-566-6111 before 5:00 pm the date of the meeting.**

No citizens signed up to be heard.

7. **Consent Agenda**

(All items below are considered to be routine and non-controversial by the commission and will be approved by one motion. There will be no separate discussion of these items unless a commission member requests, in which case the item will be removed from the consent agenda.)

- A. Approval of the minutes from the September 11, 2024, Planning & Zoning Commission Meeting.

Ms. Greve made a motion to approve the minutes with the corrections of the absence noted being changed from Ms. Beaver to Ms. Dodd and the lettering under item 7 being corrected from A, B, B to A, B, C. Motion was seconded by Ms. Garcia. For: All; Against: None. Motion passed 7 to 0.

8. **Discussion/Action Items**

- A. Discussion/Action regarding the Final Plat of Homestead Cibolo Unit 1 Subdivision.

Mr. Hinze made a motion to deny the plat as laid out by staff's comments. Mr. Thompson seconded the motion. For: All; Against: None. Motion passed 7 to 0.

- B. Discussion/Action regarding the Final Plat of Homestead Cibolo Unit 2 Subdivision.

Mr. Hinze made a motion to deny the plat until staff's outstanding comments are addressed. Mr. Thompson seconded the motion. For: All; Against: None. Motion passed 7 to 0.

- C. Discussion/Action regarding a Conditional Use Permit (CUP) request to allow an Accessory Living Quarters use in a Manufactured Home District (MH-1) for certain real property located at 432 Tolle Road, legally described as RABY ESTATES LOT 1, 1.93 AC.

Ms. Garcia made a motion to approve the CUP with staff and Council's conditions being met. Mr. Thompson seconded the motion. For: All; Against: None. Motion passed 7 to 0.

- D. Discussion/Action regarding a Comprehensive Sign Program application for certain real property located at 112 Rodeo Way, legally described as CIBOLO VALLEY RANCH #1 BLOCK 6, LOT 62R, 0.59 AC.

Ms. Beaver made the motion to approve the Comprehensive Sign Program application omitting sign A which is the sign that faces Rodeo Way. The motion was seconded by Ms. Garcia. A Roll Call vote was taken: Hines-Aye, Dodd-Nay, Garcia-Aye, Greves-Aye, Fishback-Nay, Thompson-Aye, and Beaver-Aye. The motion passed 5-2.

- E. Discussion/Action regarding a Conditional Use Permit (CUP) request to allow Local Convenience Store with Fuel Sales (larger than 5,000 square feet) use in a General Commercial District (C-4) for certain real property located at 12880 IH-10 legally described as ABS: 134 SUR: JOSE FLORES 11,26 AC.

Ms. Greve made a motion to approve the CUP. Ms. Garcia seconded the motion. For: All; Against: None. Motion passed 7 to 0.

- F. Discussion/Action regarding the creation of a P&Z training subcommittee.

Ms. Beaver made a motion to nominate Mr. Hinze to seat one on the P&Z training subcommittee. Ms. Dodd seconded the motion. For: All; Against: None. Motion passed 7 to 0. Ms. Garcia made a motion to nominate Ms. Fishback to seat two on the P&Z training subcommittee. Ms. Beaver seconded the motion. For: All; Against: None. Motion passed 7 to 0.

Mr. Hinze made a motion to nominate Mr. Thompson to seat three on the P&Z training subcommittee. Ms. Fishback seconded the motion. For: All; Against: None. Motion passed 7 to 0.

9. **UDC, CIP, Master Plan and Staff Updates**

10. **Items for Future Agendas**

11. **Adjournment** – Ms. Greve made a motion to adjourn the meeting. Ms. Fishback seconded the motion. All: For; Against: None. Motion carried 7 to 0.

PASSED AND APPROVED THIS 13TH DAY OF NOVEMBER 2024.

Jennifer Greve
Chairman
Planning & Zoning Commission



Planning and Zoning Commission Staff Report

A. Discussion/Action regarding the Final Plat of Buffalo Crossing II Knights Crossing Phase 2 subdivision.

| Meeting | Agenda Group |
|---------------------------------------|-----------------------------------|
| Wednesday, November 13, 2024, 6:30 PM | Discussion/Action Items Item: 8A. |

| From |
|------------------------|
| Grant Fore, Planner II |

Planning & Zoning Commission Action: Discussion/Action regarding the above referenced petition

PROPERTY INFORMATION:

- Project Name:** PC-24-31-FP
- Owner:** Israel Fogiel, IF Development Associates
- Representative:** Mary Stewart, KCI Technologies
- Area:** 5.71 acres
- Location:** Near Intersection of Weidner Road and Knights Crossing Road
- Council District:** 4
- Zoning (map):** Planned Unit Development (PUD)
- Proposed Use:** Two (2) Open Space lots, 925 Linear Feet of Roadway
- Utility Providers:** Water, Sewer – City of Cibolo, Electricity - GVEC

FINDINGS/CURRENT ACTIVITY:

Per Unified Development Code (UDC) Article 20.3.5 'Final Plat': The one official and authentic map of any given subdivision of land prepared from actual field measurement and staking of all identifiable points by a surveyor or engineer, with the subdivision location referenced to a survey corner, and with all boundaries, corners and curves of the land division sufficiently described so that they can be reproduced without additional references.

Knights Crossing is part of the Buffalo Crossing II subdivision. It extends from Buffalo Crossing to Weidner Road. In February of 2024, the City Council approved a Final Plat that established roughly 1,577 linear feet of roadway of Knights Crossing, beginning from Weidner Road and ending just past the intersection of Knights Crossing and Dalton Lake. Construction plans were also approved and the section of Knights Crossing from Weidner Road to Dalton Lake is currently under construction.

This Final Plat establishes an additional 925 linear feet of roadway of Knights Crossing, beginning from Dalton Lake and Knights Crossing to the intersection of Buffalo Crossing and Knights Crossing and includes two (2) open space lots. Construction plans for this segment of Knights Crossing included in this Plat were approved by the City Engineer's office and Public Works department in August of 2024. The Preliminary Plat was approved in September of 2024.

A Public Improvements Agreement (PIA) was approved in 2016, as well as a Planned Unit Development (PUD) and Land Study in 2015 for this subdivision. The Public Improvements Agreement (PIA) requires the construction of an arterial roadway (Knights Crossing) with a right-of-way width of 86' from Weidner Road to FM 1103. In 2023, negotiations took place between the developer and neighboring property owner's to acquire one-half of the ROW to meet the 86' requirement, however, negotiations were unsuccessful requiring the developer to provide sufficient ROW on their property. The developer shifted the alignment of the roadway to the West in the previously approved Final Plat to meet the 86' of ROW on their property. 86' of ROW is also achieved with this Plat.

STREETS/FUTURE THOROUGHFARE PLAN (FTPX):

Knights Crossing will connect Weidner Road to Buffalo Crossing, an existing public thoroughfare of 66' rights-of-way (ROW) collector and will serve as access to future Units 5, 6, and 7. The plat includes 86' of right-of-way along Knights Crossing required for arterial roads and 66' of right-of-way along Buffalo Crossing to connect to the existing roadway.

A Traffic Impact Analysis (TIA) was submitted and approved in 2022 for the Buffalo Crossing II Subdivision and accounts for the extension of Buffalo Crossing and construction of Knights Crossing. The City Engineer's office verified that what was submitted with this Plat complies with the previously approved traffic study.

UTILITIES:

This Plat is specific to roadway and necessary drainage infrastructure improvements. Construction plans for the roadway and associated improvements were approved in August of 2024.

DRAINAGE:

According to the applicant's drainage plan that was approved by the City Engineer, the Buffalo Crossing development proposes to utilize multiple detention ponds to be built within the development to mitigate any increase in flows in Town Creek and Town Creek East Tributary 1. This detention pond is proposed in this report to receive approximately 13 acres of interior flow and has also been designed to receive approximately 27.5 acres of flow from the existing and future Units.

STAFF RECOMMENDATION:

Staff and the City Engineer reviewed the plat and associated documents. Per the attached memo, all comments have been addressed. Therefore, Staff recommends APPROVAL of this Final Plat.

Attachments

[Application](#)

[Plat](#)

[City Engineer Letter](#)

[Property Map](#)



City of Cibolo

Planning Department
201 Loop 539 W/P.O. Box 826
Cibolo, TX 78108
Phone: (210) 658 - 9900

UNIVERSAL APPLICATION - FINAL PLAT

Please fill out this form completely, supplying all necessary information and documentation to support your request. *Please use a separate application for each submittal.* Your application will not be accepted until the application is completed and required information provided.

Project Name: Buffalo Crossing II Knight Crossing Ph2

Total Acres: 5.71 Survey Name: Trinidad Garcia Survey No. 94 Abstract No.: 137

Project Location (address): intersection of Weidner Rd. and Knights Crossing Rd.

Current Zoning: PUD Overlay: None Old Town FM 78

Proposed Zoning: PUD # of Lots: 0 # of Units: 2

Please Choose One: Single-Family Multi-Family Commercial Industrial

Other Dedication/Collector ROW

Current Use: Agriculture Total Proposed Square Footage: _____

Proposed Use: Single Family (overall development) (Commercial/Industrial only)

Applicant Information:

Property Owner Name: IF Development Associates, Inc. (Contact: Israel Fogiel)

Address: 10003 NW Military Hwy., Suite 2201 City: San Antonio

State: Texas Zip Code: 78231 Phone: 210-344-9200

Email: fogtex@aol.com Fax: _____

*Applicant (if different than Owner): _____

* Letter of Authorization required

Address: _____ City: _____

State: _____ Zip Code: _____ Phone: _____


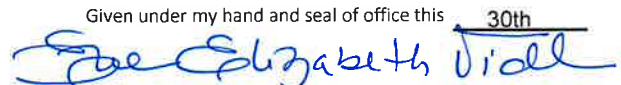
Email: _____ Fax: _____

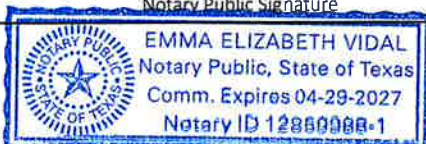
Representative: KCI Technologies (Contact: Mary Stewart)

Address: 2806 West Bitters Road, Suite 218 City: San Antonio

State: Texas Zip Code: 78248 Phone: (210) 641-9999

Email: mary.stewart@kci.com Fax: _____

| | |
|--|--|
| Authorization: By signing this application, you hereby grant Staff access to your property to perform work related to your application. | City of Cibolo Use Only Total Fees Payment Method Submittal Date Accepted by Case Number |
|  Owner or Representative's Signature <u>Israel Fogiel</u> Typed / Printed Name | |
| State of <u>Texas</u> | |
| County of <u>Bexar</u> | |
| Before me, <u>Emma Elizabeth Vidal</u> , on this day personally appeared <small>Name of Notary Public</small> | |
| <u>Israel Fogiel</u> , to be the person(s) who is/are subscribed to the <small>Name of signer(s)</small> | |
| foregoing instrument and acknowledge to me that he/she/they executed the same for the purposes and consideration therein expressed. | |
| Given under my hand and seal of office this <u>30th</u> day of <u>September, 2024</u> | |
|  Notary Public Signature | |
| (Notary Seal) | |



FINAL PLAT BUFFALO CROSSING II KNIGHTS CROSSING PH2

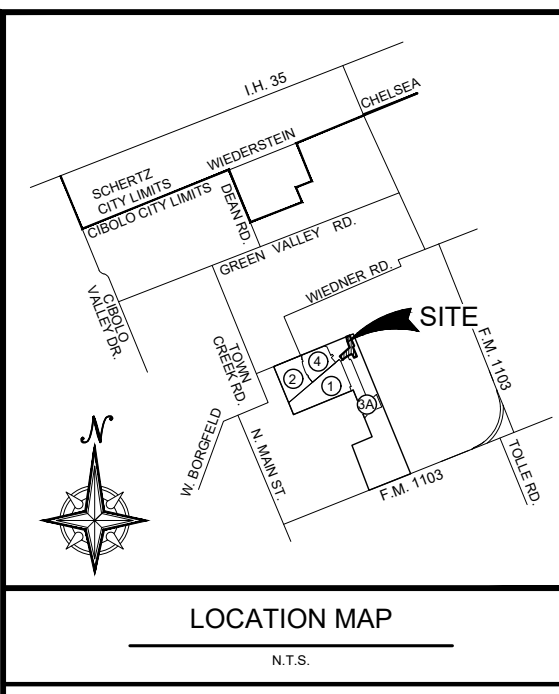
BEING 5.710 ACRES OUT OF A 68.52 ACRE PARCEL OF LAND IN THE TRINIDAD GARCIA SURVEY NO. 94, ABSTRACT NO. 137, OF GUADALUPE COUNTY, TEXAS, FILED AND RECORDED IN DOCUMENT NUMBER 2015017419 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS.



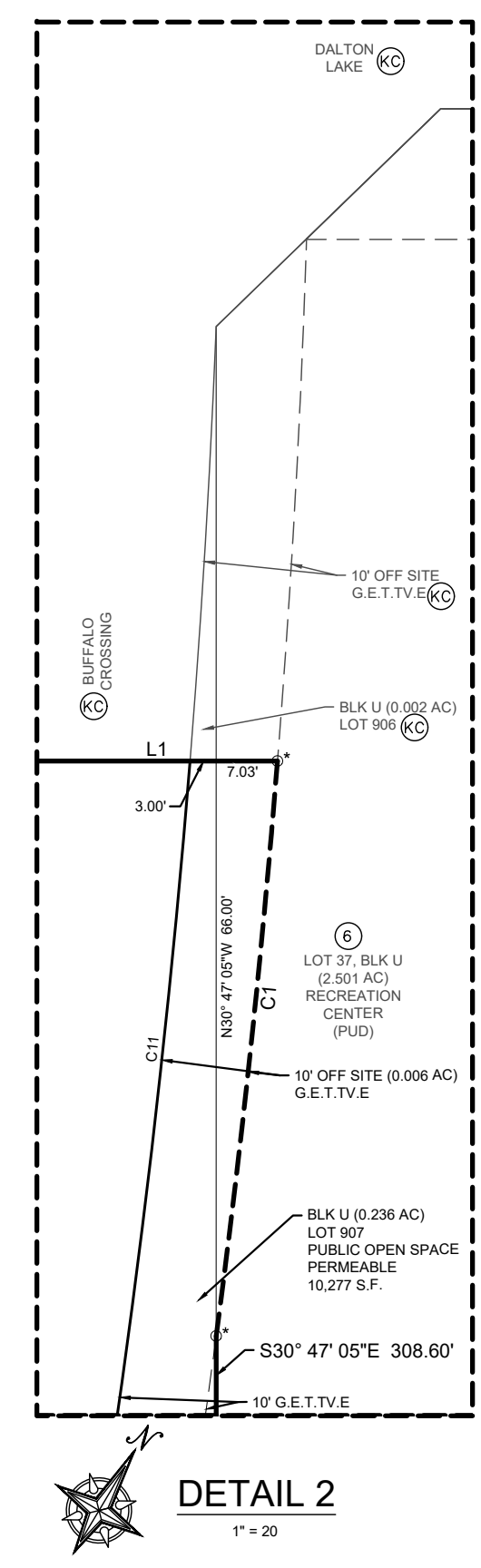
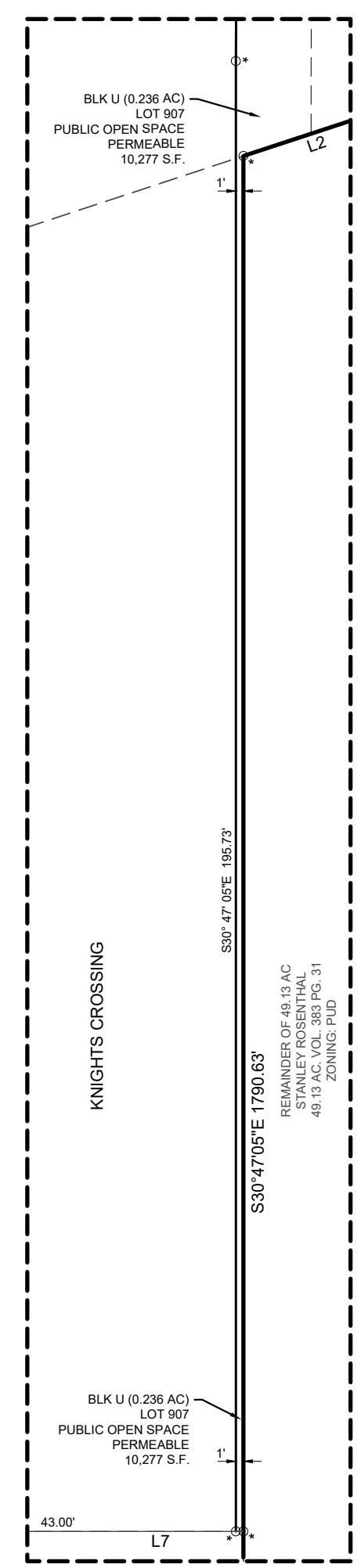
KCI TECHNOLOGIES, INC.
2806 W. BITTERS RD, SUITE 218
SAN ANTONIO, TEXAS 78248
PHONE: (210) 641-9999
FAX: (210) 641-6440
REGISTRATION #F-10573 / #101943-65

DATE PREPARED: SEP 2024
JOB NUMBER: 702402565

- ### LEGEND
- | | | |
|--|-------|------------|
| 1. GREEN VALLEY ELECTRIC COOPERATIVE | ----- | GVEC |
| 2. GAS, ELECTRIC, TELEPHONE, CABLE TELEVISION EASEMENT | ----- | G.E.T.V.E. |
| 3. PLAT RECORDS OF GUADALUPE COUNTY, TEXAS | ----- | P.R. |
| 4. DEED RECORDS OF GUADALUPE COUNTY, TEXAS | ----- | D.R. |
| 5. VOLUME | ----- | VOL. |
| 6. PAGE | ----- | PG. |
| 7. LINEAR FEET | ----- | L.F. |
| 8. RIGHT OF WAY | ----- | R.O.W. |
| 9. STREET CENTERLINE | ----- | CL |
| 10. BLOCK | ----- | BLK |
| 11. SQUARE FOOTAGE | ----- | S.F. |
| 12. ACRE | ----- | AC |
| 13. EXISTING CONTOUR | ----- | 980 |
| 14. PROPOSED FINISHED CONTOUR | ----- | 980 |
| 15. 1/2" IRON ROD FOUND W/ NO CAP, OR CAP SHOWN | ----- | 1/2" |
| 16. 1/2" IRON ROD FOUND W/ KCI CAP | ----- | 1/2" |
| 17. 1/2" IRON ROD SET W/ KCI CAP | ----- | 1/2" |
| 18. THE VALUES OF THE SETS OF COORDINATES SHOWN HEREON WERE OBTAINED WITH GLOBAL POSITIONING RECEIVERS DATUM IS NAD 83/93(2011), TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, COMBINED SCALE FACTOR IS 1.00017 | | |
| 19. MONUMENTATION AS SHOWN, IT IS THE PRACTICE OF CIVIL ENGINEERING CONSULTANTS TO MONUMENT ALL CORNERS (IF PRACTICAL) IN THE SUBDIVISION WITH 1/2" REBAR AND KCI PLASTIC CAP UPON COMPLETION OF CONSTRUCTION. | | |



| PLAT REFERENCE | |
|----------------|--|
| ① | BUFFALO CROSSING II UNIT 1 (VOL. 9, PGS. 340-342, P.R.) |
| ② | BUFFALO CROSSING II UNIT 2 (VOL. 9, PGS. 269-270, P.R.) |
| ⑤A | BUFFALO CROSSING II UNIT 3A (VOL. 9, PGS. 735-736, P.R.) |
| ④ | BUFFALO CROSSING II UNIT 4 (VOL. 10, PGS. 64-65, P.R.) |
| ⑥ | BUFFALO CROSSING II UNIT 6 (CONCURRENT PLAT) |
| KC | BUFFALO CROSSING II KNIGHTS CROSSING (CONCURRENT PLAT) |



- ### NOTES:
- THE PROPERTY SHOWN HEREON LIES WITHIN THE CITY OF CIBOLO.
 - THE PROPERTY SHOWN HEREON IS NOT LOCATED OVER THE EDWARDS AQUIFER RECHARGE ZONE.
 - THE PROPERTY SHOWN HEREON IS LOCATED INSIDE SCHERTZ-CIBOLO-UNIVERSAL CITY SCHOOL DISTRICT.
 - ALL PROPOSED STREETS WILL BE DEDICATED TO THE PUBLIC AND MAINTAINED BY THE CITY OF CIBOLO.
 - THE PROPERTY SHOWN HEREON WILL HAVE UTILITIES PROVIDED BY THE FOLLOWING:
WATER - CITY OF CIBOLO
SEWER - CITY OF CIBOLO
ELECTRICITY - G.V.E.C.
GAS - CENTERPOINT ENERGY
CABLE - CHARTER
 - NO PORTION OF THE PROPERTY EXCEPT SHOWN HEREON IS LOCATED WITHIN A 100-YEAR FLOOD BOUNDARY AS DEFINED BY FLOOD INSURANCE RATE MAP GUADALUPE COUNTY, TEXAS COMMUNITY PANEL NUMBER 48187C 0230F, REVISED MAY 4, 2012.
 - THIS PLAT DOES NOT AMEND, ALTER, RELEASE OR OTHERWISE AFFECT ANY EXISTING ELECTRIC, GAS, WATER, SEWER, DRAINAGE, TELEPHONE, CABLE EASEMENTS OR ANY OTHER EASEMENTS FOR UTILITIES UNLESS THE CHANGES TO SUCH EASEMENTS ARE DESCRIBED ABOVE.
 - ALL UTILITY EASEMENTS ARE FOR THE CONSTRUCTION, MAINTENANCE (INCLUDING BUT NOT LIMITED TO REMOVAL OF TREE AND OTHER OBSTRUCTIONS), READING METERS AND REPAIR OF ALL OVERHEAD AND UNDERGROUND UTILITIES.
 - G.V.E.C. TO HAVE 5' WIDE ELECTRIC EASEMENT ON ALL ROAD CROSSINGS IN WHICH ELECTRIC LINES ARE PLACED.
 - BEARING REFERENCE SOURCE IS THE NORTHWEST LINES OF 50" PIPELINE ES.MT. VOL. 253, PGS. 425PR. BETWEEN MONUMENTS SHOWN HEREON AND ESTABLISHED AS N40°58'31"E BY GPS OBSERVATION BASED ON NAD83 (2011) DATUM TEXAS STATE PLANE COORDINATE SYSTEM - SOUTH CENTRAL ZONE.
 - MONUMENTATION AS SHOWN, IT IS THE PRACTICE OF KCI TO MONUMENT ALL CORNERS (IF PRACTICAL) IN THE SUBDIVISION WITH 1/2" REBAR AND KCI PLASTIC CAPS, UPON COMPLETION OF CONSTRUCTION.
 - PROPERTY OWNERS ASSOCIATION WILL MOW AND MAINTAIN PARKS, LANDSCAPE BUFFERS, OPEN SPACE, GREENBELTS AND DRAINAGE EASEMENTS.
 - THE CITY OF CIBOLO RESERVES THE RIGHT TO RENAME STREETS AND/OR CHANGE HOUSE NUMBER DUE TO INCOMPATIBILITY WITH EXISTING NAME LAYOUT, EMERGENCY VEHICLE RESPONSE, AND MAIL DELIVERY.
 - SQUARE FOOTAGES SHOWN HEREON WERE DERIVED FROM DIMENSIONS SHOWN, BUT DO NOT REFLECT A CERTIFIED INCREASE IN ACREAGE ACCURACY BEYOND THAT OF THE TOTAL ACREAGE SHOWN HEREON. (5.710 AC.)
 - THIS PLAT CONTAINS APPROXIMATELY 925 L.F. OF ROADWAY.
 - ALL AREAS WITHIN THIS PLAT ARE WITHIN THE CITY OF CIBOLO AND ARE ZONED PLANNED UNIT DEVELOPMENT (PUD) PER ORDINANCE #1128.
 - SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF THE UNIFIED DEVELOPMENT CODE OF THE CITY OF CIBOLO AND STATE PLATTING STATUTES AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.
 - PLAT APPROVAL SHALL NOT BE DEEMED TO GIVE AUTHORITY TO VIOLATE, NULLIFY, VOID, OR CANCEL ANY PROVISIONS OF LOCAL, STATE, OR FEDERAL LAWS, ORDINANCES, OR CODES.
 - THE APPLICANT IS RESPONSIBLE FOR SECURING ANY FEDERAL PERMITS THAT MAY BE NECESSARY AS THE RESULT OF PROPOSED DEVELOPMENT ACTIVITY. THE CITY OF CIBOLO IS NOT RESPONSIBLE FOR DETERMINING THE NEED FOR, OR ENSURING COMPLIANCE WITH ANY FEDERAL PERMIT.
 - APPROVAL OF THIS PLAT DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD OR REGISTERED PUBLIC LAND SURVEYOR IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY THE CITY ENGINEERS.
 - ALL RESPONSIBILITY FOR THE ADEQUACY OF THIS PLAT REMAINS WITH THE ENGINEER OR SURVEYOR WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF CIBOLO MUST RELY ON THE ADEQUACY OF THE WORK OF THE ENGINEER AND/OR SURVEYOR OF RECORD.
 - ROUTINE MAINTENANCE OF WEEDS AND GRASS IN ALL EASEMENTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER, HOA, OR PROPERTY OWNER ASSOCIATION ON WHICH THE EASEMENT IS LOCATED IN ACCORDANCE WITH CITY OF CIBOLO CODE OF ORDINANCES PROVISIONS FOR HIGH WEEDS AND GRASS.
 - PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, A GEOTECHNICAL REPORT SHALL BE COMPLETED SHOWING COMPLIANCE WITH ALL RECOMMENDED PRACTICE FOR THE DESIGN OF RESIDENTIAL FOUNDATIONS, VERSION 1, STANDARDS OF THE TEXAS SECTION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS, THE GEOTECHNICAL STANDARDS OF THE CITY OF CIBOLO UDC AND THE CITY OF CIBOLO BUILDING CODE. EACH OF WHICH MAY BE AMENDED.
 - FINISHED FLOOR ELEVATIONS MUST BE A MINIMUM OF 8 INCHES ABOVE FINISHED ADJACENT GRADE.
 - TO SATISFY THE SOUTHERN "KOEHLER TRACT" PARK REQUIREMENTS, PER PUBLIC IMPROVEMENT AGREEMENT FOR KOEHLER TRACT (SOUTH) AND VEAZY/REDHAGE TRACT (NORTH) WITH THE CITY OF CIBOLO, THE DEVELOPER AGREES, IN LIEU OF PAYMENTS TO THE CITY'S PARKLAND DEDICATION FUND, TO DEDICATE THE HIKE AND BIKE TRAILS AND PARKLAND, WHICH MAY INCLUDE PUBLIC UTILITY AND DRAINAGE EASEMENTS, SUCH DEDICATIONS OF HIKE AND BIKE TRAILS AND PARKLAND BY DEVELOPER TO THE CITY (AFTER REVIEW BY THE CITY ENGINEER AND RECOMMENDATION BY THE CITY MANAGER) WILL BE DEEMED FULL SATISFACTION OF THE PARKLAND DEDICATION REQUIREMENTS OF THE CITY'S SUBDIVISION ORDINANCE AT THE TIME OF SUBDIVISION PLATTING AND BUILDING PERMITTING. THE FUTURE PHASES OF THE OVERALL DEVELOPMENT (NORTHERN VEAZY TRACT) WILL INCLUDE PARKLAND DEDICATION AND IMPROVEMENTS IN ACCORDANCE WITH THE CIBOLO UDC.
 - NO STRUCTURE, FENCES, WALLS OR OTHER OBSTRUCTIONS THAT IMPEDE DRAINAGE SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS-SECTIONS OF THE DRAINAGE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS. THE CITY OF CIBOLO SHALL HAVE THE RIGHT TO INGRESS AND EGRESS OVER THE GRANTOR'S ADJACENT PROPERTY TO REMOVE ANY IMPEDING OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADEQUATELY ALTERED. RELY ONLY ON FINAL HARD COPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.

SEE SHEET 1 OF 2 FOR LINE AND CURVE TABLES

Date: Sep 27, 2024, 12:16pm User: lb: Mary Stewart File: U:\v\m\proj\2024_KCI\702402565_Buffalo_Knights_Crossing_Ph2.dwg Plot: 702402565_000_Plat_1.dwg

October 30, 2024

City of Cibolo
Attn: Lindsey Walker
200 S. Main Street
Cibolo, Texas 78108

On behalf of the:



Re: Final Plat Review
Buffalo Crossing II ROW Ph 2 (PC-24-31-FP)

Ms. Walker,

Colliers Engineering & Design has completed its review of the referenced subdivision. We find that the development is in conformance with the City of Cibolo Unified Development Code and flood ordinances. We have no further comments.

Our review of the subdivision does not relieve or release the Engineer of Record or Surveyor of Record from complying with any and all the requirements of the local, state, and federal rules and regulations or guidelines impacting this project. If you require additional information, please contact our office.

Sincerely,

A handwritten signature in blue ink, appearing to read "Andy Carruth".

Andy Carruth, P.E.
Plan Reviewer for the City of Cibolo



PUD

MF2

SF5

Buffalo Crossing

PUD

Candor Stone

Flint Rd

Gardner Cv

Black

Property Information Map Buffalo Crossing II Knights Crossing Phase 2

-  Property of Interest
-  Parcel Boundaries
-  Cibolo City Limits
-  Neighborhood Commercial (C1)
-  Multi-Family Residential (MF2)
-  Planned Unit Development (PUD)
-  Medium-High Density Single-Family Residential (SF5)
-  High Density Single-Family Residential (SF6)
-  Public Facility (PF) - Park

Water Service: City of Cibolo

Sewer Service: City of Cibolo

Council District: 4

Zoning: Planned Unit Development (PUD)





Planning and Zoning Commission Staff Report

B. Discussion/Action regarding the Preliminary Plat of Cibolo Farms Unit 3 subdivision.

| Meeting | Agenda Group |
|---------------------------------------|-----------------------------------|
| Wednesday, November 13, 2024, 6:30 PM | Discussion/Action Items Item: 8B. |
| From | |
| Grant Fore, Planner II | |

Planning & Zoning Commission Action: Discussion/Action and Recommendation of the above referenced petition

PROPERTY INFORMATION:

Project Name: PC-24-30-PP
Owner: Richard Mott, Lennar Homes
Representative: Mary Stewart, KCI Technologies
Area: 20.117 acres
Location: Near intersection of FM 1103 and Green Valley Road
Council District: ETJ
Zoning (map): ETJ
Proposed Use: 97 residential lots, 8 open space lots, 3 drainage and open space lots
Utility Providers: Water, Sewer – GVSUD, Electricity - GVEC

FINDINGS/CURRENT ACTIVITY:

Per Unified Development Code (UDC) Article 20.3.3., ‘Preliminary Plat’, property is required to be platted prior to development of a site within or outside the City Limits. The plat or subdivision of land must comply with the Land Study, if applicable, and meet all requirements of the Unified Development Code and the Design and Construction Manual.

The Cibolo Farms development is located outside City Limits in the Extra-Territorial Jurisdiction (ETJ). This Final Plat establishes Unit 3, approximately 20 acres in size consisting of 97 residential lots, 8 open space lots and 3 drainage/open space lots.

An amended Land Study for this development was approved in 2021. Construction plans were approved in July of 2024.

STREETS/FUTURE THOROUGHFARE PLAN (FTPX):

This plat includes 3, 912 linear feet of privately maintained roadway. Sixty feet of right-of-way is being dedicated on planned streets of Bensten Rio, Balmorhea, Nails Creek, Inks Lake, Lake Meredith, and Country Club Boulevard.

A Traffic Impact Analysis (TIA) was provided with the Master Development Plan submittal in 2018 that accounts for the full build-out of the subdivision. The City Engineer’s office verified during review that the proposed Unit 3 complies with the previously approved traffic study.

UTILITIES:

Construction plans for the utility and roadway improvements have been approved. GVSUD will serve as the provider of water and sewer for this development. GVEC will serve as the electric provider.

DRAINAGE:

The drainage plan submitted was reviewed and approved by the City Engineer's office. The report indicates that drainage mitigation in Unit 3 will utilize a detention pond in Unit 1 of the subdivision.

STAFF RECOMMENDATION:

Staff and the City Engineer reviewed the plat and associated documents. Per the attached memo, there are comments pending. Therefore, staff recommends DENIAL of the Preliminary Plat at this time.

Attachments

[Application](#)

[Plat](#)

[City Engineer Letter](#)

[Property Map](#)



City of Cibolo
 Planning Department
 201 Loop 539 W/P.O. Box 826
 Cibolo, TX 78108
 Phone: (210) 658 - 9900

UNIVERSAL APPLICATION - PRELIMINARY PLAT

Please fill out this form completely, supplying all necessary information and documentation to support your request. Please use a separate application for each submittal. Your application will not be accepted until the application is completed and required information provided.

Project Name: Cibolo Farms Unit 3
 Total Acres: 20.117 AC Survey Name: J.M. Cedeno Survey No. 254, Fretan De La Garza Survey No. 253, I & G N R R. CO Abstract No.: 93, 143, & 188
 Project Location (address): approximately 3/4 of a mile SE of the intersection of FM1103 and Green Valley Rd.

Current Zoning: ETJ Overlay: None Old Town FM 78
 Proposed Zoning: ETJ # of Lots: 97 # of Units: 4
 Please Choose One: Single-Family Multi-Family Commercial Industrial
 Other _____
 Current Use: Agriculture Total Proposed Square Footage: _____
 Proposed Use: Single Family (Commercial/Industrial only)

Applicant Information:

Property Owner Name: Lennar Homes of Texas Land and Construction, LTD.
 Address: 100 NE Loop 410, Ste. 1155 City: San Antonio
 State: Texas Zip Code: 78216 Phone: (210) 403-6200
 Email: richard.mott@lennar.com Fax: _____

*Applicant (if different than Owner): _____
 * Letter of Authorization required
 Address: _____ City: _____
 State: _____ Zip Code: _____ Phone: _____
 Email: _____ Fax: _____

Representative: KCI Technologies (Contact: Mary Stewart)
 Address: 2806 West Bitters Road, Suite 218 City: San Antonio
 State: Texas Zip Code: 78248 Phone: (210) 641-9999
 Email: mary.stewart@kci.com Fax: _____

Authorization: By signing this application, you hereby grant Staff access to your property to perform work related to your application. *Please, you must follow the STATUTORY time limits in accordance with Section 211, and 245 of the Texas Local Government Code.*

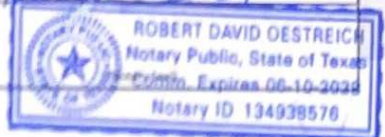
[Signature]
 Owner or Representative's Signature
Richard Mott
 Typed / Printed Name

State of TEXAS
 County of BEVIER
 Before me, ROBERT D. OESTREICH, on this day personally appeared
Richard Mott, to be the person(s) who is/are subscribed to the

I, _____, do hereby certify that he/she/they executed the same for the purposes and consideration therein expressed.

Given publicly, hand and seal of office this 27 day of August 2024

[Signature]
 Notary Public Signature



| |
|--------------------------------|
| City of Cibolo Use Only |
| Total Fees |
| Payment Method |
| Submittal Date |
| Accepted by |
| Case Number |

October 30, 2024

On behalf of the:

City of Cibolo
Attn: Lindsey Walker
200 S. Main Street
Cibolo, Texas 78108



Re: Preliminary Plat Review
Cibolo Farms U3 (PC-24-30-PP)

Ms. Walker,

Colliers Engineering & Design has completed its review of the referenced preliminary plat and has the following comments:

General Note -

1. Please include as part of your resubmittal a comment response letter addressing all comments.

Sheet 1 of 3 -

1. Remove any and all text conflicts within Index Map.
2. Correct spelling of "Lake Meredith" Street.
3. Update Cibolo City Limits within Location map.
4. Update street limits to most up to date. Markups provided for reference purposes.
5. Remove line striking through acceptance note for Guadalupe valley Electric Cooperative.
6. Update "Approval of the City Council" note to most recent version. Can be found in Section 20.6 of the current 2024 UDC.
7. Confirm acreage provided is correct. Conflicting acreage provided in note 12 on sheets 2 & 3.
8. Remove Proposed Improvement from legend.

Sheet 2 of 3 -

1. Show the limits of the flood plain boundary.
2. Please label adjacent Easements as indicated on the plans.
3. Confirm Keyed notes are referring to the correct 900 series lots. See plan markups for reference purposes.
4. Remove Proposed Improvements from legend.
5. Confirm acreage provided is correct. Conflicting acreage provided on sheet 1.
6. Fix text conflicts and mask text as needed. See Markups for reference purposes.
7. Remove proposed contours from 900 series / drainage lots for clarity.
8. Property lines of previous platted units should not be bold.

Sheet 3 of 3 –

1. Please confirm the intent for streets to be privately maintained.
2. Fix text conflicts and mask text as needed. See Markups for reference purposes.
3. Confirm Keyed notes are referring to the correct 900 series lots. See plan markups for reference purposes.
4. Remove Proposed Improvements from legend.
5. Confirm acreage provided is correct. Conflicting acreage provided on sheet 1.
6. Remove proposed contours from 900 series / drainage lots for clarity
7. Property lines of previous platted units should not be bold.
8. Drainage lot indicated as both Lot 908 & 913. Update as needed so only one lot # is shown.

Our review of the project does not relieve or release the Engineer of Record or Surveyor of Record from complying with any and all the requirements of the local, state, and federal rules and regulations or guidelines impacting this project. If you require additional information, please contact our office.

Sincerely,



Andy Carruth, P.E.

Plan Reviewer for the City of Cibolo

Utica Way

Saddle Villa

Saddle Canyon

Saddle House

Saddle Forest

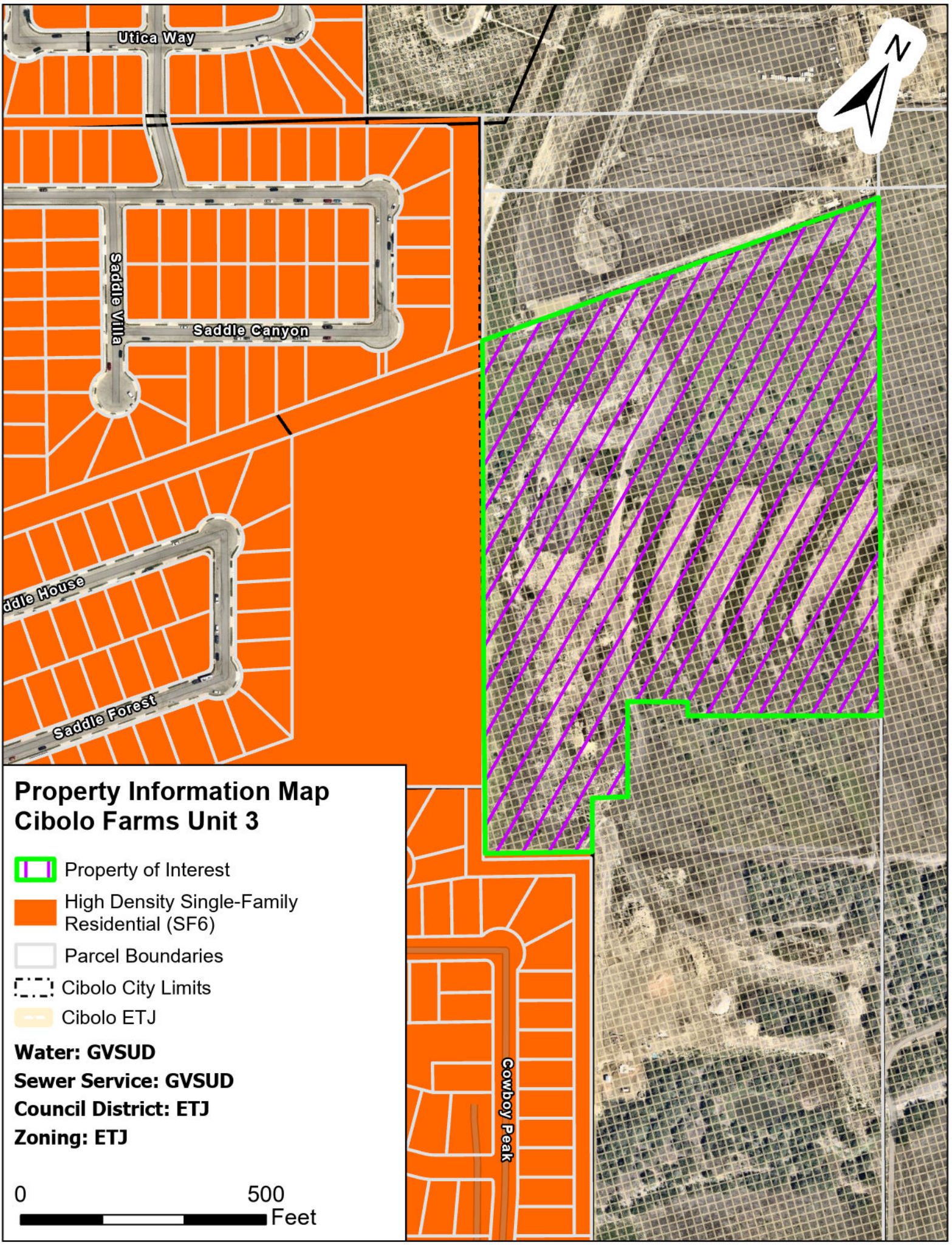
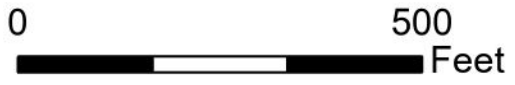
Cowboy Peak



Property Information Map Cibolo Farms Unit 3

-  Property of Interest
-  High Density Single-Family Residential (SF6)
-  Parcel Boundaries
-  Cibolo City Limits
-  Cibolo ETJ

Water: GVSUD
Sewer Service: GVSUD
Council District: ETJ
Zoning: ETJ





Planning and Zoning Commission Staff Report

C. Discussion/Action regarding a proposed Land Study of the Schryver Tract subdivision.

| Meeting | Agenda Group |
|---------------------------------------|-----------------------------------|
| Wednesday, November 13, 2024, 6:30 PM | Discussion/Action Items Item: 8C. |

| From |
|------------------------|
| Grant Fore, Planner II |

Planning & Zoning Commission Action: Discussion/Action regarding the above referenced petition

PROPERTY INFORMATION:

- Project Name:** LS-24-04
- Owner:** Michele Schryver
- Representative:** Jason Townsley, KB Homes; Sean McFarland, Cude Engineers
- Area:** 23.34 acres
- Location:** 5711 Green Valley Road
- Council District:** ETJ
- Zoning (map):** ETJ
- Proposed Use:** 92 residential lots
- Utility Providers:** Water, Sewer – GVSUD, Electricity - GVEC

FINDINGS/CURRENT ACTIVITY:

Per Unified Development Code (UDC) Article 20.3.2., 'land Study', The first or introductory plan of a proposed subdivision, in such case where the developer intends to develop and record only an individual portion to such subdivision, and which exhibits the proposed development of the balance of the subdivision. The Master Plan is synonymous with Land Study and General Plan

The applicant is proposing a 23.34 acre subdivision consisting of 92 residential lots of approximately 45' in width. This area is located outside the City of Cibolo corporate limits, in the Extra-Territorial jurisdiction (ETJ). Therefore, there is not a minimum lot size requirement required by zoning as there is not zoning in the ETJ.

STAFF ANALYSIS:

UDC Sec. 20.3.2

C.2. The Planning and Zoning Commission and the City Council shall review and evaluate the Land Study to determine whether the proposed development conforms to the Future Land Use Plan, Future Thoroughfare Plan, the UDC and other applicable ordinances of the City;

STAFF FINDINGS: The Future Land Use map (FLUM) identifies this area as Estate Residential:

PRIMARY LAND USES

Single-Family Detached Homes, Cluster Development, Parks and Open Space

SECONDARY LAND USES

Civic and Institutional

INDICATORS & ASSUMPTIONS

Lot size (range) 1/2 to 2 acres

E. Criteria for Approval. The Planning and Zoning Commission, in its review, and the City Council, in considering final action on an Overall Development Concept Plan/Land Study/ Master Plan/Mixed Use Concept Plan, should consider the following criteria:

1. the Study/Plan will be consistent with all zoning requirements for the property, if within the City corporate limits, or any development regulations approved as part of a Development Agreement;

STAFF FINDINGS: The applicant property is within Cibolo's Extraterritorial Jurisdiction (ETJ).

2. the proposed provision and configuration of roads, water, wastewater; drainage and park facilities will be adequate to serve each phase of the development;

STREETS/FUTURE THOROUGHFARE PLAN (MTP): This Land Study includes local collector roads with 60' of right-of-way. 20.3.2 of the Unified Development Code requires that documentation be submitted with the Land Study that identifies which level of a Traffic Impact Analysis will be submitted at the time of platting. The applicant has provided a Traffic Impact Analysis worksheet with this submittal and will be required to have a scoping meeting with the City to further to determine the parameters of the study.

As stated, 45' wide lots are proposed in this subdivision. Section 19.4 Block Design of the Cibolo Unified Development Code (UDC) states:

A. All lots less than sixty (60') feet in width platted after the effective date of Ordinance 1261 (passed in April 23, 2019) are required to take vehicular access from an alley. Alley design and construction shall conform to all requirements of this UDC and the Cibolo Design Construction Manual.

A comment regarding this is included in the review memo attached to this staff report.

Additionally, the applicant is proposing a secondary means of access via the Homestead development as shown on the plan. The applicant will be required to provide documentation/confirmation from the owner of the Homestead development to determine if this proposed connection is feasible.

UTILITIES: GVSUD will serve as the provider of water and sewer for this development. GVEC will serve as the electric provider.

DRAINAGE: The Engineering Design Report submitted by the applicant states that the subject tract drains to two existing lows from a high point in the middle of the site. Detention is anticipated to be provided in order to release project peak flows at or below existing flow conditions

PARKLAND: The applicant will be required to identify the acreage of the parkland on the Land Study and to show that they meet the 8% of total tract acreage requirement.

STAFF FINDINGS: Due to pending Streets, Drainage, and Parkland comments, staff finds that the proposed Land Study does not meet this requirement for approval.

3. the schedule of development is feasible and prudent and assures that the proposed development will progress to completion within the time limits proposed or allowed prior to Study/Plan expiration;

STAFF FINDINGS: The applicant has not provided a schedule of development; however, a Land Study is valid for a period of five (5) years from the date of approval.

4. if the land lies within the extra territorial jurisdiction and/or is part of an approved Development Agreement, the proposed Study/Plan conforms to the provisions of the Development Agreement and is consistent with the incorporated Conceptual Plan or any development regulations contained in the approved Development Agreement; and

STAFF FINDINGS: The property is located within the ETJ and there are no development agreements in place. The proposed Land Study must comply with all applicable regulations in UDC Article 20. Due to pending comments, the proposed Land Study does not conform with the City's regulations.

5. the location, size and sequence of the phases of development proposed assures orderly and efficient development of the land subject to the plan.

STAFF FINDINGS: Staff cannot adequately determine if the proposed phasing will ensure orderly development of the land due to the pending comments on the proposed Land Study plans.

STAFF RECOMMENDATION:

Staff and the City Engineer reviewed the Land Study and associated documents. Per the attached memo, there are comments pending. Therefore, Staff recommends DENIAL of this Land Study at this time.

Attachments

[Application](#)

[Land Study Submittal](#)

[City Engineer Letter](#)

[Property Map](#)



City of Cibolo

Planning Department
201 Loop 539 W/P.O. Box 826
Cibolo, TX 78108
Phone: (210) 658 - 9900

UNIVERSAL APPLICATION - LAND STUDY/MIXED USE PLAN

Please fill out this form completely, supplying all necessary information and documentation to support your request. *Please use a separate application for each submittal.* Your application will not be accepted until the application is completed and required information provided.

Project Name: Schryver Tract
Total Acres: 23.34 Survey Name: PEDRO SAN MIGUES SURVEY 256 Abstract No.: 227
Project Location (address): 5711 GREEN VALLEY RD

Current Zoning: ETJ Overlay: None Old Town FM 78
Proposed Zoning: N/A # of Lots: 92 # of Units: 1
Please Choose One: Single-Family Multi-Family Commercial Industrial
 Other _____
Current Use: PRIVATE RESIDENCE Total Proposed Square Footage: N/A
Proposed Use: SINGLE-FAMILY (Commercial/Industrial only)

Applicant Information:

Property Owner Name: Michele Gail Schryver
Address: 5711 GREEN VALLEY RD City: CIBOLO
State: TX Zip Code: 78108 Phone: 830-708-1966
Email: _____ Fax: _____

*Applicant (if different than Owner): KB HOME LONE STAR, INC.

* Letter of Authorization required

Address: 4800 Fredericksburg Rd. Suite 100 City: SAN ANTONIO
State: TX Zip Code: 78229 Phone: (210) 301-2821
Email: jtownsley@kbhome.com Fax: _____

Representative: CUDE ENGINEERS
Address: 4122 POND HILL RD. STE. 101 City: SAN ANTONIO
State: TX Zip Code: 78231 Phone: 210-681-2951
Email: smcfarland@cudeengineers.com Fax: _____

Authorization: By signing this application, you hereby grant Staff access to your property to perform work related to your application.

City of Cibolo
Use Only

Jason Townsley
Owner or Representative's Signature

Total Fees

KB Homes - Jason Townsley
Typed / Printed Name

Payment Method

State of TEXAS

Submittal Date

County of BEXAR

Accepted by

Before me, VERONICA BOSQUEZ, on this day personally appeared
Name of Notary Public

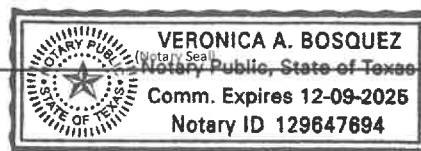
Case Number

JASON TOWNSLEY, to be the person(s) who is/are subscribed to the
Name of signer(s)

foregoing instrument and acknowledge to me that he/she/they executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 9th day of OCTOBER, 2024

Veronica A. Bosquez
Notary Public Signature



LAND STUDY

PROJECT NAME:

Schryver Tract

ATTACHMENTS:

ENGINEERING REPORT

LAND STUDY EXHIBITS

CIBOLO FUTURE LAND USE AND THOROUGHFARE MAP

MTP – SCHRYVER TRACT

TIA THRESHOLD WORKSHEET

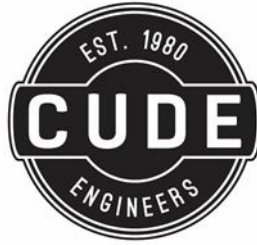
TAX CERTIFICATES

WILL SERVE LETTER

SURVEY

TITLE COMMITMENT

LETTER OF AGENT AND OWNERSHIP DOCS



Schryver Tract

PRELIMINARY ENGINEERING REPORT

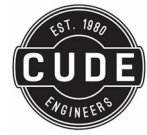
October 2024

PREPARED FOR:

CITY OF CIBOLO
PLANNING DEPARTMENT
201 LOOP 539 W/P.O. BOX 826
CIBOLO, TEXAS 78108

DEVELOPER:

KB Home Lone Star Inc., A Texas Corporation
4800 Fredericksburg Rd. Suite 100
San Antonio, Texas 78229
Contact:
Jason Townsley
Senior Director of Land Development
210-301-2815
jtownsley@kbhome.com



I. PROJECT DESCRIPTION

This report is prepared on behalf of KB Home Lone Star Inc., A Texas Corporation for the Schryver Tract. The tract is approximately 23.34 acres and located within Cibolo ETJ at 5711 Green Valley RD.

- This property is **not** located within the corporate limits of the City of Cibolo.
- This property **is** located within the ETJ limits of the City of Cibolo.
- Per FEMA floodmap Panel 48187C0230F this property is **not** located adjacent to FEMA Floodplain.
- Subject Tract is currently in agricultural use with a residence.
- Current Site Zoning: OCL Proposed Site Zoning: N/A
- This property lies within the Upper Cibolo Creek watershed.
- This property is not a part of any master development plan.
- This property is located on the Marion NW USGS Quadrangle tile image from the 2012 CoSA imagery.

II. PURPOSE AND SCOPE

The purpose of this engineering report is to provide general information to the City of Cibolo for approval of a Land Study application for the Schryver Tract. Those areas of interest in further details are described below:

Cibolo is a community where residents collaborate to shape their civic future by promoting its rich history, preserving a small-town feel, and investing in balanced development.

FUTURE LAND USE MAP/ CITY MAJOR THOROUGHFARE PLAN

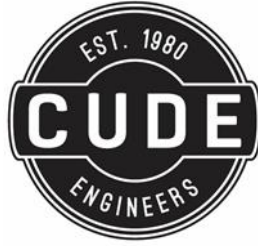
The subject tract lies within designated “Estate Residential” area of the “Future Land Use and Thoroughfare Map” as of September 10th, 2024. However, neighboring development to the north and west are planned for “Compact Residential” which our proposed development better falls under the Land Use Considerations laid out in the “Cibolo Tomorrow Comprehensive Plan”:

- Primary Use: Single Family Detached Homes
- Single Family lot size (range) up to 9,000 sq ft – Providing 45’x120’ lots, depth varies, 5,400 sf min.

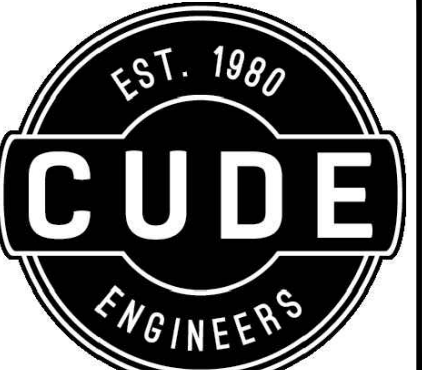
Schryver Tract is located off Green Valley Road which is an existing minor arterial. The Major Thoroughfare plan shows a proposed Collector Road (80’ ROW) running N-S within the property west of the subject tract. Please refer to the “MTP – Schryver Tract” exhibit.

DRAINAGE

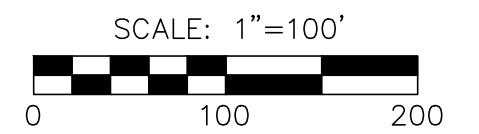
The subject tract drains to two existing lows from a high point in the middle of the site. Detention is anticipated to be provided in order to release project peak flows at or below existing flow conditions. A comparison of proposed and existing flows, as well as planned detention locations can be found on E5 within the “Land Study Exhibits” section of this report. In addition to providing detention for drainage areas A2 and A3 as shown on E5, an interceptor channel is provided for off-site flows from the north of the subject tract which will divert detention and be released to match existing drainage flow patterns.



LAND STUDY EXHIBITS



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112



SCHRYVER TRACT LAND STUDY
EXISTING CONDITIONS EXHIBIT

DATE
10/09/2024
PROJECT NO.
04200.004
DRAWN BY
JW
CHECKED BY
SPM

REVISIONS
1.
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3.
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9.

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW ONLY UNDER THE AUTHORITY OF SEAN P. McFARLAND, P.E. #38893 10/09/24 IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMITTING PURPOSES.

CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

N/A

E1

NOTES:

1. SITE IS LOCATED WITHIN THE CITY OF CIBOLO ETJ.
2. SUBJECT TRACT IS CURRENTLY IN AGRICULTURAL USE WITH A RESIDENCE.
3. PER FEMA FLOOD MAP PANEL 48187C0230F THE SITE IS NOT WITHIN THE LIMITS OF THE 1% ANNUAL CHANCE FLOODPLAIN.
4. THERE ARE NO KNOWN ENVIRONMENTALLY SENSITIVE AREAS RELATIVE TO WETLANDS, ENDANGERED OR OTHERWISE LISTED SPECIES, ARCHAEOLOGICAL INDICATORS, SOILS, OR SLOPE ANALYSIS.
5. CURRENT SITE ZONING: OCL
6. PROPOSED SITE ZONING: N/A
7. SANITARY SEWER, WATER & UTILITY INFORMATION LOCATIONS ARE APPROXIMATE AND LOCATIONS NEED TO BE FIELD VERIFIED.
8. EXISTING STREET RIGHT OF WAYS AND PAVEMENT MATERIALS ARE AS FOLLOWS:
NAME: GREEN VALLEY R.O.W. WIDTH: 50' PAVEMENT MATERIAL: ASPHALT (22' WIDE)



LOCATION MAP
N.T.S.

OWNER / DEVELOPER

KB HOME
CONTACT PERSON: RYAN BERNHARD
4800 FREDERICKSBURG RD, SUITE 100
SAN ANTONIO, TX 78229
TEL: (210) 301-2821

CIVIL ENGINEER:

M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: SEAN McFARLAND, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

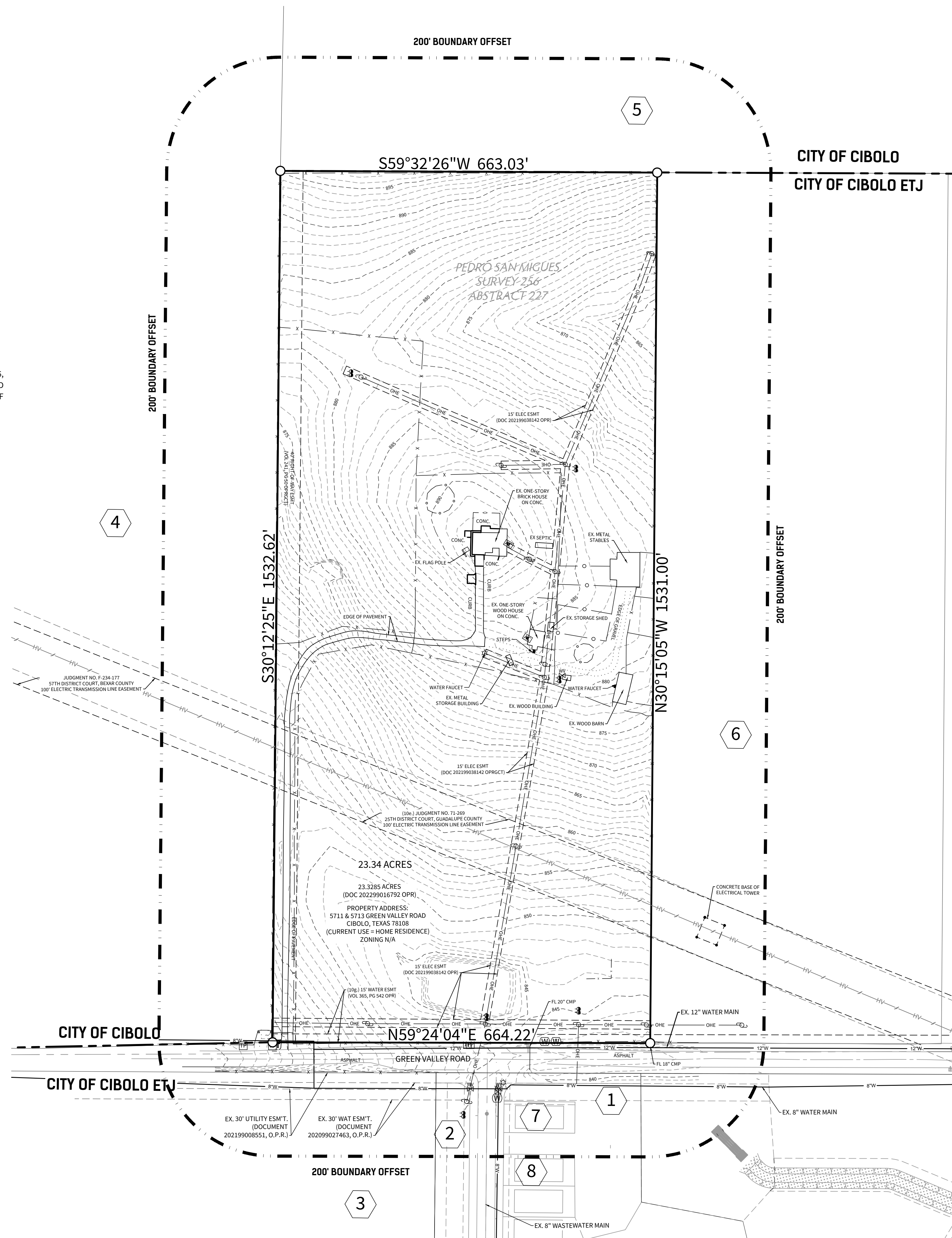
LEGEND:

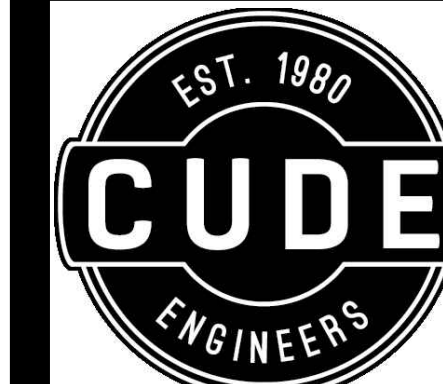
- SITE BOUNDARY
- 200' BOUNDARY OFFSET
- CITY LIMIT BOUNDARY
- EXISTING OVERHEAD ELECTRIC
-

LEGAL DESCRIPTION:

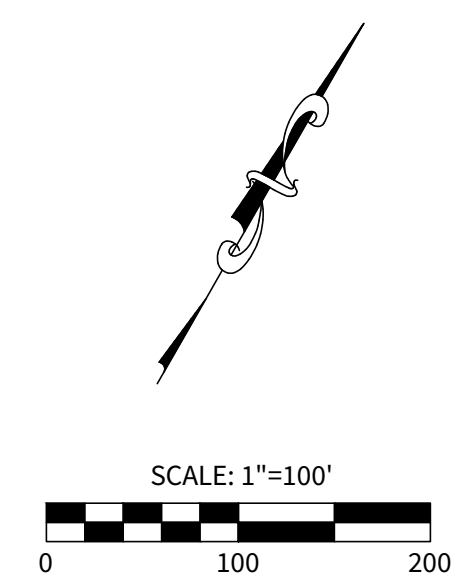
23.34 ACRES OF LAND LOCATED IN THE PEDRO SAN MIGUEL SURVEY 256, ABSTRACT 227, GUADALUPE COUNTY, TEXAS AND BEING ALL OF A CALLED 23.3285 ACRE TRACT OF LAND AS DESCRIBED IN VOLUME 1408, PAGE 742, OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS.

| ADJACENT PROPERTY SUMMARY | | | |
|---------------------------|---|--------|----------|
| PROPERTY | OWNER | VOLUME | PAGE |
| 1 | LEGENDARY TRAILS HOMEOWNERS ASSOCIATION INC | 19 | 578 |
| 2 | LEGENDARY TRAILS HOMEOWNERS ASSOCIATION INC | 19 | 578 |
| 3 | MC DOWELL DONNA R | 721 | 499 |
| 4 | ILF N-T OWNER LP | 2014 | 22581 |
| 5 | ILF N-T OWNER LP | 2014 | 22581 |
| 6 | ORTIZ TEOFILO JR & MARIA T | 2023 | 99029018 |
| 7 | MERITAGE HOMES OF TEXAS LLC | 19 | 578 |
| 8 | MERITAGE HOMES OF TEXAS LLC | 19 | 578 |





4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112



NOTES:

1. SITE IS LOCATED WITHIN THE CITY OF CIBOLO ETJ.
2. THE SUBJECT TRACT IS CURRENTLY UNDEVELOPED.
3. PER FEMA FLOOD MAP PANEL 48187C0230F THE SITE IS NOT WITHIN THE LIMITS OF THE 1% ANNUAL CHANCE FLOODPLAIN.
4. CURRENT SITE ZONING: OCL
5. ALL STREET LOCATIONS ARE SUBJECT TO CHANGE AND WILL BE FINALIZED DURING THE PLATTING PROCESS.
6. ALL PROPOSED STREET RIGHT OF WAYS ARE 60' UNLESS OTHERWISE NOTED.
7. OPEN SPACE WILL BE OWNED AND MAINTAINED BY HOME OWNERS ASSOCIATION.
8. THIS DEVELOPMENT WILL PROVIDE INGRESS/EGRESS ACCESS TO THE ORTIZ AND ILF N-T OWNER LP TRACTS.
9. THE LAND PLAN AS SHOWN ASSUMES THE ABILITY TO VACATE EXISTING 40' RIGHT OF WAY ESM'T (VOL. 241, PG. 50 OPRGCT) ALONG THE WESTERN BOUNDARY LINE.



LOCATION MAP
N.T.S.

OWNER / DEVELOPER

KB HOME
CONTACT PERSON: RYAN BERNHARD
4800 FREDERICKSBURG RD, SUITE 100
SAN ANTONIO, TX 78229
TEL: (210) 301-2821

CIVIL ENGINEER:

M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: SEAN McFARLAND, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

LEGEND:

- SITE BOUNDARY
- CITY LIMIT BOUNDARY
- 45' LOTS
- ROW
- OPEN SPACE
- DETENTION

| ADJACENT PROPERTY SUMMARY | | | |
|---------------------------|----------------------------|--------|----------|
| PROPERTY | OWNER | VOLUME | PAGE |
| 1 | ILF N-T OWNER LP | 2014 | 22581 |
| 2 | ILF N-T OWNER LP | 2014 | 22581 |
| 3 | ORTIZ TEOFILO JR & MARIA T | 2023 | 99029018 |



| DEVELOPMENT SUMMARY | | | |
|---------------------|-----------|--------------|-------------|
| USE | LOTS | ACREAGE | DU/AC. |
| [PHASE 1] | 92 | 12.68 | 7.26 |
| ROW | N/A | 4.98 | N/A |
| OPEN SPACE | N/A | 4.19 | N/A |
| DETENTION | N/A | 1.49 | N/A |
| TOTAL | 92 | 23.34 | 3.94 |

* MIN. REQUIRED PARKLAND DEDICATION = 8% OF THE OVERALL TRACT.

SCHRYVER TRACT LAND STUDY
PROPOSED CONDITIONS EXHIBIT

DATE
10/09/2024
PROJECT NO.
04200.004
DRAWN BY
JW
CHECKED BY
SPM

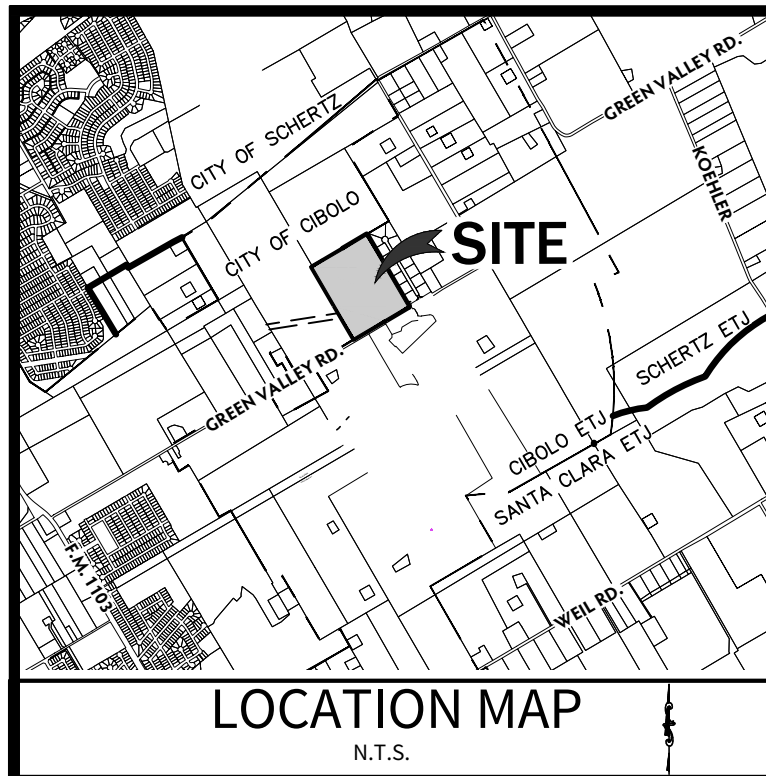
REVISIONS

| | |
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| 2. | |
| 3. | |
| 4. | |
| 5. | |
| 6. | |
| 7. | |
| 8. | |
| 9. | |

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW ONLY UNDER THE AUTHORITY OF SEAN M. McFARLAND, P.E. #138893
10/09/2024
IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMITTING PURPOSES.
CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

PLAT NO.
SAWS JOB NO.

E2

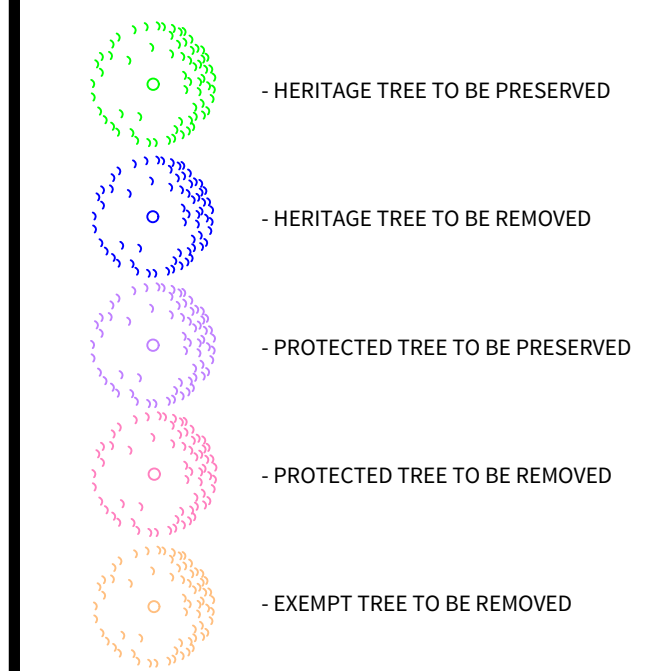


DEVELOPER:
 KB HOME
 CONTACT PERSON: RYAN BERNHARD
 4800 FREDERICKSBURG RD. SUITE 100
 SAN ANTONIO, TX 78229
 TEL: (210) 301-2821

CIVIL ENGINEER:
 CUDE ENGINEERS
 CONTACT PERSON: SEAN MCFARLAND P.E.
 4122 POND HILL ROAD, SUITE 101
 SAN ANTONIO, TX 78231
 TEL: (210) 681-2951

LEGEND:

- = SUBDIVISION BOUNDARY
- = CITY LIMIT BOUNDARY
- = EX. EASEMENTS
- = PROPOSED SECONDARY ACCESS EASEMENT

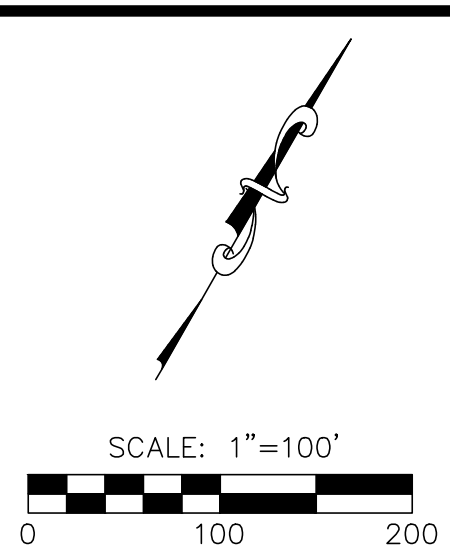
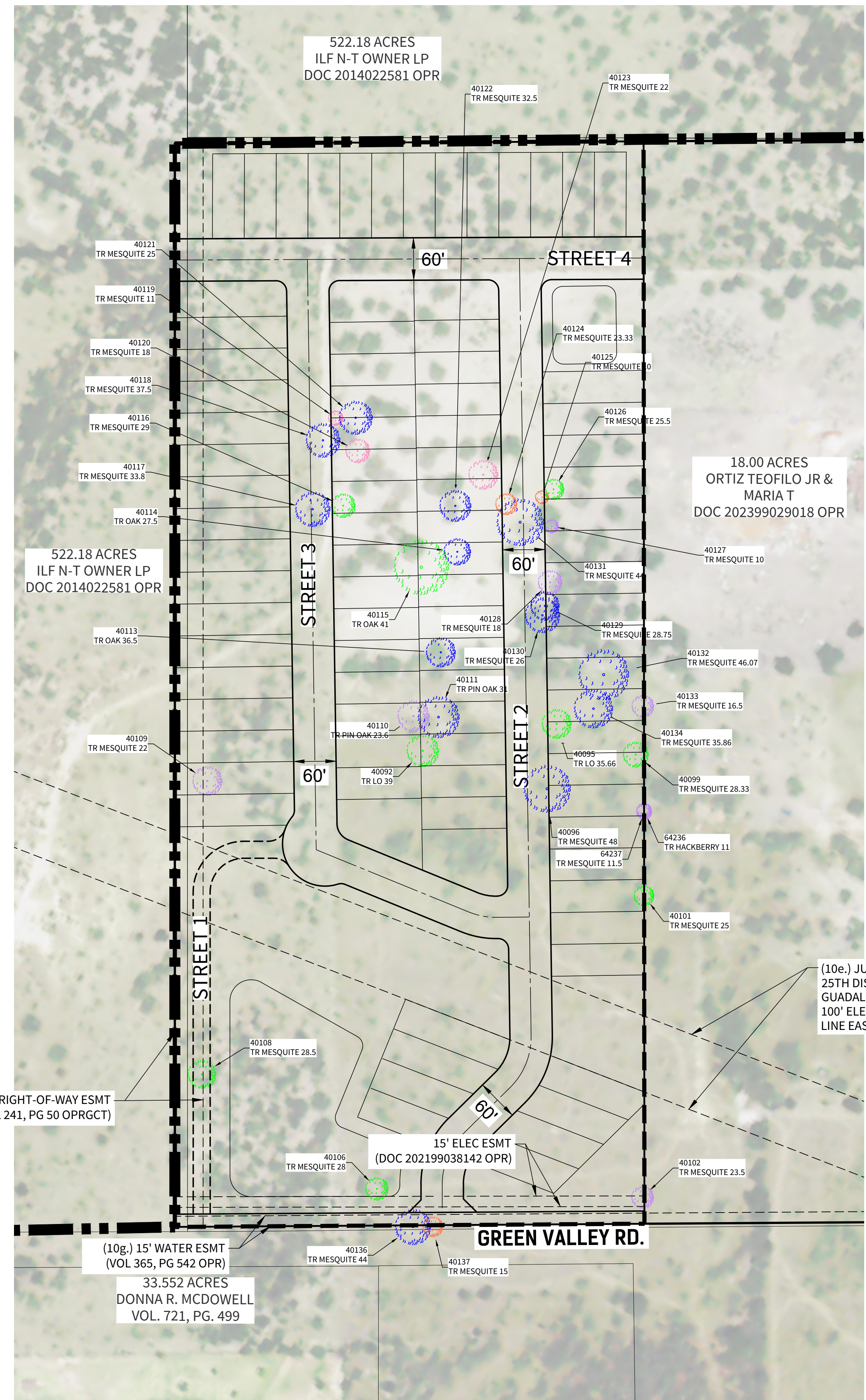


SIGNIFICANT TREE PRESERVATION LIST

| Point | Species | EXEMPT (ROW,ESMTS) | EXEMPT REMOVED | NON-EXEMPT | NON-EXEMPT REMOVED | EXEMPT PRESERVED | NON EXEMPT PRESERVED |
|--------------|-----------|--------------------|----------------|--------------|--------------------|------------------|----------------------|
| 40102 | MESQUITE | | | 23.5 | | | 23.5 |
| 40109 | MESQUITE | | | 22 | | | 22 |
| 40110 | PIN OAK | | | 23.6 | | | 23.6 |
| 40119 | MESQUITE | 11 | 11 | | | | |
| 40120 | MESQUITE | | | 18 | 18 | | |
| 40123 | MESQUITE | | | 22 | 22 | | |
| 40124 | MESQUITE | 23.33 | 23.33 | | | | |
| 40125 | MESQUITE | 10 | 10 | | | | |
| 40127 | MESQUITE | | | 10 | | | 10 |
| 40128 | MESQUITE | | | 18 | | | 18 |
| 40133 | MESQUITE | 16.5 | | | | | 16.5 |
| 40137 | MESQUITE | 15 | 15 | | | | |
| 64236 | HACKBERRY | | | 11 | | 11 | |
| 64237 | MESQUITE | | | 11.5 | | 11.5 | |
| Total | | 75.83 | 59.33 | 159.6 | 40 | 22.5 | 113.6 |

HERITAGE TREE PRESERVATION LIST

| Point | Species | EXEMPT (ROW) | EXEMPT REMOVED | NON-EXEMPT | NON-EXEMPT REMOVED | EXEMPT PRESERVED | NON EXEMPT PRESERVED |
|--------------|----------|---------------|----------------|---------------|--------------------|------------------|----------------------|
| 40092 | LO | | | 39 | | | 39 |
| 40095 | LO | | | 35.66 | | | 35.66 |
| 40096 | MESQUITE | 48 | 48 | | | | |
| 40099 | MESQUITE | | | 28.33 | | | 28.33 |
| 40101 | MESQUITE | | | 25 | | | 25 |
| 40106 | MESQUITE | | | 28 | | | 28 |
| 40108 | MESQUITE | | | 28.5 | | | 28.5 |
| 40111 | PIN OAK | | | 31 | | | 31 |
| 40113 | OAK | | | 36.5 | 36.5 | | |
| 40114 | OAK | | | 27.5 | 27.5 | | |
| 40115 | OAK | | | 41 | | | 41 |
| 40116 | MESQUITE | | | 29 | | | 29 |
| 40117 | MESQUITE | 33.8 | 33.8 | | | | |
| 40118 | MESQUITE | 37.5 | 37.5 | | | | |
| 40121 | MESQUITE | | | 25 | 25 | | |
| 40122 | MESQUITE | | | 32.5 | 32.5 | | |
| 40126 | MESQUITE | | | 25.5 | | | 25.5 |
| 40129 | MESQUITE | | | 28.75 | 28.75 | | |
| 40130 | MESQUITE | 26 | 26 | | | | |
| 40131 | MESQUITE | 44 | 44 | | | | |
| 40132 | MESQUITE | | | 46.07 | 46.07 | | |
| 40134 | MESQUITE | 35.86 | 35.86 | | | | |
| 40136 | MESQUITE | 44 | 44 | | | | |
| Total | | 269.16 | 269.16 | 507.31 | 196.32 | 0 | 310.99 |



NG N RS.COM

4122 Pond Hill Road, Suite 101
 San Antonio, Texas 78231
 P:(210) 681.2951 F:(210) 523.7112

**SCHRYVER TRACT
 LAND STUDY**

TREE CANOPY EXHIBIT

DATE
10/09/2024

PROJECT NO.
03200.004.0

DRAWN BY
SPM

CHECKED BY
SPM

REVISIONS

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW ONLY UNDER THE AUTHORITY OF SEAN P. MCFARLAND, P.E. #138893

10/09/2024
 IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMITTING PURPOSES.

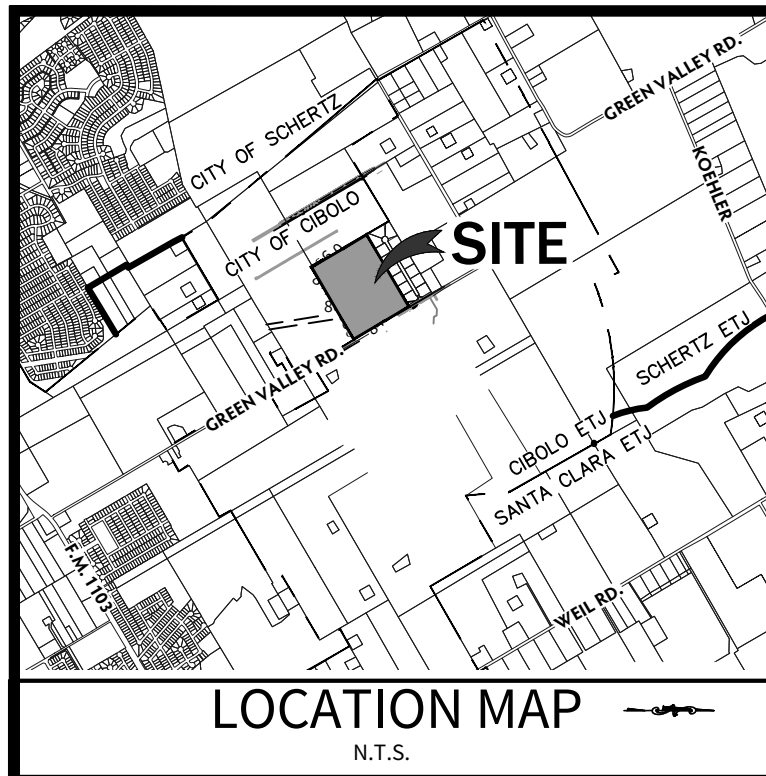
CUDE ENGINEERS
 TBPE No. 455
 TBPLS No. 10048500

PLAT NO.
N/A

E3

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.

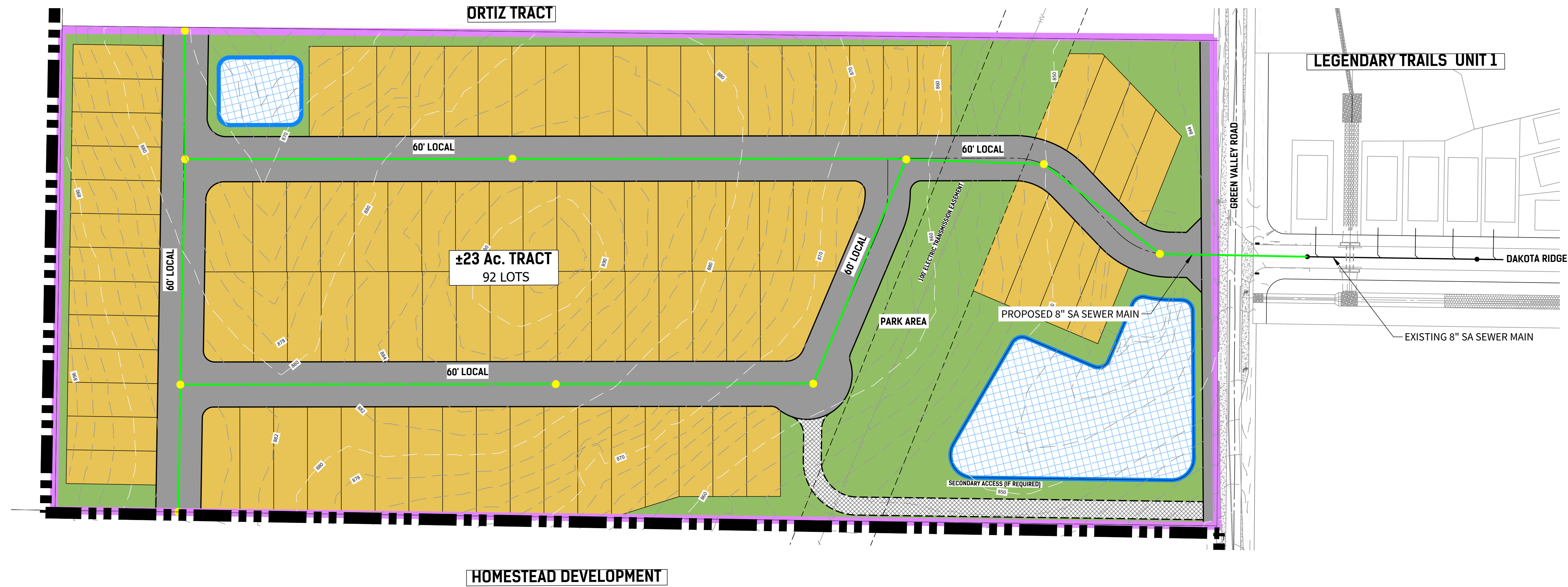
SANITARY SEWER MASTER PLAN



DEVELOPER:
 KB HOME
 CONTACT PERSON: RYAN BERNHARD
 4800 FREDERICKSBURG RD, SUITE 100
 SAN ANTONIO, TX 78229
 TEL: (210) 301-2821

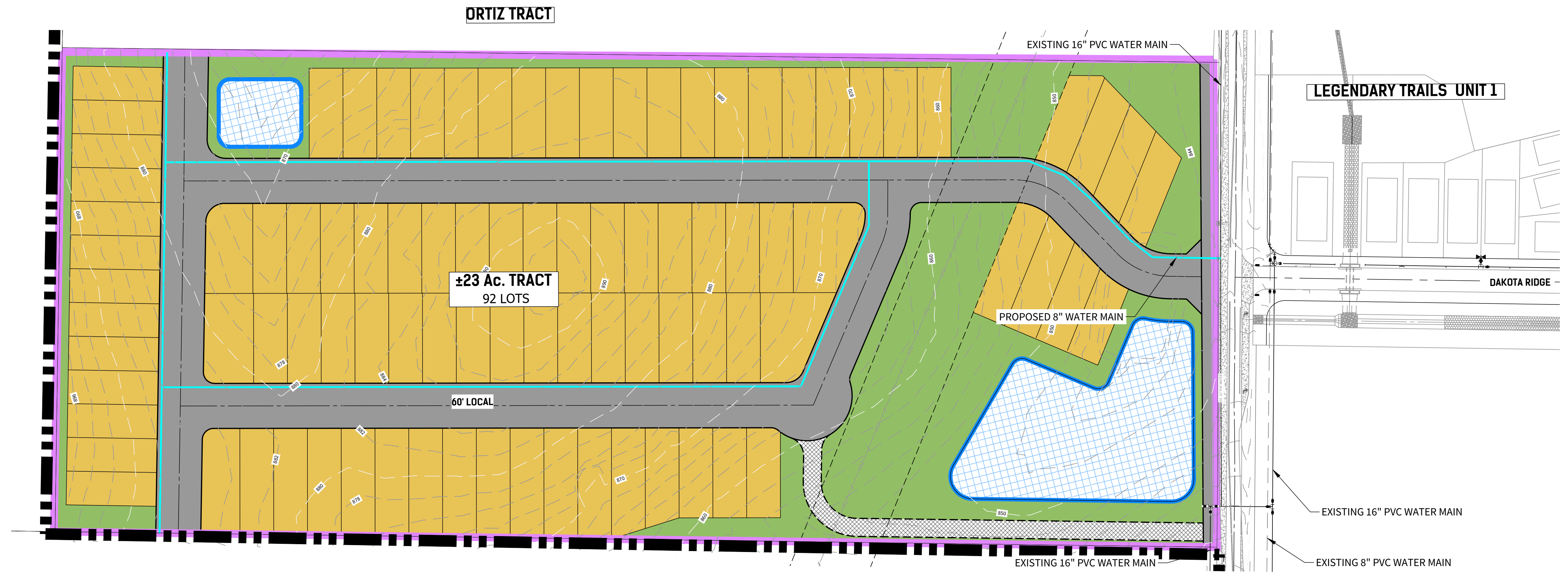
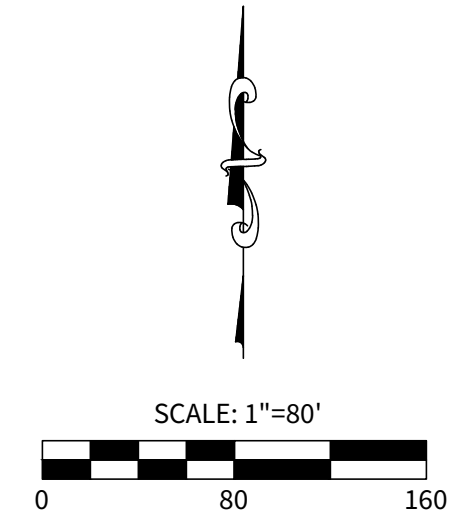
CIVIL ENGINEER:
 CUDE ENGINEERS
 CONTACT PERSON: SEAN MCFARLAND P.E.
 4122 POND HILL ROAD, SUITE 101
 SAN ANTONIO, TX 78231
 TEL: (210) 681-2951

- LEGEND**
- SCHRYVER TRACT
 - PROPOSED WATER MAIN
 - PROPOSED SEWER MAIN
 - PROPOSED SEWER MH
 - 45' LOTS
 - ROW
 - OPEN SPACE
 - DETENTION POND
 - SECONDARY ACCESS

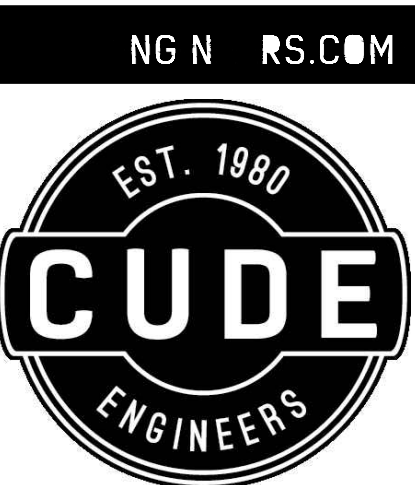


HOMESTEAD DEVELOPMENT

WATER MASTER PLAN



HOMESTEAD DEVELOPMENT



4122 Pond Hill Road, Suite 101
 San Antonio, Texas 78231
 P: (210) 681-2951 F: (210) 523-7112

SCHRYVER TRACT
 LAND TRACT
 WATER AND SANITARY SEWER
 MASTER PLAN EXHIBIT

| | |
|-------------|-------------|
| DATE | 10/09/2024 |
| PROJECT NO. | 03200.004.0 |
| DRAWN BY | SPM |
| CHECKED BY | SPM |

| NO. | REVISIONS |
|-----|-----------|
| 2. | |
| 3. | |
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| 7. | |
| 8. | |
| 9. | |

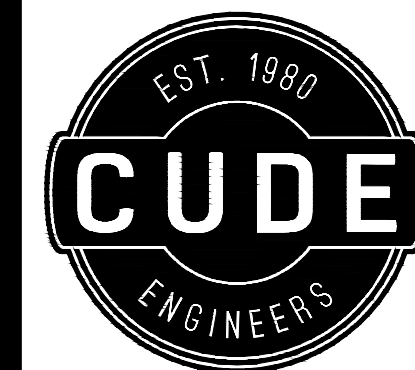
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CUDE ENGINEERS
 TBPE No. 455
 TBPLS No. 10048500

PLAT NO.
 N/A

E4

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4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681-2951 F: (210) 523-7112

SCHRYVER TRACT LAND STUDY
PRELIMINARY DRAINAGE MASTER PLAN

DATE
10/09/2024
PROJECT NO.
04200.004
DRAWN BY
JW
CHECKED BY
SPM

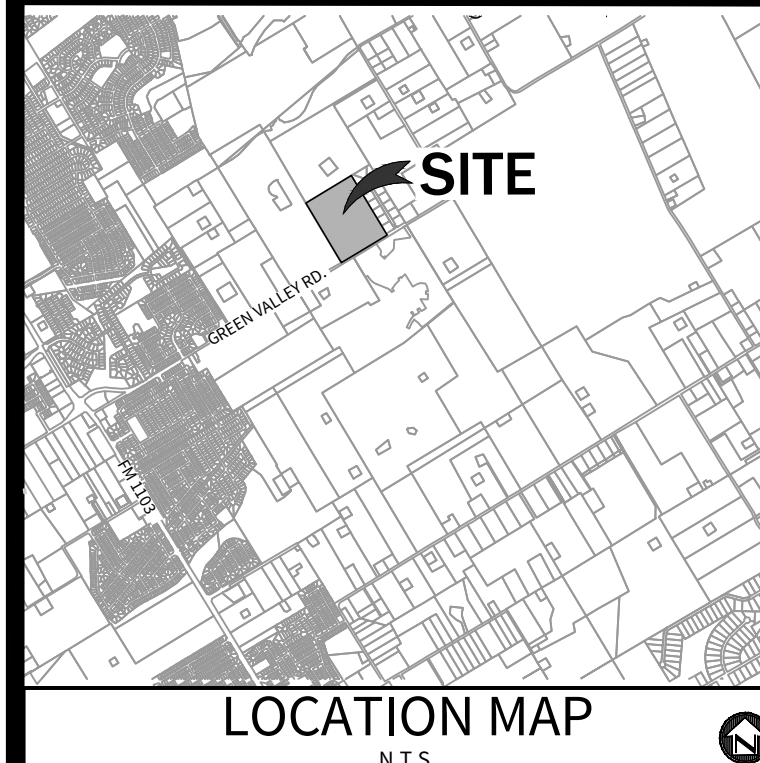
REVISIONS
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4.
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7.
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CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

PLAT NO.
SAWS JOB NO.

E5

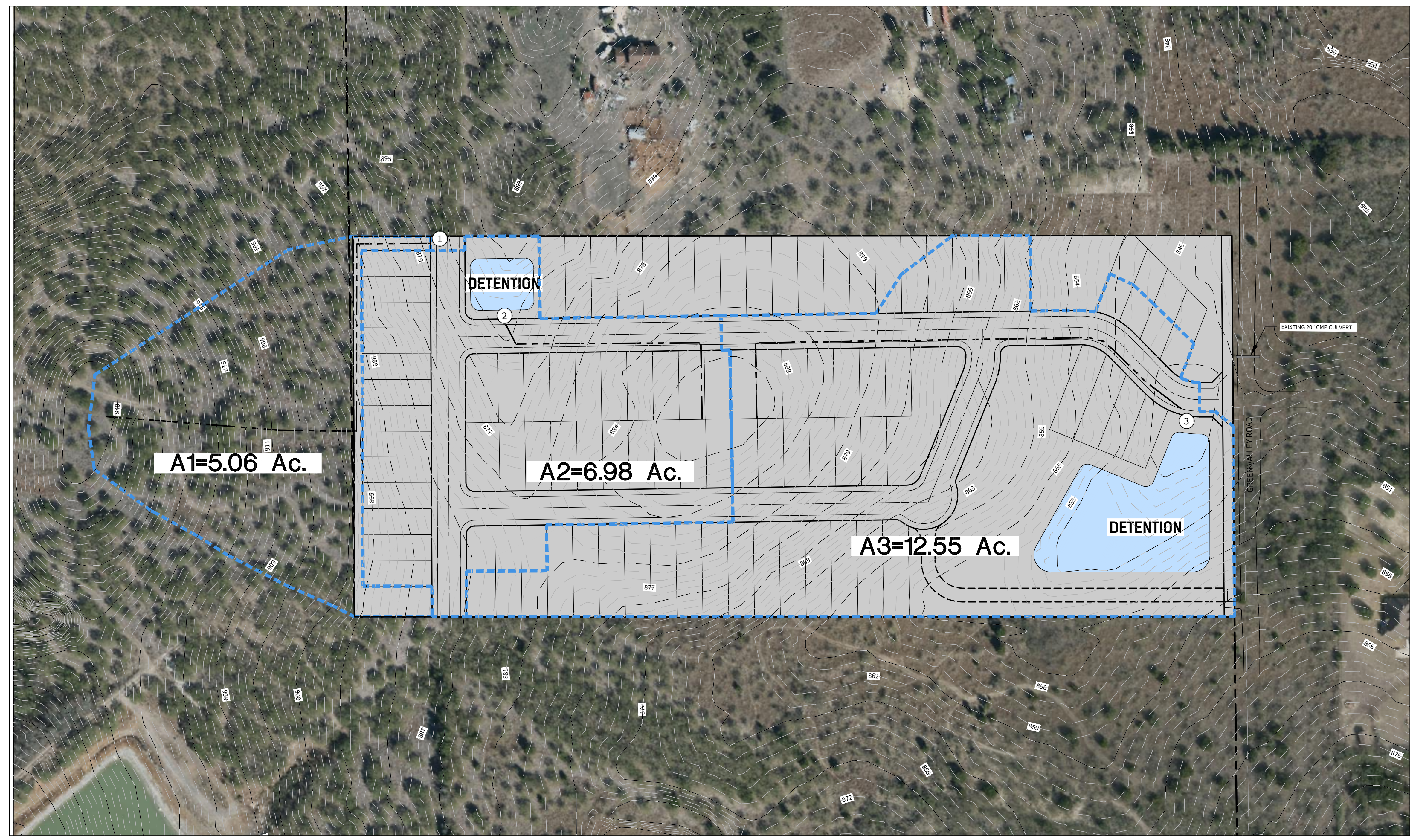


OWNER / DEVELOPER
KB HOME
CONTACT PERSON: RYAN BERNHARD
4800 FREDERICKSBURG RD, SUITE 100
SAN ANTONIO, TX 78229
TEL: (210) 301-2821

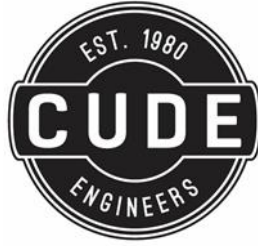
CIVIL ENGINEER:
M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: SEAN McFARLAND, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

- LEGEND:**
- = SUBDIVISION BOUNDARY
 - = DRAINAGE AREA
 - = CITY LIMIT BOUNDARY
 - = Tc FLOW PATH
 - = ACCUMULATION POINT

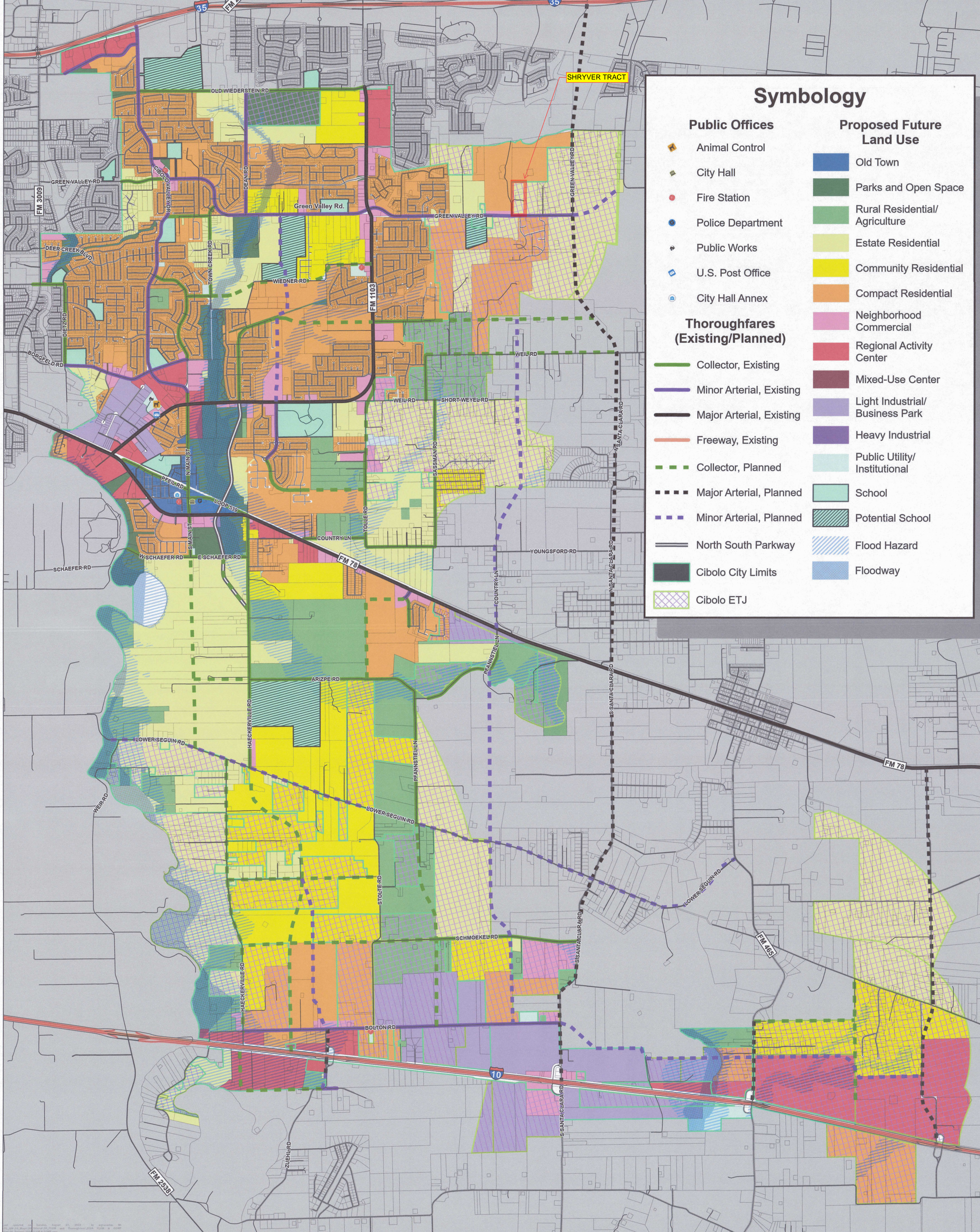
| Project Name: Schryver Tract | | | | | | | | | | | | | | | | | Preci | | PA2 | | | | | | |
|---|-----------------|----------------------------|------|----------------------------|----------------|----------------|------------------|--------|-------------------------------|---------------|----------------|------------------|------------------------------|-----------------------|--------|----------------|-----------------------|-----------------------------|------|--------|------|-------|-------|-------|---------------|
| Calculation Summary for Time of Concentrations & Project Flow (PROPOSED CONDITIONS) | | | | | | | | | | | | | | | | | | | | | | | | | |
| HYDROLOGY | | | | Sheet Flow Tc Computations | | | | | Shallow Conc. Tc Computations | | | | Concentrated Tc Computations | | | Overall | INTENSITY | | | Q FLOW | | | | | |
| Drainage Shed | Shed Area (Ac.) | AREA OF ACCUMULATION (Ac.) | C | Length < 300' | Paved (Y or N) | Upstream Elev. | Downstream Elev. | Slope | Time of Concentration | Length < 650' | Paved (Y or N) | Downstream Elev. | Slope | Time of Concentration | Length | Velocity (fps) | Time of Concentration | Time of Concentration (min) | I5 | I25 | I100 | Q5 | Q25 | Q100 | Drainage Shed |
| A1 | 5.06 | = A1 | 0.72 | 300.00 | N | 940.00 | 909.00 | 10.33% | 14.87 | 137.00 | N | 896.00 | 9.49% | 0.46 | 455.00 | 6 | 1.26 | 16.59 | 5.04 | 7.01 | 8.76 | 18.36 | 25.54 | 31.91 | A1 |
| A2 | 6.98 | = A2 | 0.72 | 130.00 | N | 900.00 | 898.00 | 1.54% | 15.42 | | | | | | 361.00 | 6 | 1.00 | 16.43 | 5.07 | 7.04 | 8.81 | 25.48 | 35.38 | 44.28 | A2 |
| A3 | 12.55 | = A3 | 0.70 | 130.00 | N | 900.00 | 898.00 | 1.54% | 15.42 | | | | | | 787.00 | 6 | 2.19 | 17.61 | 4.89 | 6.79 | 8.48 | 42.96 | 59.65 | 74.50 | A3 |



| Project Name: Schryver Tract | | | | | | | | | | | | | | | | | Preci | | PA2 | | | | | | |
|---|-----------------|----------------------------|------|----------------------------|----------------|----------------|------------------|--------|-------------------------------|---------------|----------------|------------------|------------------------------|-----------------------|--------|----------------|-----------------------|-----------------------------|------|--------|------|-------|-------|-------|---------------|
| Calculation Summary for Time of Concentrations & Project Flow (EXISTING CONDITIONS) | | | | | | | | | | | | | | | | | | | | | | | | | |
| HYDROLOGY | | | | Sheet Flow Tc Computations | | | | | Shallow Conc. Tc Computations | | | | Concentrated Tc Computations | | | Overall | INTENSITY | | | Q FLOW | | | | | |
| Drainage Shed | Shed Area (Ac.) | AREA OF ACCUMULATION (Ac.) | C | Length < 300' | Paved (Y or N) | Upstream Elev. | Downstream Elev. | Slope | Time of Concentration | Length < 650' | Paved (Y or N) | Downstream Elev. | Slope | Time of Concentration | Length | Velocity (fps) | Time of Concentration | Time of Concentration (min) | I5 | I25 | I100 | Q5 | Q25 | Q100 | Drainage Shed |
| A1 | 5.06 | = A1 | 0.53 | 300.00 | N | 940.00 | 909.00 | 10.33% | 14.87 | 137.00 | N | 896.00 | 9.49% | 0.46 | 455.00 | 6 | 1.26 | 16.59 | 5.04 | 7.01 | 8.76 | 13.52 | 18.80 | 23.49 | A1 |
| A2 | 6.98 | = A2 | 0.47 | 130.00 | N | 900.00 | 898.00 | 1.54% | 15.42 | | | | | | 361.00 | 6 | 1.00 | 16.43 | 5.07 | 7.04 | 8.81 | 16.63 | 23.10 | 28.90 | A2 |
| A3 | 12.55 | = A3 | 0.49 | 130.00 | N | 900.00 | 898.00 | 1.54% | 15.42 | | | | | | 787.00 | 6 | 2.19 | 17.61 | 4.89 | 6.79 | 8.48 | 30.07 | 41.76 | 52.15 | A3 |

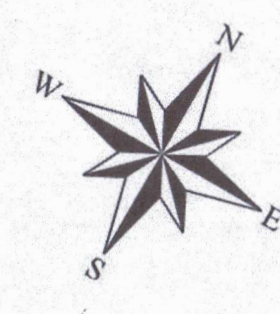


CIBOLO FUTURE LAND USE AND THOROUGHFARE MAP



Symbology

| | | | |
|---|--------------------------|---------------------------------|------------------------------------|
| Public Offices | | Proposed Future Land Use | |
| | Animal Control | | Old Town |
| | City Hall | | Parks and Open Space |
| | Fire Station | | Rural Residential/ Agriculture |
| | Police Department | | Estate Residential |
| | Public Works | | Community Residential |
| | U.S. Post Office | | Compact Residential |
| | City Hall Annex | | Neighborhood Commercial |
| Thoroughfares (Existing/Planned) | | | Regional Activity Center |
| | Collector, Existing | | Mixed-Use Center |
| | Minor Arterial, Existing | | Light Industrial/ Business Park |
| | Major Arterial, Existing | | Heavy Industrial |
| | Freeway, Existing | | Public Utility/ Institutional |
| | Collector, Planned | | School |
| | Major Arterial, Planned | | Potential School |
| | Minor Arterial, Planned | | Flood Hazard |
| | North South Parkway | | Floodway |
| | Cibolo City Limits | | |
| | Cibolo ETJ | | |



1:23,000

Future Land Use and Thoroughfare Map

City of Cibolo

September 10th 2024

This is to certify this map as the Official Future Land Use Map/Future Thoroughfare Plan adopted on 10 Sept 2024 by the City Council of the City of Cibolo, Texas.

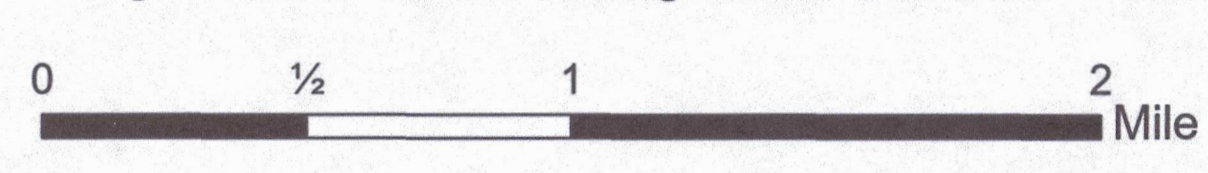
SIGNED:
Mark Allen, Mayor

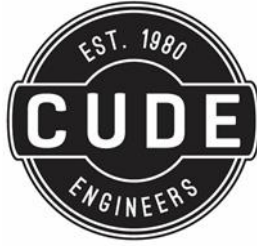
ATTEST:
Peggy Cimics, City Secretary



DISCLAIMER: All geospatial data products on this page are for informational purposes only and are not suitable for legal, engineering, or surveying purposes. The City of Cibolo cannot accept any responsibility for any errors, omissions, or positional accuracy, and therefore, there are no warranties which accompany these products. Boundaries do not represent an on-the-ground survey conducted by or under the supervision of a registered professional land surveyor and represents only the approximate relative location of property boundaries. These products may not reflect some data otherwise available. These products are not a substitute for obtaining a survey or other professional advice about a specific property, specific question, or situation.

A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries





MTP – SCHRYVER TRACT



Cities

Name
Cibolo ETJ

Acres
4 430.27

Sq miles
6.92

Etj
Yes

Schryver Tract

cc carlton

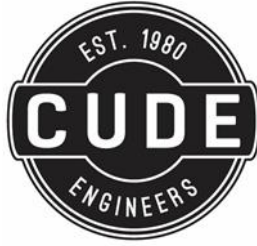
AAA Storage
 Cibolo, Texas

GSPSA Training

Fair and Flour Bread Co

Photography by Karla

Lindsey Murphree
 Photography



TIA THRESHOLD WORKSHEET

Traffic Impact Analysis (TIA) Threshold Worksheet

Table 18.1

Complete this form as an aid to determine if your project requires a Traffic Impact Analysis Study.

| | | | |
|--|--|--|---|
| Project Name: Schryver Tract | | Threshold Worksheet Prepared by: | |
| Project Location: Along Green Valley Road East of FM 1103 | | Company: Legacy Engineering Group | <input type="checkbox"/> Owner or <input type="checkbox"/> Owner's Agent. |
| Date: 10/8/2024 | | Address: 7800 W Interstate 10, Ste 830, San Antonio, Texas, 78230 | |
| | | Email: Mike.Garza@leg-llc.com | Phone: 210-660-1960 |

Permit Type or Reason for TIA Study/Worksheet (Check one and indicate the number if known):

| | | | | |
|-------------------------------|--|--------------------------------|-------------------------------------|---------------------------------|
| Zoning # Unzoned (ETJ) | Site Plan: <input checked="" type="checkbox"/> | Plat: <input type="checkbox"/> | Mixed Use: <input type="checkbox"/> | Other: <input type="checkbox"/> |
|-------------------------------|--|--------------------------------|-------------------------------------|---------------------------------|

Proposed Type of Development (Multi building development or multi-occupancies may require additional tabulation sheets to determine total peak hour trips)

| Anticipated Land/Building Use/Zoning | Project Size | | | Critical Peak Hour | Peak Hour Trip Rate (PHT) Rate | Peak Hour Trips (PHT) | Trip Rate Source |
|--------------------------------------|--------------|-----|------------|--------------------|--------------------------------|-----------------------|------------------|
| | Acres | GFA | # of Units | | | | |
| Single-Family Residential | | | 112 | PM | 0.94 | 105 | ITE Code: 210 |

Previous Development on Site (Required for land with previous/current buildings occupied within 1 year of submittal or if Re-zoning property):

| Previous Land/Building Use/Zoning | Size | | | Critical Peak Hour | Peak Hour Trip Rate (PHT) Rate | Peak Hour Trips (PHT) | Trip Rate Source |
|-----------------------------------|-------|-----|------------|--------------------|--------------------------------|-----------------------|------------------|
| | Acres | GFA | # of Units | | | | |
| | | | | | | | ITE Code: |

Previous TIA Report (If property has a TIA on file)

| Peak Hour Trips Projected in TIA on File | Peak Hour Trips Projected in Updated Development Plan |
|--|---|
| | |

Difference in PHT (Proposed PHT – Previous Development PHT or TIA PHT)

| Increase in Peak Hour Trips (if an increase of 76 PHT or an increase of 10% of the total PHT, a new TIA is required) |
|---|
| |

Turn Lane Requirements for Developments with Less Than 76 PHT (for developments with 76 or more PHT, this analysis will be included in the TIA)

| Requirement | Right-turn lanes required at: (identify street/driveway name) | Left-turn lanes required at: (identify street/driveway name) |
|--|--|---|
| Median Openings | N/A | <input type="checkbox"/> _____ <input type="checkbox"/> None |
| Driveways or streets with a daily entering right- or left-turn traffic volume of 500 vehicle trips or 50 vehicle peak hour trips | <input type="checkbox"/> _____ <input type="checkbox"/> None | <input type="checkbox"/> _____ <input type="checkbox"/> None |
| Required by TxDOT | <input type="checkbox"/> _____ <input type="checkbox"/> None | <input type="checkbox"/> _____ <input type="checkbox"/> None |
| Where unsafe conditions may exist (limited sight distance, high speed, uneven grade, etc.) | <input type="checkbox"/> _____ <input type="checkbox"/> None | <input type="checkbox"/> _____ <input type="checkbox"/> None |

Comments

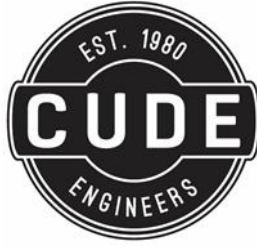
(For Official Use Only, Do Not Write in this Box)

TIA report is required. A TIA report is **not required**. The traffic generated by the proposed development does not exceed the threshold requirements.

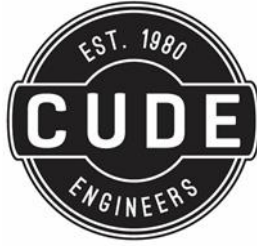
The traffic impact analysis has been waived for the following reasons: _____

Reviewed by: _____ Date: _____

NOTE: GFA = Gross Floor Area (bldg. size). ITE = Institute of Transportation Engineers, Trip Generation, 10th Edition. 525 School Street, S.W., Suite 410, Washington, DC 20024-2729; (202) 554-8050.



TAX CERTIFICATES



WILL SERVE LETTERS



10/2/24

Sean McFarland,
Cude Engineers
4122 Pond Hill Rd, Ste. 101,
San Antonio, TX 78231
210.681.2951 x 119

Re: May Serve Letter by Charter Communications

Thank you for your interest in receiving Charter service. The purpose of this letter is to confirm that the property at **Green Valley Rd and Dakota Ridge, Cibolo, TX 78108** is within an area that Charter may lawfully serve. However, it is not a commitment to provide service to the Property. Prior to any determination as to whether service can or will be provided to the Property, Charter will conduct a survey of the Property and will need the following information from you:

- Exact site address and legal description
- Is this an existing building or new construction?
- Site plans, blue prints, plat maps or any similar data
- The location of any existing utilities or utility easements
- _____

Please forward this information to **Email: Stx.NewDevelopment@charter.com** Upon receipt, a Charter representative will be assigned to you to work through the process. Ultimately, a mutually acceptable service agreement for the Property will be required and your cooperation in the process is appreciated.

For future reference, please send all utility coordination, abandonments, encroachments, plat signatures, or serviceability requests, or notices of relocation to Email: Stx.NewDevelopment@charter.com. Please share this information with whoever needs these services.

Sincerely,
Jamie Craig
Jamie Craig



September 12, 2024

RE: Sean McFarland
Cude Engineers
4122 Pond Hill Rd., Ste. 101
San Antonio, TX 78231
Parcel ID- 67942, 67943

The above-mentioned tract(s) is in the Guadalupe Valley Electric Cooperative certified service territory. GVEC can provide electric service to this property pending agreements with the developer as set forth in GVEC's tariffs.

Sincerely,

A handwritten signature in black ink that reads "Casie Boos". The signature is written in a cursive, flowing style.

Casie Boos
Project Coordinator

cboos@gvec.org

830.857.5127

6400 IH 10 W

Seguin, Texas 78155



September 16, 2024

**Availability of natural gas service at:
Schryver Tract
Green Valley Rd. & Dakota Ridge – Cibolo, TX**

Dear Sean McFarland,

This is to inform you that natural gas is available to serve the above-mentioned development.

CenterPoint Energy provides gas service up to the meter. Please provide us with a master plan and easement information in CAD format (2010), once it is available, so we may begin our design. At times, we can arrange to serve the entire development at no cost to the developer. As the development moves forward, please update us with the most current plats and designs for each unit.

I look forward to working with you to provide natural gas, the most energy efficient fuel source for your development.

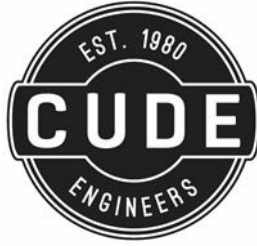
If you have any questions or require additional information, please call me at (830) 340-1209 or e-mail michael.gooden@centerpointenergy.com.

Appreciatively,

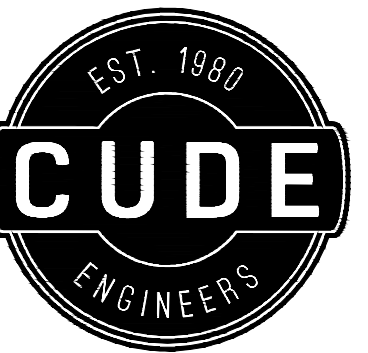
Michael Gooden, Sr.
Developer Coordinator | Business Development So. TX
830.340.1209 c. | 830.643.6912 o.

michael.gooden@centerpointenergy.com



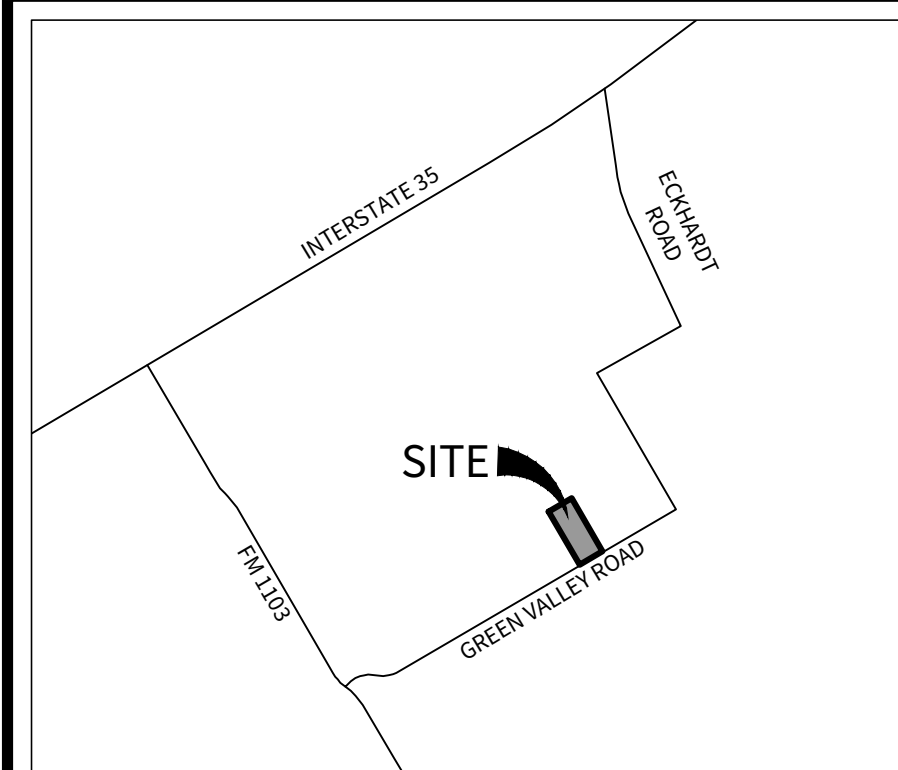
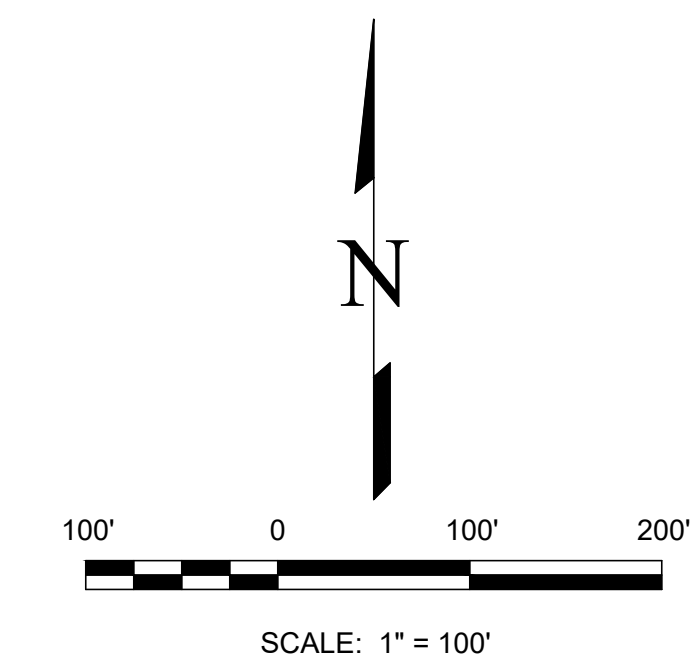


SURVEY



4122 POND HILL RD. • SUITE 101
SAN ANTONIO, TEXAS 78231
T:210.681.2951 • F:210.523.1112
WWW.CUDEENGINEERS.COM
TBPELS FIRM #10048500 • TBPE FIRM #455

LAND TITLE SURVEY
23.34 ACRES OF LAND LOCATED IN THE PEDRO SAN MIGUEL SURVEY 256, ABSTRACT 227, GUADALUPE COUNTY, TEXAS, AND BEING ALL OF A CALLED 23.3285 ACRE TRACT OF LAND, RECORDED IN DOCUMENT 202299016792 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS



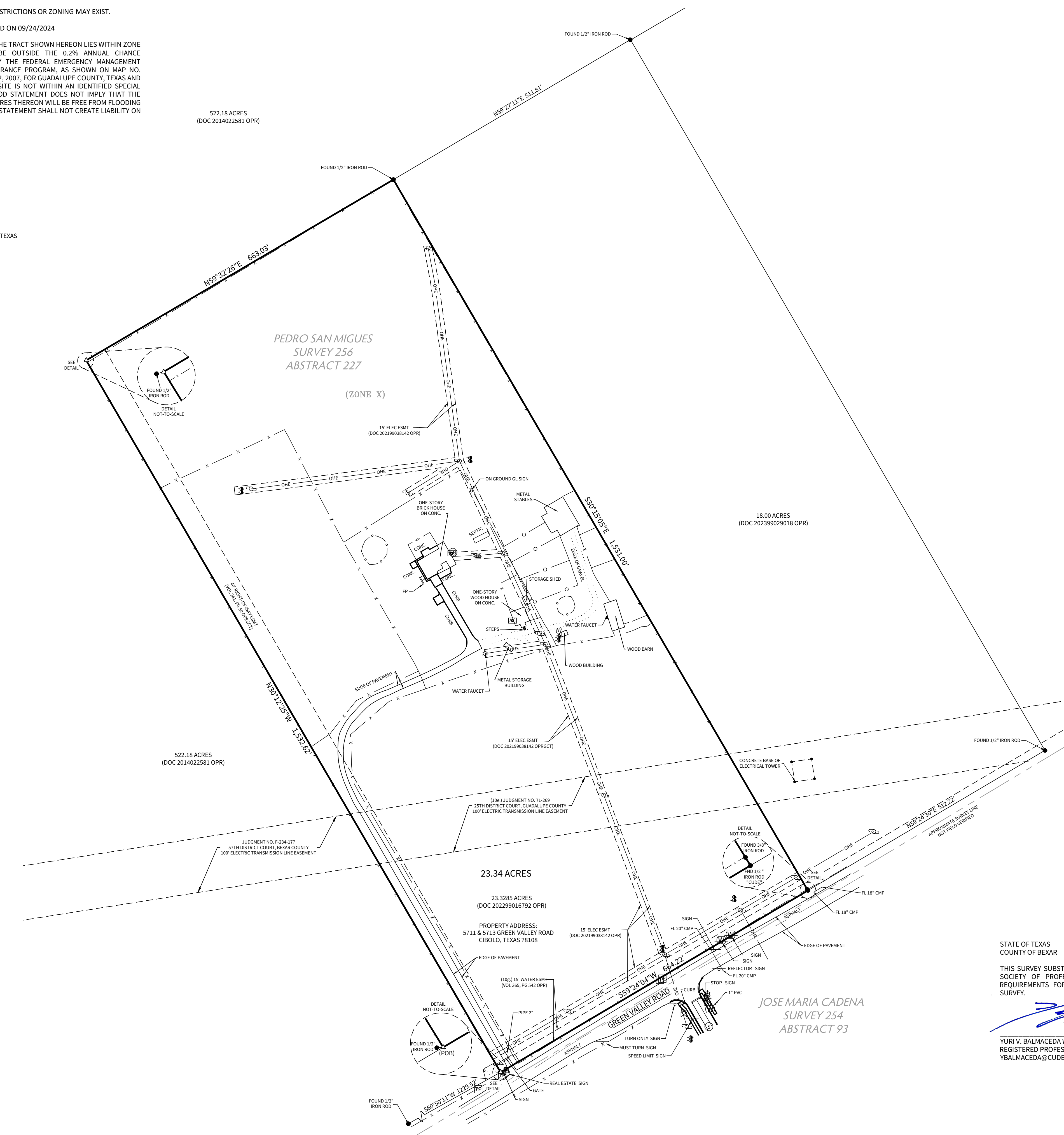
- NOTES:**
1. BASIS OF BEARING IS THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (2011). ALL DISTANCES SHOWN HEREON ARE GROUND DISTANCES USING A COMBINED SCALE FACTOR OF 1.00016.
 2. SETBACKS OR EASEMENTS PER RESTRICTIONS OR ZONING MAY EXIST.
 3. THE FIELD WORK WAS COMPLETED ON 09/24/2024
 4. BY GRAPHICAL PLOTTING ONLY, THE TRACT SHOWN HEREON LIES WITHIN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, NATIONAL FLOOD INSURANCE PROGRAM, AS SHOWN ON MAP NO. 48187C0230F, DATED NOVEMBER 2, 2007, FOR GUADALUPE COUNTY, TEXAS AND INCORPORATED AREAS. IF THIS SITE IS NOT WITHIN AN IDENTIFIED SPECIAL FLOOD HAZARD AREA, THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR THE STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

LOCATION MAP
NOT TO SCALE

- LINE LEGEND**
- o — = ORNAMENTAL FENCE
 - x — = BARBED WIRE FENCE
 - y — = WOOD FENCE
 - ohe — = OVERHEAD ELECTRIC
- LEGEND**
- POB = POINT OF BEGINNING
 - OPR = OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS
 - ▲ = CALCULATED POINT
 - = FOUND AS NOTED
 - ⊠ = AIR CONDITIONER
 - ⊙ = CLEANOUT
 - ⊙ = GUY ANCHOR
 - ⊙ = LIGHT POLE
 - ⊙ = UTILITY POLE
 - ⊙ = SIGN
 - ⊙ = TELEPHONE PEDESTAL
 - ⊙ = HOSE BIB
 - ⊙ = FLAGPOLE
 - ⊙ = MAILBOX

REFERENCES:
THIS SURVEY WAS PREPARED IN CONJUNCTION WITH, BUT NOT SOLELY RELYING ON THE TITLE COMMITMENT LISTED BELOW.
TITLE COMMITMENT: G.F. # 24-060391
ALAMO TITLE INSURANCE
DATE ISSUED: SEPTEMBER 12, 2024
EFFECTIVE DATE: AUGUST 28, 2024
ONLY THOSE MATTERS AFFECTING THE AREA OF SUBJECT PROPERTY IDENTIFIED IN THIS TITLE COMMITMENT ARE SHOWN.

- SCHEDULE B (ONLY THOSE MATTERS IN TITLE COMMITMENT ARE ADDRESSED BELOW):**
- 10c. RIGHT OF WAY EASEMENT GRANTED TO GUADALUPE VALLEY ELECTRIC COOPERATIVE, INC., RECORDED IN DOCUMENT NO. 2017024822, AND DOCUMENT NO. 2017013688, AMENDED UNDER DOCUMENT NO. 202199038142, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS. (APPLIES-NOT PLOTTABLE)
 - 10d. EASEMENT GRANTED TO COMAL POWER COMPANY, RECORDED IN VOLUME 85, PAGE 222, DEED RECORDS, GUADALUPE COUNTY, TEXAS. (BLANKET)
 - 10e. EASEMENT FOR ELECTRIC TRANSMISSION SYSTEM GRANTED TO CITY OF SAN ANTONIO IN CONDEMNATION PROCEEDINGS IN CIVIL NO. 71-269, 25TH JUDICIAL DISTRICT COURT, GUADALUPE COUNTY, TEXAS, REFERENCED IN VOLUME 718, PAGE 487, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS. (APPLIES-SHOWN)
 - 10f. EASEMENT GRANTED TO THE TEXAS PIPE LINE COMPANY, RECORDED IN VOLUME 104, PAGE 124, DEED RECORDS, GUADALUPE COUNTY, TEXAS. (BLANKET-UNABLE TO LOCATE)
 - 10g. EASEMENT GRANTED TO GREEN VALLEY WATER SUPPLY CORPORATION, RECORDED IN VOLUME 365, PAGE 542, DEED RECORDS, GUADALUPE COUNTY, TEXAS. (APPLIES-SHOWN)
 - 10h. INTEREST IN AND TO ALL COAL, LIGNITE, OIL, GAS AND OTHER MINERALS, AND ALL RIGHTS INCIDENT THERETO, CONTAINED IN INSTRUMENT DATED SEPTEMBER 27, 1994, RECORDED OCTOBER 3, 1994 AT VOLUME 1117, PAGE 657, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS, OF THE OFFICIAL RECORDS OF COUNTY, TEXAS. REFERENCE TO WHICH INSTRUMENT IS HERE MADE FOR PARTICULARS. NO FURTHER SEARCH OF TITLE HAS BEEN MADE AS TO THE INTEREST(S) EVIDENCED BY THIS INSTRUMENT, AND THE COMPANY MAKES NO REPRESENTATION AS TO THE OWNERSHIP OR HOLDER OF SUCH INTEREST(S). (NOT SURVEY RELATED)
 - 10i. INTEREST IN AND TO ALL COAL, LIGNITE, OIL, GAS AND OTHER MINERALS, AND ALL RIGHTS INCIDENT THERETO, CONTAINED IN INSTRUMENT DATED AUGUST 8, 1980, RECORDED AUGUST 15, 1980 AT VOLUME 603, PAGE 225, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS, OF THE OFFICIAL RECORDS OF COUNTY, TEXAS. REFERENCE TO WHICH INSTRUMENT IS HERE MADE FOR PARTICULARS. NO FURTHER SEARCH OF TITLE HAS BEEN MADE AS TO THE INTEREST(S) EVIDENCED BY THIS INSTRUMENT, AND THE COMPANY MAKES NO REPRESENTATION AS TO THE OWNERSHIP OR HOLDER OF SUCH INTEREST(S). (NOT SURVEY RELATED)
 - 10j. INTEREST IN AND TO ALL COAL, LIGNITE, OIL, GAS AND OTHER MINERALS, AND ALL RIGHTS INCIDENT THERETO, CONTAINED IN INSTRUMENT DATED SEPTEMBER 17, 1984, RECORDED SEPTEMBER 19, 1984 AT VOLUME 718, PAGE 487, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS, OF THE OFFICIAL RECORDS OF COUNTY, TEXAS. REFERENCE TO WHICH INSTRUMENT IS HERE MADE FOR PARTICULARS. NO FURTHER SEARCH OF TITLE HAS BEEN MADE AS TO THE INTEREST(S) EVIDENCED BY THIS INSTRUMENT, AND THE COMPANY MAKES NO REPRESENTATION AS TO THE OWNERSHIP OR HOLDER OF SUCH INTEREST(S). (NOT SURVEY RELATED)
 - 10k. LEASE FOR COAL, LIGNITE, OIL, GAS OR OTHER MINERALS, TOGETHER WITH RIGHTS INCIDENT THERETO, DATED SEPTEMBER 11, 1979, BY AND BETWEEN MARY DOROTHY BARR, A WIDOW, AS LESSOR, AND GARY HAGMAN, AS LESSEE, RECORDED OCTOBER 19, 1979 AT VOLUME 586, PAGE 709, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS. REFERENCE TO WHICH INSTRUMENT IS HERE MADE FOR PARTICULARS. NO FURTHER SEARCH OF TITLE HAS BEEN MADE AS TO THE INTEREST(S) EVIDENCED BY THIS INSTRUMENT, AND THE COMPANY MAKES NO REPRESENTATION AS TO THE OWNERSHIP OR HOLDER OF SUCH INTEREST(S). (NOT SURVEY RELATED)
 - 10l. LEASE FOR COAL, LIGNITE, OIL, GAS OR OTHER MINERALS, TOGETHER WITH RIGHTS INCIDENT THERETO, DATED NOVEMBER 29, 1973, BY AND BETWEEN WILLARD D. BARR AND WIFE, MARY DOROTHY BARR, AS LESSOR, AND FRED M. GARRETT, AS LESSEE, RECORDED OCTOBER 23, 1974 AT VOLUME 492, PAGE 539, DEED RECORDS, GUADALUPE COUNTY, TEXAS. REFERENCE TO WHICH INSTRUMENT IS HERE MADE FOR PARTICULARS. NO FURTHER SEARCH OF TITLE HAS BEEN MADE AS TO THE INTEREST(S) EVIDENCED BY THIS INSTRUMENT, AND THE COMPANY MAKES NO REPRESENTATION AS TO THE OWNERSHIP OR HOLDER OF SUCH INTEREST(S). (NOT SURVEY RELATED)
 - 10m. LEASE FOR COAL, LIGNITE, OIL, GAS OR OTHER MINERALS, TOGETHER WITH RIGHTS INCIDENT THERETO, DATED DECEMBER 6, 1973, BY AND BETWEEN WILLARD D. BARR AND WIFE, MARY DOROTHY BARR, AS LESSOR, AND FRED M. GARRETT, AS LESSEE, RECORDED OCTOBER 23, 1974 AT VOLUME 492, PAGE 536, DEED RECORDS, GUADALUPE COUNTY, TEXAS. REFERENCE TO WHICH INSTRUMENT IS HERE MADE FOR PARTICULARS. NO FURTHER SEARCH OF TITLE HAS BEEN MADE AS TO THE INTEREST(S) EVIDENCED BY THIS INSTRUMENT, AND THE COMPANY MAKES NO REPRESENTATION AS TO THE OWNERSHIP OR HOLDER OF SUCH INTEREST(S). (NOT SURVEY RELATED)

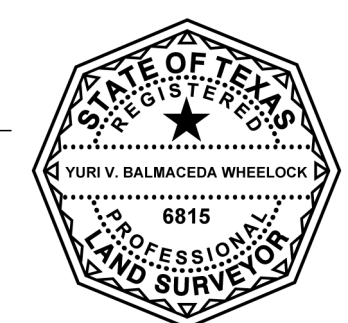


STATE OF TEXAS
COUNTY OF BEXAR

THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL SURVEYORS MANUAL OF PRACTICE REQUIREMENTS FOR A CATEGORY 1A, CONDITION 2, LAND TITLE SURVEY.

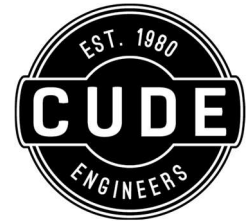
10/03/2024

YURI V. BALMACEA WHEELLOCK
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6815
YBALMACEA@CUDEENGINEERS.COM



| | |
|-------------|------------|
| DATE | 10/03/2024 |
| PROJECT NO. | 04002.004 |
| DRAWN BY | DB |
| CHECKED BY | YVB |
| REVISIONS | |
| 1. | |
| 2. | |
| 3. | |
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V-1



**LEGAL DESCRIPTION
23.34 ACRES OF LAND**

23.34 ACRES OF LAND LOCATED IN THE PEDRO SAN MIGUEL SURVEY 256, ABSTRACT 227, GUADALUPE COUNTY, TEXAS AND BEING ALL OF A CALLED 23.3285 ACRE TRACT OF LAND RECORDED IN DOCUMENT 202299016792 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS; SAID 23.34 ACRES BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING, AT A CALCULATED POINT ON THE NORTH RIGHT-OF-WAY LINE OF GREEN VALLEY ROAD, A SOUTHEAST CORNER OF A CALLED 522.18 ACRE TRACT RECORDED IN DOCUMENT 2014022581 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS, THE SOUTH CORNER OF SAID 23.3285 ACRE TRACT AND THE **POINT OF BEGINNING** OF THE HEREIN DESCRIBED TRACT, FROM WHICH A FOUND 1/2" IRON ROD BEARS S 69°53'01" W, A DISTANCE OF 0.86 FEET AND FROM WHICH A FOUND 1/2" IRON ROD BEARS S 60°50'11" W, A DISTANCE OF 1,229.52 FEET TO A SOUTH CORNER OF SAID 522.18 ACRE TRACT;

THENCE, DEPARTING THE NORTH RIGHT-OF-WAY LINE OF GREEN VALLEY ROAD, ALONG AND WITH THE COMMON BOUNDARY LINE OF SAID 23.3285 ACRE TRACT AND SAID 522.18 ACRE TRACT, THE FOLLOWING BEARINGS AND DISTANCES:

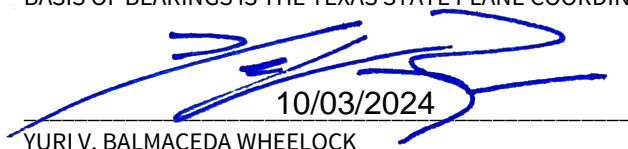
N 30°12'25" W, A DISTANCE OF 1,532.62 FEET TO A CALCULATED POINT, THE NORTH CORNER OF SAID 23.3285 ACRE TRACT FROM WHICH A FOUND 1/2" IRON ROD BEARS S 80°27'15" W, A DISTANCE OF 0.58 FEET;

N 59°32'26" E, A DISTANCE OF 663.03 FEET TO A FOUND 1/2" IRON ROD, THE NORTH CORNER OF SAID 23.3285 ACRE TRACT AND THE WEST CORNER OF A 18.00 ACRE TRACT RECORDED IN DOCUMENT 202399029018 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS, FROM WHICH A FOUND 1/2" IRON ROD BEARS N 59°27'11" E, A DISTANCE OF 511.81 FEET TO THE NORTH CORNER OF SAID 18.00 ACRE TRACT;

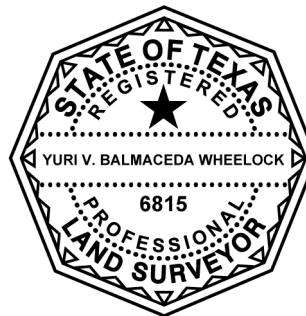
THENCE, S 30°15'05" E, ALONG AND WITH THE COMMON BOUNDARY LINE OF SAID 23.3285 ACRE TRACT AND SAID 18.00 ACRE TRACT, AT A DISTANCE OF 1,528.75 FEET PASSING A FOUND 3/8" IRON ROD, CONTINUING FOR A TOTAL DISTANCE OF 1531.00 FEET TO A FOUND 1/2" IRON ROD WITH A "CUDE" CAP, THE EAST CORNER OF SAID 23.3285 ACRE TRACT, THE SOUTH CORNER OF SAID 18.00 ACRE TRACT AND THE NORTH RIGHT-OF-WAY LINE OF SAID GREEN VALLEY ROAD, FROM WHICH A FOUND 1/2" IRON ROD BEARS N 59°24'30" E, A DISTANCE OF 512.22 FEET TO THE EAST CORNER OF SAID 18.00 ACRE TRACT;

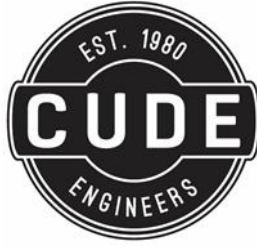
THENCE, S 59°24'04" W, ALONG AND WITH THE NORTH RIGHT-OF-WAY LINE OF SAID GREEN VALLEY ROAD AND THE SOUTH LINE OF SAID 23.3285 ACRE TRACT, A DISTANCE OF 664.22 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 23.34 ACRES OF LAND, MORE OR LESS.

BASIS OF BEARINGS IS THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (2011).


10/03/2024

YURI V. BALMACEDA WHEELOCK
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6815
CUDE ENGINEERS
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TEXAS 78231
TBPELS FIRM NO. 10048500
TBPE FIRM NO. 455
JOB NO.04002.004





TITLE COMMITMENT

THE FOLLOWING COMMITMENT FOR TITLE INSURANCE IS NOT VALID UNLESS YOUR NAME AND THE POLICY AMOUNT ARE SHOWN IN SCHEDULE A, AND OUR AUTHORIZED REPRESENTATIVE HAS COUNTERSIGNED BELOW.

COMMITMENT FOR TITLE INSURANCE
ISSUED BY
ALAMO TITLE INSURANCE

We, Alamo Title Insurance, will issue our title insurance policy or policies (the Policy) to You (the proposed insured) upon payment of the premium and other charges due, and compliance with the requirements in Schedule B and Schedule C. Our Policy will be in the form approved by the Texas Department of Insurance at the date of issuance, and will insure your interest in the land described in Schedule A. The estimated premium for our Policy and applicable endorsements is shown on Schedule D. There may be additional charges such as recording fees, and expedited delivery expenses.

This Commitment ends ninety (90) days from the effective date, unless the Policy is issued sooner, or failure to issue the Policy is our fault. Our liability and obligations to you are under the express terms of this Commitment and end when this Commitment expires.

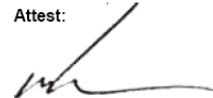
ALAMO TITLE INSURANCE



By: 

President

Attest:



Secretary



Authorized Signature
San Antonio Title Co.

CONDITIONS AND STIPULATIONS

1. If you have actual knowledge of any matter which may affect the title or mortgage covered by this Commitment, that is not shown in Schedule B, you must notify us in writing. If you do not notify us in writing, our liability to you is ended or reduced to the extent that your failure to notify us affects our liability. If you do notify us, or we learn of such matter, we may amend Schedule B, but we will not be relieved of liability already incurred.
2. Our liability is only to you, and others who are included in the definition of Insured in the Policy to be issued. Our liability is only for actual loss incurred in your reliance on this Commitment to comply with its requirements or to acquire the interest in the land. Our liability is limited to the amount shown in Schedule A of this Commitment and will be subject to the following terms of the Policy: Insuring Provisions, Conditions and Stipulations, and Exclusions.

COMMITMENT FOR TITLE INSURANCE

Issued By

Alamo Title Insurance

SCHEDULE A

Effective Date: **August 28, 2024, 8:00 am**

GF No. **24-060391**

Commitment No. _____, issued **September 12, 2024, 8:00 am**

1. The policy or policies to be issued are:

- (a) OWNER'S POLICY OF TITLE INSURANCE (Form T-1)
(Not applicable for improved one-to-four family residential real estate)
Policy Amount: **\$1,380,000.00**
PROPOSED INSURED: **KB Home Lone Star Inc., a Texas corporation**
- (b) TEXAS RESIDENTIAL OWNER'S POLICY OF TITLE INSURANCE
- ONE-TO-FOUR FAMILY RESIDENCES (Form T-1R)
Policy Amount:
PROPOSED INSURED:
- (c) LOAN POLICY OF TITLE INSURANCE (Form T-2)
Policy Amount:
PROPOSED INSURED:
Proposed Borrower:
- (d) TEXAS SHORT FORM RESIDENTIAL LOAN POLICY OF TITLE INSURANCE (Form T-2R)
Policy Amount:
PROPOSED INSURED:
Proposed Borrower:
- (e) LOAN TITLE POLICY BINDER ON INTERIM CONSTRUCTION LOAN (Form T-13)
Binder Amount:
PROPOSED INSURED:
Proposed Borrower:
- (f) OTHER
Policy Amount:
PROPOSED INSURED:

2. The interest in the land covered by this Commitment is: **Fee Simple**

3. Record title to the land on the Effective Date appears to be vested in:
Michele Gail Schryver, Belinda Lee Myers, Ben Davis Schryver

4. Legal description of the land:

A TRACT OF LAND CONTAINING 23.3285 ACRES OF LAND OUT OF' A 63.0 ACRE TRACT OUT OF THE PEDRO SAN MIGUEL SURVEY NO. 256. ADSTRACT NO. 227, GUADALUPE COUNTY, TEXAS AS RECORDED IN [VOLUME 567 PAGE 878](#) OF THE DEED RECORDS OF GUADALUPE COUNTY, TEXAS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON PIN FOUND ON THE NORTHWEST RIGHT OF WAY LINE OF COUNTY ROAD 376, COMMONLY KNOWN AS GREEN VALLEY RD., SAID POINT ALSO BEING THE SOUTH CORNER OF THE ABOVE MENTIONED 63.0 ACRE PARENT TRACT AND THE SOUTH CORNER OF SAID TRACT: THENCE: LEAVING THE NORTHWEST RIGHT OF WAY LINE OF GREEN VALLEY RD., N 29°38' 33" W FOR A DISTANCE OF 1532.33 FEET TO AN IRON PIN FOUND FOR THE MOST WESTERLY CORNER OF SAID TRACT; THENCE: N 60°3'27" E FOR A 'DISTANCE OF 662.34 FEET TO AN IRON PIN SET FOR THE HOST NORTHERLY CORNER OF SAID TRACT, THENCE: S 29° 42' 57" E FOR A DISTANCE OF 1531.65 FEET TO AN IRON PIN SET ON THE NORTHWEST RIGHT OF WAY LINE OF GREEN VALLEY RD, FOR THE MOST EASTERLY CORNER OF SAID TRACTS; THENCE, . WITH THE RP1TW OF WAY LINE OF GREEN VALLEY RD. S 60°00'00""W FOR A DISTANCE OF 664.31 FEET TO THE POINT OF BEGINNING AND CONTAINING 23.3285 ACRES (1,016,188 SQ, FT.) OF LAND.

Note: The Company is prohibited from insuring the area or quantity of the Land. Any statement in the legal description contained in Schedule A as to area or quantity of land is not a representation that such area or quantity is correct but is for informal identification purposes and does not override Item 2 of Schedule B hereof.

Countersigned
San Antonio Title Co.

By 

COMMITMENT FOR TITLE INSURANCE

Issued By

Alamo Title Insurance

SCHEDULE B

EXCEPTIONS FROM COVERAGE

In addition to the Exclusions and Conditions and Stipulations, your Policy will not cover loss, costs, attorneys' fees, and expenses resulting from:

1. The following restrictive covenants of record itemized below (We must either insert specific recording data or delete this exception):

Item 1, Schedule B is hereby deleted.

2. Any discrepancies, conflicts, or shortages in area or boundary lines, or any encroachments or protrusions, or any overlapping of improvements.
3. Homestead or community property or survivorship rights, if any, of any spouse of any insured. (Applies to the Owner's Policy only.)
4. Any titles or rights asserted by anyone, including, but not limited to, persons, the public, corporations, governments or other entities,
 - a. to tidelands, or lands comprising the shores or beds of navigable or perennial rivers and streams, lakes, bays, gulfs or oceans, or
 - b. to lands beyond the line of harbor or bulkhead lines as established or changed by any government, or
 - c. to filled-in lands, or artificial islands, or
 - d. to statutory water rights, including riparian rights, or
 - e. to the area extending from the line of mean low tide to the line of vegetation, or the rights of access to that area or easement along and across that area.

(Applies to the Owner's Policy only.)

5. Standby fees, taxes and assessments by any taxing authority for the year **2024**, and subsequent years; and subsequent taxes and assessments by any taxing authority for prior years due to change in land usage or ownership, but not those taxes or assessments for prior years because of an exemption granted to a previous owner of the property under Section 11.13, *Texas Tax Code*, or because of improvements not assessed for a previous tax year. (If Texas Short Form Residential Loan Policy (T-2R) is issued, that policy will substitute "which become due and payable subsequent to Date of Policy" in lieu of "for the year _____ and subsequent years.")
6. The terms and conditions of the documents creating your interest in the land.
7. Materials furnished or labor performed in connection with planned construction before signing and delivering the lien document described in Schedule A, if the land is part of the homestead of the owner. (Applies to the Loan Title Policy Binder on Interim Construction Loan only, and may be deleted if satisfactory evidence is furnished to us before a binder is issued.)
8. Liens and leases that affect the title to the land, but that are subordinate to the lien of the insured mortgage. (Applies to Loan Policy (T-2) only.)

9. The Exceptions from Coverage and Express Insurance in Schedule B of the Texas Short Form Residential Loan Policy (T-2R). (Applies to Texas Short Form Residential Loan Policy (T-2R) only. Separate exceptions 1 through 8 of this Schedule B do not apply to the Texas Short Form Residential Loan Policy (T-2R).
10. The following matters and all terms of the documents creating or offering evidence of the matters (We must insert matters or delete this exception.):
- a. **Rights of parties in possession. (Owner Policy Only)**
 - b. **All leases, grants, exceptions or reservations of coal, lignite, oil, gas and other minerals, together with all rights, privileges, and immunities relating thereto, appearing in the Public Records whether listed in Schedule B or not. There may be leases, grants, exceptions or reservations of mineral interest that are not listed.**
 - c. **Right of Way Easement granted to Guadalupe Valley Electric Cooperative, Inc., recorded in Document No. [2017024822](#), and Document No. [2017013688](#), amended under Document No. [202199038142](#), Official Public Records, Guadalupe County, Texas.**
 - d. **Easement granted to Comal Power Company, recorded in [Volume 85, Page 262](#), Deed Records, Guadalupe County, Texas.**
 - e. **Easement for electric transmission system granted to City of San Antonio in Condemnation proceedings in civil No. 71-269, 25th Judicial district Court, Guadalupe County, Texas, referenced in [Volume 718, Page 487](#), Official Public Records, Guadalupe County, Texas.**
 - f. **Easement granted to The Texas Pipe Line Company, recorded in [Volume 104, Page 124](#), Deed Records, Guadalupe County, Texas.**
 - g. **Easement granted to Green Valley Water supply Corporation, recorded in [Volume 365, Page 542](#), Deed Records, Guadalupe County, Texas.**
 - h. **Interest in and to all coal, lignite, oil, gas and other minerals, and all rights incident thereto, contained in instrument dated September 27, 1994, recorded October 3, 1994 at [Volume 1117, Page 657](#), Official Public Records, Guadalupe County, Texas. of the Official Records of County, Texas. Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s).**
 - i. **Interest in and to all coal, lignite, oil, gas and other minerals, and all rights incident thereto, contained in instrument dated August 8, 1980, recorded August 15, 1980 at [Volume 603, Page 225](#), Official Public Records, Guadalupe County, Texas. of the Official Records of County, Texas. Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s).**
 - j. **Interest in and to all coal, lignite, oil, gas and other minerals, and all rights incident thereto, contained in instrument dated September 17, 1984, recorded September 19, 1984 at [Volume 718, Page 487](#), Official Public Records, Guadalupe County, Texas. of the Official Records of County, Texas. Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s).**
 - k. **Lease for coal, lignite, oil, gas or other minerals, together with rights incident thereto, dated September 11, 1979, by and between Mary Dorothy Barr, a widow, as Lessor, and Gary Hagman, as Lessee, recorded October 19, 1979 at [Volume 586, Page 709](#), Official Public Records, Guadalupe County, Texas. Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of**

such interest(s).

- l. Lease for coal, lignite, oil, gas or other minerals, together with rights incident thereto, dated November 29, 1973, by and between Willard D. Barr and wife, Mary Dorothy Barr, as Lessor, and Fred M. Garrett, as Lessee, recorded October 23, 1974 at [Volume 492, Page 539](#), Deed Records, Guadalupe County, Texas. Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s).**

- m. Lease for coal, lignite, oil, gas or other minerals, together with rights incident thereto, dated December 6, 1973, by and between Willard D. Barr and wife, Mary Dorothy Barr, as Lessor, and Fred M. Garrett, as Lessee, recorded October 23, 1974 at [Volume 492, Page 536](#), Deed Records, Guadalupe County, Texas. Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s).**

COMMITMENT FOR TITLE INSURANCE

Issued By

Alamo Title Insurance

SCHEDULE C

Your Policy will not cover loss, costs, attorneys' fees, and expenses resulting from the following requirements that will appear as Exceptions in Schedule B of the Policy, unless you dispose of these matters to our satisfaction, before the date the Policy is issued:

1. Documents creating your title or interest must be approved by us and must be signed, notarized and filed for record.
2. Satisfactory evidence must be provided that:
 - a. no person occupying the land claims any interest in that land against the persons named in paragraph 3 of Schedule A,
 - b. all standby fees, taxes, assessments and charges against the property have been paid,
 - c. all improvements or repairs to the property are completed and accepted by the owner, and that all contractors, subcontractors, laborers and suppliers have been fully paid, and that no mechanic's, laborer's or materialmen's liens have attached to the property,
 - d. there is legal right of access to and from the land,
 - e. (on a Loan Policy only) restrictions have not been and will not be violated that affect the validity and priority of the insured mortgage.
3. You must pay the seller or borrower the agreed amount for your property or interest.
4. Any defect, lien or other matter that may affect title to the land or interest insured, that arises or is filed after the effective date of this Commitment.
5. **As to any document creating your title or interest that will be executed or recorded electronically, or notarized pursuant to an online notarization, the following requirements apply: a) Confirmation prior to closing that the County Clerk in the county the property is situated in has approved and authorized electronic recording of electronically signed and notarized instruments in the form or format that is being used; b) Electronic recordation of the instruments to be insured in the Official Public or Real Property Records of the County the property is situated in; c) Execution of the instruments to be insured pursuant to the requirements of the Texas Uniform Electronic Transactions Act, Chapter 322 of the Business and Commerce Code; d) Acknowledgement of the instruments to be insured by a notary properly commissioned as an online notary public by the Texas Secretary of State with the ability to perform electronic and online notarial acts under 1 TAC Chapter 87.**
6. **The company and its policy issuing agents are required by Federal law to collect additional information about certain transactions in specific geographic areas in accordance with the Bank Secrecy Act. If this transaction is required to be reported under a Geographic Targeting Order issued by FinCen, the Company and its policy issuing agent must be supplied with a completed ALTA Information Collection Form ("ICF") prior to closing the transaction contemplated herein.(Applies to Texas Counties: Bexar, Harris, Travis, Montgomery, Webb,Tarrant and Dallas).**
7. **If the Proposed Insured executes a Waiver of Inspection in the approved form, an exception to "Rights of parties in possession" will be contained in the Owner's Policy when issued; however, the Proposed Insured may refuse to execute the Waiver, in which case the Company will require that an inspection be conducted by its agent, for which an inspection fee may be charged, and the Company reserves the right to make additional, particular exceptions in the Policy to matters revealed by the inspection**
8. **We must be furnished with a satisfactory Affidavit as to Debts and Liens, executed by the seller/borrower or his/her/their authorized representative at the time of closing. We reserve the right to make additional requirements on the basis of this Affidavit.**

9. **You may request amendment of the Area and Boundary Exception to read "Shortages in Area". The Texas Title Insurance Information portion of the Commitment for Title Insurance advises you that your Policy will insure you against loss because of non-expected discrepancies or conflicts in boundary lines, encroachments, or protrusions, or overlapping of improvements if you pay an additional five percent (5%) premium of the Basic Rate for T-1R Residential Owner Policy coverage, or fifteen percent (15%) premium of the Basic Rate for T-1 Non-Residential Owner Policy coverage, and if we are provided with a satisfactory survey, pursuant to Procedural Rule P2.**
10. **Company requires evidence of the marital status of seller(s) named in Schedule A. If herein described person was married and is now single, or was married and is now married to a different spouse, Company requires sufficient information to determine the status of any outstanding community interest for purposes of the joinder of additional parties, if necessary. Company requires the joinder of spouse, if any, in any conveyance of homestead property.**
11. **Judgment: Against: Belinda L. Meyers Amount: \$5,996.73, plus costs and interest Recording Date: March 12, 2024 Recording No. Document No. [202499006514](#), Official Public Records, Guadalupe County, Texas.**

COMMITMENT FOR TITLE INSURANCE

SCHEDULE D

GF No. **24-060391**

Effective Date: **August 28, 2024, 8:00 am**

Pursuant to the requirements of Rule P-21, Basic Manual of Rules, Rates and Forms for the writing of Title Insurance in the State of Texas, the following disclosures are made:

1. The following individuals are directors and/or officers, as indicated, of the Title Insurance Company issuing this Commitment

The issuing Title Insurance Company, Alamo Title Insurance, is a corporation whose shareholders owning or controlling, directly or indirectly, 10% of said corporation, directors and officers are listed below

Shareholders: Fidelity National Title Group, Inc. which is owned 100% by FNTG Holdings, LLC which is owned 100% by Fidelity National Financial, Inc.

| Directors | Officers | |
|--------------------|------------------|---------------------------|
| Michael J. Nolan | Michael J. Nolan | President |
| Anthony J Park | Anthony J. Park | Executive Vice President |
| Marjorie Nemzura | Marjorie Nemzura | Secretary, Vice President |
| Joseph W. Grealish | | |
| Steven G. Day | | |
| John A. Wunderlich | | |
| Roger S. Jewkes | | |

2. The following disclosures are made by the Title Insurance Agent Issuing this Commitment. The following persons are officers and directors of the Title Insurance Agent:

| | | |
|------------|----------------------|---|
| Directors: | Larry Oglesby | |
| | William R. Hollinger | |
| Officers: | Mark A. Crivelli | President |
| | Thad Johnson | Vice President and Treasurer |
| | William R. Hollinger | Vice President and Assistant Secretary |
| | Tony Richelieu | Secretary |
| | David Simons | Assistant Secretary |
| | Richard D. Silver | Senior Vice President/Chief Financial Officer |
| | Cory F. Cohen | Assistant Secretary |
| | Joe Acosta | Assistant Secretary |
| | Sulema Morin | Manager |

KBSA, Inc. owns 100% of San Antonio Title Co, and KB Home owns 100% of KBSA, Inc.

3. You are entitled to receive advance disclosure of settlement charges in connection with the proposed transaction to which this commitment relates. Upon your request, such disclosure will be made to you. Additionally, the name of any person, firm or corporation receiving a portion of the premium from the settlement of this transaction will be disclosed on the closing or settlement statement.

You are further advised that the estimated title premium* is:

| | |
|---------------------|-------------------|
| Owner's Policy | <u>\$7,220.00</u> |
| Loan Policy | <u>\$0.00</u> |
| Endorsement Charges | <u>\$0.00</u> |
| Other | <u>\$0.00</u> |
| Total | <u>\$7,220.00</u> |

Of this total amount: 15% will be paid to the policy issuing Title Insurance Company; 85% will be retained by the issuing Title Insurance Agent; and the remainder of the estimated premium will be paid to other parties as follows:

| <u>Amount</u> | <u>To Whom</u> | <u>For Services</u> |
|---------------|----------------|---------------------|
|---------------|----------------|---------------------|

" *The estimated premium is based upon information furnished to us as of the date of this Commitment for Title Insurance. Final determination of the amount of the premium will be made at closing in accordance with the Rules and Regulations adopted by the Commissioner of Insurance."

TEXAS TITLE INSURANCE INFORMATION

| | |
|--|---|
| <p>Title insurance insures you against loss resulting from certain risks to your title.</p> <p>The commitment for Title Insurance is the title insurance company's promise to issue the title insurance policy. The commitment is a legal document. You should review it carefully to completely understand it before your closing date.</p> | <p>El seguro de título le asegura en relación a pérdidas resultantes de ciertos riesgos que pueden afectar el título de su propiedad.</p> <p>El Compromiso para Seguro de Título es la promesa de la compañía aseguradora de títulos de emitir la póliza de seguro de título. El Compromiso es un documento legal. Usted debe leerlo cuidadosamente y endenterlo complemente antes de la fecha para finalizar su transacción.</p> |
|--|---|

Your Commitment of Title insurance is a legal contract between you and us. The Commitment is not an opinion or report of your title. It is a contract to issue you a policy subject to the Commitment's terms and requirements.

Before issuing a Commitment for Title insurance (the Commitment) or a Title Insurance Policy (the Policy), the Title Insurance Company (the Company) determines whether the title is insurable. This determination has already been made. Part of that determination involves the Company's decision to insure the title except for certain risks that will not be covered by the Policy. Some of these risks are listed in Schedule B of the attached Commitment as Exceptions. Other risks are stated in the Policy as Exclusions. These risks will not be covered by the Policy. The Policy is not an abstract of title nor does a Company have an obligation to determine the ownership of any mineral interest.

---MINERALS AND MINERAL RIGHTS may not be covered by the Policy. The Company may be unwilling to insure title unless there is an exclusion or an exception as to Minerals and Mineral Rights in the Policy. Optional endorsements insuring certain risks involving minerals, and the use of improvements (excluding lawns, shrubbery and trees) and permanent buildings may be available for purchase. If the title insurer issues the title policy with an exclusion or exception to the minerals and mineral rights, neither this Policy, nor the optional endorsements, ensure that the purchaser has title to the mineral rights related to the surface estate.

Another part of the determination involves whether the promise to insure is conditioned upon certain requirements being met. Schedule C of the Commitment lists these requirements that must be satisfied or the Company will refuse to cover them. You may want to discuss any matters shown in Schedules B and C of the Commitment with an attorney. These matters will affect your title and your use of the land.

When your policy is issued, the coverage will be limited by the Policy's Exceptions, Exclusions and Conditions, defined below.

---EXCEPTIONS are title risks that a Policy generally covers but does not cover in a particular instance. Exceptions are shown on Schedule B or discussed in Schedule C of the Commitment. They can also be added if you do not comply with the Conditions section of the Commitment. When the policy is issued, all Exceptions will be on Schedule B of the Policy.

---EXCLUSIONS are title risks that a Policy generally does not cover. Exclusions are contained in the Policy but not shown or discussed in the Commitment.

---CONDITIONS are additional provisions that qualify or limit you coverage. Conditions include your responsibilities and those of the Company. They are contained in the Policy but not shown or discussed in the Commitment. The Policy Conditions are not the same as the Commitment Conditions.

You can get a copy of the policy form approved by the Texas Department of Insurance by calling the Title Insurance Company at (800) 292-5320 or by calling the title insurance agent that issued the Commitment. The Texas Department of Insurance may revise the policy form from time to time.

You can also get a brochure that explains the policy from the Texas Department of Insurance by calling 1-800-252-3439.

Before the Policy is issued, you may request changes in the Policy. Some of the changes to consider are:

---Request amendment of the "area and boundary" exception (Schedule B, paragraph 2). To get this amendment, you must furnish a survey and comply with other requirements of the Company. On the Owner's Policy, you must pay an additional premium for the amendment. If the survey is acceptable to the Company and if the Company's other requirements are met, your Policy will insure you against loss because of discrepancies or conflicts in boundary lines, encroachments or protrusions, or overlapping of improvements. The Company may then decide not to insure against specific boundary or survey problems by making special exceptions in the Policy. Whether or not you request amendment of the "area and boundary" exception, you should determine whether you want to purchase and review a survey if a survey is not being provided to you.

---Allow the Company to add an exception to "rights of parties in possession." If you refuse this exception, the Company or the title insurance agent may inspect the property. The Company may except to and not insure you against the rights of specific persons, such as renters, adverse owners or easement holders who occupy the land. The Company may charge you for the inspection. If you want to make your own inspection, you must sign a Waiver of Inspection form and allow the Company to add this exception to your Policy.

The entire premium for a Policy must be paid when the Policy is issued. You will not owe any additional premiums unless you want to increase your coverage at a later date and the Company agrees to add an Increased Value Endorsement.

DELETION OF ARBITRATION PROVISION
(Not applicable to the Texas Residential Owner's Policy)

Arbitration is a common form of alternative dispute resolution. It can be a quicker and cheaper means to settle a dispute with your Title Insurance Company. However, if you agree to arbitrate, you give up your right to take the Title Company to court and your rights to discovery of evidence may be limited in the arbitration process. In addition, you cannot usually appeal an arbitrator's award.

Your policy contains an arbitration provision (shown below). It allows you or the Company to require arbitration if the amount of insurance is \$2,000,000 or less. If you want to retain your right to sue the Company in case of a dispute over a claim, you must request deletion of the arbitration provision before the policy is issued. You can do this by signing this form and returning it to the Company at or before the closing of your real estate transaction or by writing to the Company.

The arbitration provision in the Policy is as follows:

"Either the Company or the Insured may demand that the claim or controversy shall be submitted to arbitration pursuant to the Title Insurance Arbitration Rules of the American Land Title Association ("Rules"). Except as provided in the Rules, there shall be no joinder or consolidation with claims or controversies of other persons. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the Insured arising out of or relating to this policy, any service in connection with its issuance or the breach of a policy provision, or to any other controversy or claim arising out of the transaction giving rise to this policy. All arbitrable matters when the Amount of Insurance is \$2,000,000 or less shall be arbitrated at the option of either the Company or the Insured, unless the Insured is an individual person (as distinguished from an Entity). All arbitrable matters when the Amount of Insurance is in excess of \$2,000,000 shall be arbitrated only when agreed to by both the Company and the Insured. Arbitration pursuant to this policy and under the Rules shall be binding upon the parties. Judgment upon the award rendered by the Arbitrator(s) may be entered in any court of competent jurisdiction."

SIGNATURE

DATE

Alamo Title Insurance

| Premium Amount | Rate Rules | Property Type | County Code | Liability at Reissue Rate | 6 | 7 | 8 |
|------------------------|------------------|---------------|----------------|---------------------------|---|---|---|
| 1 \$7,220.00 | 2 1000 | 3 3 | 4 29 | 5 | 6 | 7 | 8 |

FIDELITY NATIONAL FINANCIAL PRIVACY NOTICE

Fidelity National Financial, Inc. and its majority-owned subsidiary your Internet browser from a web server and stored on your computers providing real estate- and loan-related services (collectively, "FNF", "our" or "we") respect and are committed to protecting your subsequent visits. A cookie, by itself, cannot read other data from your privacy. This Privacy Notice lets you know how and for what purposes hard disk or read other cookie files already on your computer. A cookie, your Personal Information (as defined herein) is being collected by itself, does not damage your system. We, our advertisers and other processed and used by FNF. We pledge that we will take reasonable third parties may use cookies to identify and keep track of, among other steps to ensure that your Personal Information will only be used in ways things, those areas of the Website and third party websites that you have that are in compliance with this Privacy Notice. visited in the past in order to enhance your next visit to the Website. You

This Privacy Notice is only in effect for any generic information and Personal Information collected and/or owned by FNF, including your Internet browser, but some functionality of the Website may be collection through any FNF website and any online features, services and/or programs offered by FNF (collectively, the "Website"). This Privacy Notice is not applicable to any other web pages, mobile applications, social media sites, email lists, generic information or Personal Information collected and/or owned by any entity other than FNF. impaired or not function as intended. See the Third Party Opt Out section below.

Collection and Use of Information

The types of personal information FNF collects may include, among other things (collectively, "Personal Information"): (1) contact information (e.g., name, address, phone number, email address); (2) demographic information (e.g., date of birth, gender marital status); (3) Internet protocol (or IP) address or device ID/UDID; (4) social security number (SSN), student ID (SIN), driver's license, passport, and other government ID numbers; (5) financial account information; and (6) information related to offenses or criminal convictions. Web **Beacons**. Some of our web pages and electronic communications may contain images, which may or may not be visible to you, known as Web Beacons (sometimes referred to as "clear gifs"). Web Beacons collect only limited information that includes a cookie number; time and date of a page view; and a description of the page on which the Web Beacon resides. We may also carry Web Beacons placed by third party advertisers. These Web Beacons do not carry any Personal information and are only used to track usage of the Website and activities associated with the Website. See the Third Party Opt Out section below.

In the course of our business, we may collect Personal Information about you from the following sources:

- i Applications or other forms we receive from you or your authorized representative;
- i Information we receive from you through the Website;
- i Information about your transactions with or services performed by us, our affiliates, or others; and
- i From consumer or other reporting agencies and public records maintained by governmental entities that we either obtain directly from those entities, or from our affiliates or others.

Information collected by FNF is used for three main purposes:

- i To provide products and services to you or one or more third party service providers (collectively, "Third Parties") who are obtaining services on your behalf or in connection with a transaction involving you.
- i To improve our products and services that we perform for you or for Third Parties.
- i To communicate with you and to inform you about FNF's, FNF's affiliates and third parties' products and services.

Additional Ways Information is Collected Through the Website

Browser Log Files. Our servers automatically log each visitor to the Website and collect and record certain information about each visitor. This information may include IP address, browser language, browser type, operating system, domain names, browsing history (including time spent at a domain, time and date of your visit), referring/exit web pages and URLs, and number of clicks. The domain name and IP address reveal nothing personal about the user other than the IP address from which the user has accessed the Website.

Cookies. From time to time, FNF or other third parties may send a "cookie" to your computer. A cookie is a small piece of data that is sent to

We may provide your Personal Information (excluding information we receive from consumer or other credit reporting agencies) to

Unique Identifier. We may assign you a unique internal identifier to help keep track of your future visits. We may use this information to gather aggregated demographic information about our visitors, and we may use it to personalize the information you see on the Website and some of the electronic communications you receive from us. We keep this information for our internal use, and this information is not shared with others.

Third Party Opt Out. Although we do not presently, in the future we may allow third-party companies to serve advertisements and/or collect certain anonymous information when you visit the Website. These companies may use non-personally identifiable information (e.g., click stream information, browser type, time and date, subject of advertisements clicked or scrolled over) during your visits to the Website in order to provide advertisements about products and services likely to be of greater interest to you. These companies typically use a cookie or third party Web Beacon to collect this information, as further described above. Through these technologies, the third party may have access to and use non-personalized information about your online usage activity.

You can opt-out of online behavioral services through any one of the ways described below. After you opt-out, you may continue to receive advertisements, but those advertisements will no longer be as relevant to you.

- i You can opt-out via the Network Advertising Initiative industry opt-out at <http://www.networkadvertising.org/>.
- i You can opt-out via the Consumer Choice Page at www.aboutads.info.
- i For those in the U.K., you can opt-out via the IAB UK's industry opt-out at www.vouronlinechoices.com.

You can configure your web browser (Chrome, Firefox, Internet Explorer, Safari, etc.) to delete and/or control the use of cookies.

More information can be found in the Help system of your browser.

Note: If you opt-out as described above, you should not delete your cookies. If you delete your cookies, you will need to opt-out again.

When Information Is Disclosed By FNF

Information from Children

various individuals and companies, as permitted by law, without obtaining your prior authorization. Such laws do not allow consumers

to restrict these disclosures. Disclosures may include, without limitation, the following:

- i To agents, brokers, representatives, or others to provide you with services you have requested, and to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure in connection with an insurance transaction;
- ii To third-party contractors or service providers who provide services or perform marketing services or other functions on our behalf;
- iii To law enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoenas or court orders; and/or
- iv To lenders, lien holders, judgment creditors, or other parties claiming an encumbrance or an interest in title whose claim or interest must be determined, settled, paid or released prior to a title or escrow closing.

In addition to the other times when we might disclose information about you, we might also disclose information when required by law or in the good-faith belief that such disclosure is necessary to: (1) comply with a legal process or applicable laws; (2) enforce this Privacy Notice; (3) respond to claims that any materials, documents, images, graphics, logos, designs, audio, video and any other information provided by you violates the rights of third parties; or (4) protect the rights, property or personal safety of FNF, its users or the public.

We maintain reasonable safeguards to keep the Personal Information that is disclosed to us secure. We provide Personal Information and non-Personal Information to our subsidiaries, affiliated companies, and other businesses or persons for the purposes of processing such information on our behalf and promoting the services of our trusted business partners, some or all of which may store your information on servers outside of the United States. We require that these parties agree to process such information in compliance with our Privacy Notice or in a similar, industry-standard manner, and we use reasonable efforts to limit their use of such information and to use other appropriate confidentiality and security measures. The use of your information by one of our trusted business partners may be subject to that party's own Privacy Notice. We do not, however, disclose information we collect from consumer or credit reporting agencies with our affiliates or others without your consent, in conformity with applicable law, unless such disclosure is otherwise permitted by law.

We also reserve the right to disclose Personal Information and/or non-Personal Information to take precautions against liability, investigate and defend against any third-party claims or allegations, assist government enforcement agencies, protect the security or integrity of the Website, and protect the rights, property, or personal safety of FNF, our users or others.

We reserve the right to transfer your Personal Information, as well as any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets. We also cannot make any representations regarding the use or transfer of your Personal Information or other information that we may have in the event of our bankruptcy, reorganization, insolvency, receivership or an assignment for the benefit of creditors, and you expressly agree

and consent to the use and/or transfer of your Personal Information or other information in connection with a sale or transfer of some or all of our assets in any of the above described proceedings. Furthermore, we cannot and will not be responsible for any breach of security by any third parties or for any actions of any third parties that receive any of the information that is disclosed to us.

We do not collect Personal Information from any person that we know to be under the age of thirteen (13). Specifically, the Website is not intended or designed to attract children under the age of thirteen (13). You affirm that you are either more than 18 years of age, or an emancipated minor, or possess legal parental or guardian consent, and are fully able and competent to enter into the terms, conditions, obligations, affirmations, representations, and warranties set forth in this Privacy Notice, and to abide by and comply with this Privacy Notice. In any case, you affirm that you are over the age of 13, as **THE WEBSITE IS NOT INTENDED FOR CHILDREN UNDER 13 THAT ARE UNACCOMPANIED BY HIS OR HER PARENT OR LEGAL GUARDIAN**

Parents should be aware that FNF's Privacy Notice will govern our use of Personal Information, but also that information that is voluntarily given by children - or others - in email exchanges, bulletin boards or the like may be used by other parties to generate unsolicited communications. FNF encourages all parents to instruct their children in the safe and responsible use of their Personal Information while using the Internet.

Privacy Outside the Website

The Website may contain various links to other websites, including links to various third party service providers. FNF is not and cannot be responsible for the privacy practices or the content of any of those other websites. Other than under agreements with certain reputable organizations and companies, and except for third party service providers whose services either we use or you voluntarily elect to utilize, we do not share any of the Personal Information that you provide to us with any of the websites to which the Website links, although we may share aggregate, non-Personal Information with those other third parties. Please check with those websites in order to determine their privacy policies and your rights under them.

European Union Users

If you are a citizen of the European Union, please note that we may transfer your Personal Information outside the European Union for use for any of the purposes described in this Privacy Notice. By providing FNF with your Personal Information, you consent to both our collection and such transfer of your Personal Information in accordance with this Privacy Notice.

Choices with Your Personal Information

Whether you submit Personal Information to FNF is entirely up to you. You may decide not to submit Personal Information, in which case FNF may not be able to provide certain services or products to you.

You may choose to prevent FNF from disclosing or using your Personal Information under certain circumstances ("opt out"). You may opt out of any disclosure or use of your Personal Information for purposes that are incompatible with the purpose(s) for which it was originally collected or for which you subsequently gave authorization by notifying us by one of the methods at the end of this Privacy Notice. Furthermore, even where your Personal Information is to be disclosed and used in accordance with the stated purposes in this Privacy Notice, you may elect to opt out of such disclosure to and use by a third party that is not acting as an agent of FNF. As described above, there are some uses from which you cannot opt-out.

that you may submit in any manner that we may choose without notice or compensation to you.

If you have additional questions or comments, please let us know by sending your comments or requests to:

Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, Florida 32204
Attn: Chief Privacy Officer
(888) 934-3354
privacy@fnf.com

Please note that opting out of the disclosure and use of your Personal Information as a prospective employee may prevent you from being hired as an employee by FNF to the extent that provision of your Personal Information is required to apply for an open position.

If FNF collects Personal Information from you, such information will not be disclosed or used by FNF for purposes that are incompatible with the purpose(s) for which it was originally collected or for which you subsequently gave authorization unless you affirmatively consent to such disclosure and use.

You may opt out of online behavioral advertising by following the instructions set forth above under the above section "Additional Ways That Information Is Collected Through the Website," subsection "Third Party Opt Out."

Access and Correction

To access your Personal Information in the possession of FNF and correct inaccuracies of that information in our records, please contact us in the manner specified at the end of this Privacy Notice. We ask individuals to identify themselves and the information requested to be accessed and amended before processing such requests, and we may decline to process requests in limited circumstances as permitted by applicable privacy legislation.

Your California Privacy Rights

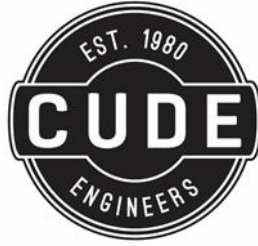
Under California's "Shine the Light" law, California residents who provide certain personally identifiable information in connection with obtaining products or services for personal, family or household use are entitled to request and obtain from us once a calendar year information about the customer information we shared, if any, with other businesses for their own direct marketing uses. If applicable, this information would include the categories of customer information and the names and addresses of those businesses with which we shared customer information for the immediately prior calendar year (e.g., requests made in 2013 will receive information regarding 2012 sharing activities).

To obtain this information on behalf of FNF, please send an email message to privacy@fnf.com with "Request for California Privacy Information" in the subject line and in the body of your message. We will provide the requested information to you at your email address in response. Please be aware that not all information sharing is covered by the "Shine the Light" requirements and only information on covered sharing will be included in our response.

Additionally, because we may collect your Personal Information from time to time, California's Online Privacy Protection Act requires us to disclose how we respond to "do not track" requests and other similar mechanisms. Currently, our policy is that we do not recognize "do not track" requests from Internet browsers and similar devices.

Your Consent to This Privacy Notice

By submitting Personal Information to FNF, you consent to the collection and use of information by us as specified above or as we otherwise see fit, in compliance with this Privacy Notice, unless you inform us otherwise by means of the procedure identified below. If we decide to change this Privacy Notice, we will make an effort to post those changes on the Website. Each time we collect information from you following any amendment of this Privacy Notice will signify your assent to and acceptance of its revised terms for all previously collected information and information collected from you in the future. We may use comments, information or feedback



LETTER OF AGENT AND OWNERSHIP DOCS

October 9, 2024

City of Cibolo
P.O. Box 826
Cibolo, TX 78108

Re: Letter of Agent Authorization

Agent: KB Home Lonestar INC
4800 FREDERICKSBURG RD. SAN ANTONIO, TX 78229

Project: Schryver Tract

To whom this may concern,

The purpose of this correspondence is to act as a Letter of Agent Authorization for KB Home Lonestar INC, to serve as a duly authorized Agent for Michele Gail Schryver. The Agent is authorized to act on our behalf for all documents pertaining to the submittal of the Land Use Study, Land Plan, Preliminary Plat, Plan and Final Plat to the City of Cibolo.

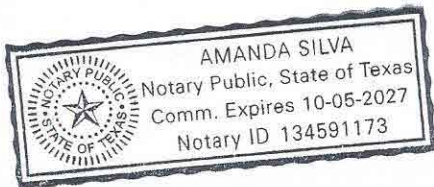
Respectfully,

Michele Gail Schryver

STATE OF Texas §
§

COUNTY OF Guadalupe §

The foregoing authorization was acknowledged before me this 09th day of October 2024 by Michele Gail Schryver, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed same for the purpose and consideration therein expressed.


NOTARY PUBLIC

Print Name: Amanda Silva

My Commission Expires: 10/05/2027

2/25

Special Warranty Deed

Date: June 23, 2017

Grantor: The Estate of Mary Helen McCalley

Grantor's Mailing Address:

The Estate of Mary Helen McCalley
5711 Green Valley Rd.
Cibolo, TX 78108

Grantee: Michele Gail Schryver, Belinda Lee Meyers, Ben Davis Schryver

→

Grantee's Mailing Address:

Michele Gail Schryver
3334 Whisper Manor
Cibolo, TX 78108

Consideration:

Cash and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged.

Property (including any improvements):

ABS: 227 SUR: P MIGUEL 4.2600 AC. also know as 5711 Green Valley Rd., Cibolo, TX 78108.

Reservations from Conveyance:

None.

Exceptions to Conveyance and Warranty:

Validly existing easements, rights-of-way, and prescriptive rights, whether of record or not; all presently recorded and validly existing instruments, other than conveyances of the surface fee estate, that affect the Property; and taxes for 2015, which Grantee assumes and agrees to pay, and subsequent assessments for that and prior years due to change in land usage, ownership, or both, the payment of which Grantee assumes.

Grantor, for the Consideration and subject to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty, grants, sells, and conveys to Grantee the Property, together with all and singular the rights and appurtenances thereto in any way belonging, to have and to hold it to Grantee and Grantee's heirs, successors, and assigns forever. Grantor binds Grantor and Grantor's heirs and successors to warrant

and forever defend all and singular the Property to Grantee and Grantee's heirs, successors, and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof when the claim is by, through, or under Grantor but not otherwise, except as to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty.

When the context requires, singular nouns and pronouns include the plural.


This instrument was prepared based on information furnished by the parties, and no independent title search has been made.


Michele Gail Schryver, Executrix of the Estate of
Mary Helen McCalley

STATE OF TEXAS)

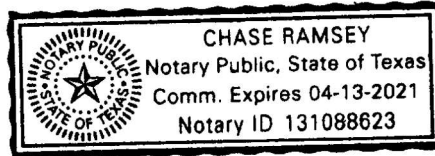
COUNTY OF GUADALUPE)

This instrument was acknowledged before me on June 23, 2017,
by Michele Gail Schryver.


Notary Public, State of Texas
My 4-13-21 commission expires:

PREPARED IN THE OFFICE OF:

ALLEN & ROIG LLP
3003 N.W. Loop 410, Ste. 204
San Antonio, Texas 78230
Tel: (210) 377-2529
Fax: (210) 340-1346



201899023995

I certify this instrument was FILED and RECORDED
in the OFFICIAL PUBLIC RECORDS
of Guadalupe County, Texas on
10/19/2018 02:06:35 PM PAGES: 2 COURTNEY
TERESA KIEL, COUNTY CLERK





GENERAL WARRANT DEED WITH VENDOR'S LIEN IN FAVOR OF THIRD PARTY

ATC 00034659/kw

Vol. 1408 PAGE 0742
THE STATE OF TEXAS

3270 } ~~10755~~
KNOW ALL MEN BY THESE PRESENTS: ~~1356/0709~~

COUNTY OF GUADALUPE

SOLE PURPOSE OF THIS INSTRUMENT IS TO SERVE AS GRANTOR'S SIGNATURE AND COMMENCEMENT OF GRANTOR'S MIDDLE INITIAL.

THAT STEVEN O. BEDWELL and BRENDA K. BEDWELL

(hereinafter called "GRANTORS" whether one or more), for and in consideration of the sum of TEN DOLLARS (\$10.00) and other good and valuable considerations cash in hand paid by JUSTICE McCALLEY, an unmarried person and MARY H. McCALLEY, an unmarried person

whose address is 5711 Green Valley Rd.
Cibolo, TX 78108

(hereinafter called "GRANTEES" whether one or more), the receipt and sufficiency of which are hereby acknowledged and confessed, and the further consideration of the note in the principal sum of
Fifty Thousand And No/100ths (\$50,000.00)

payable to the order of FIRST TEXAS MORTGAGE

(hereinafter referred to as "BENEFICIARY") at the special instance and request of the Grantees herein, the receipt of which is hereby acknowledged and confessed, and as evidence of such advancement, the said Grantees herein have executed their note of even date herewith for said amount payable to the order of said Beneficiary, bearing interest at the rate therein provided, principal and interest being due and payable in monthly installments as therein set out, and providing for attorney's fees and acceleration of maturity at the rate and in the events therein set forth, which note is secured by the Vendor's Lien herein reserved and is additionally secured by a Deed of Trust of even date herewith, executed by the Grantees herein to JIM L. SORVAAG,

Trustee, reference to which is here made for all purposes; and in consideration of the payment of the sum above mentioned by the Beneficiary above mentioned, Grantors hereby transfer, set over, assign and convey unto said Beneficiary and assigns, the Vendor's Lien and Superior Title herein retained and reserved against the property and premises herein conveyed, in the same manner and to the same extent as if said note had been executed in Grantor's favor and by said Grantors assigned to the Beneficiary without recourse; have GRANTED, SOLD and CONVEYED, and by these presents do GRANT, SELL and CONVEY unto the said Grantees herein, the following described property, together with all improvements thereon, to-wit:

SEE EXHIBIT "A" ATTACHED HERETO AND INCORPORATED HEREIN FOR ALL PURPOSES.

TO HAVE AND TO HOLD the above described premises, together with, all and singular, the rights and appurtenances thereto in any wise belonging, unto the said Grantees, their heirs and assigns forever. And Grantors do hereby bind themselves, their heirs, executors and administrators, to warrant and forever defend all and singular, the said premises unto the said Grantees, their heirs and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof. Taxes for the current year have been prorated and are assumed by Grantee. This conveyance is made and accepted subject to any and all validly existing restrictions, mineral reservations and interests, conditions, covenants, easements, and rights of way, if any, applicable to and enforceable against the above described property as now reflected by the records of the County Clerk in said County and State and to any applicable zoning laws or ordinances.

But it is expressly agreed and stipulated that the Vendor's Lien and the Superior Title are retained and reserved in favor of the payee in said note against the above described property, premises and improvements, until said note, and all interest thereon is fully paid according to the face and tenor, effect and reading thereof, when this deed shall become absolute.

When this deed is executed by one person, or when the Grantee is one person, the instrument shall read as though pertinent verbs and pronouns were changed to correspond, and when executed by or to a corporation the words "heirs, executors and administrators" or "heirs and assigns" shall be construed to mean "Successors and assigns".

Executed on this the 16th day of July, 1998

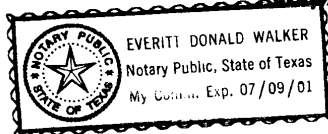
Steven O. Bedwell
STEVEN O. BEDWELL
Brenda K. Bedwell
BRENDA K. BEDWELL

THE STATE OF TEXAS
COUNTY OF BEXAR

This instrument was acknowledged before me on *7/16/98 Steven O. Bedwell and Brenda K. Bedwell*

Will [Signature]
Notary Public, State of Texas.

RETURN TO:
JUSTICE McCALLEY
5711 Green Valley Rd.
Cibolo, TX 78108



FILED BY
ALAMO TITLE

EXHIBIT A

BEING 23.3285 ACRES OF LAND OUT OF A 63.0 ACRE TRACT OUT OF THE PEDRO SAN MIGUEL SURVEY NO. 256, ABSTRACT NO. 227 GUADALUPE COUNTY TEXAS AS RECORDED IN VOLUME 567 PAGE 878 OF THE DEED RECORDS OF GUADALUPE COUNTY, TEXAS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BEGINNING AT AN IRON PIN FOUND ON THE NORTHWEST RIGHT OF WAY LINE OF COUNTY ROAD 376, COMMONLY KNOWN AS GREEN VALLEY RD., SAID POINT ALSO BEING THE SOUTH CORNER OF THE ABOVE MENTIONED 63.0 ACRE PARENT TRACT AND THE SOUTH CORNER OF SAID TRACT;

THENCE: LEAVING THE NORTHWEST RIGHT OF WAY LINE OF GREEN VALLEY RD., N 29°38'33" W FOR A DISTANCE OF 1532.33 FEET TO AN IRON PIN FOUND FOR THE MOST WESTERLY CORNER OF SAID TRACT;

THENCE: N 60°03'27" E FOR A DISTANCE OF 662.34 FEET TO AN IRON PIN SET FOR THE MOST NORTHERLY CORNER OF SAID TRACT;

THENCE: S 29°42'57" E FOR A DISTANCE OF 1531.65 FEET TO AN IRON PIN SET ON THE NORTHWEST RIGHT OF WAY LINE OF GREEN VALLEY RD. FOR THE MOST EASTERLY CORNER OF SAID TRACT;

THENCE: WITH THE RIGHT OF WAY LINE OF GREEN VALLEY RD., S 60°00'00" W FOR A DISTANCE OF 664.31 FEET TO THE POINT OF BEGINNING AND CONTAINING 23.3285 ACRES (1,016,188 SQ. FT.) OF LAND.

FILED FOR RECORD
98 JUL 17 AM 10:08

LIZZIE H. ...
COUNTY CLERK ...
BY: *Shirley R. Krupp*

EXHIBIT A

THE STATE OF TEXAS
COUNTY OF GUADALUPE
I hereby certify that this instrument was
FILED on the date and at the time stamped
hereon by me and was duly RECORDED in the
Official Public Records of Guadalupe County,
Texas.



Luzie M. Lacey
County Clerk
Guadalupe County, Texas

VOL. 1408 PAGE 0744
FILED FOR RECORD

99 FEB 23 AM 8:27

AIZZIE M. LORENT
COUNTY CLERK GUADALUPE CTY.

BY *[Signature]*

THE STATE OF TEXAS
COUNTY OF GUADALUPE

I hereby certify that this instrument was
FILED on the date and at the time stamped
hereon by me and was duly recorded in the
Official Public Records of Guadalupe County,
Texas.



[Signature]
County Clerk,
Guadalupe County Texas

2-

40755

UNOFFICIAL

[Signature]

3270

Alamo Title Co.
10010 San Pedro # 700
SA. TX 78216
attn: Carol R.

2/2

Special Warranty Deed

Date: _September 13___, 2017

Grantor: The Estate of Mary Helen McCalley

Grantor's Mailing Address:

The Estate of Mary Helen McCalley
5711 Green Valley Rd.
Cibolo, TX 78108

Grantee: Michele Gail Schryver, Belinda Lee Meyers, Ben Davis Schryver

→

Grantee's Mailing Address:

Michele Gail Schryver
3334 Whisper Manor
Cibolo, TX 78108

Consideration:

Cash and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged.

Property (including any improvements):

ABS: 227 SUR: P MIGUEL 19.0690 AC. also know as 5711 Green Valley Rd., Cibolo, TX 78108.

Reservations from Conveyance:

None.

Exceptions to Conveyance and Warranty:

Validly existing easements, rights-of-way, and prescriptive rights, whether of record or not; all presently recorded and validly existing instruments, other than conveyances of the surface fee estate, that affect the Property; and taxes for 2015, which Grantee assumes and agrees to pay, and subsequent assessments for that and prior years due to change in land usage, ownership, or both, the payment of which Grantee assumes.

Grantor, for the Consideration and subject to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty, grants, sells, and conveys to Grantee the Property, together with all and singular the rights and appurtenances thereto in any way belonging, to have and to hold it to Grantee and Grantee's heirs, successors, and assigns forever. Grantor binds Grantor and Grantor's heirs and successors to warrant

and forever defend all and singular the Property to Grantee and Grantee's heirs, successors, and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof when the claim is by, through, or under Grantor but not otherwise, except as to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty.

When the context requires, singular nouns and pronouns include the plural.
This instrument was prepared based on information furnished by the parties, and no independent title search has been made.

Michele Gail Schryver
Michele Gail Schryver, Executrix of the Estate of
Mary Helen McCalley

STATE OF TEXAS)

COUNTY OF GUADALUPE)

This instrument was acknowledged before me on September 13, 2017,
by Michele Gail Schryver.

Sara Cornejo

Notary Public, State of Texas
My commission expires:
04/06/2020

PREPARED IN THE OFFICE OF:

ALLEN & ROIG LLP
3003 N.W. Loop 410, Ste. 204
San Antonio, Texas 78230
Tel: (210) 377-2529
Fax: (210) 340-1346



201899023996

I certify this instrument was FILED and RECORDED
in the OFFICIAL PUBLIC RECORDS
of Guadalupe County, Texas on
10/19/2018 02:06:36 PM PAGES: 2 COURTNEY
TERESA KIEL, COUNTY CLERK



Teresa Kiel

November 4, 2024

On behalf of the:

City of Cibolo
Attn: Grant Fore
200 S. Main Street
Cibolo, Texas 78108



Re: Land Study Review
Schryver Tract (LS-24-04)

Mr. Fore,

Colliers Engineering & Design has completed its review of the referenced Land Study and has the following comments:

General Note -

1. Please include as part of your resubmittal a comment response letter addressing all comments.
2. Add " Date Prepared" to the bottom of all sheets in (Month/day/year) format.
3. Add a black dashed "Cibolo City Limits" line to all location maps.

Sheet E1 -

1. Add Call out for 15' Electric Easement as marked up

Sheet E2 -

1. Please update note #2 as there is conflicting information between sheets.
2. Variance is required if you are platting lots less than 60' and not proposing alleys.
3. Label existing easements and provide recording information.
4. Call out ROW dedication if proposed.
5. Layout shows a connection to the Homestead development. In order for this to count as the 2nd access point proof that coordination with the Homestead developer needs to be provided showing they will update their lot layout to make this connection viable.
6. No more than one lot will be able to be serviced by a dead end street without some sort of temporary / permanent turn around or variance.

Sheet E4 -

1. Fix North arrow as it is facing in the wrong direction.

Sheet E5 -

1. Add North Arrow and scale to sheet.

Our review of the project does not relieve or release the Engineer of Record or Surveyor of Record from complying with any and all the requirements of the local, state, and federal rules and regulations or guidelines impacting this project. If you require additional information, please contact our office.

Sincerely,



Andy Carruth, P.E.

Plan Reviewer for the City of Cibolo



Nor-Tex Dr

Nor-Tex Dr

Mustang Valley

Green Valley Rd

Property Information Map 5711 Green Valley Rd- Schryver Tract

-  Property of Interest
-  Planned Unit Development (PUD)
-  Parcel Boundaries
-  Cibolo City Limits
-  Cibolo ETJ

Water: GVSUD
Sewer Service: GVSUD
Council District: ETJ
Zoning: ETJ

0 1,000 Feet



Prominence Way

Dakota



Planning and Zoning Commission Staff Report

D. Discussion/Action regarding a proposed Land Study of the Neill Tract Subdivision.

| Meeting | Agenda Group |
|---------------------------------------|-----------------------------------|
| Wednesday, November 13, 2024, 6:30 PM | Discussion/Action Items Item: 8D. |
| From | |
| Lindsey Walker, Planner I | |
| Staff Contact(s) | |
| Lindsey Walker, | |

PLANNING & ZONING COMMISSION ACTION: Discussion/Action and Recommendation of the above referenced petition

PROPERTY INFORMATION:

Project Name: LS-24-02
Owner: KB Home Lone Star, Inc.
Representative: Jason Townsley, KB Home Lone Star, Inc.
Area: 67.589 acres
Location: East of the intersection of Schmoekel Road and South Santa Clara Road
Council District: ETJ
Zoning ([map](#)): ETJ
Proposed Use: +/-335 residential lots
Utility Providers: Sewer/Water - GVSUD and Electricity - Guadalupe Valley Electric Coop

FINDINGS/CURRENT ACTIVITY:

Per Unified Development Code (UDC) Article 20.3.2, 'Overall Development Concept Plan/Land Study/Master Plan/Mixed Use Concept Plan,' a Master Plan or Land Study is required for phased development prior to the development of a site within or outside the City Limits. The Land Study will ensure all future plats of the proposed phases meet the requirements of the Unified Development Code and the Design and Construction Manual.

The land to be developed is located on Schmoekel Road, east of South Santa Clara Road, within Cibolo's ETJ. The applicant is proposing a high density single-family residential subdivision consisting of about about 335 lots on 67.589 acres. Staff's comments include clarifying total number of lots proposed. This subdivision will be built in four phases.

STAFF ANALYSIS:

The UDC states that the Planning and Zoning Commission and City Council must make their determination for the approval or disapproval of a Land Study based on the approval criteria listed in Sec. 20.3.2:

E. Criteria for Approval. The Planning and Zoning Commission, in its review, and the City Council, in considering final action on an Overall Development Concept Plan/Land Study/ Master Plan/Mixed Use Concept Plan, should consider the following criteria:

1. the Study/Plan will be consistent with all zoning requirements for the property, if within the City corporate limits, or any development regulations approved as part of a Development Agreement;

STAFF FINDINGS: The applicant property is within Cibolo's Extraterritorial Jurisdiction (ETJ), therefore, there are no zoning requirements. However, the property will be subject to platting standards listed in UDC Article 20.

2. the proposed provision and configuration of roads, water, wastewater; drainage and park facilities will be adequate to serve each phase of the development;

STREETS/FUTURE THOROUGHFARE PLAN (MTP): This Land Study includes 1,700 linear feet of private streets. 20' of right-of-way is to be dedicated along Schmoekel Road for the planned collector street. Additional comments for the proposed streets may arise after the applicant has had their required TIA scoping meeting with staff.

UTILITIES: GVSUD will serve as the provider of water and sewer for this development. GVEC will serve as the electric provider.

DRAINAGE: The Engineering Design Report submitted by the applicant calls out a detention pond in the northeast corner of the property. However, this is not shown on the Land Study plan. Additionally, there are several comments on the Drainage Report from the City Engineer. This requirement has not been satisfied and is listed in staff's pending comments for the applicant.

A portion of the property is in the floodplain. A floodplain development permit is required as part of the development process per the City Engineer's comments.

PARKLAND: The applicant identified that 5.41 acres are required for parkland. However, the required parkland has not been called out in the Land Study plan. This requirement has not been satisfied and is listed in staff's pending comments for the applicant.

STAFF FINDINGS: Due to pending Streets, Drainage, and Parkland comments, staff finds that the proposed Land Study does not meet this requirement for approval.

3. the schedule of development is feasible and prudent and assures that the proposed development will progress to completion within the time limits proposed or allowed prior to Study/Plan expiration;

STAFF FINDINGS: The applicant has not provided a schedule of development; however, a Land Study is valid for a period of five (5) years from the date of approval.

4. if the land lies within the extra territorial jurisdiction and/or is part of an approved Development Agreement, the proposed Study/Plan conforms to the provisions of the Development Agreement and is consistent with the incorporated Conceptual Plan or any development regulations contained in the approved Development Agreement; and

STAFF FINDINGS: The property is located within the ETJ and there are no development agreements in place. The proposed Land Study must comply with all applicable regulations in UDC Article 20. Due to pending comments, the proposed Land Study does not conform with the City's regulations.

5. the location, size and sequence of the phases of development proposed assures orderly and efficient development of the land subject to the plan.

STAFF FINDINGS: Staff cannot adequately determine if the proposed phasing will ensure orderly development of the land due to the pending comments on the proposed Land Study plans.

STAFF RECOMMENDATION:

Staff and the City Engineer reviewed the Land Study and associated documents. Per the attached memo, there are comments pending. Therefore, Staff recommends DENIAL of this Land Study.

Attachments

[Application](#)

[Land Study](#)

[City Engineer's Letter](#)

[Property Map](#)



City of Cibolo
 Planning Department
 201 Loop 539 W/P.O. Box 826
 Cibolo, TX 78108
 Phone: (210) 658 - 9900

UNIVERSAL APPLICATION - LAND STUDY/MIXED USE PLAN

Please fill out this form completely, supplying all necessary information and documentation to support your request. *Please use a separate application for each submittal.* Your application will not be accepted until the application is completed and required information provided.

Project Name: Neill Subdivision
 Total Acres: 67,589 Survey Name: F. Garcia Survey No. 231 Abstract No.: 141
 Project Location (address): Schmoekel Rd

Current Zoning: OCL Overlay: None Old Town FM 78
 Proposed Zoning: OCL # of Lots: 337 # of Units: 4
 Please Choose One: Single-Family Multi-Family Commercial Industrial
 Other
 Current Use: Farming Total Proposed Square Footage: _____
 Proposed Use: Single Family Residential (Commercial/Industrial only)

Applicant Information:

Property Owner Name: KB Home Lone Star Inc.
 Address: 4800 Fredericksburg Road, Suite 100 City: San Antonio
 State: Texas Zip Code: 78229 Phone: 210-301-2815
 Email: jtownsley@kbhome.com Fax: _____

*Applicant (if different than Owner): LJA Engineering
 * Letter of Authorization required
 Address: 9830 Colonnade Boulevard, Suite 300 City: San Antonio
 State: Texas Zip Code: 78230 Phone: 210-503-2700
 Email: ngower@lja.com Fax: _____

Representative: Jason Townsley
 Address: 4800 Fredericksburg Road, Suite 100 City: San Antonio
 State: Texas Zip Code: 78229 Phone: 210-301-2815
 Email: jtownsley@kbhome.com Fax: _____

Authorization: By signing this application, you hereby grant Staff access to your property to perform work related to your application.

 Owner or Representative's Signature

 Typed / Printed Name

State of _____

County of _____

Before me, _____, on this day personally appeared
 Name of Notary Public

_____, to be the person(s) who is/are subscribed to the
 Name of signer(s)

foregoing instrument and acknowledge to me that he/she/they executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this _____ day of _____,

 Notary Public Signature (Notary Seal)

| |
|------------------------------------|
| City of Cibolo Use Only |
| Total Fees |
| Payment Method |
| Submittal Date |
| Accepted by |
| Case Number |
| Page 1 of 3 |



City of Cibolo

Planning Department
201 Loop 539 W/P.O. Box 826
Cibolo, TX 78108
Phone: (210) 658 - 9900

Authorization: By signing this application, you hereby grant Staff access to your property to perform work related to your application.

Jason Townsley

Owner or Representative's Signature

KB Homes - Jason Townsley

LONE STAR, INC.

Typed / Printed Name

State of TEXAS

County of BEXAR

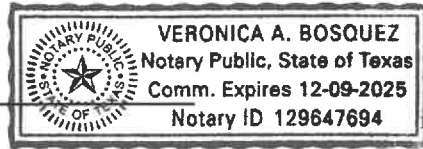
Before me, VERONICA BOSQUEZ, on this day personally appeared
Name of Notary Public

JASON TOWNSLEY, to be the person(s) who is/are subscribed to the
Name of Signer(s)

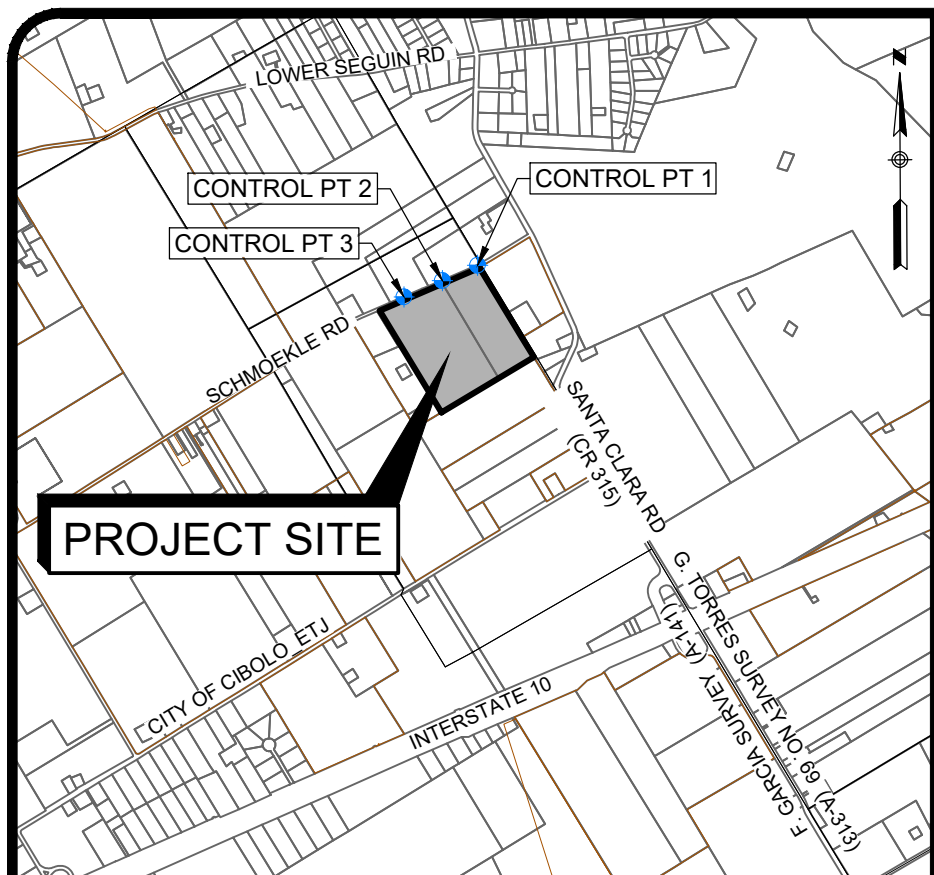
foregoing instrument and acknowledged to me that he/she/they executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 9th day of October, 2024

Veronica A. Bosquez
Notary Public Signature

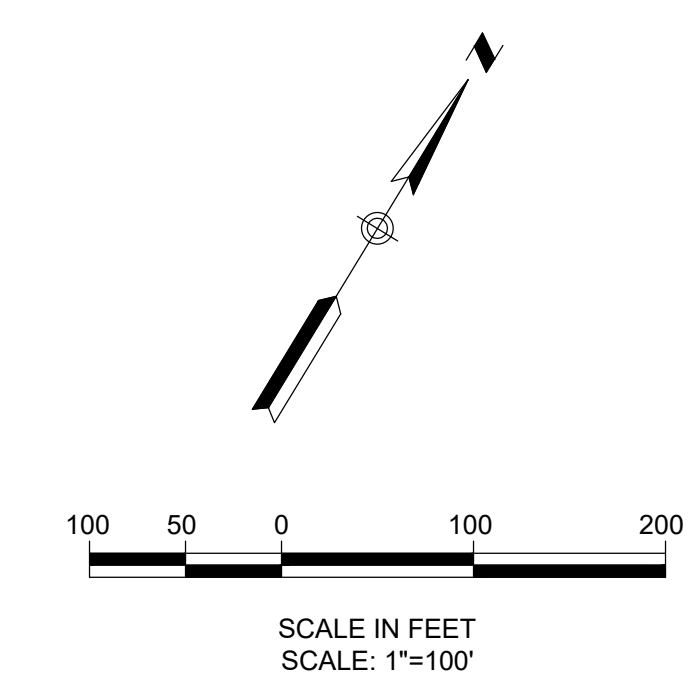


(Notary Seal)



LOCATION MAP
N.T.S.

| BORMANN FARMS SUBDIVISION | | | | |
|---------------------------|-----------|------------------|---------------------|---------------------|
| UNIT | AREA (AC) | RESIDENTIAL LOTS | RESIDENTIAL ACREAGE | RESIDENTIAL DENSITY |
| 1 | 30.99 | 130 | 17.20 | 7.56 |
| 2 | 17.44 | 97 | 11.68 | 8.31 |
| 3 | 8.51 | 55 | 6.51 | 8.45 |
| 4 | 10.65 | 55 | 6.48 | 8.48 |
| TOTALS | 67.59 | 335 | 41.84 | 8.05 |



LEGEND

- OPEN SPACE / DRAINAGE
- RIGHT-OF-WAY DEDICATION (20')
- PHASE LINE
- SUBDIVISION BOUNDARY



DEVELOPER: KB HOME
4800 FREDERICKSBURG ROAD, SUITE 100
SAN ANTONIO, TX 78229
CONTACT PERSON: JASON TOWNSLEY
PHONE # (210) 301-2815

ENGINEER: LJA ENGINEERING, INC.
9830 COLONNADE BLVD, SUITE 300
SAN ANTONIO, TEXAS 78230
CONTACT PERSON: PRISCILLA G. FLORES, P.E.
PHONE # (210) 503-2700

8.65 ACRES
MORENO LIVING TRUST
DOC# 202199031276
O.P.R.G.C.TX.

11.284 ACRES
MORENO LIVING TRUST
DOC# 202199031276
O.P.R.G.C.TX.

11.166 ACRES
SHAWN & JUDY MORENO
VOL. 1971 / PG. 536
DOC# 2004003901
O.P.R.G.C.TX.

14.019 ACRES
SHAWN & JUDY MORENO
VOL. 1971 / PG. 536
DOC# 2004003901
O.P.R.G.C.TX.

6.25 ACRES
LARRY DARRELL BOSTON
VOL. 4041 / PG. 774
O.P.R.G.C.TX.

30' ACCESS EASEMENT
DOC# 20169900887
O.P.R.G.C.TX.

10.75 ACRES
ALLAN W & JUDY M STALEY
VOL. 2616 / PG. 596
O.P.R.G.C.TX.

10.50 ACRES
ALLAN W & JUDY M STALEY
VOL. 2616 / PG. 596
O.P.R.G.C.TX.

2.50 ACRES
JAMES S DYER JR
DOC# 201899008877
O.P.R.G.C.TX.

38.585 ACRES
JOYCE STRIEGL
& BARBARA NEHR
DOC# 2015023668
O.P.R.G.C.TX.

20.00 ACRES
BRIAN D & GINA D WARREN
VOL. 2131 / PG. 271
O.P.R.G.C.TX.

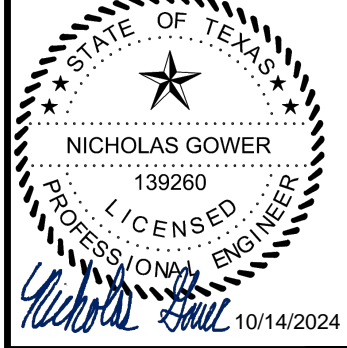
5.00 ACRES
BRIAN D & GINA D WARREN
VOL. 2131 / PG. 271
O.P.R.G.C.TX.

7.00 ACRES
CLAYTON R JR
& STELLA L PARKER
VOL. 4126 / PG.
1130.P.R.G.C.TX.

NEILL SUBDIVISION
LAND STUDY
PROPOSED USE PLAN

| NO. | DATE | BY | DESCRIPTION |
|-----|------|----|-------------|
| | | | |

| | |
|---------------|-------------|
| DATE: | 02/16/2024 |
| DESIGNED BY: | NG |
| DRAWN BY: | HEW |
| CHECKED BY: | NG |
| DRAWING NAME: | sa_164-2402 |



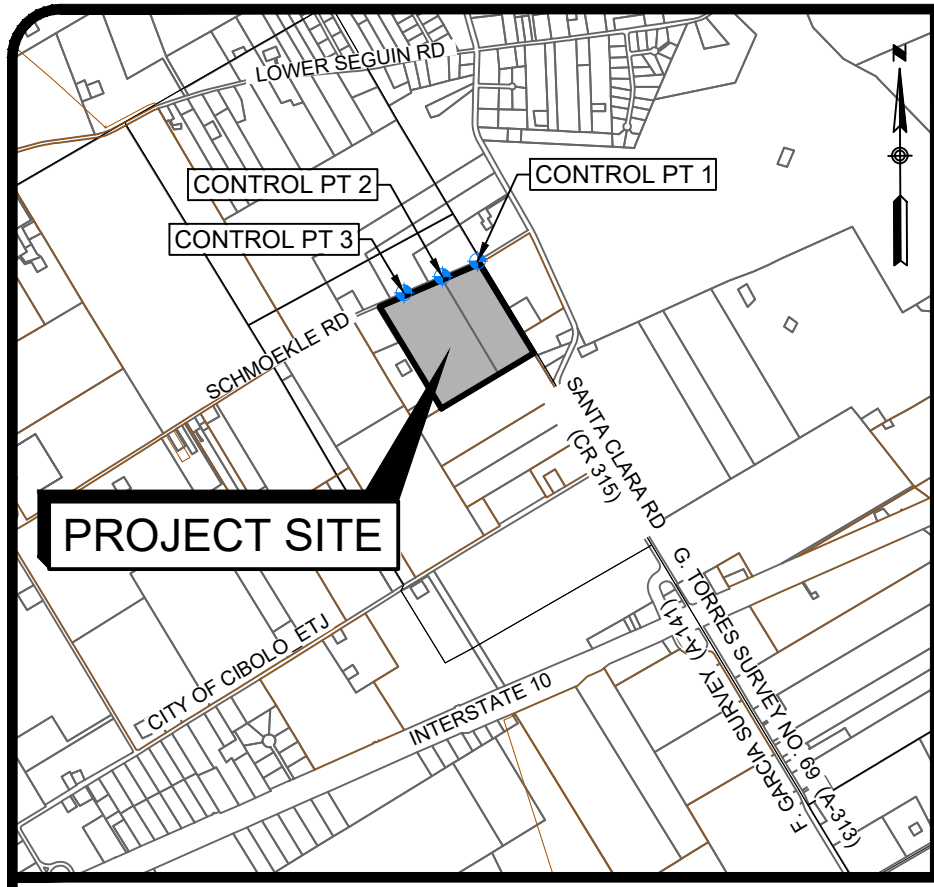
LJA Engineering, Inc.
9830 Colonnade Boulevard
Suite 300
San Antonio, Texas 78230
Phone 210-503-2700
Fax 210-503-2749
TBE No. T-11986

JOB NUMBER:
SA164-2402

SHEET NO.
1.1
OF -- SHEETS

DATE OF PREPARATION: 10/07/2024

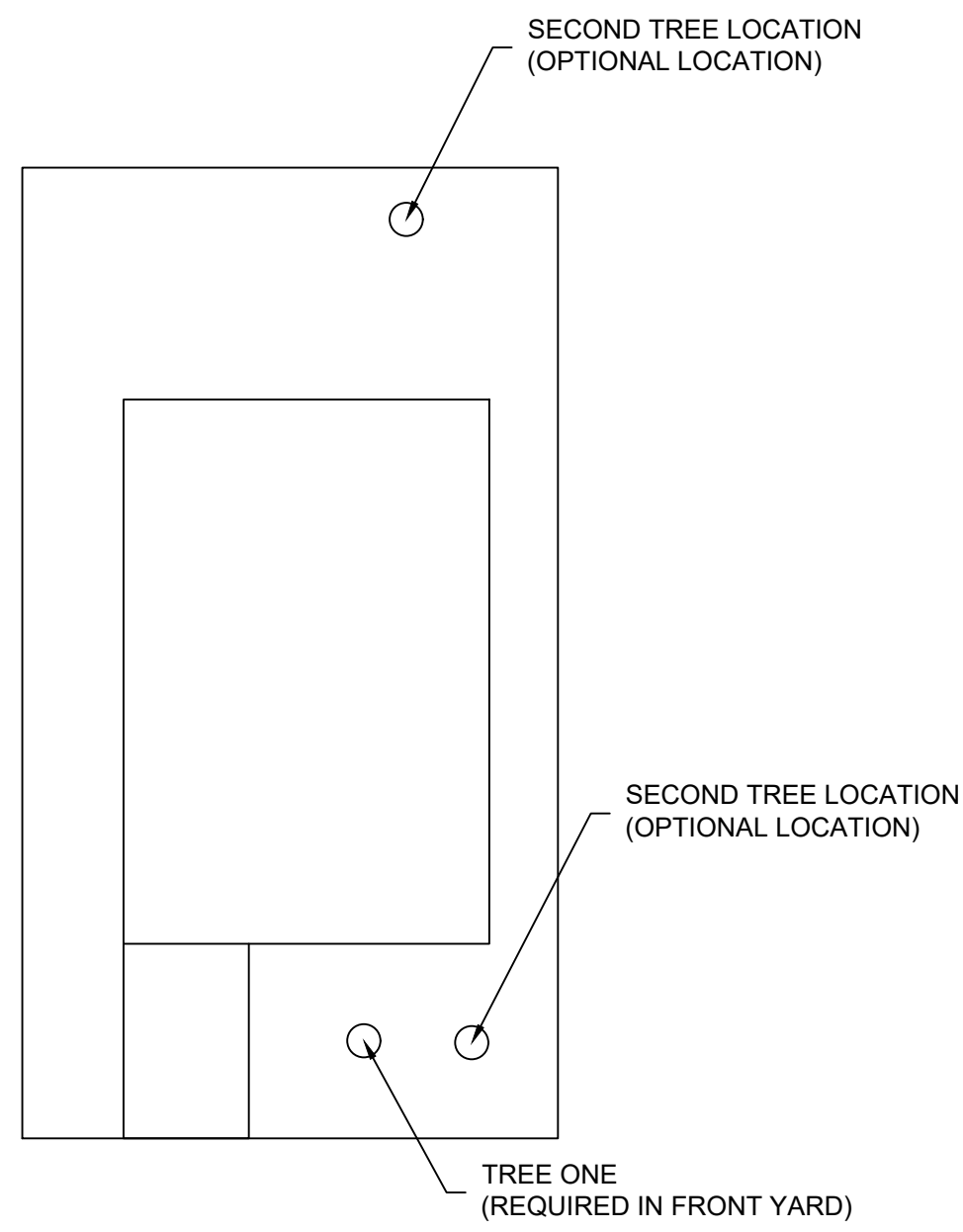
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 User: hewitson Oct 10, 24 - 12:35
 Last Modified: Oct 10, 24 - 12:35
 Plot Date/Time: Oct 10, 24 - 12:35:54



LOCATION MAP
N.T.S.

| BORMANN FARMS SUBDIVISION | | | | |
|---------------------------|-----------|------------------|---------------------|---------------------|
| UNIT | AREA (AC) | RESIDENTIAL LOTS | RESIDENTIAL ACREAGE | RESIDENTIAL DENSITY |
| 1 | 30.99 | 130 | 17.20 | 7.56 |
| 2 | 17.44 | 97 | 11.68 | 8.31 |
| 3 | 8.51 | 55 | 6.51 | 8.45 |
| 4 | 10.65 | 55 | 6.48 | 8.48 |
| TOTALS | 67.59 | 335 | 41.64 | 8.05 |

| REQUIRED TREE PLANTING | |
|------------------------|--------------------------------|
| 335 | LOTS TO RECEIVE (2) - 2" TREES |



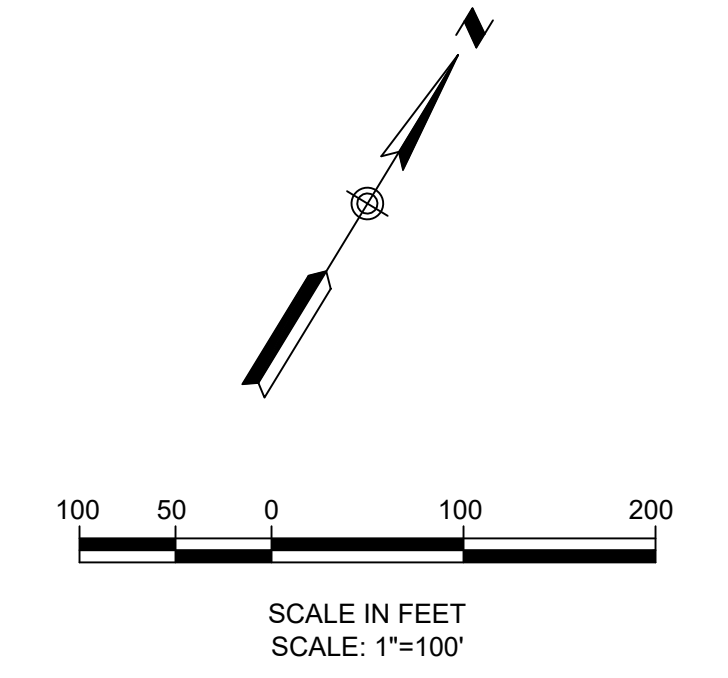
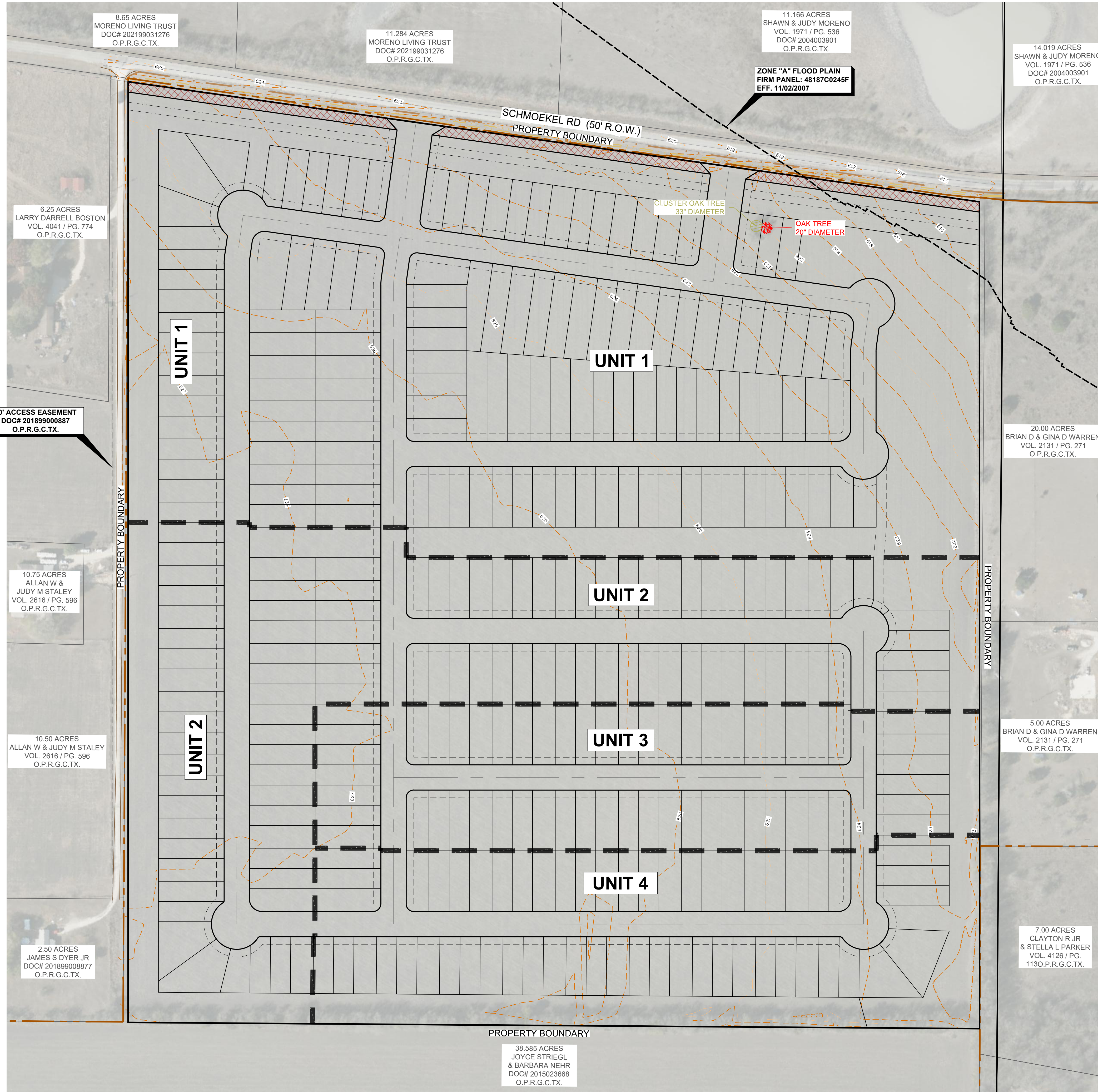
TYPICAL LOT LAYOUT
N.T.S.

NOTES:

1. ALL REQUIRED PLANT MATERIALS SHALL BE FROM THE CITY'S PREFERRED PLANT LIST IN THE CITY OF SEGUIN TECHNICAL MANUAL.
2. TREES MUST BE 2 INCHES IN CALIPER AND 8 FEET HIGH AT TIME OF PLANTING.
3. TWO TREES MINIMUM ARE REQUIRED TO BE PLANTED FOR EACH RESIDENTIAL LOT WITH ONE OF THOSE TREES REQUIRED TO BE PLANTED IN THE FRONT YARD.
4. NO TREES EXIST WITHIN THE PROJECT SITE LIMITS.
5. SEE THIS SHEET FOR LOT LAYOUT.

DEVELOPER: KB HOME
4800 FREDERICKSBURG ROAD, SUITE 100
SAN ANTONIO, TX 78229
CONTACT PERSON: JASON TOWNSLEY
PHONE # (210) 301-2815

ENGINEER: LJA ENGINEERING, INC.
9830 COLONNADE BLVD, SUITE 300
SAN ANTONIO, TEXAS 78230
CONTACT PERSON: PRISCILLA G. FLORES, P.E.
PHONE # (210) 503-2700



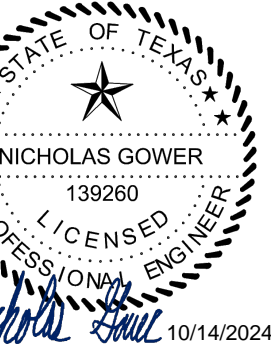
LEGEND

- TREE (REMOVE)
- CLUSTER TREE (REMOVE)
- 800 EXISTING MAJOR CONTOUR
- 801 EXISTING MINOR CONTOUR

NEILL SUBDIVISION
LAND STUDY
PROPOSED TREE PLAN

| NO. | REVISIONS | DESCRIPTION | BY | DATE |
|-----|-----------|-------------|----|------|
| | | | | |

| | |
|---------------|------------------|
| DATE: | 02/16/2024 |
| DESIGNED BY: | NG |
| DRAWN BY: | HEW |
| CHECKED BY: | NG |
| DRAWING NAME: | sh_Tree Plan.dwg |



LJA
Phone 210-503-2700
Fax 210-503-2748
18PE No. T-1386

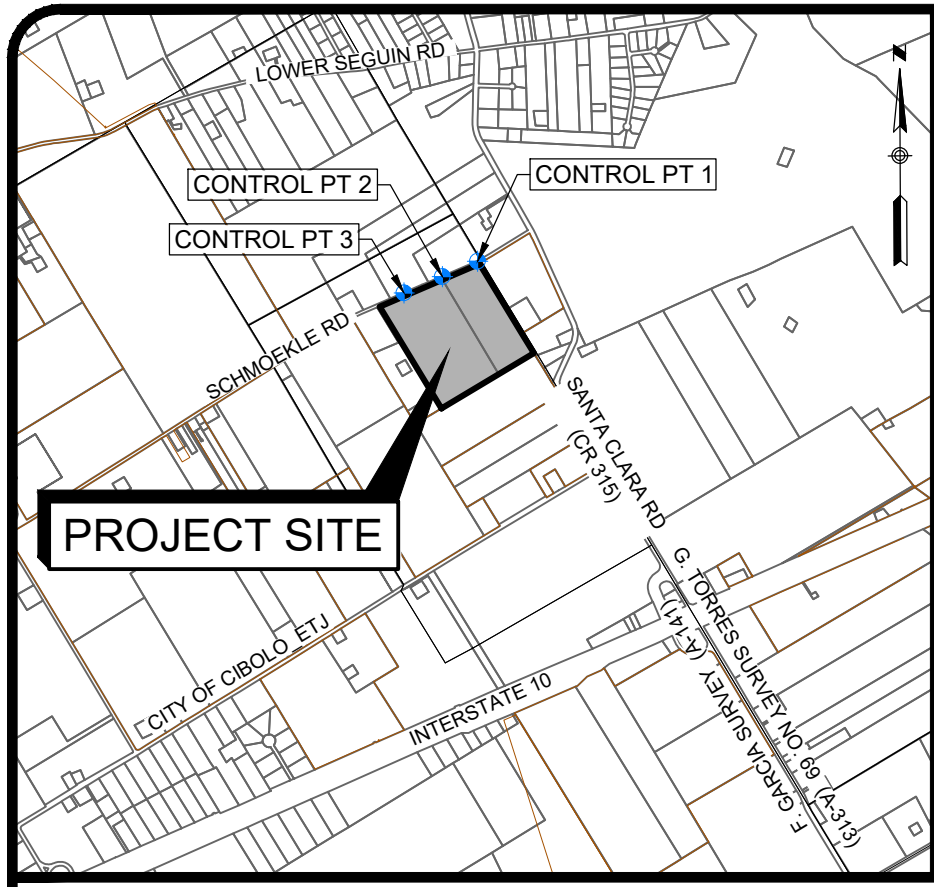
LJA Engineering, Inc.
9830 Colonnade Boulevard
Suite 300
San Antonio, Texas 78230

JOB NUMBER:
SA164-2402

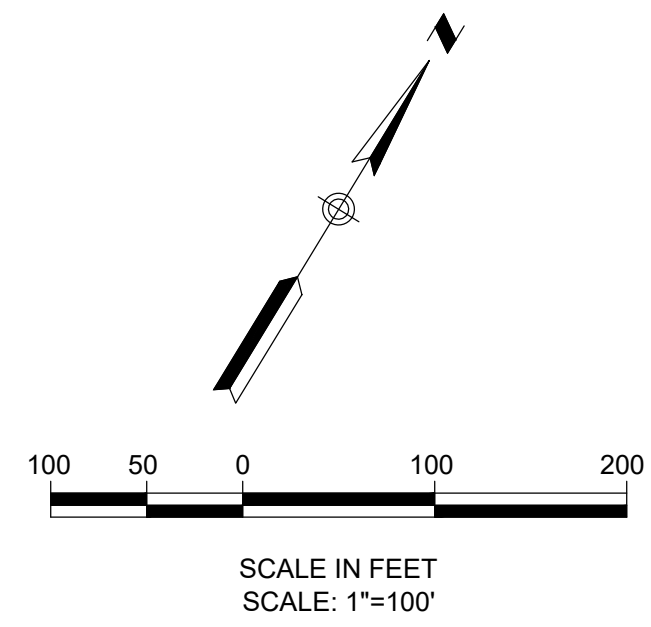
SHEET NO.
1.3
OF -- SHEETS

DATE OF PREPARATION: 10/07/2024

K:\ASAS\KB Home\2402 Neill Tree\ASAS_Site Development Plans\DWG-Civil\Land Study\sh_Tree Plan.dwg
User: hew
Last Modified: Oct 14, 24 10:09 AM
Plot Date/Time: Oct 14, 24 10:09 AM



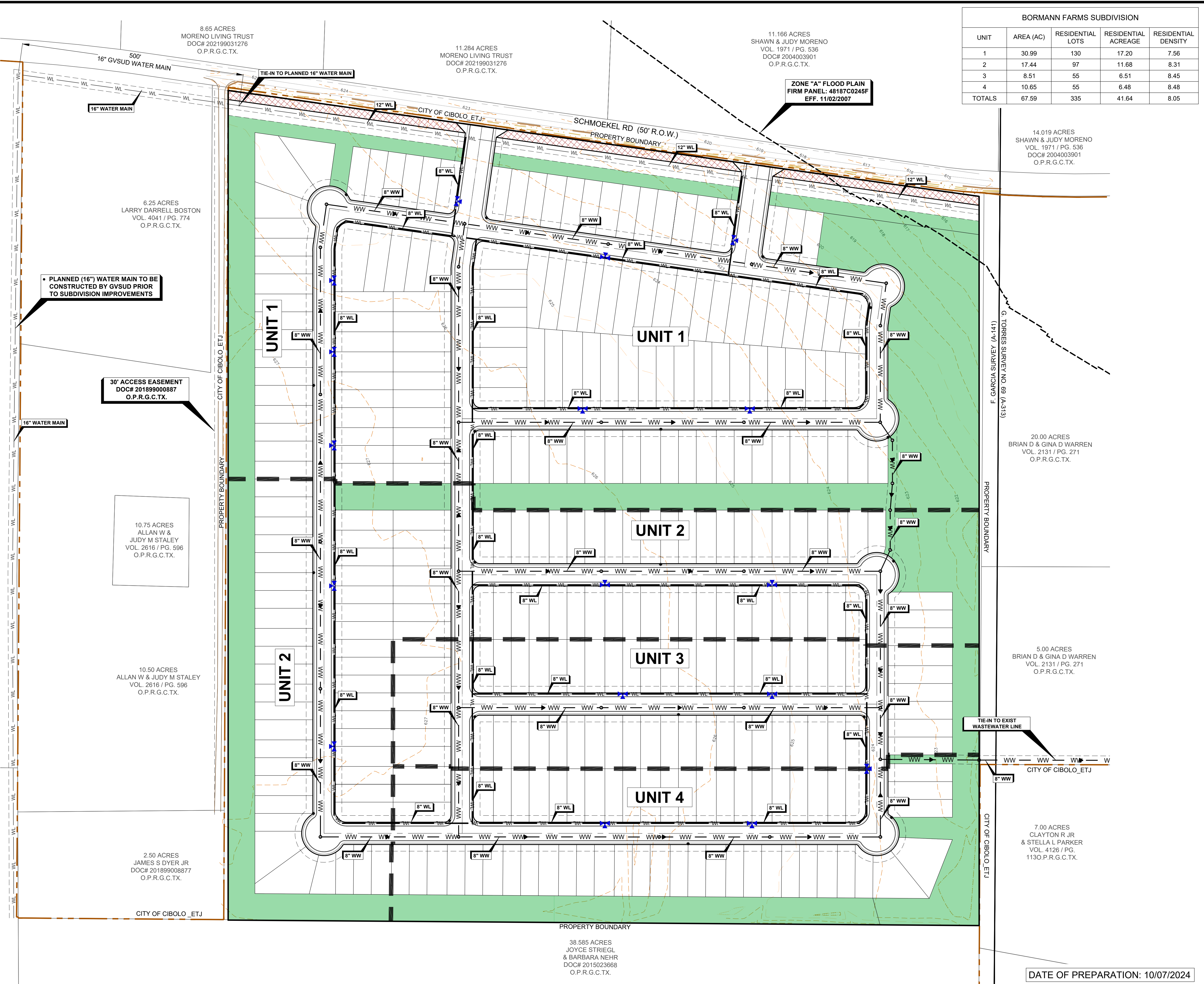
LOCATION MAP
N.T.S.



LEGEND

- OPEN SPACE / DRAINAGE
- RIGHT-OF-WAY DEDICATION (20')
- PHASE LINE
- SUBDIVISION BOUNDARY
- PROPOSED WASTEWATER LINE (WW)
- PROPOSED WATER LINE (WL)
- SANITARY SEWER MANHOLE
- FIRE HYDRANT
- PROPOSED STREETLIGHT

| BORMANN FARMS SUBDIVISION | | | | |
|---------------------------|-----------|------------------|---------------------|---------------------|
| UNIT | AREA (AC) | RESIDENTIAL LOTS | RESIDENTIAL ACREAGE | RESIDENTIAL DENSITY |
| 1 | 30.99 | 130 | 17.20 | 7.56 |
| 2 | 17.44 | 97 | 11.68 | 8.31 |
| 3 | 8.51 | 55 | 6.51 | 8.45 |
| 4 | 10.65 | 55 | 6.48 | 8.48 |
| TOTALS | 67.59 | 335 | 41.64 | 8.05 |



DEVELOPER: KB HOME
4800 FREDERICKSBURG ROAD, SUITE 100
SAN ANTONIO, TX 78229
CONTACT PERSON: JASON TOWNSLEY
PHONE # (210) 301-2815

ENGINEER: LJA ENGINEERING, INC.
9830 COLONNADE BLVD, SUITE 300
SAN ANTONIO, TEXAS 78230
CONTACT PERSON: PRISCILLA G. FLORES, P.E.
PHONE # (210) 503-2700

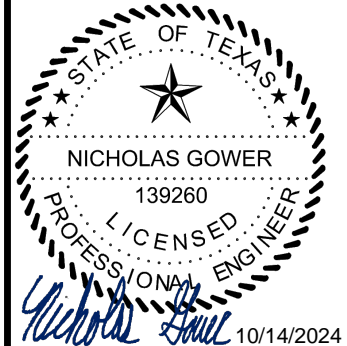
38.585 ACRES
JOYCE STRIEGL
& BARBARA NEHR
DOC# 2015023668
O.P.R.G.C.T.X.

DATE OF PREPARATION: 10/07/2024

NEILL SUBDIVISION
LAND STUDY
PRELIMINARY UTILITY PLAN

| NO. | DATE | BY | REVISIONS DESCRIPTION |
|-----|------|----|-----------------------|
| | | | |

| | |
|---------------|-------------------------|
| DATE: | 02/16/2024 |
| DESIGNED BY: | NG |
| DRAWN BY: | HEW |
| CHECKED BY: | NG |
| DRAWING NAME: | sh_Prelim Util Plan.dwg |



LJA Engineering, Inc.
Phone 210-503-2700
Fax 210-503-2749
1800 Colonnade Boulevard
Suite 300
San Antonio, Texas 78230
TBEPE No. T-1386

JOB NUMBER:
SA164-2402

SHEET NO.
1.2
OF SHEETS

K:\ASAP\KB Home\2402_Neill_Touch\ASAP_Site Development Plans\DWG-Civil\Utility Study\sh_Prelim Util Plan.dwg
User: hewins
Last Modified: Oct 10, 24 - 10:32
Plot Date/Time: Oct 10, 24 - 11:53:02



October 14th, 2024

City of Cibolo
200 South Main Street
Cibolo, TX 78108

Re: Neill Subdivision Land Study

Dear City of Cibolo,

For the Neill Subdivision Land Study, there are no public streets, alleys, or easements, that are proposed to be platted across private easement or fee strips at this time.

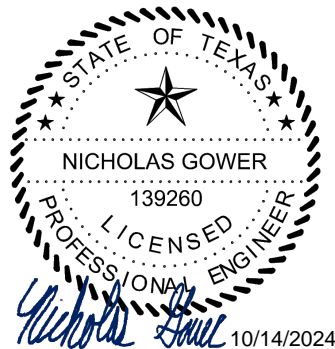
Sincerely,
Nicholas Gower, PE

A handwritten signature in blue ink that reads "Nicholas Gower". The signature is written in a cursive style.

LJA Engineering, Inc.
TBPE No. F-1386

ENGINEERING DESIGN REPORT
FOR
NEILL SUBDIVISION

SEPTEMBER 24, 2024



Prepared By:

LJA ENGINEERING, INC.
9830 Colonnade Blvd, Suite 300
San Antonio, Texas 78230
Phone (210) 503-2700

LJA FILE NO. SA3856-040

ENGINEERING DESIGN REPORT

IN CITY OF CIBOLO EXTRATERRITORIAL JURISDICTION, GUADALUPE COUNTY, TEXAS

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1.0 Executive Summary

Neill Subdivision will be a single-family subdivision that will be constructed in four phases totaling 337 lots situated on 67.59 acres. Phase 1 will consist of 130 lots situated on 30.99 acres, Phase 2 will consist of 97 lots situated on 17.45 acres, Phase 3 will consist of 55 lots situated on 8.51 acres, and Phase 4 will consist of 55 lots situated on 10.65 acres. This development will consist of the design of water, wastewater, streets, and drainage produced by LJA Engineering.

1.1 Site Summary

Neill Subdivision is located within the City of Cibolo's extraterritorial jurisdiction (ETJ), Guadalupe County, Texas. Neill Subdivision is located on the south side of Schmoekel Road with the northeastern corner of the Neill Subdivision parcel located approximately 1,000 linear feet southwest of the intersection of Schmoekel Road and Santa Clara Road (Exhibit 2.1). The project site is currently two parcels in Guadalupe County Appraisal District numbered 63975 and 63974. Neill Subdivision has approximately 1,700 linear feet of frontage along Schmoekel Road on the north side of the property, is bounded by rural residential homes to the east and west of the project site, and farmland to the south of the project site. The project site is in Marion Independent School District. The project site is a 67.59-acre tract out the F. Garcia survey, Abstract 141, Guadalupe County, Texas. A chain-of-title document was prepared by RPS Title, LLC (Appendix 3.9). The Deed of gift has been filed 13 August 1993, in Volume 1054, Page 0449, of the Official Public Records of Guadalupe County, Texas (Appendix 3.10). Since the project site is within the City's ETJ, there is no zoning associated with the development. The lots will have a front setback of 15 feet minimum, side setback of 5 feet minimum, and a back setback of 10 feet minimum. The minimum frontage for the typical lots will be 40 feet. The irregular lots along knuckles, cul-de-sacs, etc. will have a minimum frontage of 40 feet measured at the front building setback.

The subject tract is currently cultivated farmland with mature trees along the eastern and southern tract boundaries and slopes ranging from 1% to 3% slopes. The site predominately drains from south to north into the Santa Clara Tributary 6 which ultimately discharges into the Santa Clara Creek. There is an abandoned hand-dug water well on site which was filled to

approximately four feet from the surface with sediment (Appendix 3.2). According to the Soil Conservation Service (SCS) Soil Survey of Guadalupe County, Texas, the soil type present on the subject tract is Branyon clay (BrA & BrB) (Appendix 3.1). Branyon clay (BrA) consists of slopes ranging from 0 to 1 percent, and Branyon clay (BrB) consists of slopes ranging from 1 to 3 percent (Appendix 3.1).

1.2 Water Infrastructure

The water purveyor is Green Valley Special Utility District (GVSUD). Neill Subdivision water infrastructure will be designed in accordance to GVSUDs standard waterline specification and details. Currently GVSUD is planning a 16-inch distribution that will be located approximately 500 feet west of the project site. The existing 16-inch water will be the connection point for the proposed water main that services Neill Subdivision. Per the GVSUD Water Service Feasibility Study (Appendix 3.5), the proposed 12" water main will extend across the Schmoekel Road frontage and end at the eastern boundary of Neill Subdivision. Neill Subdivision will tie into the 12" water main at the two entrances of the subdivision with 8-inch water main. The 8-inch water main will continue from the connection points throughout the subdivision. The development currently proposes approximately 10,591 linear feet of 8-inch water main (Exhibit 2.11). GVSUD currently has adequate water supply to meet the Neill Subdivision demand request, per the Water Service Feasibility Study.

1.3 Wastewater Infrastructure

The wastewater purveyor is Green Valley Special Utility District (GVSUD). Neill Subdivision wastewater infrastructure will be designed according to the GVSUD wastewater design criteria and the Texas Commission of Environmental Quality (TCEQ). The nearest existing wastewater infrastructure is at the intersection of Schmoekel Road and Santa Clara Road, which is located approximately 1,000 linear feet from the northeastern most corner of our site. This existing wastewater line was designed by Westwood Professional Services, Inc. in San Antonio, TX. The construction documents are titled "Off-site Sanitary Sewer Construction Plans for Kayden Springs Unit 1". This existing wastewater line is the proposed connection point for the Neill Subdivision wastewater infrastructure, per GVSUD coordination. The wastewater line is currently on the east side of Santa Clara Road. No upsizing of the existing wastewater will be

necessary. Neill Subdivision proposes an 8-inch wastewater main to connect to the 18-inch wastewater main and extend offsite via easements through parcels 120838 and 153797. The development currently proposes 9,757 linear feet of 8-inch wastewater line to provide service for 337 homes (Exhibit 2.11). No lift stations or force mains will be required.

1.4 Street Infrastructure

Neill Subdivision has 1,700 linear feet of frontage along Schmoekel Road (county road). Schmoekel Road is a two-lane undivided, 20-foot wide asphalt paved road with no pavement markings within a 50' right-of-way. The nearest intersection from our project site is Santa Clara Road, approximately 1,000 linear feet east from our project site. Santa Clara Road is an existing two lane, 24-foot wide asphalt paved road with yellow center line pavement markings within an 80' right-of-way. There are no apparent existing driveways to access the project site. The current condition of the site is crops without any fencing, therefore, it is assumed the owner accesses the site along any point of the Schmoekel Road frontage.

Per the City of Cibolo and Guadalupe County Major Thoroughfare Plans, 20-foot of right-of-way will be dedicated to Schmoekel Road with the construction of the proposed development for a future ROW width of 90-foot. Neill Subdivision is proposing two points of access along the Schmoekel Road frontage. The streets will be public roads but privately maintained. Both entrances will consist of a 52' pavement section with a center island within a 70' right-of-way. The two entrances will be the only portions of the subdivision that will have a 70' right-of-way. After the entrances there will be a series of streets that will all have 32' foot pavement sections within a 50' right-of-way. There will be curb abutting 5-foot sidewalks on both sides of all pavement sections in the entire subdivision. All streets are required to have sidewalks meet the requirements for the Americans with Disabilities Act (ADA), the International Building Code (IBC), and the Texas Accessibility Standards (TAS), as enforced by the Texas Department of Licensing and Regulation (TDLR).

The Neill Subdivision streets have been designed using the City of Cibolo Street Design Criteria., consisting of HMAC, flexible base, and compacted subgrade as determined by the geotechnical report. There are no future roads to be built though the Neill Subdivision project site according to the Guadalupe County and City of Cibolo Major Thoroughfare maps (Exhibit

2.9). Per the Traffic Impact Analysis, the intersection of Santa Clara Road and Lower Seguin Road will need to be converted to an all-way stop-control at full build-out of subdivision. Construction of a 180 linear foot eastbound right-turn lane on Schmoekel Road onto Santa Clara Road at full build-out of the subdivision. Also, a westbound 365 linear foot left-turn lane along Schmoekel Rd at full build out will need to be constructed at the eastern access point into Neill Subdivision (Appendix 3.8).

1.5 Drainage Analysis

1.5.1 Summary

Neill Subdivision storm water design will be designed according to the City of Cibolo Stormwater Design Guidelines. Drainage analysis will include the anticipated storm water runoff associated with the existing, proposed, and fully developed conditions for the 2-year, 5-year, 10-year, 25-year, 50-year, and 100-year flood conditions and mitigate any increases in storm water runoff leaving the site. The drainage analysis will be using the SCS method, which is acceptable within the City of Cibolo Unified Development Code. The on-site and off-site drainage areas were delineated using survey and lidar data. The site will utilize earthen channels and other drainage structures to reduce the runoff back to existing conditions for the overall tributary.

1.5.2 Existing Conditions

The Neill Subdivision project site is currently farmland with crops planted throughout the site with minimal slopes (Exhibit 2.12). The drainage associated with our property flows from the western portion of the site to the east. There is a small portion of the project site in FEMA Flood Zone A at the northeast corner of the project site per FEMA Pannel 48187C0245F Eff. 11/2/2007 (Exhibit 2.7). The rest of the project site is outside of any FEMA Floodplain boundaries. The stormwater from the development will flow into Santa Clara Tributary 6 which will then flow into Santa Clara Creek. There is an existing earthen swell that runs parallel to the eastern border of the project site starting approximately midway into the project site and ending at Schmoekel Road. There is also an existing off-site earthen swell on the southern side of Schmoekel Road. The entire site is Soil Type D (Exhibit 2.4).

The existing drainage area is a total of 132.10 acres encompassing the entirety of the project site and a portion of several parcels to the west of the project site. The existing drainage area

with all parcels included consists of 25.11 acres of farmstead and 106.99 acres of crops with slopes less than 2%.

1.5.3 Ultimate Conditions

Neill Subdivision will be developed as a single-family residential subdivision. Neill Subdivision drainage concept will include the use of earthen drainage channels along all four boundaries of the project site as well as in the center of the project site (Exhibit 2.13). This drainage system will ultimately flow to a proposed detention pond at the northeast corner of the development that will discharge at 80% of the existing flow.

1.5.4 Pond Analysis

Neill Subdivision proposes one on-site detention basin on the northeastern corner of the project site to mitigate the increase in runoff to 80% of existing conditions. The hydraulic path to be used for time of concentration calculations utilizes the TR-55 method with a lag time using a 0.6 coefficient. The Soil Conservation Service (SCS) method will be used for the Hydrology Method for the analysis of ultimate storm water flow. The water from the detention pond will flow into the earthen drainage channel along the south side of Schmoekel road and into Santa Clara Tributary 6. Water quality requirements as prescribed by the TCEQ Technical Guidance Manual will be met with the detention basin design.

1.5.5 Drainage Conclusion

The proposed Neill Subdivision development has been analyzed and has resulted in all anticipated existing peak flows resulting from the 2-year, 5-year, 10-year, 25-year, and 100-year storm events have been reduced with the use of the proposed on-site detention and drainage facilities. In conclusion, Neill Subdivision will not produce significant adverse impact to other properties, habitable structures, or drainage systems downstream.

1.6 Gas & Electric Service

Electric service will be provided by GVEC. Both Spectrum and AT&T can provide cable, phone, and internet service. GVEC has existing overhead single-phase primary electric along the northern, eastern, and western property line and three-phase along Santa Clara Rd (Exhibit 2.10). AT&T has an existing buried cable line on the northern property boundary. Will-serve

letters from GVEC, Spectrum, and AT&T are provided in (Appendix 3.3). Gas service will not be provided in this development.

1.7 Parkland Dedication

The City of Cibolo has parkland dedication requirements for the proposed major subdivision. The subject property will have a dedication or mitigation requirement of at least eight (8%) percent of the total tract, excluding any commercial or industry land uses that may be in the tract, of which no more than 60% may be floodplain. Based on our 67.59-acre tract, the total parkland dedication will be greater or equal to 5.41 acres. The land plan has been designed to meet the required parkland dedication requirements.

1.8 Tree Preservation

The City of Cibolo does have tree preservation and landscaping requirements. This project site currently has one existing tree on the north side of the property and dozens of shrubs along the eastern and southern project boundaries. There will be no existing trees to be preserved with this development. Per the City of Cibolo, single family developments must have a minimum of two trees per lot, each with a minimum 2-inch diameter measured at breast height (DBH) minimum.

1.9 Conclusion

Neill Subdivision has been preliminarily studied on all civil engineering aspects that will affect the project and has been deemed to be able to develop the 67.59-acre project site to a single-family residential subdivision with approximately 337 lots as shown on the Land Plan (Exhibit 2.14).

EXHIBIT 2.1

SITE LOCATION MAP



0 1,000 2,000 4,000
 FEET

 PROJECT BOUNDARY



9830 Colonnade Boulevard, Suite 300
 San Antonio, Texas 78230
 Phone 210.503.2700
 LJA.com

NEILL SUBDIVISION

LOCATION
 EXHIBIT

DATE: 9/30/2024

EXHIBIT 2.2

AERIAL MAP



0 250 500 1,000
FEET

 PROJECT BOUNDARY



9830 Colonnade Boulevard, Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.com

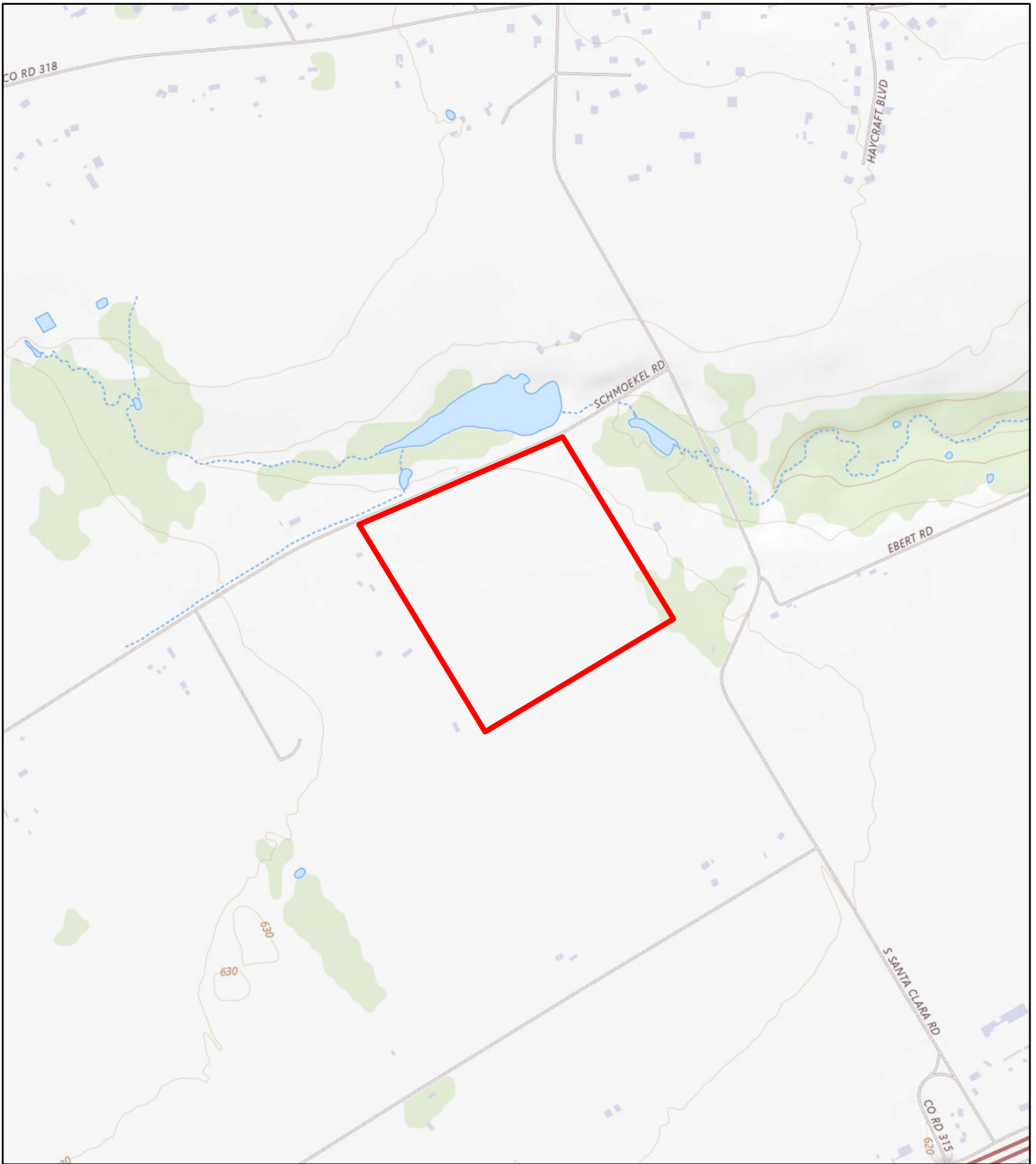
NEILL SUBDIVISION

**AERIAL
EXHIBIT**

DATE: 9/30/2024

EXHIBIT 2.3

USGS QUIADRANGLE



0 500 1,000 2,000
 FEET

 PROJECT BOUNDARY



9830 Colonnade Boulevard, Suite 300
 San Antonio, Texas 78230
 Phone 210.503.2700
 LJA.com

NEILL SUBDIVISION

**USGS
 EXHIBIT**

DATE: 9/30/2024

EXHIBIT 2.4

SOILS MAP



PROJECT BOUNDARY



D, BRANYON CLAY, 0 TO 1 PERCENT SLOPES



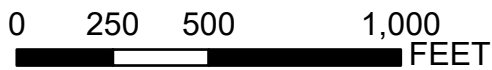
D, BRANYON CLAY, 1 TO 3 PERCENT SLOPES



D, TINN CLAY, 0 TO 1 PERCENT SLOPES, FREQUENTLY FLOODED



D, WATER



9830 Colonnade Boulevard, Suite 300
 San Antonio, Texas 78230
 Phone 210.503.2700
 LJA.com

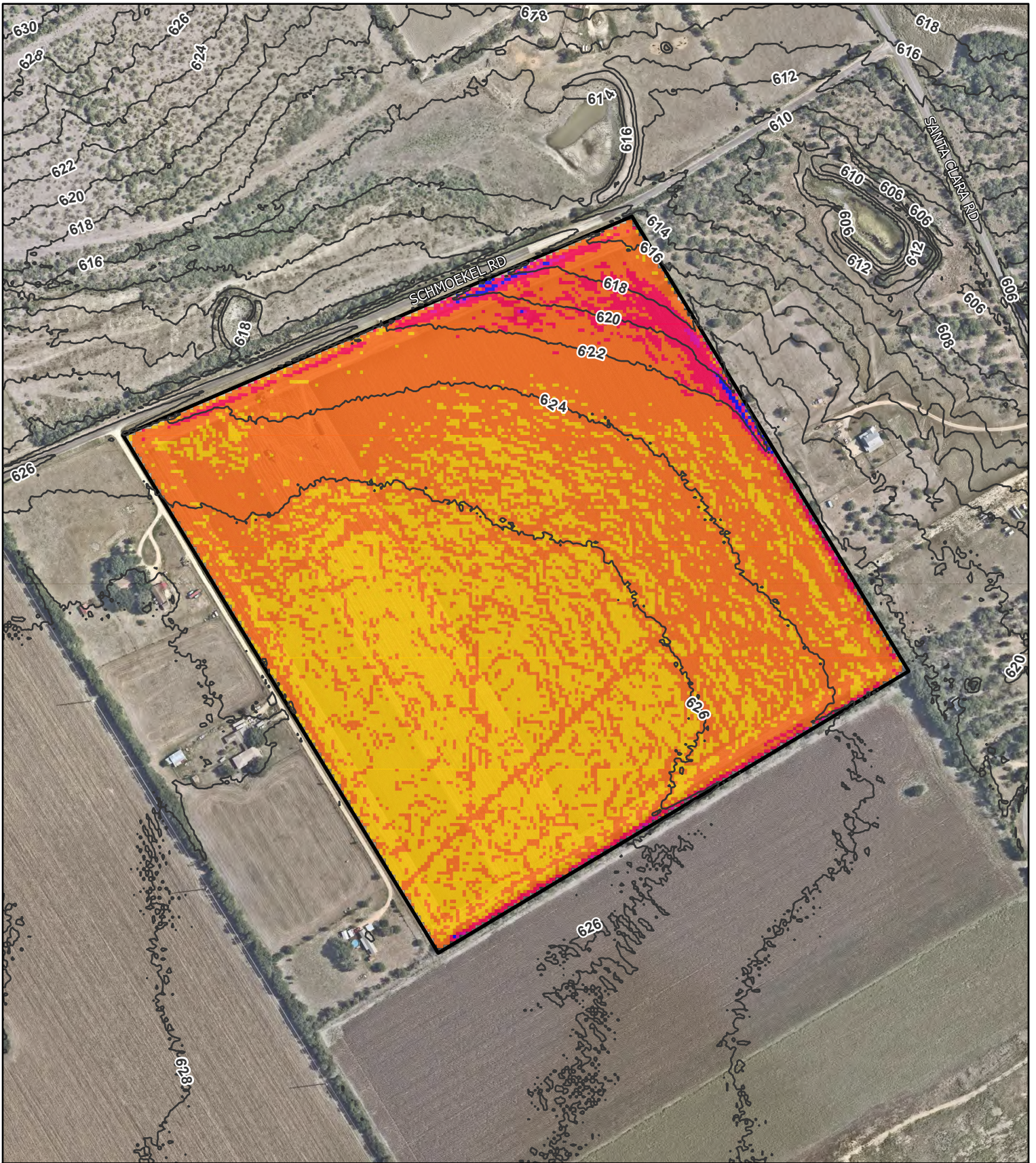
SPRINGS PHASE II

**NRCS SOILS
 EXHIBIT**

DATE: 9/30/2024

EXHIBIT 2.5

SLOPE MAP



0 200 400 800 FEET

PROJECT BOUNDARY
 0.501 - 2
 4.001 - 5
 0.001 - 0.5
 2.001 - 4
 5.001 - 7.715
 — CONTOURS 2FT

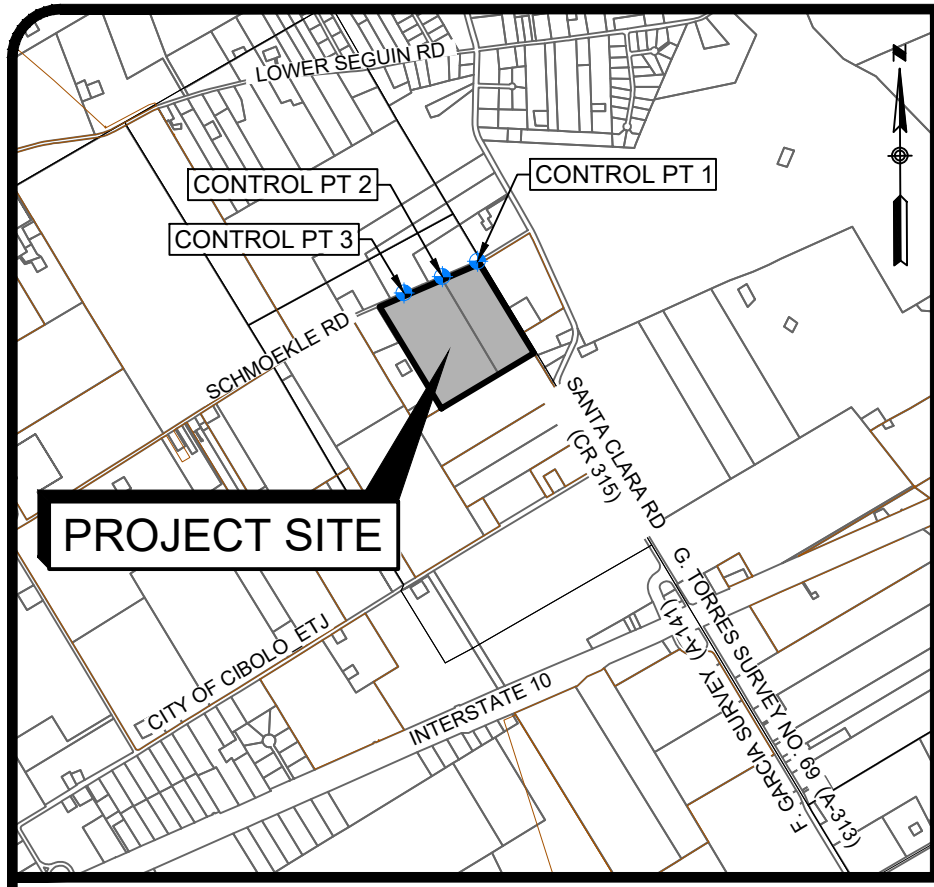


9830 Colonnade Boulevard, Suite 300
 San Antonio, Texas 78230
 Phone 210.503.2700
 LJA.com

NEILL SUBDIVISION

**SLOPE
EXHIBIT**

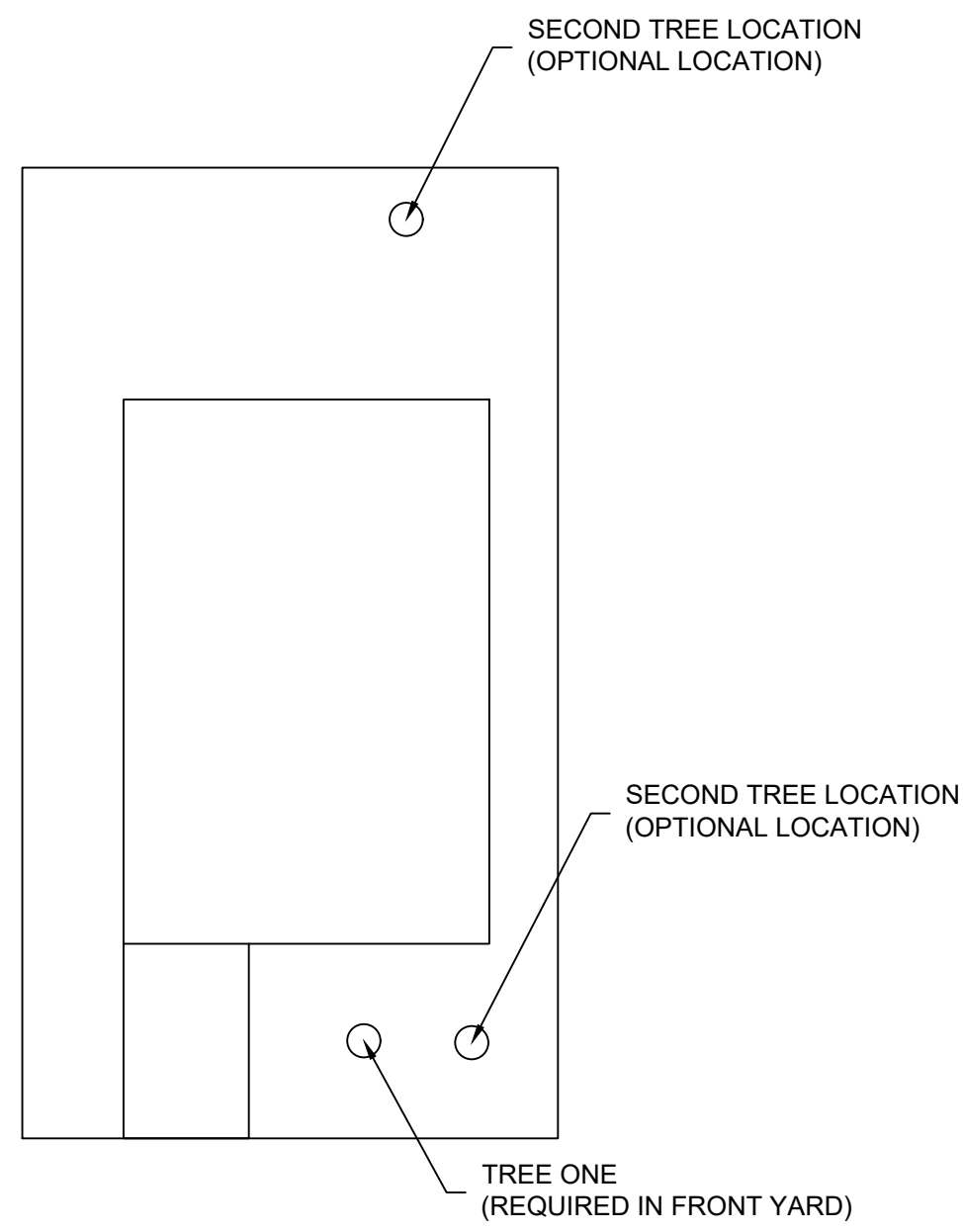
DATE: 9/30/2024



LOCATION MAP
N.T.S.

| BORMANN FARMS SUBDIVISION | | | | |
|---------------------------|-----------|------------------|---------------------|---------------------|
| UNIT | AREA (AC) | RESIDENTIAL LOTS | RESIDENTIAL ACREAGE | RESIDENTIAL DENSITY |
| 1 | 30.99 | 130 | 17.20 | 7.56 |
| 2 | 17.44 | 97 | 11.68 | 8.31 |
| 3 | 8.51 | 55 | 6.51 | 8.45 |
| 4 | 10.65 | 55 | 6.48 | 8.48 |
| TOTALS | 67.59 | 335 | 41.64 | 8.05 |

| REQUIRED TREE PLANTING | |
|------------------------|--------------------------------|
| 335 | LOTS TO RECEIVE (2) - 2" TREES |



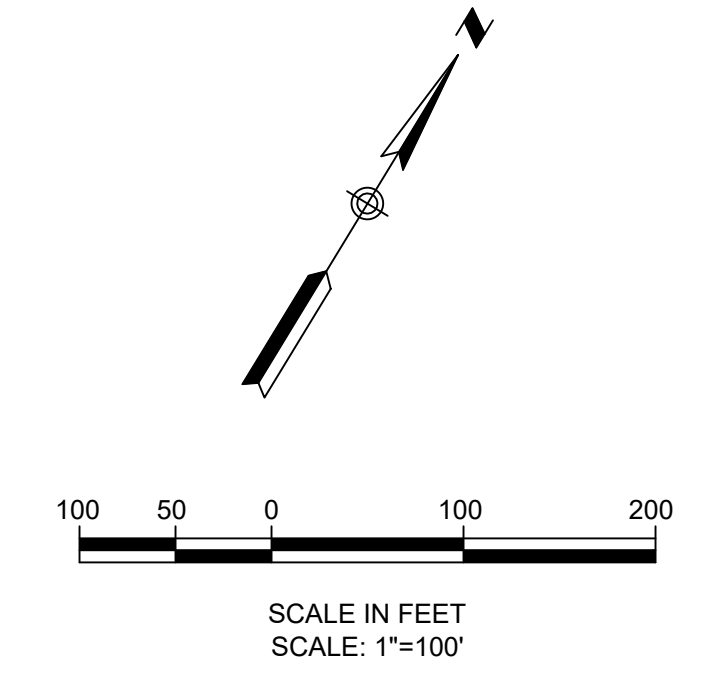
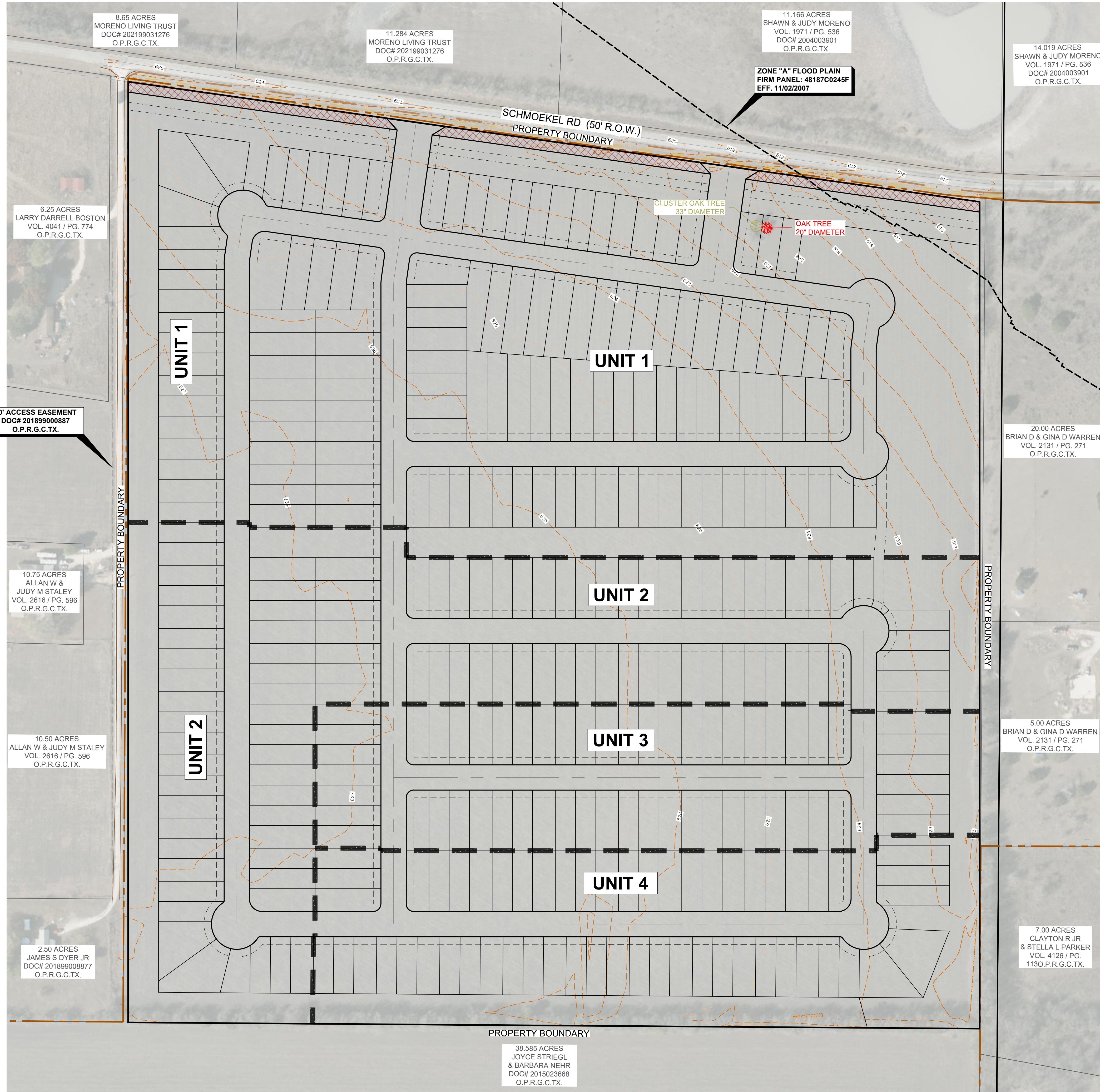
TYPICAL LOT LAYOUT
N.T.S.

NOTES:

1. ALL REQUIRED PLANT MATERIALS SHALL BE FROM THE CITY'S PREFERRED PLANT LIST IN THE CITY OF SEGUIN TECHNICAL MANUAL.
2. TREES MUST BE 2 INCHES IN CALIPER AND 8 FEET HIGH AT TIME OF PLANTING.
3. TWO TREES MINIMUM ARE REQUIRED TO BE PLANTED FOR EACH RESIDENTIAL LOT WITH ONE OF THOSE TREES REQUIRED TO BE PLANTED IN THE FRONT YARD.
4. NO TREES EXIST WITHIN THE PROJECT SITE LIMITS.
5. SEE THIS SHEET FOR LOT LAYOUT.

DEVELOPER: KB HOME
4800 FREDERICKSBURG ROAD, SUITE 100
SAN ANTONIO, TX 78229
CONTACT PERSON: JASON TOWNSLEY
PHONE # (210) 301-2815

ENGINEER: LJA ENGINEERING, INC.
9830 COLONNADE BLVD, SUITE 300
SAN ANTONIO, TEXAS 78230
CONTACT PERSON: PRISCILLA G. FLORES, P.E.
PHONE # (210) 503-2700



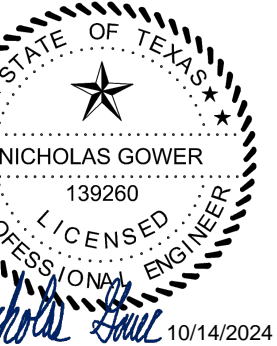
LEGEND

- TREE (REMOVE)
- CLUSTER TREE (REMOVE)
- 800 EXISTING MAJOR CONTOUR
- 801 EXISTING MINOR CONTOUR

NEILL SUBDIVISION
LAND STUDY
PROPOSED TREE PLAN

| NO. | REVISIONS | DESCRIPTION | BY | DATE |
|-----|-----------|-------------|----|------|
| | | | | |

| | |
|---------------|------------------|
| DATE: | 02/16/2024 |
| DESIGNED BY: | NG |
| DRAWN BY: | HEW |
| CHECKED BY: | NG |
| DRAWING NAME: | sh_Tree Plan.dwg |



LJA Engineering, Inc.
9830 Colonnade Boulevard
Suite 300
San Antonio, Texas 78230
Phone 210-503-2700
Fax 210-503-2748
TBEPE No. T-1386

JOB NUMBER:
SA164-2402

SHEET NO.
1.3
OF -- SHEETS

DATE OF PREPARATION: 10/07/2024

K:\ASAS\KB Home\2402 Neill Tree\ASAS_Site Development Plans\DWG-Civil\Land Study\sh_Tree Plan.dwg
 User: hew
 Last Modified: Oct 14, 24 10:09 AM
 Plot Date/Time: Oct 14, 24 10:09 AM

EXHIBIT 2.7

FEMA FLOOD INSURANCE RATE MAP



0 250 500 1,000
FEET



PROJECT BOUNDARY



ZONE A



9830 Colonnade Boulevard, Suite 300
San Antonio, Texas 78230
Phone 210.503.2700
LJA.com

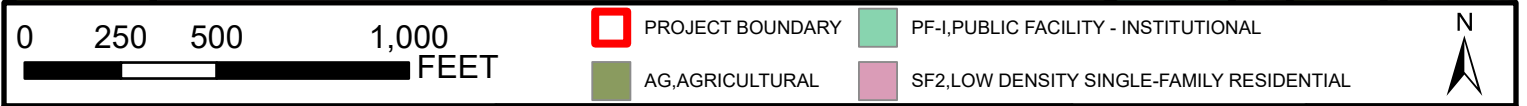
NEILL SUBDIVISION

FEMA
EXHIBIT

DATE: 9/30/2024

EXHIBIT 2.8

ZONING MAP




 9830 Colonnade Boulevard, Suite 300
 San Antonio, Texas 78230
 Phone 210.503.2700
 LJA.com

NEILL SUBDIVISION

**ZONING
EXHIBIT**

DATE: 9/30/2024

8 OF 9

EXHIBIT 2.9

MAJOR THOROUGHFARE MAP



0 500 1,000 2,000 FEET



PROJECT BOUNDARY — — — — — FREEWAY — — — — — MINOR ARTERIAL — — — — — COLLECTOR



9830 Colonnade Boulevard, Suite 300
 San Antonio, Texas 78230
 Phone 210.503.2700
 LJA.com

NEILL SUBDIVISION

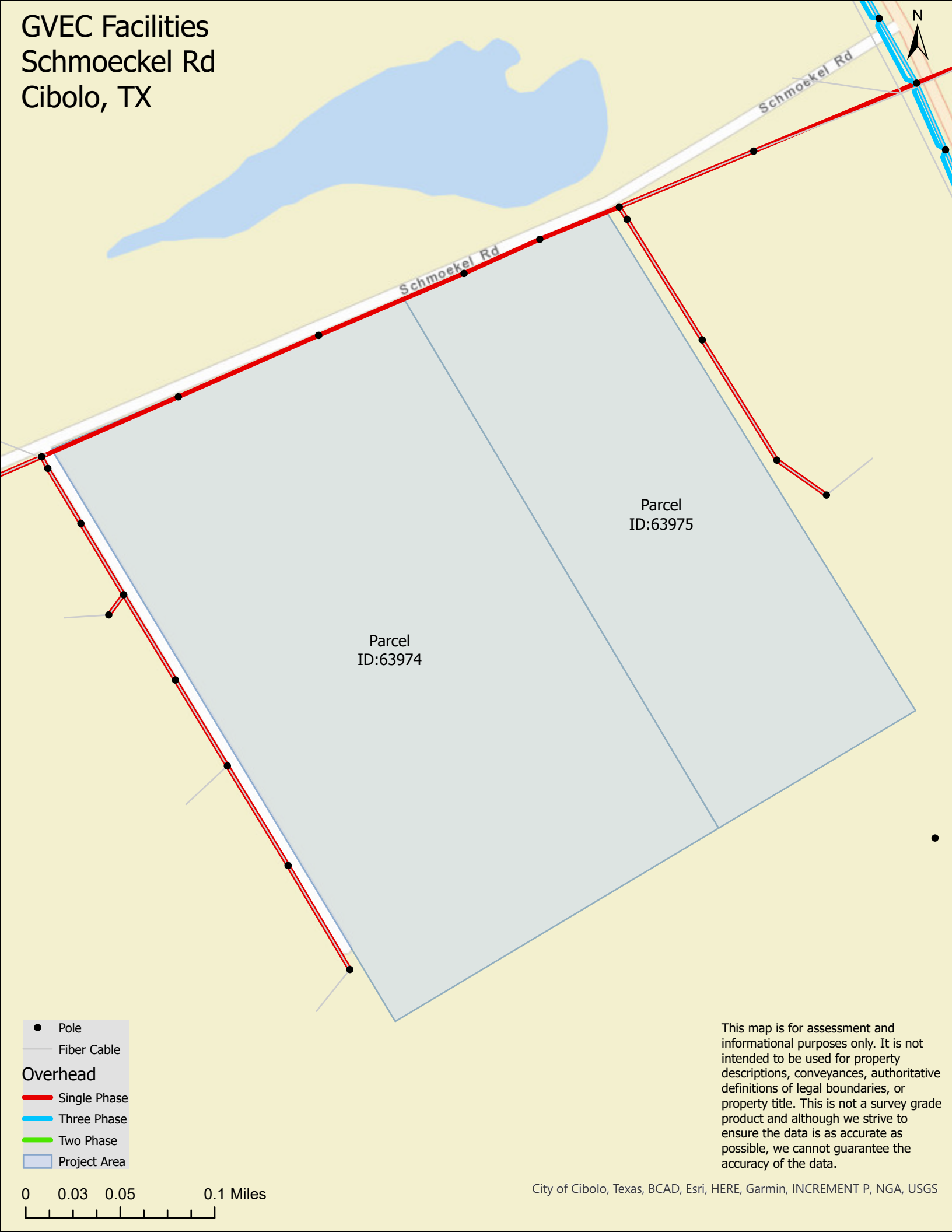
SITE LOCATION
 EXHIBIT

DATE: 10/1/2024

EXHIBIT 2.10

EXISTING ELECTRIC MAP

GVEC Facilities Schmoekel Rd Cibolo, TX



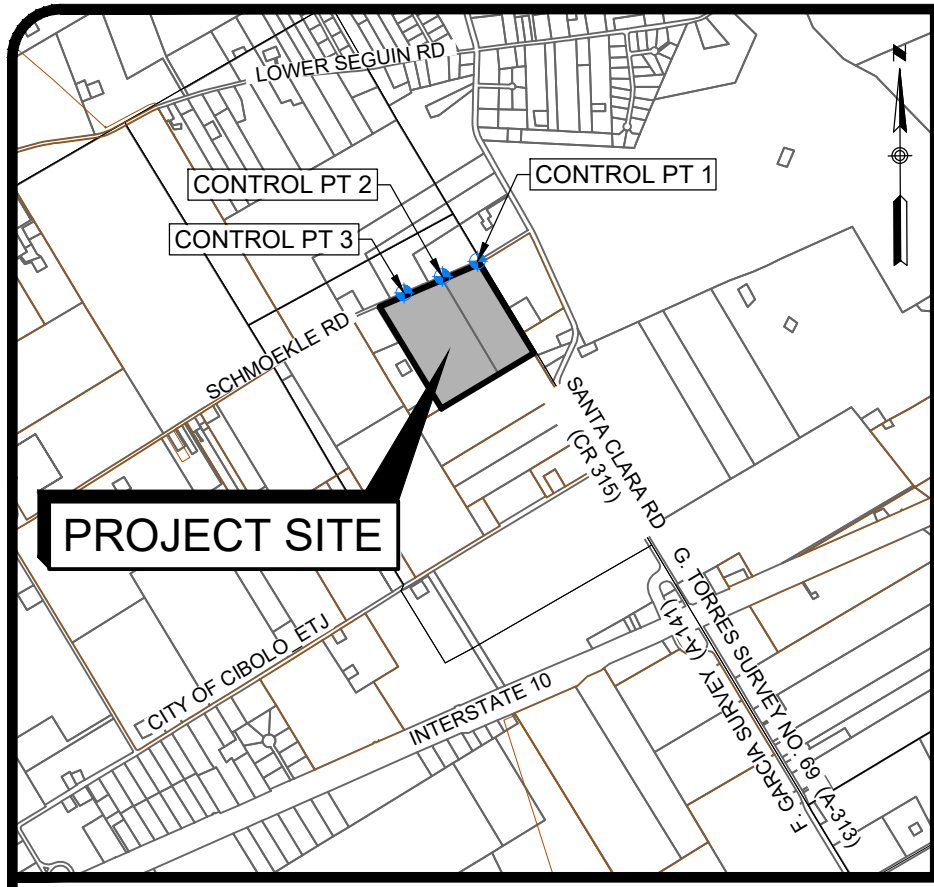
- Pole
- Fiber Cable
- Overhead**
- Single Phase
- Three Phase
- Two Phase
- Project Area

This map is for assessment and informational purposes only. It is not intended to be used for property descriptions, conveyances, authoritative definitions of legal boundaries, or property title. This is not a survey grade product and although we strive to ensure the data is as accurate as possible, we cannot guarantee the accuracy of the data.

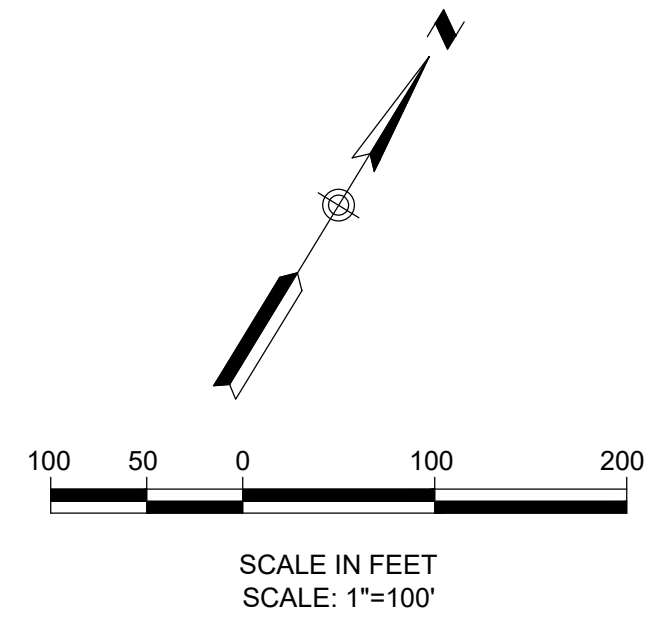
0 0.03 0.05 0.1 Miles

EXHIBIT 2.11

PRELIMINARY UTILITY LAYOUT



LOCATION MAP
N.T.S.

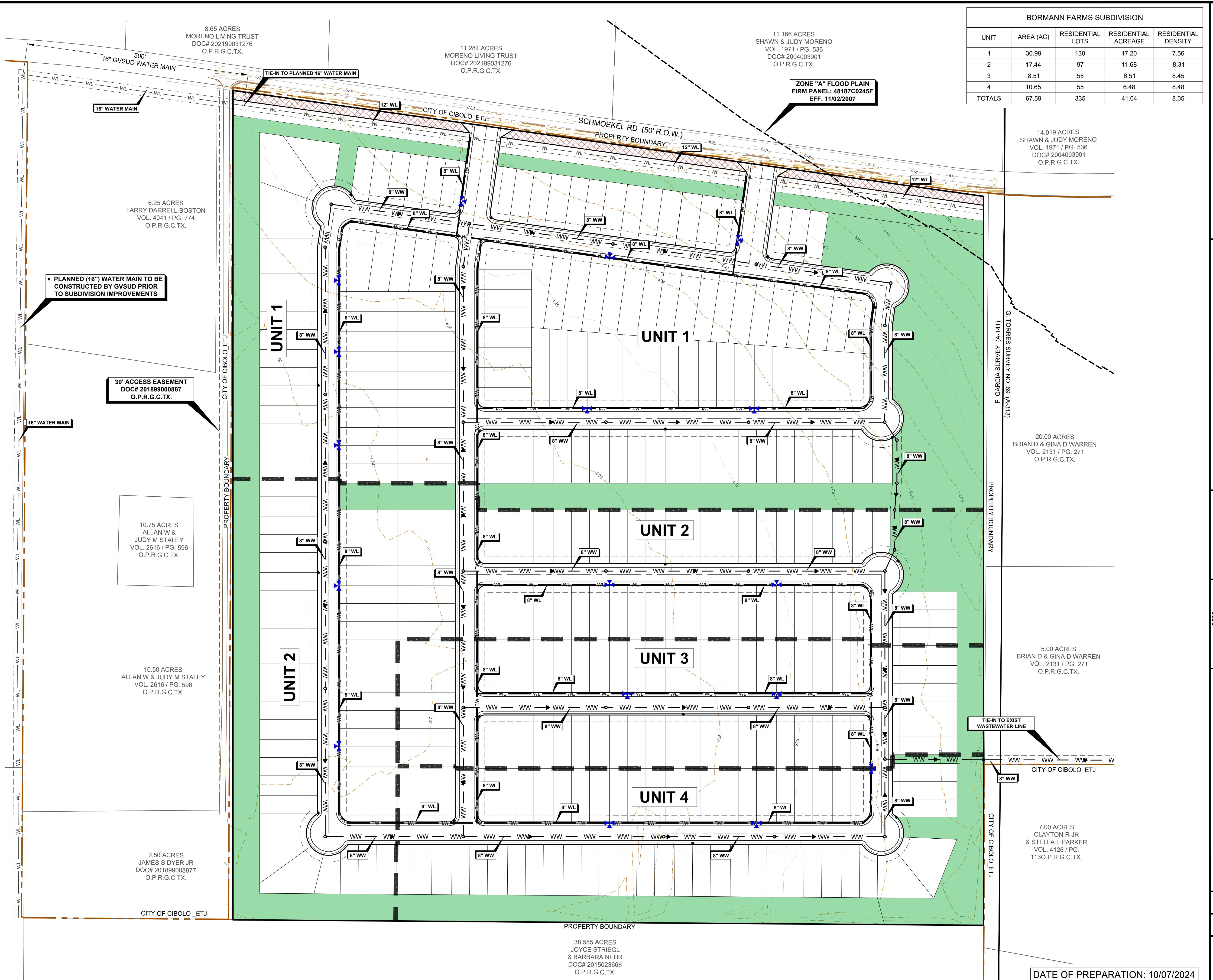


LEGEND

- OPEN SPACE / DRAINAGE
- RIGHT-OF-WAY DEDICATION (20')
- PHASE LINE
- SUBDIVISION BOUNDARY
- PROPOSED WASTEWATER LINE (WW)
- PROPOSED WATER LINE (WL)
- SANITARY SEWER MANHOLE
- +
 FIRE HYDRANT
- *
 PROPOSED STREETLIGHT

DEVELOPER: KB HOME
4800 FREDERICKSBURG ROAD, SUITE 100
SAN ANTONIO, TX 78229
CONTACT PERSON: JASON TOWNSLEY
PHONE # (210) 301-2815

ENGINEER: LJA ENGINEERING, INC.
9830 COLONNADE BLVD, SUITE 300
SAN ANTONIO, TEXAS 78230
CONTACT PERSON: PRISCILLA G. FLORES, P.E.
PHONE # (210) 503-2700

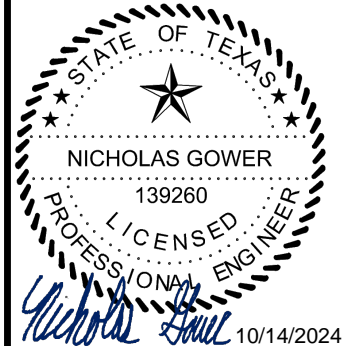


| BORMANN FARMS SUBDIVISION | | | | |
|---------------------------|-----------|------------------|---------------------|---------------------|
| UNIT | AREA (AC) | RESIDENTIAL LOTS | RESIDENTIAL ACREAGE | RESIDENTIAL DENSITY |
| 1 | 30.99 | 130 | 17.20 | 7.56 |
| 2 | 17.44 | 97 | 11.68 | 8.31 |
| 3 | 8.51 | 55 | 6.51 | 8.45 |
| 4 | 10.65 | 55 | 6.48 | 8.48 |
| TOTALS | 67.59 | 335 | 41.64 | 8.05 |

NEILL SUBDIVISION
 LAND STUDY
 PRELIMINARY UTILITY PLAN

| NO. | DATE | BY | REVISIONS DESCRIPTION |
|-----|------|----|-----------------------|
| | | | |
| | | | |

| | |
|---------------|-------------------------|
| DATE: | 02/16/2024 |
| DESIGNED BY: | NG |
| DRAWN BY: | HEW |
| CHECKED BY: | NG |
| DRAWING NAME: | sh_Prelim Util Plan.dwg |



LJA Engineering, Inc.
 Phone 210-503-2700
 Fax 210-503-2749
 TBP# No. T-1386

JOB NUMBER:
SA164-2402

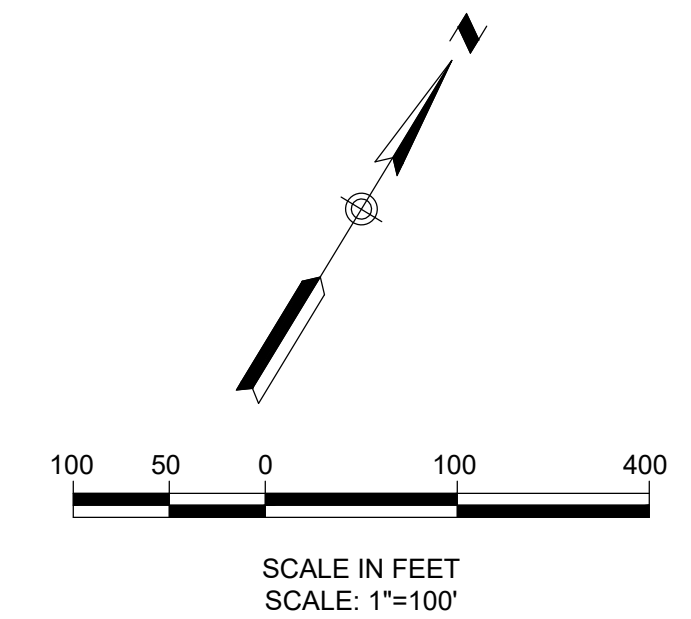
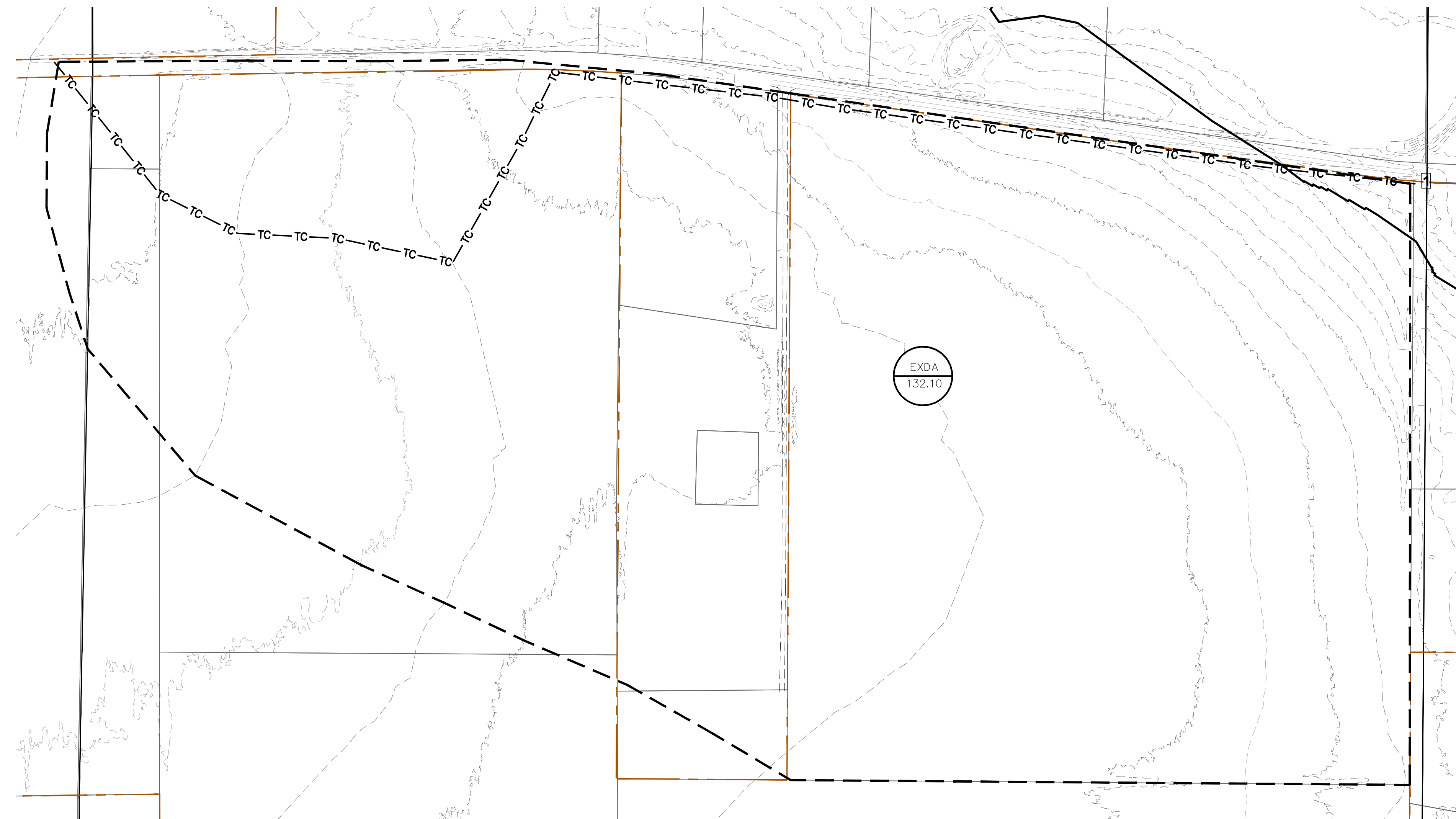
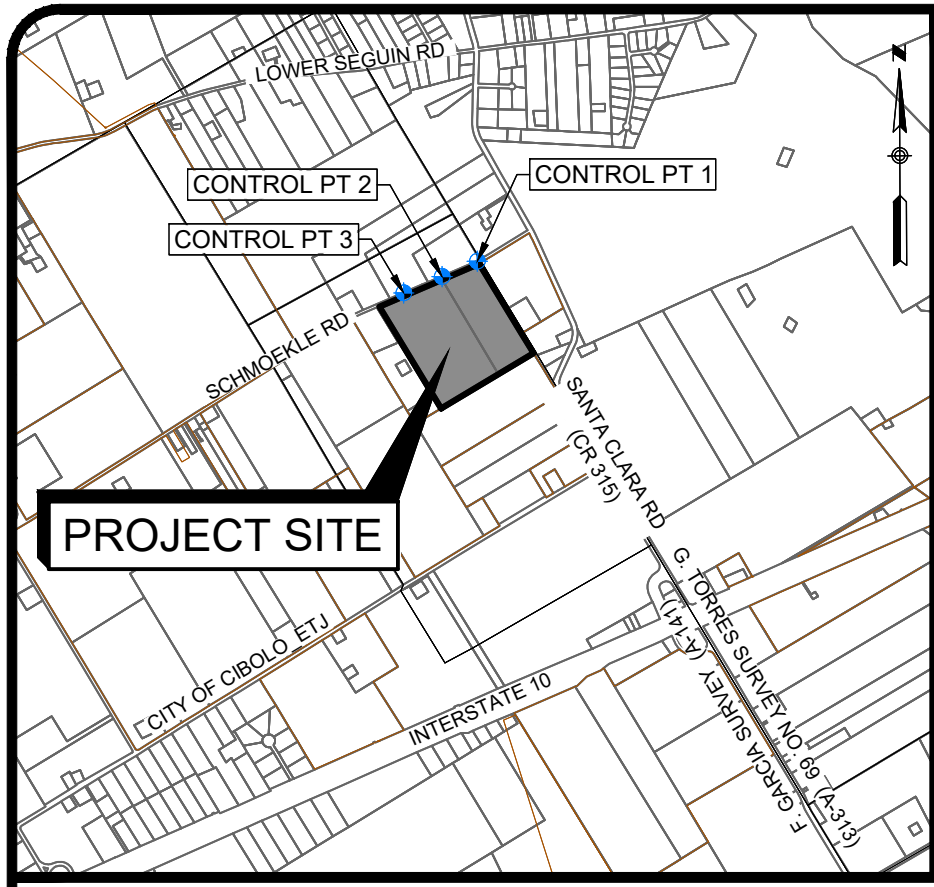
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OF SHEETS

DATE OF PREPARATION: 10/07/2024

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EXHIBIT 2.12

EXISTING DRAINAGE AREA MAP



LEGEND

- A
X.X AREA (BASIN) ACREAGE
- 570 EXISTING CONTOUR
- 570 PROPOSED CONTOUR
- DRAINAGE AREA LIMITS
- TC-TC TIME OF CONCENTRATION PATH
- FLOW ARROWS
- PROPOSED BOUNDARY
- EXISTING LOT LINES
- PROPOSED LOT LINES
- 1 REFERENCE POINT

Jacks East SCS Atlas14 Q Flow Table Guadalupe

| Study Point | Drainage Area | | Curve Number |
|-------------|---------------|-----------|--------------|
| | A (ac.) | Soil Type | CN |
| EXDA | 132.10 | D | 88.43 |

Jacks East SCS Atlas14 Time of Concentration Table Guadalupe

| Drainage Basin(s)/ Analysis Points | Sheet Flow (max length = 150') | | | | | Shallow Concentrated Flow | | | | | Channel Flow | | | Total | |
|------------------------------------|--------------------------------|---------------------|---------------------|------------------|----------------------|---------------------------|---------------------|------------------|------|----------------------|--------------|-----------|----------------------|----------------------|-----------|
| | n | L _s (ft) | P _s (in) | S _s % | T _s (min) | Paved/Unpaved | L _c (ft) | S _w % | k | T _w (min) | L(ft) | V(ft/sec) | T _c (min) | T _c (min) | Tlag(min) |
| Existing SCS | | | | | | | | | | | | | | | |
| EXDA | 0.24 | 100 | 3.98 | 0.5 | 20.0 | Unpaved | 1,000 | 0.25 | 16.1 | 20.7 | 3136 | 6 | 8.7 | 49.4 | 29.6 |

NEILL TRACT
EXISTING DAM

| NO. | REVISIONS | DESCRIPTION | BY | DATE |
|-----|-----------|-------------|----|------|
| | | | | |
| | | | | |

DATE: 10/09/2024
 DESIGNED BY: NG
 DRAWN BY: HEW
 CHECKED BY: NG
 DRAINING NAME: SCS_DAM.dwg

LJA Engineering, Inc.

8830 Colonnade Boulevard
 Suite 300
 San Antonio, Texas 78230

Phone: 210.503.2700
 Fax: 210.503.2749
 TBP# No. T-1386

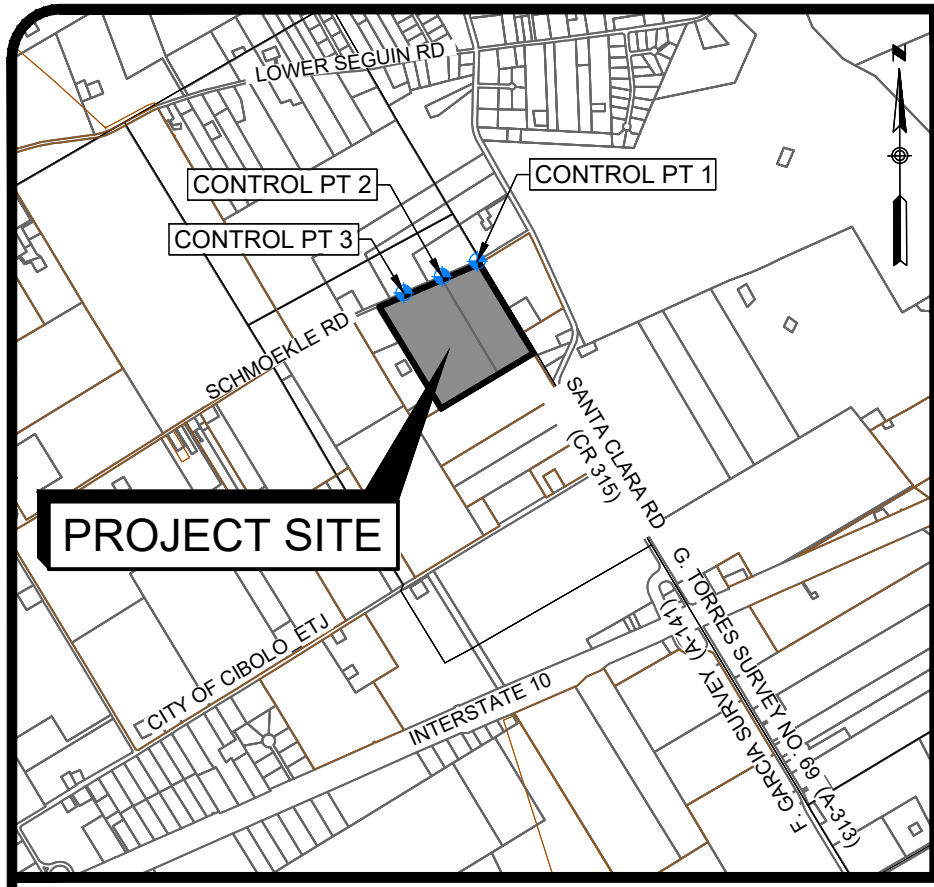
JOB NUMBER:
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SHEET NO.
EX1
OF XX SHEETS

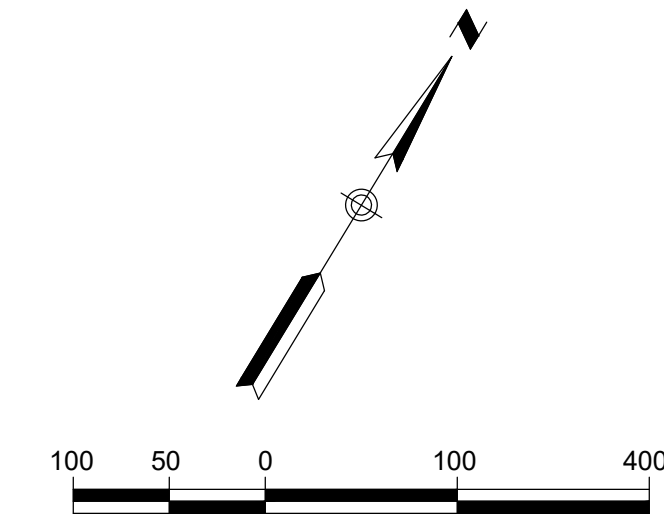
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 Plot Date/Time: Oct 10, 24 - 12:12:38

EXHIBIT 2.13

ULTIMATE DRAINAGE AREA MAP



LOCATION MAP
N.T.S.



LEGEND

- AREA (BASIN) ACREAGE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- DRAINAGE AREA LIMITS
- TIME OF CONCENTRATION PATH
- FLOW ARROWS
- PROPOSED BOUNDARY
- EXISTING LOT LINES
- PROPOSED LOT LINES
- REFERENCE POINT

| Study Point | Drainage Area | | Curve Number |
|-------------|---------------|-----------|--------------|
| | A (ac.) | Soil Type | CN |
| DA1 | 39.04 | D | 86.50 |
| DA1 REACH | | D | |
| DA2 | 12.12 | D | 92.00 |
| DA3 | 25.08 | D | 87.77 |
| DA3 REACH | | | |
| DA4 | 55.85 | D | 92.00 |

| Drainage Basin(s)/ Analysis Points | Sheet Flow (max length = 150') | | | | | Shallow Concentrated Flow | | | | | Channel Flow | | | Total | |
|------------------------------------|--------------------------------|---------------------|---------------------|------------------|----------------------|---------------------------|---------------------|------------------|------|----------------------|--------------|----------|-----------------------|----------------------|-----------|
| | n | L _s (ft) | P _s (in) | S _s % | T _s (min) | Paved/Unpaved | L _c (ft) | S _c % | k | T _c (min) | L(f) | V(f/seo) | T _{ch} (min) | T _t (min) | Tlag(min) |
| ULTIMATE SCS | | | | | | | | | | | | | | | |
| DA1 | 0.24 | 100 | 3.98 | 0.5 | 20.0 | Unpaved | 1,000 | 0.25 | 16.1 | 20.7 | 1400 | 6 | 3.9 | 44.6 | 26.8 |
| DA1 REACH | 0.24 | 0 | 3.98 | 0.5 | 0.0 | Unpaved | 0 | 0.50 | 16.1 | 0.0 | 1760 | 6 | 4.9 | 5.0 | 3.0 |
| DA2 | 0.24 | 100 | 3.98 | 2.0 | 12.8 | Unpaved | 37 | 1.00 | 16.1 | 0.4 | 2600 | 6 | 7.2 | 20.4 | 12.2 |
| DA3 | 0.24 | 100 | 3.98 | 0.5 | 20.0 | Unpaved | 1,000 | 0.20 | 16.1 | 23.1 | 1418 | 6 | 3.9 | 47.0 | 28.2 |
| DA3 REACH | 0.24 | 0 | 3.98 | 0.5 | 0.0 | Unpaved | 0 | 0.50 | 16.1 | 0.0 | 2540 | 6 | 7.1 | 7.1 | 4.3 |
| DA4 | 0.24 | 100 | 3.98 | 2.0 | 12.8 | Unpaved | 33 | 2.00 | 16.1 | 0.2 | 790 | 6 | 2.2 | 27.5 | 16.5 |
| | | | | | | Paved | 1,060 | 0.50 | 20.3 | 12.3 | | | | | |

NEILL TRACT
PRELIMINARY UTILITY PLAN

| NO | REVISIONS | DESCRIPTION | BY | DATE |
|----|-----------|-------------|----|------|
| | | | | |

| | |
|---------------|-------------|
| DATE: | 10/09/2024 |
| DESIGNED BY: | NG |
| DRAWN BY: | HEW |
| CHECKED BY: | NG |
| DRAWING NAME: | SCS_DAM.dwg |

8830 Colomade Boulevard
Suite 300
San Antonio, Texas 78230

Phone 210.503.2700
Fax 210.503.2749
TBE No. T-1386

JOB NUMBER:
SA164

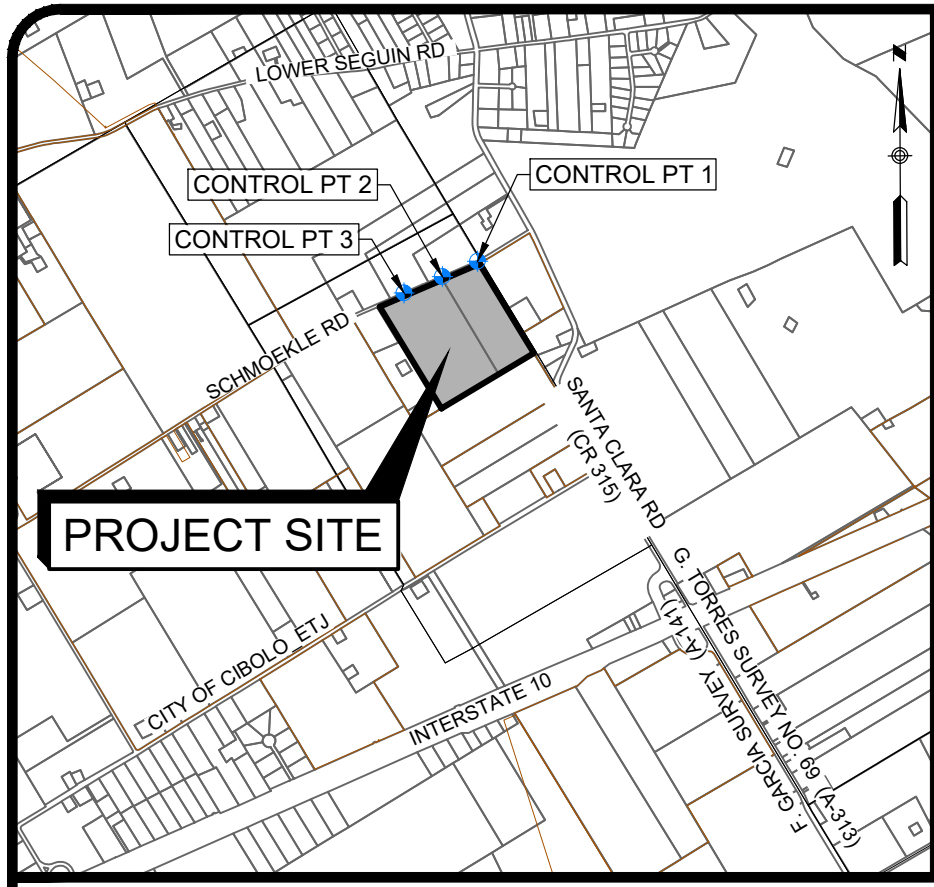
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OF XX SHEETS

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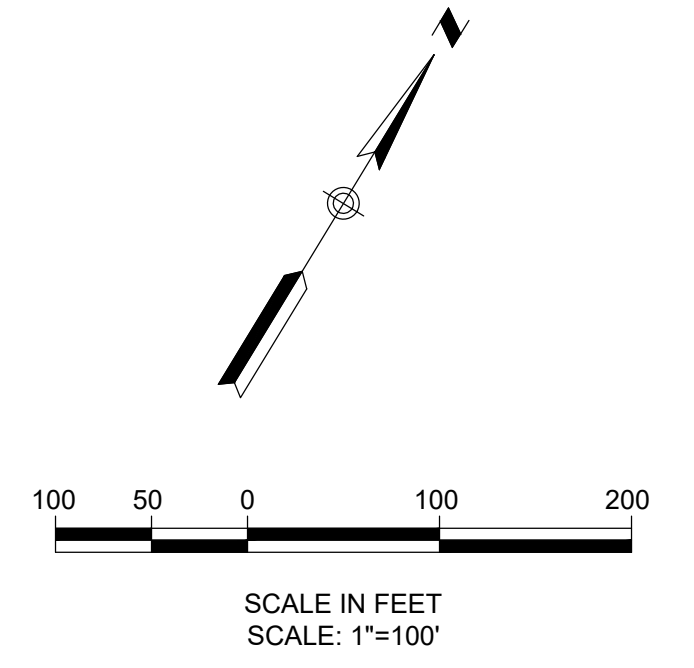
EXHIBIT 2.14

PRELIMINARY LAND PLAN



LOCATION MAP
N.T.S.

| BORMANN FARMS SUBDIVISION | | | | |
|---------------------------|-----------|------------------|---------------------|---------------------|
| UNIT | AREA (AC) | RESIDENTIAL LOTS | RESIDENTIAL ACREAGE | RESIDENTIAL DENSITY |
| 1 | 30.99 | 130 | 17.20 | 7.56 |
| 2 | 17.44 | 97 | 11.68 | 8.31 |
| 3 | 8.51 | 55 | 6.51 | 8.45 |
| 4 | 10.65 | 55 | 6.48 | 8.48 |
| TOTALS | 67.59 | 335 | 41.84 | 8.05 |



LEGEND

- OPEN SPACE / DRAINAGE
- RIGHT-OF-WAY DEDICATION (20')
- PHASE LINE
- SUBDIVISION BOUNDARY



DEVELOPER: KB HOME
4800 FREDERICKSBURG ROAD, SUITE 100
SAN ANTONIO, TX 78229
CONTACT PERSON: JASON TOWNSLEY
PHONE # (210) 301-2815

ENGINEER: LJA ENGINEERING, INC.
9830 COLONNADE BLVD, SUITE 300
SAN ANTONIO, TEXAS 78230
CONTACT PERSON: PRISCILLA G. FLORES, P.E.
PHONE # (210) 503-2700

8.65 ACRES
MORENO LIVING TRUST
DOC# 202199031276
O.P.R.G.C.TX.

11.284 ACRES
MORENO LIVING TRUST
DOC# 202199031276
O.P.R.G.C.TX.

11.166 ACRES
SHAWN & JUDY MORENO
VOL. 1971 / PG. 536
DOC# 2004003901
O.P.R.G.C.TX.

14.019 ACRES
SHAWN & JUDY MORENO
VOL. 1971 / PG. 536
DOC# 2004003901
O.P.R.G.C.TX.

6.25 ACRES
LARRY DARRELL BOSTON
VOL. 4041 / PG. 774
O.P.R.G.C.TX.

30' ACCESS EASEMENT
DOC# 20169900887
O.P.R.G.C.TX.

10.75 ACRES
ALLAN W & JUDY M STALEY
VOL. 2616 / PG. 596
O.P.R.G.C.TX.

10.50 ACRES
ALLAN W & JUDY M STALEY
VOL. 2616 / PG. 596
O.P.R.G.C.TX.

2.50 ACRES
JAMES S DYER JR
DOC# 201899008877
O.P.R.G.C.TX.

38.585 ACRES
JOYCE STRIEGL
& BARBARA NEHR
DOC# 2015023668
O.P.R.G.C.TX.

20.00 ACRES
BRIAN D & GINA D WARREN
VOL. 2131 / PG. 271
O.P.R.G.C.TX.

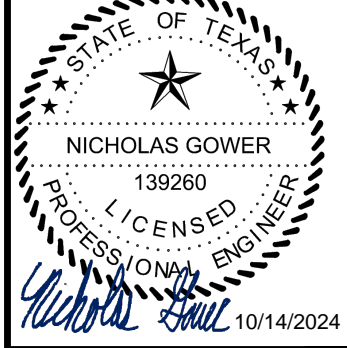
5.00 ACRES
BRIAN D & GINA D WARREN
VOL. 2131 / PG. 271
O.P.R.G.C.TX.

7.00 ACRES
CLAYTON R JR
& STELLA L PARKER
VOL. 4126 / PG.
1130.P.R.G.C.TX.

NEILL SUBDIVISION
LAND STUDY
PROPOSED USE PLAN

| NO. | DATE | BY | DESCRIPTION |
|-----|------|----|-------------|
| | | | |

| | |
|---------------|-----------------------|
| DATE: | 02/16/2024 |
| DESIGNED BY: | NG |
| DRAWN BY: | HEW |
| CHECKED BY: | NG |
| DRAWING NAME: | sh_Projg Use Plan.dwg |



LJA Engineering, Inc.
9830 Colonnade Boulevard
Suite 300
San Antonio, Texas 78230
Phone 210-503-2700
Fax 210-503-2749
TBP# No. T-1386

JOB NUMBER:
SA164-2402

SHEET NO.
1.1
OF -- SHEETS

DATE OF PREPARATION: 10/07/2024

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EXHIBIT 2.15

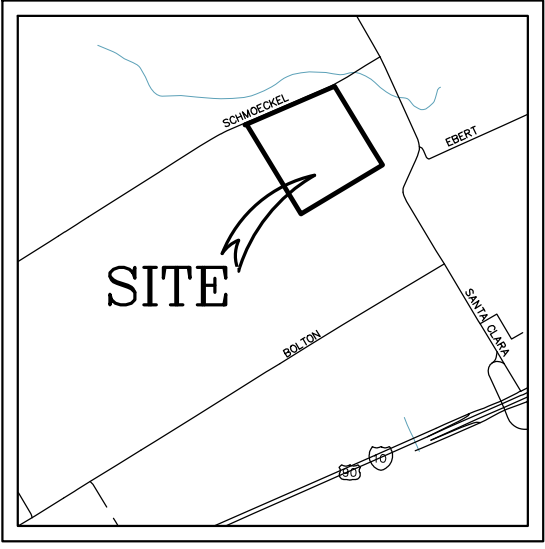
ALTA/ ACSM LAND TITLE SURVEY

CATEGORY 1A SURVEY

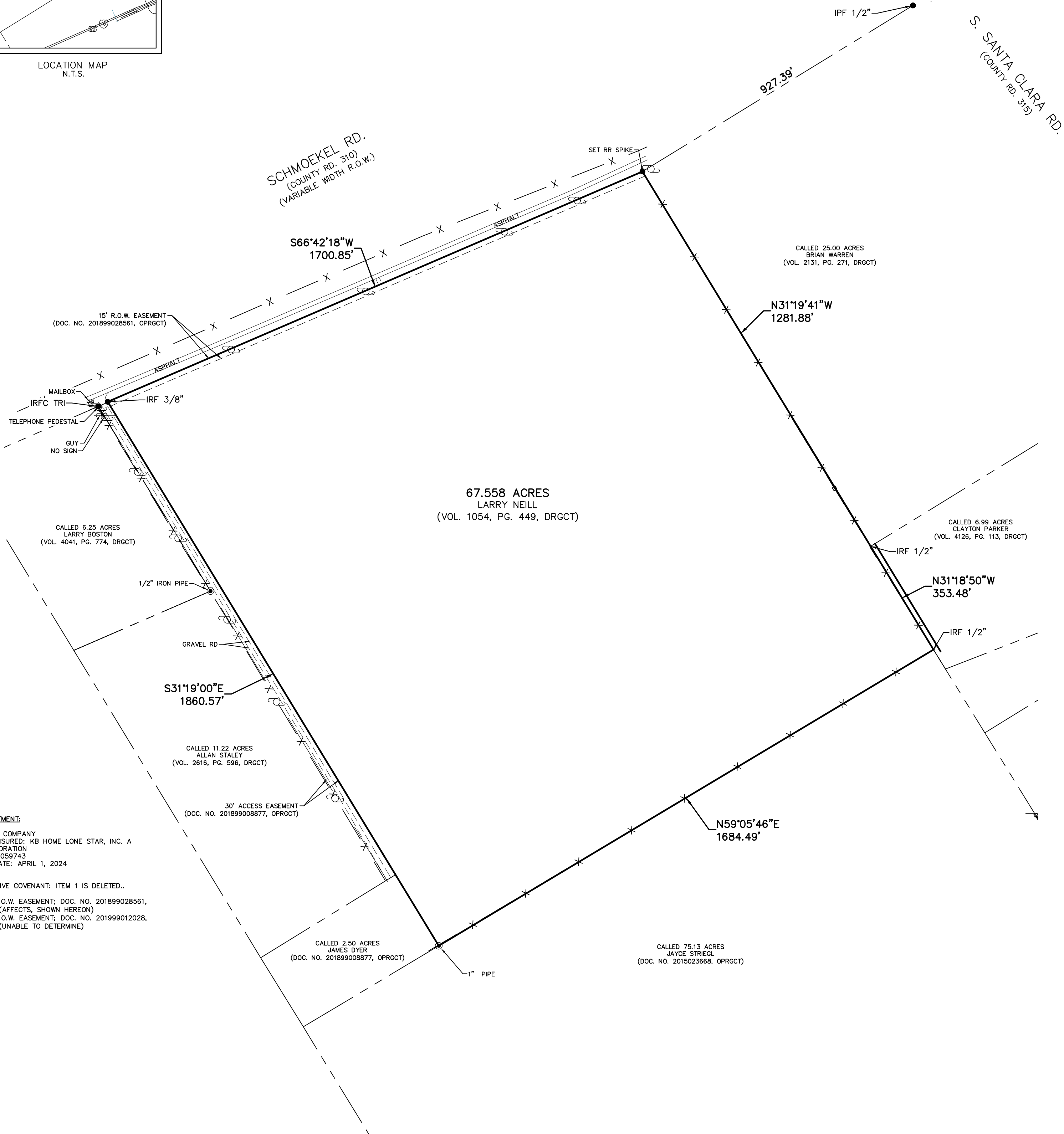
BEING 67.558 ACRES OF LAND OUT OF THE F. GARCIA SURVEY NO. 231, ABSTRACT 141, GUADALUPE COUNTY, TEXAS AND BEING A REMAINDER OF THE CALLED 104 ACRE TRACT OF LAND AS DESCRIBED IN VOLUME 1054, PAGE 449 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY TEXAS.

LEGEND:

- = (IPS) SET 1/2" IRON PIN W/ PLASTIC CAP STAMPED "DAM #5348 PROP. COR." UNLESS OTHERWISE NOTED
- = (IPF) FOUND 1/2" IRON PIN UNLESS OTHERWISE NOTED
- () = RECORD INFORMATION
- DRGCT = DEED RECORDS OF GUADALUPE COUNTY, TEXAS
- OPRGCT = OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS
- R.O.W. = RIGHT-OF-WAY
- ⊕ = POWER POLE



LOCATION MAP
N.T.S.



TITLE COMMITMENT:

ALAMO TITLE COMPANY
 PROPOSED INSURED: KB HOME LONE STAR, INC. A TEXAS CORPORATION
 OF NO.: 24-059743
 EFFECTIVE DATE: APRIL 1, 2024
 REFERENCES:

1. RESTRICTIVE COVENANT: ITEM 1 IS DELETED.
2. 10.(c.) R.O.W. EASEMENT; DOC. NO. 201899028561, OPRGCT (AFFECTS, SHOWN HEREON)
3. 10.(d.) R.O.W. EASEMENT; DOC. NO. 201999012028, OPRGCT (UNABLE TO DETERMINE)

NOTES:

1. BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1983.
2. THE PROFESSIONAL SERVICES PROVIDED HEREWITH INCLUDE THE PREPARATION OF A FIELD NOTE DESCRIPTION.

STATE OF TEXAS
 COUNTY OF COMAL

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS SURVEY IS TRUE AND CORRECT ACCORDING TO AN ACTUAL SURVEY MADE ON THE GROUND UNDER MY SUPERVISION
 THIS ___ DAY OF _____ 2024

DREW A. MAWYER
 REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5348



5151 W. SH 46
 NEW BRAUNFELS, TX 78132
 PH: 830.730.4449
 DREW@DAM-LAND.COM
 FIRM #10191500

ADDRESS:
 SCHMOEKEL RD
 MARION, TX 78124

DATE: JUNE 2024 JOB: LJA087

APPENDIX 3.1

SCS SOIL SURVEY REPORT

Custom Soil Resource Report for Guadalupe County, Texas

Neil Tract



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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| | |
|--|----|
| Preface | 2 |
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| Soil Map (Neil Tract)..... | 9 |
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| Map Unit Legend (Neil Tract)..... | 11 |
| Map Unit Descriptions (Neil Tract)..... | 11 |
| Guadalupe County, Texas..... | 13 |
| BrA—Branyon clay, 0 to 1 percent slopes..... | 13 |
| BrB—Branyon clay, 1 to 3 percent slopes..... | 14 |
| References | 17 |

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map (Neil Tract)



Soil Map may not be valid at this scale.

Map Scale: 1:5,830 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 250 500 1000 1500 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Guadalupe County, Texas
 Survey Area Data: Version 20, Aug 30, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 15, 2020—Dec 25, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Neil Tract)

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|-------------------------------------|--------------|----------------|
| BrA | Branyon clay, 0 to 1 percent slopes | 60.2 | 89.0% |
| BrB | Branyon clay, 1 to 3 percent slopes | 7.4 | 11.0% |
| Totals for Area of Interest | | 67.6 | 100.0% |

Map Unit Descriptions (Neil Tract)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Guadalupe County, Texas

BrA—Branyon clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2shgv
Elevation: 290 to 1,050 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 65 to 70 degrees F
Frost-free period: 238 to 288 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Branyon and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Branyon

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous clayey alluvium derived from mudstone of pleistocene age

Typical profile

Ap - 0 to 12 inches: clay
Bkss - 12 to 72 inches: clay
BCKss - 72 to 80 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 7.0
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: D
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Minor Components

Houston black

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Lewisville

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY007TX - Southern Clay Loam
Hydric soil rating: No

Burleson

Percent of map unit: 5 percent
Landform: Stream terraces, stream terraces
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai, circular gilgai
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

BrB—Branyon clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2shgw
Elevation: 290 to 1,040 feet
Mean annual precipitation: 33 to 39 inches
Mean annual air temperature: 66 to 70 degrees F
Frost-free period: 243 to 288 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Branyon and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Branyon

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous clayey alluvium derived from mudstone of pleistocene age

Typical profile

Ap - 0 to 12 inches: clay
Bkss - 12 to 72 inches: clay
BCKss - 72 to 80 inches: clay

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 7.0
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Minor Components

Houston black

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Burleson

Percent of map unit: 5 percent
Landform: Stream terraces, stream terraces
Landform position (three-dimensional): Tread

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Microfeatures of landform position: Circular gilgai, circular gilgai

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R086AY011TX - Southern Blackland

Hydric soil rating: No

Lewisville

Percent of map unit: 5 percent

Landform: Stream terraces

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: R086AY007TX - Southern Clay Loam

Hydric soil rating: No

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APPENDIX 3.2

PHASE 1 ESA & SOIL SAMPLING

**PHASE I
ENVIRONMENTAL SITE ASSESSMENT
NEILL 67.5-ACRE PROPERTY
SCHMOEKEL ROAD
MARION, GUADALUPE COUNTY, TEXAS
HJN 24110.001PI**

PREPARED FOR:

**KB HOME
SAN ANTONIO, TEXAS**

PREPARED BY:

HORIZON ENVIRONMENTAL SERVICES

28 JUNE 2024

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EXECUTIVE SUMMARY

ASTM-SCOPE FINDINGS AND RECOMMENDATIONS

Per request by KB Home of San Antonio, Texas (the User), Horizon Environmental Services (Horizon) has performed a Phase I Environmental Site Assessment (ESA) for the Neill 67.5-Acre Property located off Schmoekel Road in Marion, Guadalupe County, Texas (the Property). All work was done in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E1527-21 (ASTM, 2021). Any exceptions to, or deletions from, this practice are described in Section 8.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the Property.

The following findings are worthy of note but are not considered recognized environmental conditions:

NON-REC FINDINGS

| Figure 6-1 Map ID | Appendix C Photo Number(s) | Description | REC, CREC, or HREC?* |
|-------------------|----------------------------|---|----------------------|
| A | 5 | Evidence of an abandoned hand-dug water well was observed on the northern portion of the Property. The well was filled to approximately 4 feet from the surface with sediment. | No |
| N/A | 6 to 8 | Overhead powerlines were observed adjacent to the northern and western Property boundaries. Pole-mounted electrical transformers serving adjacent single-family residences were observed on the powerlines along the western boundary. The transformers appeared to be of recent construction (unlikely to contain polychlorinated biphenyl oils [PCBs]) and did not exhibit any signs of leakage. Evidence of a buried cable line was observed adjacent to the northern Property boundary. | No |

* REC = recognized environmental condition
 CREC = controlled recognized environmental condition
 HREC = historical recognized environmental condition

Based upon a review of regulatory records, historical use information, interviews, User-provided information, and a site reconnaissance, the Property was found to have a low probability for environmental risk related to significant levels of hazardous substances or petroleum products, and further assessment is not warranted at this time. However, Horizon has the following recommendations for certain conditions identified during this assessment:

RECOMMENDATIONS

| Figure 6-1 Map ID | Feature/Condition | Recommendation | REC, CREC, or HREC?* |
|----------------------|-------------------|--|----------------------------|
| A | Water well | Properly cap/abandon according to Texas Commission on Environmental Quality (TCEQ) rules if not intended for future use. | No |

* REC = recognized environmental condition
 CREC = controlled recognized environmental condition
 HREC = historical recognized environmental condition

NON-ASTM-SCOPE FINDINGS AND RECOMMENDATIONS

Threatened or Endangered Species Habitat

It is Horizon’s opinion that the Property does not provide habitat or exhibit preferred habitat characteristics for any of the federally listed threatened or endangered (T/E) species known to occur in Guadalupe County. It is Horizon’s opinion that any occurrence of T/E migratory bird species listed as potentially occurring throughout the state would be temporary, and that development of the Property would have no direct impact on the species.

Wetlands and Jurisdictional “Waters of the United States”

The determination process revealed that the Property does not contain areas subject to jurisdiction under Section 404 of the Clean Water Act (CWA) and associated guidance.

Cultural Resources

No documented cultural resources are located within or immediately adjacent to the boundaries of the Property. Based on the physiographic setting of the Property on a gently rolling upland landform situated adjacent to an unnamed tributary of Santa Clara Creek, it is Horizon’s opinion that there exists a moderate potential for undocumented prehistoric archeological resources within the boundaries of the Property. Based on the absence of historic-age structures within the Property boundaries on historical aerial photographs and topographic maps, it is Horizon’s opinion that there exists a low potential for historic-age architectural and/or archeological resources within the boundaries of the Property.

Radon

Texas Department of Health data indicate that radon levels in Guadalupe County are average indoor levels and below US Environmental Protection Agency (EPA) levels of concern. However, a low mean radon level does not mean that every structure in that county will have a low radon measurement.

Asbestos-Containing Materials and Lead-Based Paint

No potential occurrences of asbestos-containing materials (ACMs) or lead-based paint were observed on the Property during the site reconnaissance.

1.0 INTRODUCTION

Per request by KB Home of San Antonio, Texas (the User), Horizon Environmental Services (Horizon) has performed a Phase I Environmental Site Assessment (ESA) for the Neill 67.5-Acre Property located off Schmoekel Road in Marion, Guadalupe County, Texas (the Property). All work was done in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E1527-21 (ASTM, 2021). This assessment was conducted under the supervision or responsible charge of Scott Flesher, Environmental Professional. James Pittman, Environmental Professional, performed the site reconnaissance on 3 May 2024.

Horizon has pursued all appropriate inquiry (AAI) into previous ownership and uses of the Property according to customarily accepted, sound professional practices and procedures as defined in 40 Code of Federal Regulations (CFR) Part 312. Horizon has obtained as much information as is “reasonably ascertainable,” as defined by ASTM Practice E1527-21. Horizon assumes no responsibility for the accuracy of information provided by the User (or User’s agent) or federal, state, or local agency file information. Horizon is not required to verify independently the accuracy of information obtained during this Phase I ESA, but has relied on the information unless Horizon has actual knowledge that certain information is incorrect or unless it is obvious that certain information is incorrect based on other information obtained during the Phase I ESA or otherwise actually known to Horizon. Horizon did compare information obtained from different sources for consistency.

Horizon has observed the Property in an effort to identify recognized environmental conditions. The site reconnaissance included observation of physical conditions of the land, as well as any structures on or improvements of the Property, as accessible, for potential indicators of recognized environmental conditions. Horizon also observed adjoining properties, to the extent physically possible from the boundary of the Property, in an effort to detect the presence of recognized environmental conditions that may have the potential to impact the Property.

1.1 PURPOSE

ASTM Practice E1527-21 is intended to satisfy one of the requirements to qualify for the “innocent landowner” defense to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability. The purpose of the Phase I ESA is to identify “recognized environmental conditions” in connection with the Property. This includes the presence or likely presence of any hazardous substances or petroleum products, as defined by CERCLA (42 USC §9601), on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the Property or into the ground, groundwater, or surface water of the Property.

The term “recognized environmental conditions” includes hazardous substances or petroleum products, even under conditions in compliance with laws. However, the term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that, generally, would not be the subject of an enforcement

action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions. Some substances may be present on the Property in quantities and under conditions that may lead to contamination of the Property or of nearby properties, but are not included in the CERCLA definition of hazardous substances or do not otherwise present potential CERCLA liability.

1.2 SCOPE OF SERVICES

Horizon performs its Phase I ESAs in conformance with the scope and limitations of ASTM Practice E1527-21. A detailed scope of this service is provided in Appendix A. Any significant data gaps or deviations from this scope are reported in Sections 7.0 and 8.0 of this document. Horizon did conduct additional, non-ASTM-scope assessments during this Phase I ESA at the request of the User (see Section 12.0 of this report).

1.3 USER RELIANCE

Within the scope and limitations of ASTM Practice E1527-21, KB Home may rely on the results of this Phase I ESA regarding the potential for hazardous substance liabilities on the Property as of the date of its preparation. Horizon assumes no responsibility for liabilities or costs that may arise in the future due to features/conditions that could not have been reasonably identified at the time the work reported herein was performed.

1.4 PHASE I ESA REPORT EFFECTIVE PERIOD

Per ASTM Practice E1527-21, this Phase I ESA report is effective for a 180-day period beginning on the earliest date of the five main AAI components that were conducted. The five main AAI components with applicable Phase I ESA report sections and associated dates are listed in the table below.

**TABLE 1-1
AAI COMPONENTS**

| AAI Component | Report Section | Description | Date Completed |
|--|---|---|-----------------------|
| Government Records Review | 4.1 – Standard Environmental Records Sources, Federal and State | Regulatory Database Search | 31 May 2024 |
| Recorded Environmental Cleanup Lien Search | 4.4 - Historical Use Information | Chain-of-Title Search/ Review of Title Commitment | 5 May 2024 |
| Site Reconnaissance/Visual Inspection | 6.0 - Site Reconnaissance | Visual inspection of the Property and adjoining lands | 3 May 2024 |
| Interviews with Owners, Operators, and Occupants | 5.0 - Interviews | Interviews | 24 May 2024 |
| Declaration by the Environmental Professional | 11.0 – Signature of Environmental Professional | Names, titles, and signature dates | 28 June 2024 |

2.0 DESCRIPTION OF THE PROPERTY

2.1 LOCATION AND LEGAL DESCRIPTION

The Property is located off Schmoekel Road in Marion, Guadalupe County, Texas (Figure 2-1). Per a commitment for title insurance document provided by the User, the Property is legally described as “A 23.5000 acre tract and a 44.000 acre tract, out of a 104 acre Tract in the Guadalupe Torres Survey Abstract 313, and the Francisco Garcia Survey Abstract 141, in Guadalupe County, Texas.”

A copy of the document containing this legal description is included in Appendix B.

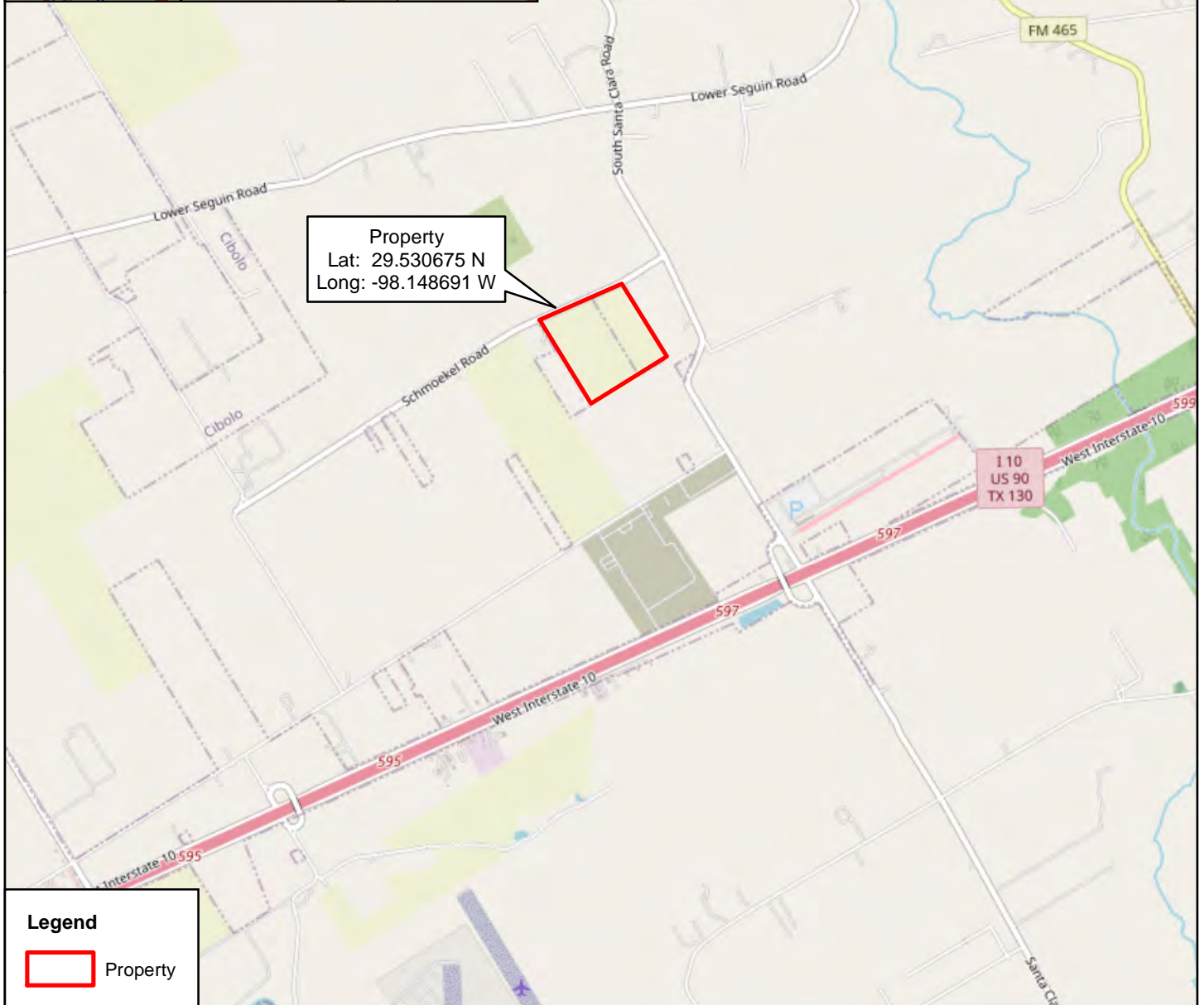
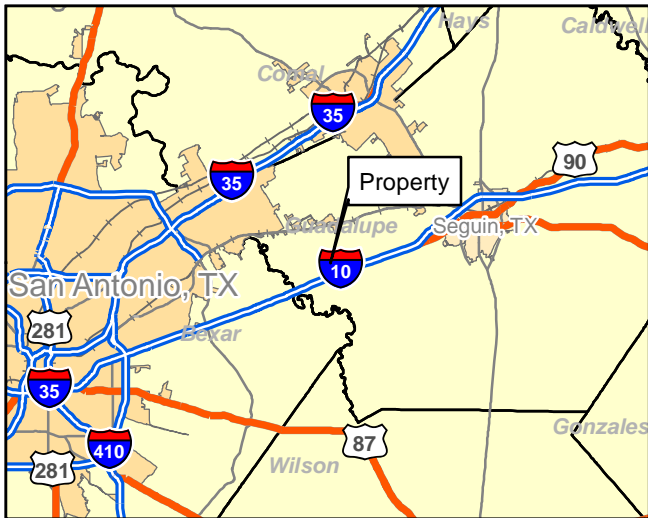
2.2 SITE AND VICINITY GENERAL CHARACTERISTICS


The Property consists of approximately 67.5 acres of row-planted cropland located within an area characterized by agricultural, residential, and commercial land use. On-site photographs are provided in Appendix C.

2.3 CURRENT USE OF THE PROPERTY

Current land use on the Property is agricultural (row-planted cropland).

Any structures, roads, and/or improvements of the Property, as well as current uses of adjoining properties, are discussed within Section 6.2 of this report. An aerial view of the Property and adjacent land use, dated 2023, is provided in Section 4.4.1.2.

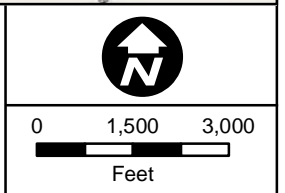


| Legend | |
|---|----------|
|  | Property |



| | |
|---------|------------|
| Date: | 06/04/2024 |
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| HJN NO: | 24110 PI |
| Source: | OSM, 2024 |

Figure 2-1
 Vicinity Map
 Neill 67.5-Acre Property
 Schmoekel Road
 Marion, Guadalupe County, Texas



3.0 USER-PROVIDED INFORMATION

3.1 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The User identified Larry Neill as the current owner of the Property. An interview conducted with Mr. Neill on 24 May 2024 indicated that the Property has been in his family since approximately 1951, and he inherited it in approximately 1992 (see Appendix F).

There were no occupants associated with the Property at the time of Horizon's assessment.

3.2 TITLE RECORDS

Per the User's request, Horizon acquired historical chain-of-title documentation on the Property for this assessment. The chain-of-title review is discussed in Section 4.4.1 (Standard Historical Sources), and a copy is provided in Appendix E (Historical Research Documentation).

3.3 RESPONSE TO ASTM-REQUIRED QUESTIONS

The User responded to the following ASTM-required questions by completing a Phase I ESA User Questionnaire. The User-completed copy of this form is included in Appendix B.

3.3.1 Environmental Liens or Activity and Use Limitations

The User reported no knowledge of any environmental liens or activity and use limitations (AULs) for the Property. The User reported that a search for environmental liens and/or AULs was not conducted prior to this assessment.

3.3.2 Specialized Knowledge

No specialized knowledge or experience related to the Property or nearby properties was reported to Horizon by the User.

3.3.3 Purchase Price vs. Fair Market Value

The User reported that the purchase price being paid for the Property reasonably reflects the fair market value of the Property if it were not contaminated.

3.3.4 Commonly Known or Reasonably Ascertainable Information

The User reported having no commonly known or reasonably ascertainable information about the Property that would help Horizon to identify conditions indicative of releases or threatened releases.

3.3.5 Obvious Indicators of Contamination

The User reported having no knowledge of any obvious indicators that point to the presence or likely presence of contamination at the Property.

3.3.6 Litigation, Administrative Proceedings, or Notices from Government Entities

The User reported having no knowledge of any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Property. The User reported having no knowledge of any notice from a governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.

3.3.7 Reason for Requesting the Phase I ESA

The User requested performance of the Phase I ESA for due diligence/feasibility purposes.

4.0 RECORDS REVIEW

The purpose of the records review is to obtain and review records that will help identify recognized environmental conditions in connection with the Property. Accuracy and completeness of record information vary among information sources. Horizon makes a reasonable effort to compensate for mistakes or insufficiencies in the information reviewed that were obvious when compared to other information reviewed or based on actual knowledge.

4.1 STANDARD ENVIRONMENTAL RECORD SOURCES

Horizon commissioned Environmental Risk Information Services (ERIS) of Austin, Texas, to review state and federal agency records required by ASTM Practice E1527-21. ERIS conducted its data search using minimum search distances outlined in the ASTM standard (ASTM, 2021). ERIS’s search results for Standard Environmental Records can be found within its complete Database Report, provided in Appendix D.

ERIS found the following recorded incidents within the ASTM-prescribed search distances:

**TABLE 4-1
SUMMARY OF STANDARD ENVIRONMENTAL RECORD FINDINGS**

| Database | Acronym | Last Updated | Minimum Search Distance (miles) | Findings |
|----------------------------------|----------------|---------------------|--|-----------------|
| Permitted Solid Waste Facilities | SWF/LF | 28 July 2024 | 0.5 | 2 |

Permitted Solid Waste Facilities

ERIS reviewed the list of active, inactive, and post-closure Municipal Solid Waste landfills and processing facilities (SWF/LF) issued permits and authorizations, as well as pending, withdrawn, or denied application registered with the Texas Commission on Environmental Quality (TCEQ) under the Texas Administrative Code (TAC) Title 30 Chapter 330. ERIS identified no SWF/LF facilities on the Property. Two SWF/LF sites were identified within a 0.5-mile radius of the Property.

Both SFW/LF listings were associated with a site identified as Mulch-Compost Storage Yard, located approximately 0.25 miles southeast of the Property at 3330 South Santa Clara Road, Marion, Texas. The SFW/LF site is reportedly a brush recycling facility and would not be considered a recognized environmental condition for the Property.

4.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

4.2.1 Additional Federal and State Environmental Records

In addition to the ASTM-required Standard Environmental Records, ERIS provided data from additional federal and state environmental record sources, using search areas ranging from on the Property to 1 mile from the Property. ERIS's search results for Additional Environmental Records can be found within its complete Database Report, provided in Appendix D.

After reviewing ERIS's Additional Environmental Records findings, it is Horizon's opinion that none of the facilities/incidents listed are likely to have current or former releases of hazardous substances and/or petroleum products with the potential to migrate to the Property; therefore, they would not be considered recognized environmental conditions for the Property at this time.

4.2.2 Oil and Gas Activity

Railroad Commission of Texas (RRC) records were investigated to determine if current or past oil and/or gas exploration and production (E&P) activity may exist on or within 1000 feet from the Property. The records reviewed did not indicate the presence of any of these structures on the Property. A dry hole is documented on adjacent land east of the Property (RRC, 2024).

4.2.3 Documented Water Wells

A review of the records of the Texas Water Development Board (TWDB) revealed no documented water wells on the Property; six water wells are documented within a 0.5-mile radius from the Property (TWDB, 2024). Evidence of an abandoned hand-dug water well was observed on the northern portion of the Property. The well was filled to approximately 4 feet from the surface with sediment.

If the on-site well is not intended for future use, it should be capped or properly abandoned according to the Administrative Rules of the Texas Department of Licensing and Regulation (TDLR), 16 Texas Administrative Code (TAC), Chapter 76. TCEQ publication RG-347, "Landowner's Guide to Plugging Abandoned Water Wells," provides specific guidance. If a well is intended for use, it must comply with 16 TAC §76.

The results of this assessment do not preclude the existence of additional undocumented/abandoned wells. If a water well or casing is encountered during construction, work should be halted near the feature until the TCEQ is contacted.

4.3 PHYSICAL SETTING SOURCES

The Property is mapped on the US Geological Survey (USGS) Marion, Texas, topographic quadrangle (USGS, 1992) (Figure 4-1). Topography on the Property is generally flat, with surface elevation ranging from approximately 615 to 625 feet above mean sea level. The Property is in the Lower Santa Clara Creek watershed (EPA, 2024), with surface water flowing northeast via overland sheet flow. The northeastern corner of the Property associated with an unnamed tributary of Santa Clara Creek lies within a Federal Emergency Management Agency (FEMA) designated 100-year floodplain (FEMA, 2007) (Figure 4-2).

The Property is located within the Blackland Prairie ecological area of Texas (Gould, 1975) and the “Crops” vegetational area of Texas (McMahan et al., 1984).

Geologically, the Property is underlain by the following:

**TABLE 4-2
GEOLOGY**

| Unit | Period | Epoch | Description |
|-----------------------|------------|-------------|---|
| Leona Formation (Qle) | Quaternary | Pleistocene | Fine calcareous silt grading down into coarse gravel; type locality first wide terrace of Nueces and Leona Rivers below level of Uvalde Gravel. May correlate with Onion Creek Marl of Austin sheet |

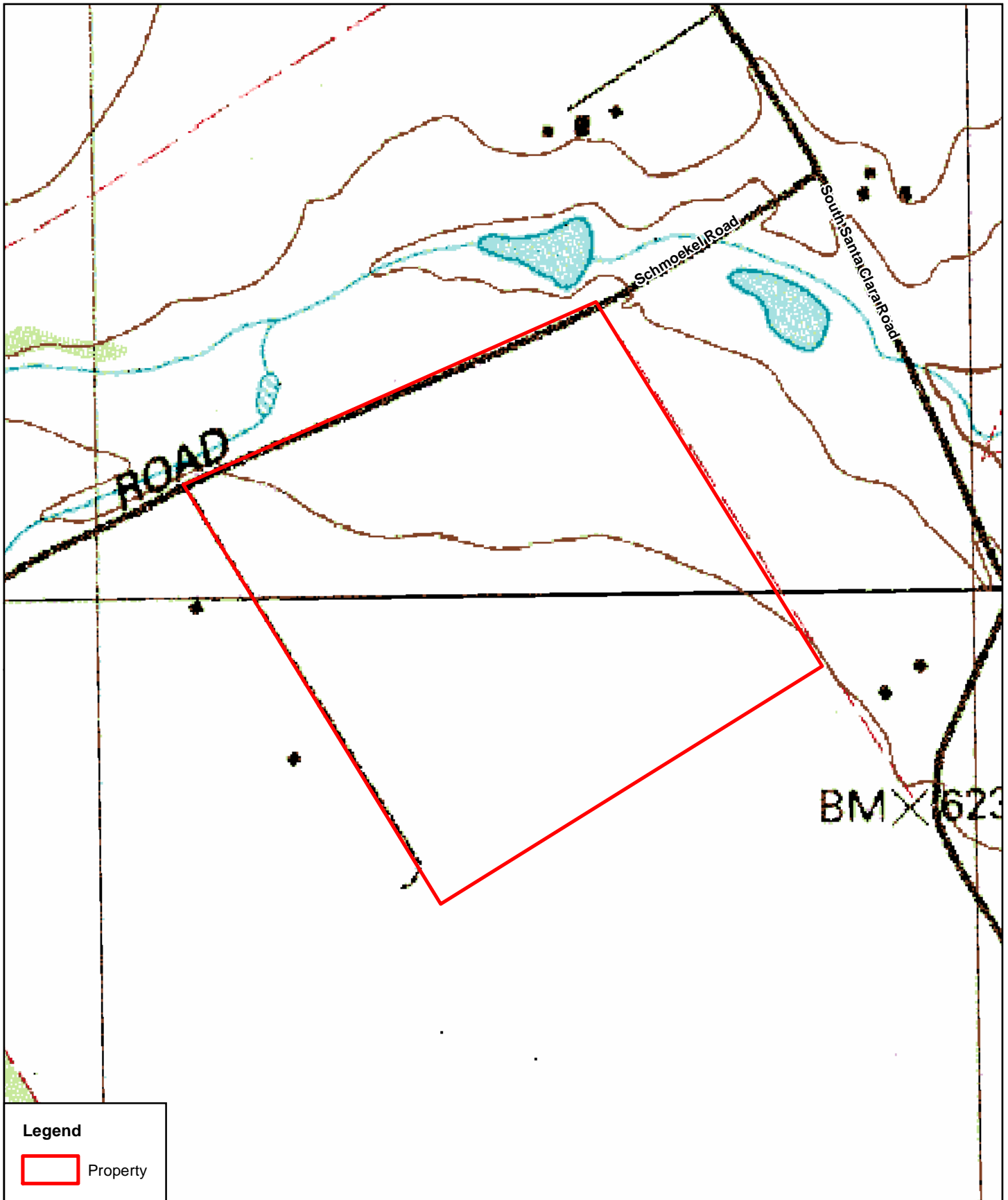
Source: UT-BEG, 1983

Mapped soils on the Property include the following:


**TABLE 4-3
SOILS**

| Soil Name | Soil Type | Soil Depth (feet) | Underlying Material | Permeability | Available Water Capacity | Shrink-Swell Capacity |
|------------------------------------|-----------|-------------------|---------------------|-----------------------|--------------------------|-----------------------|
| Branyon clay, 0 to 1% slopes (BrA) | clay | 5.0 | mottled clay | very slow to moderate | high | very high |
| Branyon clay, 1 to 3% slopes (BrB) | clay | 5.0 | mottled clay | very slow to moderate | very low | very high |

Source: NRCS, 2024




Legend

 Property

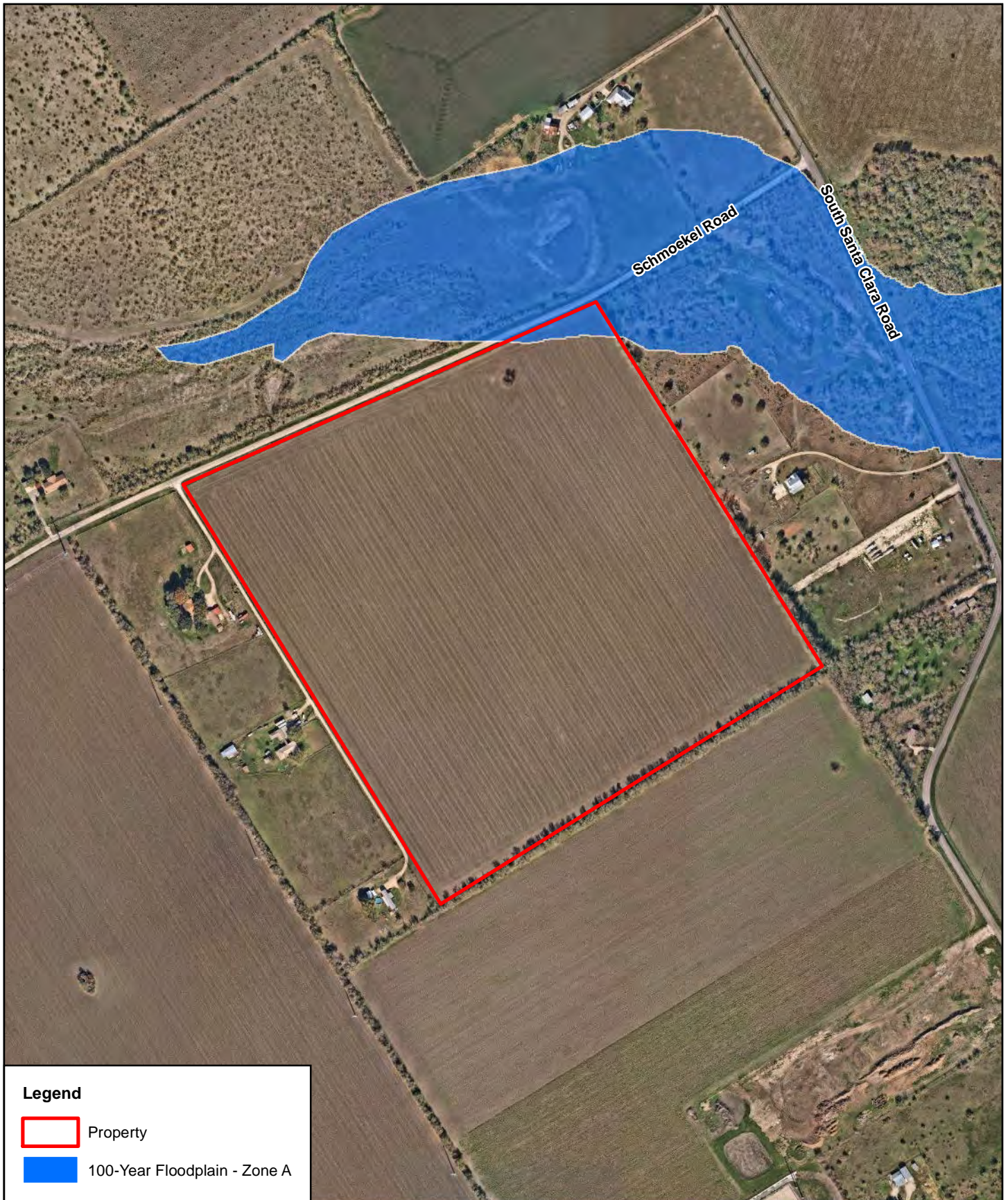
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| Date: | 06/04/2024 |
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| HJN NO: | 24110 PI |
| Source: | USGS, 1992 |

Figure 4-1
Topographic Map
Neill 67.5-Acre Property
Schmoekel Road
Marion, Guadalupe County, Texas



0 250 500
Feet



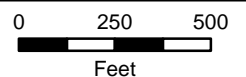
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- Property
- 100-Year Floodplain - Zone A



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| Date: | 06/04/2024 |
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| HJN NO: | 24110 PI |
| Source: | FEMA, 2007; Nearmap, 2023 |

Figure 4-2
 Flood Hazard Map
 Neill 67.5-Acre Property
 Schmoekel Road
 Marion, Guadalupe County, Texas



4.4 HISTORICAL USE INFORMATION ON THE PROPERTY AND ADJOINING PROPERTIES

Horizon conducted an examination of available historical use information, including ownership records, aerial photography, and historical topographic maps to develop a history of the previous uses of the Property and the surrounding area to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the Property. ASTM Practice E1527-21 calls for identification of all obvious uses of the Property from the present to the Property's obvious first "developed use" or 1940, whichever is earlier. For the purpose of identifying the historical uses of the Property, Section 8.3.2 of ASTM Practice E1527-21 defines the term "developed use" to include agricultural uses and placement of fill onto the Property. Section 8.3.2.1 of ASTM Practice E1527-21 does not require a review of standard historical sources at less than approximately 5-year intervals. If the specific use of the site appears unchanged over a period longer than 5 years, then ASTM Practice E1527-21 does not require research of the use during that period. A standard historical source may be excluded if the source is not reasonably ascertainable, or if past experience indicates that the source is not likely to be sufficiently useful, accurate, or complete.

4.4.1 Standard Historical Sources

4.4.1.1 Title Records

Historical ownership records are reviewed to develop a history of the previous uses of the Property in order to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the Property, as well as to identify any environmental liens associated with the Property.

Horizon obtained historical chain-of-title documentation for the Property at the User's request. The chain-of-title document was prepared by RPS Title, LLC, Kyle, Texas (Appendix E). The records indicate that the Property has been owned by private individuals since 1947, and that the Property is currently owned by Larry Robert Neill, as recorded in a warranty deed filed 13 August 1993, in Volume 1054, Page 0449, of the Deed Records of Guadalupe County, Texas. A review of the ownership information produced no evidence suggesting an owner who may have conducted activities resulting in recognized environmental conditions for the Property. No easements or leases of environmental concern and no environmental liens were noted during the title research.

4.4.1.2 Historical Aerial Photography

Horizon reviewed historical aerial photographs dated 1938, 1944, 1950, 1959, 1964, 1973, 1983, 1991, 1995, 2004, 2005, 2008, 2010, 2012, 2014, 2016, 2018, 2020, and 2023, supplied by ERIS. The historical aerial photography supplied by ERIS can be viewed in Appendix E.

In the 1938 aerial photograph, the Property appears to be used for agriculture. A structure is visible near the central portion of the Property. A roadway is located adjacent to the northern Property boundary. Surrounding lands appear to be used for agriculture and rural residences. Horizon did not observe land uses commonly associated with recognized environmental conditions on or adjacent to the Property while reviewing the aerial photograph.

The 1944 aerial photograph revealed no significant visible changes to the Property or immediately surrounding lands. Horizon did not observe land uses commonly associated with recognized environmental conditions on or adjacent to the Property while reviewing the aerial photograph.

In the 1950 aerial photograph, the structure near the center of the Property has been removed. The aerial photograph revealed no significant visible changes to the immediately surrounding lands. Horizon did not observe land uses commonly associated with recognized environmental conditions on or adjacent to the Property while reviewing the aerial photograph.

The 1959 aerial photograph revealed no significant visible changes to the Property. A pond was constructed on adjacent land north of the Property. Horizon did not observe land uses commonly associated with recognized environmental conditions on or adjacent to the Property while reviewing the aerial photograph.

The 1964 and 1973 aerial photographs revealed no significant visible changes to the Property or immediately surrounding lands. Horizon did not observe land uses commonly associated with recognized environmental conditions on or adjacent to the Property while reviewing the aerial photographs.

The 1983 aerial photograph revealed no significant visible changes to the Property. Three residential sites and an access road are visible on adjacent land west of the Property. Horizon did not observe land uses commonly associated with recognized environmental conditions on or adjacent to the Property while reviewing the aerial photograph.

The 1991, 1995, 2004, 2005, 2005, 2008, 2010, and 2012 aerial photographs revealed no significant visible changes to the Property or immediately surrounding lands. Horizon did not observe land uses commonly associated with recognized environmental conditions on or adjacent to the Property while reviewing the aerial photographs.

The 2014 aerial photograph revealed no significant visible changes to the Property. Minor land clearing and development occurred on adjacent land east of the Property. Horizon did not observe land uses commonly associated with recognized environmental conditions on or adjacent to the Property while reviewing the aerial photograph.

The 2016, 2018, 2020, and 2023 aerial photographs revealed no significant visible changes to the Property or immediately surrounding lands. Horizon did not observe land uses commonly associated with recognized environmental conditions on or adjacent to the Property while reviewing the aerial photographs.

Horizon also reviewed Nearmap aerial photography dated 6 December 2023 (Nearmap, 2023) (Figure 4-3). The aerial photo revealed no significant visible changes to the Property or immediately surrounding lands. Horizon did not observe land uses commonly associated with recognized environmental conditions on or adjacent to the Property while reviewing the aerial photograph.

4.4.1.3 Historical USGS Topographic Maps

Horizon reviewed historical topographic maps of the Property, dated 1927, 1958, 1973, 1992, 2016, and 2019, supplied by ERIS. The historical USGS topographic maps supplied by ERIS can be viewed in Appendix E.

The topographic maps did not indicate any specific land use of the Property. Roadways and structures are depicted on surrounding lands.

4.4.1.4 Fire Insurance Maps

The Sanborn Company published fire insurance maps for urban areas designed for use by companies offering fire insurance policies. The maps show the size, shape, and construction materials of a structure; land use; and other independent improvements, such as gasoline storage tanks. The maps were originally published in the 1930s and updated periodically through at least the 1950s. Because Sanborn maps were limited to the core of major metropolitan areas, it is highly unlikely any maps would be available for the Property. Therefore, Horizon did not review published fire insurance maps for the Property.

4.4.1.5 Local Street Directories

Local street directories are published by private (or sometimes government) sources and show ownership and/or use of a specific property for each year by reference to its street address. The ownership and/or use of a specific property listed in the local street directory are used to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the Property. With the exception of rural single-family residences, the immediately adjacent properties do not appear to have been previously developed for occupied purposes. As such, local street directories are unlikely to provide useful historical information about the Property, so Horizon did not review them during this assessment.

4.4.1.6 Prior Assessment

Neither the User nor the landowner indicated knowledge of any prior ESAs conducted on the Property.

4.4.2 Data Failure


The historical research objectives of ASTM Practice E1527-21 were met during the review of standard historical sources; data failure was not encountered.



Schmoekel Road

South Santa Clara Road

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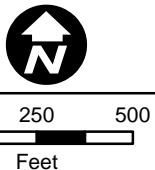
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| Date: | 06/04/2024 |
| Drawn: | KRW |
| HJN NO: | 24110 PI |
| Source: | Nearmap, 2023 |

Figure 4-3
 2023 Aerial Photograph
 Neill 67.5-Acre Property
 Schmoekel Road
 Marion, Guadalupe County, Texas



0 250 500
Feet

5.0 INTERVIEWS

5.1 INTERVIEW WITH OWNER/KEY SITE MANAGER

A Phase I ESA Landowner/Occupant Interview Questionnaire was completed on 24 May 2024 by the current landowner, Mr. Larry Neill. Mr. Neill's responses to the interview questions indicated that he had no knowledge of any potential recognized environmental conditions in connection with the Property. The completed Landowner/Occupant Interview Questionnaire is provided in Appendix F.

5.2 INTERVIEWS WITH CURRENT OCCUPANTS

As no occupants are currently associated with the Property, occupant interviews were not conducted.

5.3 INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

Horizon contacted the Guadalupe County Fire Marshal to request information on recorded incidents that may indicate a release of hazardous materials or petroleum products on the Property or adjacent properties. At the date of this report, the Guadalupe County Fire Marshal had not responded to the request. In the event the Guadalupe County Fire Marshal later provides significant information about the Property, Horizon will notify the User.

6.0 SITE RECONNAISSANCE

Horizon conducted a site reconnaissance on 3 May 2024. Horizon also reviewed immediately adjacent lands, to the extent possible from the boundaries of the Property, to observe any existing or potential sources of off-site contamination that may affect the Property. Horizon's Phase I ESA Site Reconnaissance Checklist is provided in Appendix G. On-site photographs are provided in Appendix C.

6.1 METHODOLOGY AND LIMITING CONDITIONS

A pedestrian reconnaissance of the Property was conducted, as well as visual observation of immediately adjacent lands from the boundaries of the Property. No conditions were encountered that would have limited Horizon's ability to observe the Property.

6.2 GENERAL SITE SETTING

The Property is generally described as approximately 67.5 acres of row-planted cropland located within an area characterized by agricultural, residential, and commercial land use.

6.2.1 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

Observable geologic, hydrogeologic, hydrologic, and topographic conditions on the Property were generally consistent with the findings of our literature review (see Section 4.3).

6.2.2 Property Uses

6.2.2.1 Current Use of the Property

Current land use on the Property is agricultural (row-planted cropland).

6.2.2.2 Past Uses of the Property

Information obtained during the review of standard historical sources, participant interviews, and the site reconnaissance indicates that past use of the Property was likely limited to agriculture. It is Horizon's opinion that this past use is unlikely to have involved the use, treatment, storage, disposal, or generation of significant quantities of hazardous substances or petroleum products on the Property.

6.2.2.3 Current/Past Uses of Adjoining Properties

An aerial view of the Property and adjoining land use, dated 2023, is provided in Section 4.4.1.2 (see Figure 4-3).

During the site reconnaissance, Horizon observed the following land uses on adjoining properties:

- NORTH: Schmoekel Road, agricultural, and residential;
- SOUTH: Agricultural;
- EAST: Agricultural and residential; and
- WEST: Agricultural and residential.

On adjoining properties, Horizon did not observe any industrial uses or other uses likely to involve the use, treatment, storage, or generation of significant quantities of hazardous substances or petroleum products.

The review of historical aerial photography and participant interviews indicates that past uses of adjoining properties were likely agricultural and residential. No evidence of potential recognized environmental conditions on adjacent properties was revealed through a review of historical sources, interviews, or visual inspection from the Property’s boundaries during the site reconnaissance.

6.2.2.4 Current/Past Uses of Surrounding Area

The surrounding area in general is dominated by agricultural, residential, and commercial land use. The surrounding area appears to have been historically used for agricultural and rural residential purposes.

6.2.3 Improvements

Man-made improvements observed on the Property or its boundaries include the following:

**TABLE 6-1
IMPROVEMENTS OBSERVED**

| Figure 6-1 Map ID | Appendix C Photo Number(s) | Description |
|-------------------|----------------------------|---|
| Property | 1 to 4 | The Property has been improved for agriculture (row-planted cropland). |
| A | 5 | Evidence of an abandoned hand-dug water well was observed on the northern portion of the Property. The well was filled to approximately 4 feet from the surface with sediment. |
| N/A | 6 to 8 | Overhead powerlines were observed adjacent to the northern and western Property boundaries. Pole-mounted electrical transformers serving adjacent single-family residences were observed on the powerlines along the western boundary. Evidence of a buried cable line was observed adjacent to the northern Property boundary. |

| Figure 6-1 Map ID | Appendix C Photo Number(s) | Description |
|-------------------|----------------------------|--|
| N/A | 8 | Schmoekel Road is located adjacent to the northern Property boundary. A gravel-based road providing access to adjacent homesites is located along the western Property boundary. |

No structures, potable water supply sources, or sewage disposal systems were observed on the Property or its boundaries during the site reconnaissance.

6.3 SITE FINDINGS

6.3.1 Exterior Observations

On or immediately adjacent to the Property, Horizon observed the following exterior features or conditions, which ASTM Practice E1527-21 identifies as potential recognized environmental conditions:

**TABLE 6-2
EXTERIOR FEATURES/CONDITIONS OBSERVED**

| Figure 6-1 Map ID | Appendix C Photo Number(s) | Description | REC, CREC, or HREC?* |
|-------------------|----------------------------|---|----------------------|
| A | 5 | Evidence of an abandoned hand-dug water well was observed on the northern portion of the Property. The well was filled to approximately 4 feet from the surface with sediment. | No |
| N/A | 6 to 8 | Overhead powerlines were observed adjacent to the northern and western Property boundaries. Pole-mounted electrical transformers serving adjacent single-family residences were observed on the powerlines along the western boundary. The transformers appeared to be of recent construction (unlikely to contain polychlorinated biphenyl oils [PCBs]) and did not exhibit any signs of leakage. Evidence of a buried cable line was observed adjacent to the northern Property boundary. | No |

* REC = recognized environmental condition
CREC = controlled recognized environmental condition
HREC = historical recognized environmental condition

It is Horizon’s opinion that the features listed in Table 6-2 above do not meet the ASTM definition of a recognized environmental condition, controlled recognized environmental condition, or historical recognized environmental condition.



Legend

Property

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| Date: | 06/04/2024 |
| Drawn: | KRW |
| HJN NO: | 24110 PI |
| Source: | FEMA, 2007; Nearmap, 2023 |

Figure 6-1
ASTM-Scope Findings Map
Neill 67.5-Acre Property
Schmoekel Road
Marion, Guadalupe County, Texas

0 250 500
Feet

Horizon did *not* observe any of the following exterior conditions on or immediately adjacent to the Property:

- Evidence of current or past industrial or manufacturing uses
- Pits, ponds, or lagoons
- Stained soil or pavement
- Stressed vegetation
- Oil/gas wells
- Evidence of pipelines
- Septic systems
- Piles of debris or other evidence of solid waste disposed on site
- Evidence of wastewater discharges within, onto, or off of the Property
- Hazardous substances, petroleum products, or associated containers
- Storage drums
- Unidentified substance containers
- Storage tanks, vent pipes, or fill pipes
- Hydraulic equipment or other equipment likely to contain polychlorinated biphenyl oils (PCBs)
- Strong, pungent, or noxious odors
- Pools of liquid suspected of containing hazardous materials or petroleum products

6.3.2 Interior Observations

As no structures were observed on the Property, interior inspections prescribed by ASTM Practice E1527-21 were not conducted during the site reconnaissance.

7.0 DATA GAPS

According to ASTM Practice E1527-21, a “data gap” occurs when the environmental professional is unable to obtain information required by the practice despite good-faith efforts to gather such information.

No significant data gaps were encountered in the process of conducting this Phase I ESA that would affect Horizon’s ability to identify recognized environmental conditions.

8.0 LIMITING CONDITIONS/DEVIATIONS

There were no limiting conditions, deletions, or deviations from ASTM Practice E1527-21 in connection with this Phase I ESA.

9.0 FINDINGS AND CONCLUSIONS

Horizon has performed a Phase I ESA of the Property in conformance with the scope and limitations of ASTM Practice E1527-21. Any exceptions to, or deletions from, this practice are described in Section 8.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the Property.

The following findings are worthy of note but are not considered recognized environmental conditions:

**TABLE 9-1
NON-REC FINDINGS**

| Figure 6-1 Map ID | Appendix C Photo Number(s) | Description | REC, CREC, or HREC?* |
|-------------------|----------------------------|---|----------------------|
| A | 5 | Evidence of an abandoned hand-dug water well was observed on the northern portion of the Property. The well was filled to approximately 4 feet from the surface with sediment. | No |
| N/A | 6 to 8 | Overhead powerlines were observed adjacent to the northern and western Property boundaries. Pole-mounted electrical transformers serving adjacent single-family residences were observed on the powerlines along the western boundary. The transformers appeared to be of recent construction (unlikely to contain polychlorinated biphenyl oils [PCBs]) and did not exhibit any signs of leakage. Evidence of a buried cable line was observed adjacent to the northern Property boundary. | No |

* REC = recognized environmental condition
 CREC = controlled recognized environmental condition
 HREC = historical recognized environmental condition

10.0 OPINION OF ENVIRONMENTAL PROFESSIONAL

Based upon a review of regulatory records, historical use information, interviews, User-provided information, and a site reconnaissance, the Property was found to have a low probability for environmental risk related to significant levels of hazardous substances or petroleum products, and further assessment is not warranted at this time. However, Horizon has the following recommendations for certain conditions identified during this assessment:

**TABLE 10-1
RECOMMENDATIONS**

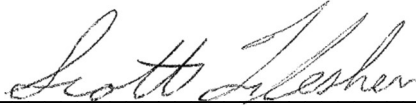
| Figure 6-1 Map ID | Feature/Condition | Recommendation | REC, CREC, or HREC?* |
|----------------------|-------------------|--|----------------------------|
| A | Water well | Properly cap/abandon according to TCEQ rules if not intended for future use. | No |

* REC = recognized environmental condition
 CREC = controlled recognized environmental condition
 HREC = historical recognized environmental condition

11.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

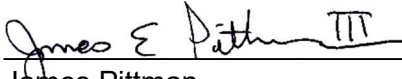
I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR §312.10. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

For Horizon Environmental Services



Scott Flesher
Vice President, Ecological Program Manager, EP¹

28 June 2024
Date



James Pittman
Ecological Project Manager, EP

28 June 2024
Date

¹ Qualified Environmental Professional under ASTM Practice E1527-21

12.0 ADDITIONAL, NON-ASTM-SCOPE ASSESSMENTS

12.1 THREATENED OR ENDANGERED SPECIES HABITAT

Literature and agency file searches were conducted to identify the potential occurrence of any federally listed threatened or endangered (T/E) species in the vicinity of the Property. The search included information from the US Fish and Wildlife Service (USFWS), the Texas Parks and Wildlife Department (TPWD) Natural Diversity Database, and The University of Texas Bureau of Economic Geology (UT-BEG).

Federally listed T/E species for Guadalupe County that are potentially affected by activities within the Property are presented in the following table:

**TABLE 12-1
T/E SPECIES LISTED FOR GUADALUPE COUNTY**

| Common Name | Scientific Name | Federal Status |
|--------------------|------------------------------|-----------------------|
| Tricolored bat | <i>Perimyotis subflavus</i> | Proposed Endangered |
| Piping plover | <i>Charadrius melodus</i> | Threatened |
| Rufa red knot | <i>Calidris canutus rufa</i> | Threatened |
| Whooping crane | <i>Grus americana</i> | Endangered |

Source: USFWS, 2024a

Tricolored Bat

Tricolored bats are associated with forested landscapes, where they forage near trees (including forest perimeters) and along waterways. Maternity and other summer roosts are typically in dead or live tree foliage (including attached lichen clumps such as *Usnea* sp. and "Spanish moss"). Caves, mines, and rock crevices may be used as night roosts between foraging forays. Maternity colonies also may utilize human-made structures (i.e., buildings, bridges) or tree cavities (NatureServe, 2024). Due to the lack of forested habitat and mature woodland species on or within the vicinity of the Property, it is Horizon’s opinion that the Property does not provide habitat for the tricolored bat.

Piping Plover

The piping plover is indicated by the USFWS as a potential transitory migrant species for most of Texas, including Guadalupe County. The piping plover winters on the Texas coast, occupying beaches and tidal mud flats. Its migratory path from its breeding grounds in the northern plains, Great Lakes, and northern Atlantic coast to the Texas coast carries it primarily through the eastern third of Texas, where it may occasionally stop over during migration. It occasions lake shores and marshes along its migratory path (NatureServe, 2024). No suitable habitat for the piping plover (lake shores or marshes) was observed on the Property. It is

Horizon's opinion that any occurrence of the piping plover would only be temporary and development of the Property would have no direct impact on this species.

Rufa Red Knot

The rufa red knot is a migratory shorebird which nests in the Arctic and winters mainly in southern South America (NatureServe, 2024). Rufa red knots are commonly found along sandy, gravel, or cobble beaches, tidal mudflats, salt marshes, shallow coastal impoundments and lagoons, and peat banks. Red knots forage on beaches, oyster reefs, and exposed bay bottoms and roost on high sand flats, reefs, and other sites protected from high tides (NatureServe, 2024). No shorelines or adequate water sources were observed on the Property; therefore, it is Horizon's opinion that the Property does not provide habitat for this species.

Whooping Crane

The whooping crane is a migratory bird species listed as potentially occurring in many or all Texas counties. Whooping cranes nest in dense emergent vegetation in shallow water bodies and migratory stopover points include large expanses of wetlands and rural agricultural fields. In Texas, whooping cranes winter at Aransas National Wildlife Refuge and Matagorda and St. Joseph's islands in Aransas, Calhoun, and Matagorda counties. Habitat for loafing and foraging includes flooded tidal flats and mud or sand in shallow bays and channels (NatureServe, 2019). The Property is located within the path of migration for the whooping cranes during their 2600-mile flight each spring (late March to late April) and fall (mid-October to late November) (Oberholser, 1974); however, no suitable habitat was observed by Horizon on the Property or the immediately adjacent properties. It is Horizon's opinion that any occurrence of the whooping crane would only be temporary and development of the Property would have no direct impact on this species.

Additional Resources Reviewed

The USFWS's Critical Habitat Mapper did not indicate critical habitat for a listed species on or within a 0.5-mile radius of the Property (USFWS, 2024b).

Examination of the TPWD Natural Diversity Database indicated no documented occurrence(s) of listed species on or within a 0.5-mile radius of the Property (TPWD, 2024).

T/E Species Summary and Recommendations

Horizon did not observe potentially suitable habitat on the Property for any of the federally listed T/E species of Guadalupe County.

12.2 WETLANDS AND JURISDICTIONAL "WATERS OF THE US"

Horizon's jurisdictional determination of wetlands (officially referred to as "waters of the US" [WOTUS]) consisted of a pre-field literature review and a site assessment conducted

according to the general methodologies prescribed by the 1987 US Army Corps of Engineers (USACE) *Wetlands Delineation Manual* and Regional Supplement: Great Plains Region (Version 2.0) (March 2010); USACE Regulatory Guidance Letter (RGL) No. 05-05 (7 December 2005); USACE Regulatory Guidance Letter (RGL) No. 05-05 (7 December 2005); 2008 CWA Jurisdictional Determination Guidance (*Rapanos* Guidance); and Horizon's interpretation of the US Supreme Court's decision in *Sackett v. Environmental Protection Agency* (EPA).

The pre-field evaluation included a review of US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) published soil survey information for Guadalupe County (NRCS, 2024); the USGS Marion, Texas, topographic quadrangle map (USGS, 1992); FEMA Flood Insurance Rate Map (FEMA, 2007); USFWS National Wetlands Inventory (NWI) map (2024c); and historical aerial photography dated 1938, 1944, 1950, 1959, 1964, 1973, 1983, 1991, 1995, 2004, 2005, 2008, 2010, 2012, 2014, 2016, 2018, 2020, and 2023.

Based on the pre-field literature review and field investigation, Horizon did not observe areas on the Property that would be considered jurisdictional WOTUS and be subject to regulation by the USACE.

The professional opinions expressed in this report are based on Horizon's interpretation of the currently applicable statutory and regulatory provisions, as implemented by the EPA and USACE (Agencies). These provisions have undergone a variety of changes in recent years. Since the 2006 US Supreme Court (the Court) case *Rapanos v. United States*, there have been two primary evaluation methods for evaluating aquatic resources: the "relatively permanent" and the "significant nexus" standards (formalized by the Agencies in 2008). Various rules, notably those published in 2015 and in 2020, have sought to redefine the regulatory scope of the Clean Water Act (CWA) by leaning more on one standard or the other to narrow or expand the Agencies' regulatory authority.

In early 2023 the Agencies published a revised definition of WOTUS (88 FR 3004), effective 20 March 2023. However, on 19 March a federal district court in Texas granted a preliminary injunction preventing this rule from going into effect in Texas and Idaho. Other lawsuits similarly prevented this rule's implementation in an additional 25 states. On 25 May 2023, the Court issued a long-awaited decision in the case of *Sackett v. Environmental Protection Agency*.

This ruling struck down the "significant nexus" standard, a major component of the Agencies' March 2023 rule. To comply with the Court's ruling, the Agencies published an amended version of their March 2023 rule (88 FR 61964) known as "Revised Definition of 'Waters of the United States'; Conforming" (the conforming rule) on 8 September 2023.

The previously mentioned injunctions remain in effect as of this date and prevent the conforming rule from going into effect in 27 states, including Texas. Therefore, the effective rule for Texas is the preceding 2008 *Rapanos* guidance (sometimes referred to as the pre-2015 regulations and guidance). However, per the *Sackett* ruling, the "significant nexus" portion of this guidance legally should not be enforced. As a result, there remains considerable uncertainty at

this time on how to classify the jurisdictional status of aquatic features. Additionally, individual USACE districts may have their own interpretations of various regulatory aspects. Until the EPA and USACE issue official guidance and the USACE begins issuing Approved Jurisdictional Determinations, Horizon will evaluate all aquatic resources based on our understanding of current guidance, the *Sackett* ruling, and our experience with the preceding pre-2015 regulations and guidance.

The USACE and the EPA are the final authority over the jurisdictional status of wetlands, streams, and other potential WOTUS per Section 404 of the CWA. The findings discussed in this report are solely the opinion of Horizon and have not been verified by the aforementioned regulatory Agencies. Although the USACE and EPA are applying this legal standard at present, recent history and ongoing litigation demonstrate the likelihood that legal circumstances may change in the future. Thus, Horizon recommends following up prior to closing or starting work on the site in order to determine what rules are in place at that time.

12.3 CULTURAL RESOURCES

Database Review

Archival research conducted on the Texas Historical Commission’s (THC) online *Texas Archeological Sites Atlas* (TASA) web site indicates the presence of two previously recorded cemeteries within an approximately 1.0-mile radius of the Property. These documented cultural resources and their distances from the Property are summarized in Table 12-2 below. No documented cultural resources, including any archeological sites, cemeteries, or historic properties listed on the National Register of Historic Places (NRHP) and/or designated as State Antiquities Landmarks (SAL), are located within or immediately adjacent to the boundaries of the Property.

**TABLE 12-2
PREVIOUSLY RECORDED CULTURAL SITES WITHIN 1.0 MILES OF THE PROPERTY**

| Site No./Name | Site Type | NRHP/SAL Eligibility Status | Distance/Direction from Property | Potential to be Impacted by Project? |
|--------------------------|-----------|-----------------------------|----------------------------------|--------------------------------------|
| <i>Cemeteries</i> | | | | |
| Ebert Cemetery (GU-C074) | Cemetery | Historic Texas Cemetery | 0.8 miles east | No |
| Gutz Cemetery (GU-C177) | Cemetery | N/A | 1.0 mile north) | No |

NRHP = National Register of Historic Places; SAL = State Antiquities Landmark; SHPO = State Historic Preservation Office

Source: THC, 2024

Examination of historical USGS topographic maps dating from 1927 to the present and aerial photographs dating from 1955 to the present indicate that no standing structures of potentially historic age (i.e., 50 years of age or older) are located within the boundaries of the Property. Historical land use within the Property appears to have been predominantly agricultural.

Based on the TASA database, no prior cultural resources surveys have been conducted within the limits of the Property.

Probability Assessment

Prehistoric archeological sites are commonly found in upland areas and on alluvial terraces near stream/river channels or drainages. Based on the physiographic setting of the Property on a gently rolling upland landform situated adjacent to an unnamed tributary of Santa Clara Creek, it is Horizon's opinion that there exists a moderate potential for undocumented prehistoric archeological resources within the boundaries of the Property.

Based on the absence of historic-age structures within the Property boundaries on historical aerial photographs and topographic maps, it is Horizon's opinion that there exists a low potential for historic-age architectural and/or archeological resources within the boundaries of the Property.

Governing Regulations

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, requires federal agencies to take into consideration the effects of their actions (funding or permitting) on historic properties. Historic properties include prehistoric archeological sites and historic-era structures, engineering features, and sites that are listed on, considered eligible for listing on, or have the potential for being eligible for listing on the NRHP, including previously unidentified properties. With this in mind, if the development of the Property would require the use of federal permits, licenses, or funding, such as Nationwide Permits (NWP) or Individual Permits (IP) issued by the USACE, funding provided by the US Department of Housing and Urban Development (HUD), or if the project would occur on federal lands, federal agencies may require a cultural resources survey of any portions of the Property that fall within their jurisdiction.

Specific to NWPs, General Condition 20(c) of the 2012 NWPs requires non-federal permittees to notify the USACE under the Pre-Construction Notification (PCN) procedures if a proposed project subject to Section 404 jurisdiction may have the potential to cause effects to any historic properties. In order to make this determination, the USACE may require a cultural resources survey in the immediate vicinity of any Section 404 regulated activity if at least a moderate potential for the occurrence of historic or prehistoric properties exists.

Additionally, General Condition 21 of the 2012 NWPs requires persons conducting an activity authorized by NWP to stop work and immediately notify the USACE if a previously

unknown prehistoric or historic property (remains or artifacts) is discovered during the construction process.

Regarding state regulations, if any part of the Property is located on publicly owned land, permitting agencies may require a cultural resources survey in compliance within the Antiquities Code of Texas (ACT).

In the event that the undertaking does not require any federal permitting/funding and it is not located on publicly owned land, cultural resources are not afforded protection under the regulations of Section 106 of the NHPA or the ACT. However, unmarked burial sites (both prehistoric and historic-era) are still protected under the Texas Health and Safety Code.

Recommendations

Based on the assessed moderate potential for undocumented prehistoric archeological resources on the Property, it is Horizon's opinion that a formal cultural resources survey of the portions of the Property within any federal agency's jurisdiction would be warranted to comply with Section 106 of the NHPA if the development of the Property would require the usage of any federal permits or funding. Similarly, if any portion of the Property is located on publicly owned land, it is Horizon's further opinion that a formal cultural resources survey of the portions of the Property located on public property would be warranted in compliance with the ACT.

If no federal permitting or coordination is required for the undertaking and the undertaking is located entirely on privately owned land, field personnel should still be made aware of the unmarked burial regulations within the Texas Health and Safety Code. Specifically, if any human remains or grave objects are encountered at any point during development, maintenance, or ongoing use of the Property, all work at the location of the inadvertent discovery should cease immediately. Following the cessation of activity, the THC (and possibly also the county coroner) should be notified immediately and a qualified archeologist should be contacted to assess the find.

12.4 POTENTIAL FOR THE OCCURRENCE OF RADON

In 1992, the Texas Department of Health, Bureau of Radiation Control (TDH-BRC), conducted statewide indoor air quality surveys to learn the average levels of radon gas within homes of each county (Smith et al., 1992). Radon is an odorless, colorless, naturally occurring radioactive gas produced by the radioactive decay of uranium in geological formations. Radon can readily migrate through permeable rocks and soils and eventually seep into buildings or be released into the atmosphere.

Radon further decays into radioactive, chemically reactive particles that can attach themselves to other particles, such as dust, in a home environment. If inhaled, these now-

radioactive particles may cause damage to lung tissues and increase the risk of lung cancer. The radon level threshold of concern established by the EPA is 4 pico curies per liter (pCi/l) of air. The average indoor radon level is estimated to be about 1.3 pCi/l and about 0.4 pCi/l is normally found in the outside air (EPA et al., 1992). Texas homes, when viewed on a statewide basis, have a relatively low level of radon, averaging 1.2 pCi/l of air (Smith et al., 1992). Such levels are not a major public health concern, as it would be extremely costly and difficult to achieve lower average residential levels on a statewide basis. This Texas average is within the national norms, where US homes have been reported to have averaged indoor radon levels between 1.0 and 2.0 pCi/l of air. However, when examined on a county basis, Texas counties that have a higher potential for residential radon are found in the West Texas Panhandle region; the Big Bend area; the Llano Uplift area; and inland from the coastal bend in South Texas, where underground formations of ancient Mesozoic beach sands, rich in uranium, can be found. All the counties with higher levels of radon were found to have geology that supports their higher potential.

Residential radon measurements for Guadalupe County are as follows:

**TABLE 12-3
RADON MEASUREMENTS**

| Mean (pCi/l) | No. of Houses Surveyed | Percent > 4 pCi/l | Percent > 20 pCi/l | Minimum Value (pCi/l) | Maximum Value (pCi/l) |
|---------------------|-------------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1.3 | 17 | 5.9 | 0.0 | <0.5 | 5.4 |

Source: Smith et al., 1992

The above data indicate that radon levels in Guadalupe County are average indoor levels and below EPA levels of concern. However, a low mean radon level does not mean that all houses in that county will have a low radon measurement. Unique construction techniques, such as underground or berm-surrounded homes, as well as energy-efficient or tightly sealed homes, may show higher indoor radon levels. Percentages measured within individual counties, however, can be used as determinants of the potential radon problem for that county, because all residents within a specific county have an equal chance of being chosen for the survey.

When a house is discovered with elevated indoor radon levels, and mitigation efforts are determined necessary, the following general methods are available: (1) sealing off entry routes into the home by covering exposed dirt in floors or basements with concrete or gas-proof liners, sealing cracks and holes in slabs, and covering sumps in untrapped floor drains; (2) increasing the ventilation rate in a house by either passive or active means; or (3) increasing soil ventilation by drawing away radon gas from the soil before it reaches the house, such as with below-slab suction. Technical guidance for incorporating radon resistance into a new structure is available from the EPA Radon Office at 1-800-SOS-RADON or by contacting the EPA Region 6 in Dallas, Texas, at (214) 665-2760.

12.5 ASBESTOS-CONTAINING MATERIALS AND LEAD-BASED PAINT

The EPA defines asbestos-containing materials (ACMs) as any material or product that contains greater than 1% asbestos. In general, the EPA classifies ACMs into the 3 categories outlined below.

- Surfacing, which includes sprayed-on or troweled-on materials
- Thermal, which includes insulation and materials associated with heating, hot/cold water systems, and HVAC systems
- Miscellaneous, which includes ceiling and floor tiles, roofing materials, and all other materials that do not fall into the 2 previous categories

In addition, identified ACMs are further defined as “Friable” or “Non-friable.” “Friable” material is defined as material that, when dry, can easily be pulverized, crushed, or reduced to powder by hand pressure. “Non-friable” material is defined as those materials containing asbestos that are firmly bound by matrix such as plastic, cement, etc., that, if handled carefully, will not become friable.

No potential occurrences of ACMs were observed on the Property during the site visit. No potential occurrences of lead-based paints were observed on the Property during the site visit.

13.0 PARTICIPATING PERSONNEL

Horizon’s participating personnel for this Phase I ESA are listed below. Qualifications of the Environmental Professional are provided in Appendix H.

| <u>PERSON</u> | <u>PARTICIPATION</u> |
|--|--|
| Scott Flesher, Vice President, Ecological Program Manager, EP ¹ | Project Manager Technical Review Drafting |
| James Pittman, Ecological Project Manager, EP..... | Field Investigation Records Search Report Author Drafting |
| Karlie Wilson, GIS Specialist..... | Drafting |
| Jesse Owens, Archeology Program Manager, RPA ² | Cultural Resources Section |
| Bridgette Miller, Technical Editor..... | Final Report Preparation |

¹ Qualified Environmental Professional under ASTM Practice E1527-21
² Registered Professional Archeologist

14.0 REFERENCES

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APPENDIX A
PHASE I ESA
SCOPE OF SERVICES AND LIMITED GLOSSARY OF TERMS

SCOPE OF WORK PHASE I ENVIRONMENTAL SITE ASSESSMENT

The following presents the 4 principal components of Horizon's scope of work for the performance of a Phase I Environmental Site Assessment (ESA). Horizon's Phase I ESA is performed in conformance with the scope and limitations of ASTM Practice E1527-21.

1.0 Records Review

A review of reasonably ascertainable environmental and historical use information from corporate and/or governmental records related to the Property is performed. Standard sources of information (e.g., various federal, state, local, and tribal governmental agencies) and search distances from the Property adhere to those specified in ASTM Practice E1527-21, as applicable. Sources of information reviewed include the following, as applicable and reasonably ascertainable:

- 1.1 Standard Environmental Record Sources (Federal and State)
 - 1.1.1 National Priority List Database
 - 1.1.2 Comprehensive Environmental Response, Compensation, and Liability Information System Database
 - 1.1.3 Resource Conservation and Recovery Information System Database
 - 1.1.4 Emergency Response Notification System Database
 - 1.1.5 Texas Voluntary Cleanup Program and the Texas Innocent Owner/Operator Program
 - 1.1.6 Texas State Superfund Database
 - 1.1.7 TCEQ Solid Waste Facilities and Unauthorized and Unpermitted Landfill Sites
 - 1.1.8 TCEQ Registered Storage Tanks
 - 1.1.9 TCEQ Spills List
 - 1.1.10 Brownfields
 - 1.1.11 Dry Cleaners
- 1.2 Additional Environmental Record Sources
 - 1.2.1 Oil and gas activity records
 - 1.2.2 Documented water wells and information concerning known or potentially contaminated wells
 - 1.2.3 Other local record sources as applicable and reasonably ascertainable
- 1.3 Physical Setting Sources
 - USGS topographic map and description of general topography
 - USDA mapped soils information
 - FEMA flood hazard mapping information
- 1.4 Standard Historical Sources
 - Historical chain-of-title documentation
 - Historical aerial photography
 - Fire insurance maps
 - Local street directories
 - Other standard historical sources (may include sources such as USGS topographic maps, property tax files, local building department records, local zoning/land use records, or information from prior ESAs conducted on the Property)

2.0 Interviews

Horizon makes a reasonable attempt to interview current owners and occupants of the Property. Selection of persons to be interviewed follows the guidance provided in ASTM Practice E1527-21.

- 2.1 Interview with Owner/Key Site Manager
- 2.2 Interview(s) with current occupants
- 2.3 Interview(s) with local government officials
- 2.4 Interview(s) with others, as deemed necessary by the Environmental Professional under ASTM Practice E1527-21

3.0 Site Reconnaissance

A site reconnaissance is performed on the Property, including observation of physical conditions of the land and any structures or improvements on the Property, and immediately adjacent properties as accessible or visible, for potential indicators of recognized environmental conditions. Representative photographs of the Property and immediately adjacent properties are taken to document conditions existing at the time of the site reconnaissance. Observed indications of current and past uses of the Property and adjoining properties, as accessible or visible, are noted. Certain features/conditions that may exist on the Property are documented, including, but not limited to, the following:

- 3.1 General Site Setting
 - 3.1.1 Geologic, hydrogeologic, hydrologic, and topographic conditions
 - 3.1.2 Property uses
 - Current/past uses of the Property
 - Current/past uses of adjoining properties
 - Current/past uses of surrounding area
 - 3.1.3 Structures on the Property
 - 3.1.4 Roads and parking areas on the Property
 - 3.1.5 Potable water supply
 - 3.1.6 Sewage disposal system
- 3.2 Exterior Observations
 - 3.2.1 Pits, ponds, or lagoons
 - 3.2.2 Stained soil or pavement
 - 3.2.3 Stressed vegetation
 - 3.2.4 Evidence of solid waste
 - 3.2.5 Evidence of wastewater discharges
 - 3.2.6 Wells
 - 3.2.7 Septic systems
 - 3.2.8 Hazardous substances or petroleum products
 - 3.2.9 Hazardous substance or petroleum products containers
 - 3.2.10 Storage tanks, vent pipes, and fill pipes
 - 3.2.11 Equipment likely to contain polychlorinated biphenyl oils (PCBs)
 - 3.2.12 Strong, pungent, or noxious odors
 - 3.2.13 Pools of liquid
- 3.3 Interior Observations
 - 3.3.1 Heating/cooling facilities
 - 3.3.2 Stains or corrosion
 - 3.3.3 Floor drains and sumps
 - 3.3.4 Hazardous substances or petroleum products
 - 3.3.5 Hazardous substance or petroleum products containers

- 3.3.6 Storage tanks, vent pipes, and fill pipes
- 3.3.7 Equipment likely to contain PCBs
- 3.3.8 Strong, pungent, or noxious odors
- 3.3.9 Pools of liquid

4.0 Report

Two copies of a written report are prepared presenting the findings of the Phase I ESA. The report includes the following:

- 4.1 Description of the Property
 - 4.1.1 Location and legal description
 - 4.1.2 Site and vicinity general characteristics
 - 4.1.3 Current use of the Property
 - 4.1.4 Description of structures, roads, and other improvements on the Property
 - 4.1.5 Current uses of the adjoining properties
- 4.2 User-provided Information
 - 4.2.1 Historical chain-of-title documentation
 - 4.2.2 Environmental liens or activity and use limitations (AULs)
 - 4.2.3 Specialized knowledge
 - 4.2.4 Commonly known or reasonably ascertainable information
 - 4.2.5 Purchase price vs. fair market value of the Property
 - 4.2.6 Owner, property manager, and occupant information
 - 4.2.7 Reason for performing the Phase I ESA
 - 4.2.8 Other User-provided information
- 4.3 Discussion of findings from Records Review, Interviews, and Site Reconnaissance
- 4.4 Identification of any significant data gaps
- 4.5 Identification of any deviations from ASTM Practice E1527-21
- 4.6 Findings and Conclusions
- 4.7 Opinion of the Environmental Professional
- 4.8 Signature of the Environmental Professional
- 4.9 Qualifications of the Environmental Professional

PHASE I ESA LIMITED GLOSSARY OF TERMS

The terms below may be found in the Phase I ESA report. They are defined by ASTM Standard Practice E1527-21 as follows. This should not be considered a comprehensive list of terms.

activity and use limitations (AULs) – legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property.

controlled recognized environmental condition – a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

data failure – a failure to achieve the historical research objectives prescribed by the practice, even after reviewing standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. Data failure is not uncommon in trying to identify the use of the property at 5-year intervals back to first use or 1940 (whichever is earlier).

data gap – a lack of or inability to obtain information required by the practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by the practice.

de minimis condition – a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* conditions are not recognized environmental conditions nor controlled recognized environmental conditions.

environmental lien – a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property.

historical recognized environmental condition – a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

recognized environmental condition – the presence of hazardous substances or petroleum products in, on, or at the subject property: (1) due to a release to the environment; (2) the likely

presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions.

user – the party seeking to use Practice E1527 to complete an environmental site assessment of the property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The user has specific obligations for completing a successful application of the practice.

APPENDIX B

USER-PROVIDED INFORMATION DOCUMENTS

Phase I ESA User Questionnaire
Title Commitment (Legal Description of Property)

PHASE I ESA USER QUESTIONNAIRE

ASTM Practice E1527-21 defines the User as the party seeking to use Practice E1527-21 to complete an environmental site assessment of the Property. In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the User must provide the following information (if available) to the Environmental Professional. **Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.** This form, as completed by the User, will be attached to the Phase I ESA report.

1. Environmental cleanup liens against the Property (40 CFR 312.25)

Have you conducted a search for environmental cleanup liens against the Property that are filed or recorded under federal, tribal, state, or local law? Yes No

Are you aware of any environmental cleanup liens against the Property that are filed or recorded under federal, tribal, state, or local law? Yes (Explain below) No

2. Activity and land use limitations (AULs) on the Property (40 CFR 312.25)

Have you conducted a search for AULs such as engineering controls, land use restrictions, or institutional controls that are in place for the Property, or filed/recorded in any registry under federal, tribal, state, or local law?

Yes No

Are you aware of any AULs that are in place for the Property or filed/recorded in such registries?

Yes (Explain below) No

3. Specialized knowledge or experience of person seeking to qualify for the LLP (40 CFR 312.28)

As the User of this ESA, do you have any specialized knowledge or experience related to the Property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the Property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? Yes (Explain below) No

4. Relationship of purchase price to fair market value (40 CFR 312.29)

Does the purchase price being paid for the Property reasonably reflect the fair market value of an uncontaminated Property? Yes No

If not, have you considered whether the lower purchase price is because contamination is known or believed to be present at the Property? Yes No

5. Commonly known or reasonably ascertainable information about the Property (40 CFR 312.30)

Are you aware of commonly known or reasonably ascertainable information about the Property that would help the Environmental Professional to identify conditions indicative of releases or threatened releases? For example, as User,

(a.) Do you know the past uses of the Property? Yes (Explain below) No

(b.) Do you know of specific chemicals that are present or once were present at the Property?

Yes (Explain below) No

(c.) Do you know of spills or other chemical releases that have taken place at the Property?

Yes (Explain below) No

(d.) Do you know of any environmental cleanups that have taken place at the Property?
 Yes (Explain below) No

[Empty text box for explanation]

6. Degree of obviousness of the presence or likely presence of contamination at the Property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31)

As the User of this ESA, based on your knowledge and experience related to the Property, are there any obvious indicators that point to the presence or likely presence of contamination at the Property?
 Yes (Explain below) No

[Empty text box for explanation]

7. Litigation, administrative proceedings, or notices from government entities (ASTM E 1527-21 §10.9)

As the User, are you aware of any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Property? Yes (Explain below) No

[Empty text box for explanation]

Are you aware of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products? Yes (Explain below) No

[Empty text box for explanation]

8. Reason for requesting the Phase I ESA (ASTM E 1527-21 §6.7)

As the User, are you requesting this ESA be performed for the purpose of qualifying for one of the Landowner Liability Protections to CERCLA liability? Yes No

If no, please explain reason for requesting performance of the Phase I ESA:

Due Dilligence/Feasibility period.

Have you requested Horizon to conduct additional, non-ASTM-scope services in conjunction with this Phase I ESA?

No Yes (describe): [Empty text box]

REQUIRED INFORMATION:

IDENTIFICATION OF USER AND SIGNATURE OF PERSON COMPLETING USER QUESTIONNAIRE

Signature: Bernhard, Michael Digitally signed by Bernhard, Michael
Date: 2024.05.23 16:49:21 -05'00'

Printed Name: Ryan Bernhard

Representing: KB Home
(Organization)

Title: Land Acq. Manager

Date: 5.23.24

Address: 4800 Fredericksburg Rd. Suite 100

City, State, ZIP: San Antonio, TX 78229

PLEASE COMPLETE, SIGN, AND RETURN TO: sflesher@horizon-esi.com

This form has been developed using the standards in ASTM Practice E1527-21 for the purpose of supporting a Phase I Environmental Site Assessment to satisfy the federal "All Appropriate Inquiries" rule.

References:

(ASTM) American Society for Testing and Materials. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Designation E1527-21. West Conshohocken, Pennsylvania: ASTM, 2021.

US Environmental Protection Agency. "Standards and Practices for All Appropriate Inquiries; Final Rule." 40 CFR Part 312. 1 November 2005.

COMMITMENT FOR TITLE INSURANCE

Issued By

Alamo Title Insurance

SCHEDULE A

Effective Date: **April 1, 2024, 8:00 am**

GF No. **24-059743**


Commitment No. _____, issued **April 10, 2024, 8:00 am**

1. The policy or policies to be issued are:
 - (a) OWNER'S POLICY OF TITLE INSURANCE (Form T-1)
 (Not applicable for improved one-to-four family residential real estate)
 Policy Amount: **\$3,500,000.00**
 PROPOSED INSURED: **KB Home Lone Star Inc., a Texas corporation**
 - (b) TEXAS RESIDENTIAL OWNER'S POLICY OF TITLE INSURANCE
 - ONE-TO-FOUR FAMILY RESIDENCES (Form T-1R)
 Policy Amount:
 PROPOSED INSURED:
 - (c) LOAN POLICY OF TITLE INSURANCE (Form T-2)
 Policy Amount:
 PROPOSED INSURED:
 Proposed Borrower:
 - (d) TEXAS SHORT FORM RESIDENTIAL LOAN POLICY OF TITLE INSURANCE (Form T-2R)
 Policy Amount:
 PROPOSED INSURED:
 Proposed Borrower:
 - (e) LOAN TITLE POLICY BINDER ON INTERIM CONSTRUCTION LOAN (Form T-13)
 Binder Amount:
 PROPOSED INSURED:
 Proposed Borrower:
 - (f) OTHER
 Policy Amount:
 PROPOSED INSURED:
2. The interest in the land covered by this Commitment is: **Fee Simple**
3. Record title to the land on the Effective Date appears to be vested in:
Larry Robert Neill
4. Legal description of the land:
A 23.5000 acre tract and a 44.000 acre tract, out of a 104 acre Tract in the Guadalupe Torres Survey Abstract 313, and the Francisco Garcia Survey Abstract 141, in Guadalupe County, Texas.

SUBJECT TO THE REQUIREMENT FOR A SURVEY.

Note: The Company is prohibited from insuring the area or quantity of the Land. Any statement in the legal description contained in Schedule A as to area or quantity of land is not a representation that such area or quantity is correct but is for informal identification purposes and does not override Item 2 of Schedule B hereof.

Countersigned
San Antonio Title Co.

By 

APPENDIX C

PHOTOGRAPHS FROM SITE RECONNAISSANCE



PHOTO 1
Typical site conditions on the Property



PHOTO 2
Typical site conditions on the Property



PHOTO 3
Typical site conditions on the Property



PHOTO 4
Typical site conditions on the Property



PHOTO 5
Abandoned well located on the northern portion of the Property
(Figure 6-1, Item A)



PHOTO 6
Evidence of buried cable line observed along the northern
Property boundary



PHOTO 7
Overhead powerlines located along the northern Property
boundary



PHOTO 8
Overhead powerlines and access road located along the western
Property boundary

APPENDIX D

GOVERNMENT AGENCY RECORDS

ERIS Environmental Data Search Report



DATABASE REPORT

Project Property: *Neill 67.5-Acre Property
Schmoekel Road
Marion TX*

Project No: *24110.001PI*

Report Type: *Database Report*

Order No: *24052900480*

Requested by: *Horizon Environmental Services*

Date Completed: *May 31, 2024*

Environmental Risk Information Services

A division of Glacier Media Inc.

1.866.517.5204 | info@erisinfo.com | erisinfo.com

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Executive Summary

Property Information:

Project Property: *Neill 67.5-Acre Property
Schmoekel Road Marion TX*

Project No: *24110.001PI*

Coordinates:

Latitude: *29.53169768*
Longitude: *-98.14920051*
UTM Northing: *3,267,197.22*
UTM Easting: *582,441.74*
UTM Zone: *14R*

Elevation: *621 FT*

Order Information:

Order No: *24052900480*
Date Requested: *May 29, 2024*
Requested by: *Horizon Environmental Services*
Report Type: *Database Report*

Historicals/Products:

Aerial Photographs *Historical Aerials (with Project Boundaries)*
ERIS Xplorer [*ERIS Xplorer*](#)
Excel Add-On *Excel Add-On*
Topographic Map *Topographic Maps*

Executive Summary: Report Summary

| Database | Searched | Search Radius | Project Property | Within 0.12mi | 0.125mi to 0.25mi | 0.25mi to 0.50mi | 0.50mi to 1.00mi | Total |
|---------------------------------------|----------|---------------|------------------|---------------|-------------------|------------------|------------------|-------|
| Standard Environmental Records | | | | | | | | |
| Federal | | | | | | | | |
| NPL | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| PROPOSED NPL | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| DELETED NPL | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| SEMS | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| SEMS ARCHIVE | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| ODI | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| IODI | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| CERCLIS | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| CERCLIS NFRAP | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| CERCLIS LIENS | Y | PO | 0 | - | - | - | - | 0 |
| RCRA CORRACTS | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| RCRA TSD | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| RCRA LQG | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| RCRA SQG | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| RCRA VSQG | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| RCRA NON GEN | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| RCRA CONTROLS | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| FED ENG | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| FED INST | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| LUCIS | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| NPL IC | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| ERNS 1982 TO 1986 | Y | PO | 0 | - | - | - | - | 0 |
| ERNS 1987 TO 1989 | Y | PO | 0 | - | - | - | - | 0 |
| ERNS | Y | PO | 0 | - | - | - | - | 0 |
| FED BROWNFIELDS | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| FEMA UST | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| FRP | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |

| Database | Searched | Search Radius | Project Property | Within 0.12mi | 0.125mi to 0.25mi | 0.25mi to 0.50mi | 0.50mi to 1.00mi | Total |
|-------------------|-----------------|----------------------|-------------------------|----------------------|--------------------------|-------------------------|-------------------------|--------------|
| DELISTED FRP | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| HIST GAS STATIONS | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| REFN | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| BULK TERMINAL | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| SEMS LIEN | Y | PO | 0 | - | - | - | - | 0 |
| SUPERFUND ROD | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| DOE FUSRAP | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

State

| | | | | | | | | |
|---------------|---|------|---|---|---|---|---|---|
| SUPERFUND | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| SHWS | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| SDA | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| DELISTED SHWS | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| SWF/LF | Y | 0.5 | 0 | 0 | 0 | 2 | - | 2 |
| CLI | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| HGAC CLI | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| AACOG CLI | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| IHW | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| IHW RECEIVER | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| RWS | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| LPST | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| DELISTED LST | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| UST | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| AST | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| PST | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| HIST TANK | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| UST AUSTIN | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| PETROL CAVERN | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| DTNK | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| AUL | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| VCP | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| VCP RRC | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| OP CLEANUP | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| IOP | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| BROWNFIELDS | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |

| Database | Searched | Search Radius | Project Property | Within 0.12mi | 0.125mi to 0.25mi | 0.25mi to 0.50mi | 0.50mi to 1.00mi | Total |
|---------------------|----------|---------------|------------------|---------------|-------------------|------------------|------------------|-------|
| BROWN RRC | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| MSD | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| Tribal | | | | | | | | |
| INDIAN LUST | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| INDIAN UST | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| DELISTED INDIAN LST | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| DELISTED INDIAN UST | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |

County *No County standard environmental record sources available for this State.*

Additional Environmental Records

Federal

| | | | | | | | | |
|-----------------|---|-------|---|---|---|---|---|---|
| PFAS GHG | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| OSC RESPONSE | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| FINDS/FRS | Y | PO | 0 | - | - | - | - | 0 |
| TRIS | Y | PO | 0 | - | - | - | - | 0 |
| PFAS NPL | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| PFAS FED SITES | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| PFAS SSEHRI | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| ERNS PFAS | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| PFAS NPDES | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| PFAS TRI | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| PFAS WATER | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| PFAS TSCA | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| PFAS E-MANIFEST | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| PFAS IND | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| HMIRS | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| NCDL | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| TSCA | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| HIST TSCA | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| FTTS ADMIN | Y | PO | 0 | - | - | - | - | 0 |
| FTTS INSP | Y | PO | 0 | - | - | - | - | 0 |
| PRP | Y | PO | 0 | - | - | - | - | 0 |
| SCRD DRYCLEANER | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| ICIS | Y | PO | 0 | - | - | - | - | 0 |
| FED DRYCLEANERS | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |

| Database | Searched | Search Radius | Project Property | Within 0.12mi | 0.125mi to 0.25mi | 0.25mi to 0.50mi | 0.50mi to 1.00mi | Total |
|----------------------|-----------------|----------------------|-------------------------|----------------------|--------------------------|-------------------------|-------------------------|--------------|
| DELISTED FED DRY | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| FUDS | Y | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| FUDS MRS | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| FORMER NIKE | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| PIPELINE INCIDENT | Y | PO | 0 | - | - | - | - | 0 |
| MLTS | Y | PO | 0 | - | - | - | - | 0 |
| HIST MLTS | Y | PO | 0 | - | - | - | - | 0 |
| MINES | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| SMCRA | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| MRDS | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| LM SITES | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALT FUELS | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| CONSENT DECREES | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| AFS | Y | PO | 0 | - | - | - | - | 0 |
| SSTS | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| PCBT | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| PCB | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| State | | | | | | | | |
| PRIORITY CLEAN | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| DRYCLEANERS | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| DELISTED DRYCLEANERS | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| GWCC | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| GWCC HIST | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| APAR | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| SPILLS | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| PFAS | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| IHW CORR ACTION | Y | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| LAND APPL | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| NOV | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| NOE | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| LIENS | Y | PO | 0 | - | - | - | - | 0 |
| ORD | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| HIST RCRA NONRCRA | Y | 0.5 | 0 | 0 | 0 | 0 | - | 0 |
| RTOL | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| UIC | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |

| Database | Searched | Search Radius | Project Property | Within 0.12mi | 0.125mi to 0.25mi | 0.25mi to 0.50mi | 0.50mi to 1.00mi | Total |
|-----------------|----------|---------------|------------------|---------------|-------------------|------------------|------------------|-------|
| IHW GENERATOR | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| IHW TRANSPORT | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| AIR PERMITS | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| EMISSIONS | Y | 0.25 | 0 | 0 | 0 | - | - | 0 |
| TIER 2 | Y | 0.125 | 0 | 0 | - | - | - | 0 |
| EDWARDS AQUIFER | Y | PO | 0 | - | - | - | - | 0 |

Tribal *No Tribal additional environmental record sources available for this State.*

County *No County additional environmental record sources available for this State.*

Total: 0 0 1 2 0 3

* PO – Property Only

* 'Property and adjoining properties' database search radii are set at 0.25 miles.

Executive Summary: Site Report Summary - Project Property

| <i>Map Key</i> | <i>DB</i> | <i>Company/Site Name</i> | <i>Address</i> | <i>Direction</i> | <i>Distance (mi/ft)</i> | <i>Elev Diff (ft)</i> | <i>Page Number</i> |
|----------------|-----------|--------------------------|----------------|------------------|-------------------------|-----------------------|--------------------|
|----------------|-----------|--------------------------|----------------|------------------|-------------------------|-----------------------|--------------------|

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

| Map Key | DB | Company/Site Name | Address | Direction | Distance (mi/ft) | Elev Diff (ft) | Page Number |
|-------------------|--------|----------------------------|---|-----------|------------------|----------------|--------------------|
| 1 | FUDS | NEIL, ET AL, PROPERTIES | MARION TX <i>FUDS Property No: K06TX1120</i> | ENE | 0.15 / 796.41 | -19 | 17 |
| 2 | SWF/LF | MULCHCOMPOST STORAGE YARD | 3330 S SANTA CLARA RD MARION TX | SE | 0.25 / 1,324.35 | 1 | 17 |
| 2 | SWF/LF | MULCH-COMPOST STORAGE YARD | 3330 S SANTA CLARA RD MARION TX | SE | 0.25 / 1,324.35 | 1 | 18 |

Executive Summary: Summary by Data Source

Standard

State

SWF/LF - Permitted Solid Waste Facilities

A search of the SWF/LF database, dated Jul 28, 2023 has found that there are 2 SWF/LF site(s) within approximately 0.50miles of the project property.

| <u>Equal/Higher Elevation</u> | <u>Address</u> | <u>Direction</u> | <u>Distance (mi/ft)</u> | <u>Map Key</u> |
|--------------------------------------|------------------------------------|-------------------------|--------------------------------|--------------------------|
| MULCHCOMPOST STORAGE YARD | 3330 S SANTA CLARA RD MARION TX | SE | 0.25 / 1,324.35 | <u>2</u> |
| MULCH-COMPOST STORAGE YARD | 3330 S SANTA CLARA RD MARION TX | SE | 0.25 / 1,324.35 | <u>2</u> |

Non Standard

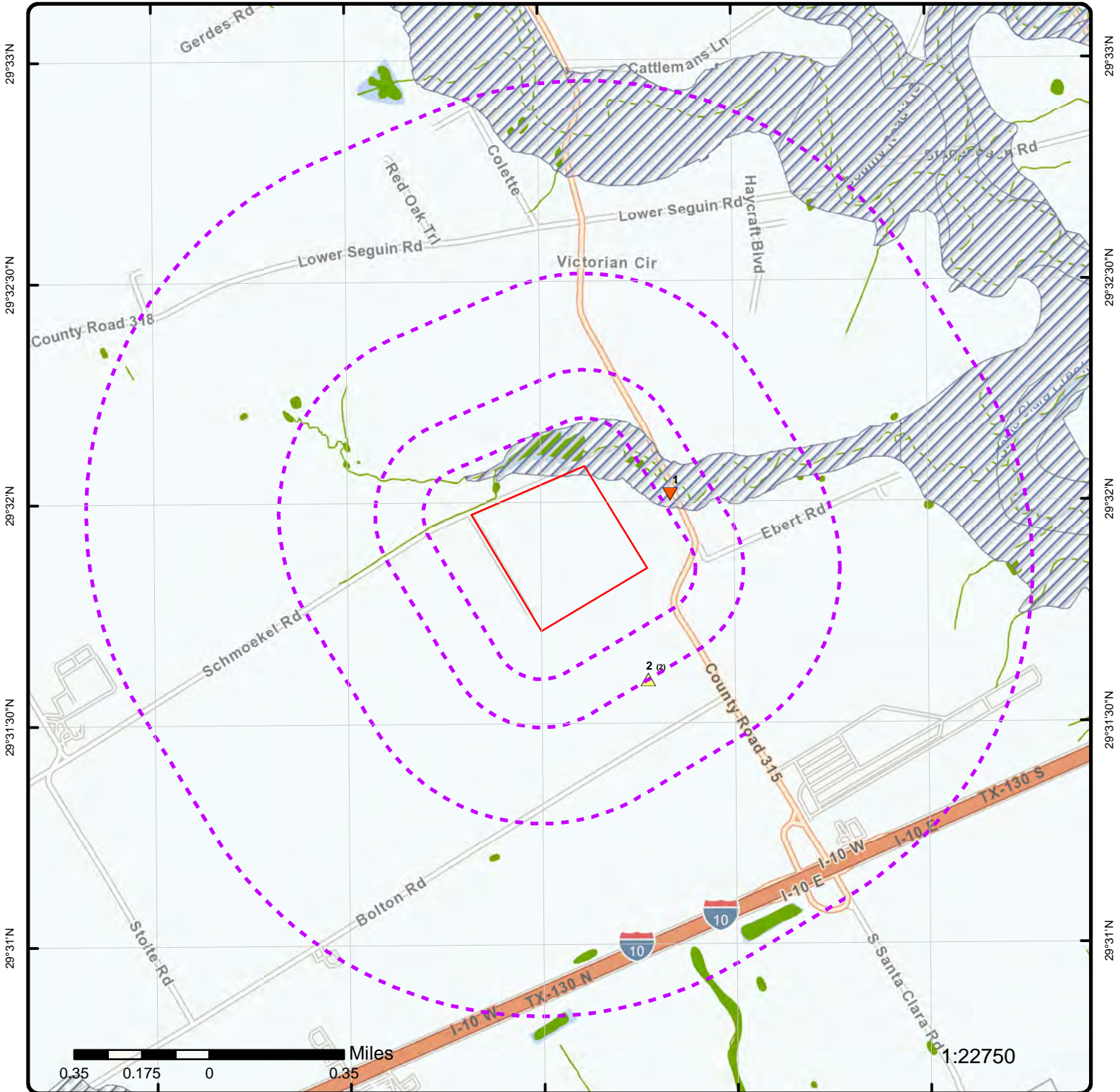
Federal

FUDS - Formerly Used Defense Sites

A search of the FUDS database, dated May 15, 2023 has found that there are 1 FUDS site(s) within approximately 1.00miles of the project property.

| <u>Lower Elevation</u> | <u>Address</u> | <u>Direction</u> | <u>Distance (mi/ft)</u> | <u>Map Key</u> |
|-------------------------------|-----------------------|-------------------------|--------------------------------|--------------------------|
| NEIL, ET AL, PROPERTIES | MARION TX | ENE | 0.15 / 796.41 | <u>1</u> |

FUDS Property No: K06TX1120



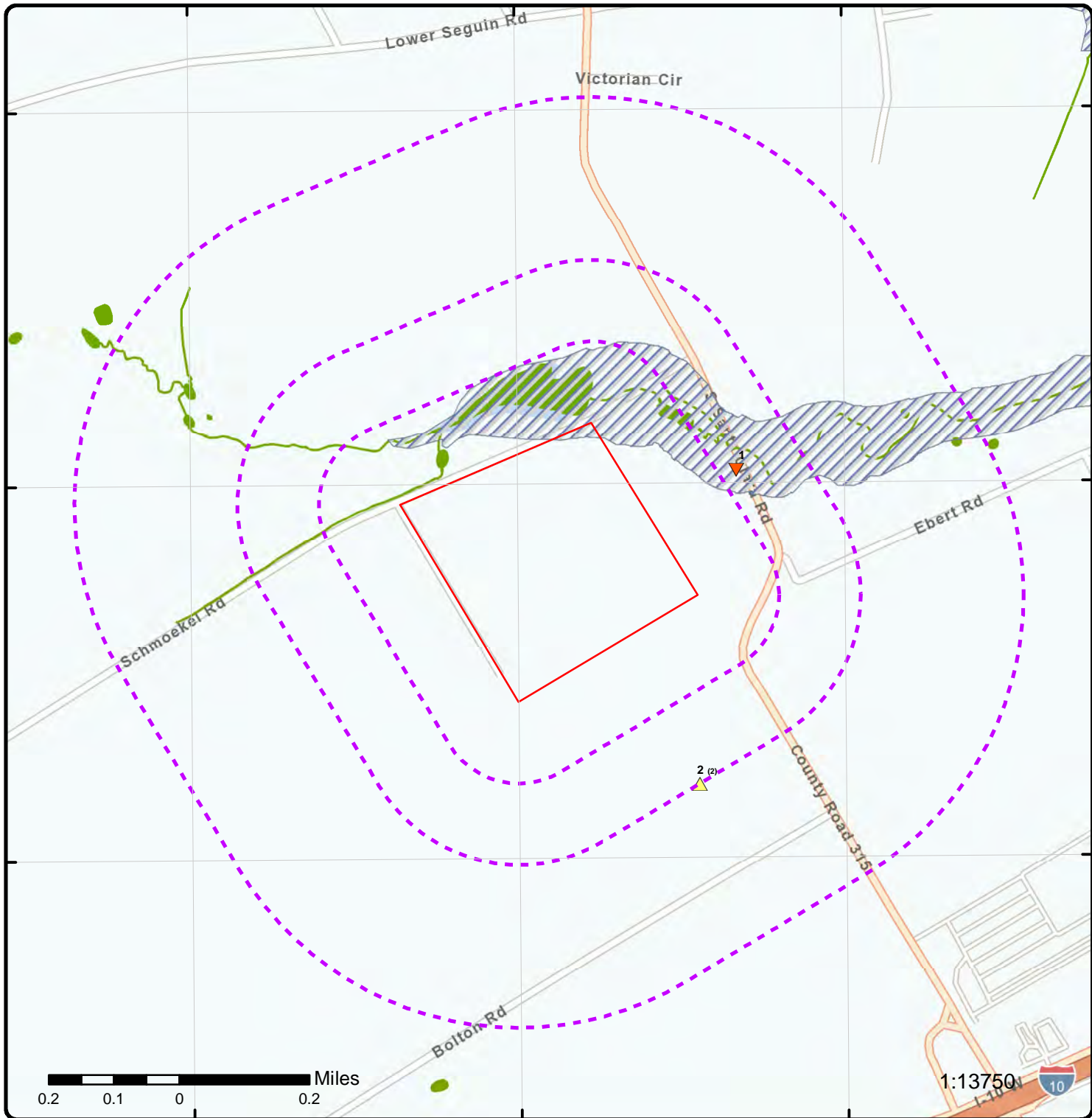
Map: 1.0 Mile Radius

Order Number: 24052900480

Address: Schmoekel Road, Marion, TX



- Project Property
- Buffer Outline
- ▲ Sites with Higher Elevation
- Sites with Same Elevation
- ▼ Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)



Map: 0.5 Mile Radius

Order Number: 24052900480

Address: Schmoekel Road, Marion, TX



Project Property

Buffer Outline

Sites with Higher Elevation

Sites with Same Elevation

Sites with Lower Elevation

Sites with Unknown Elevation

Areas with Higher Elevation

Areas with Same Elevation

Areas with Lower Elevation

Areas with Unknown Elevation

Freeways; Highways

Traffic Circle; Ramp

Major & Minor Arterial

Traffic Circle; Ramp

Local Road

Rail

State

Country

National Wetland

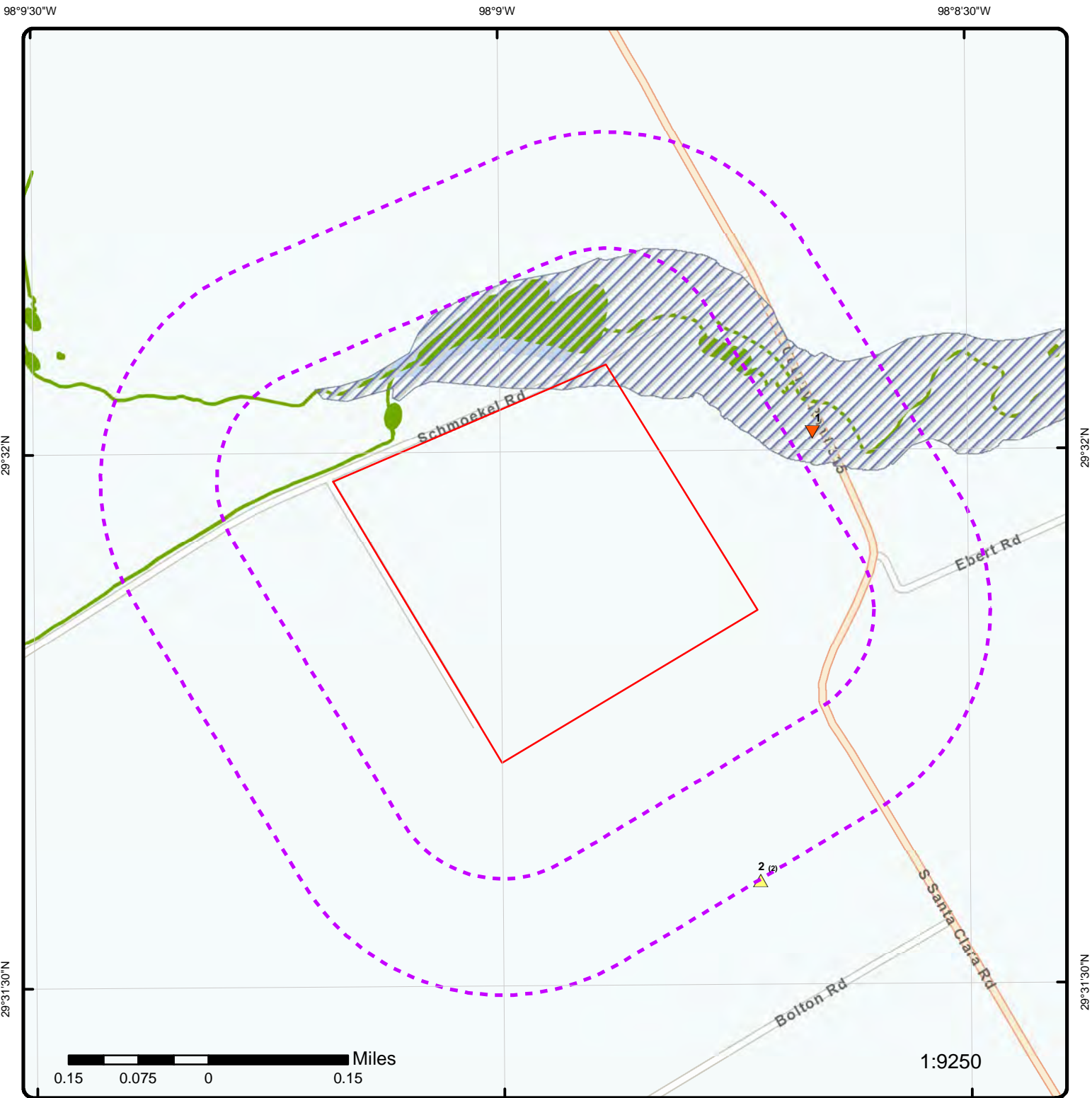
Indian Reserve Land

100 Year Flood Zone

500 Year Flood Zone

FWS Special Designation Areas

National Priorities List (Active, Delisted, Proposed, Institutional Control)



Map: 0.25 Mile Radius

Order Number: 24052900480
 Address: Schmoekel Road, Marion, TX



- Project Property
- Buffer Outline
- ▲ Sites with Higher Elevation
- Sites with Same Elevation
- ▼ Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

98°9'30"W

98°9'W

98°8'30"W

29°32'30"N

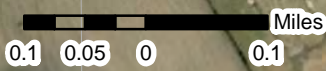
29°32'30"N

29°32'N

29°32'N

29°31'30"N

29°31'30"N



1:10000

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Aerial Year: 2019

Address: Schmoekel Road, Marion, TX

Source: ESRI World Imagery

Order Number: 24052900480



© ERIS Information Inc.

98°10'W

98°9'30"W

98°9'W

98°8'30"W

98°8'W

98°7'30"W

29°33'N

29°32'30"N

29°32'N

29°31'30"N

29°31'N

29°30'30"N

29°33'N

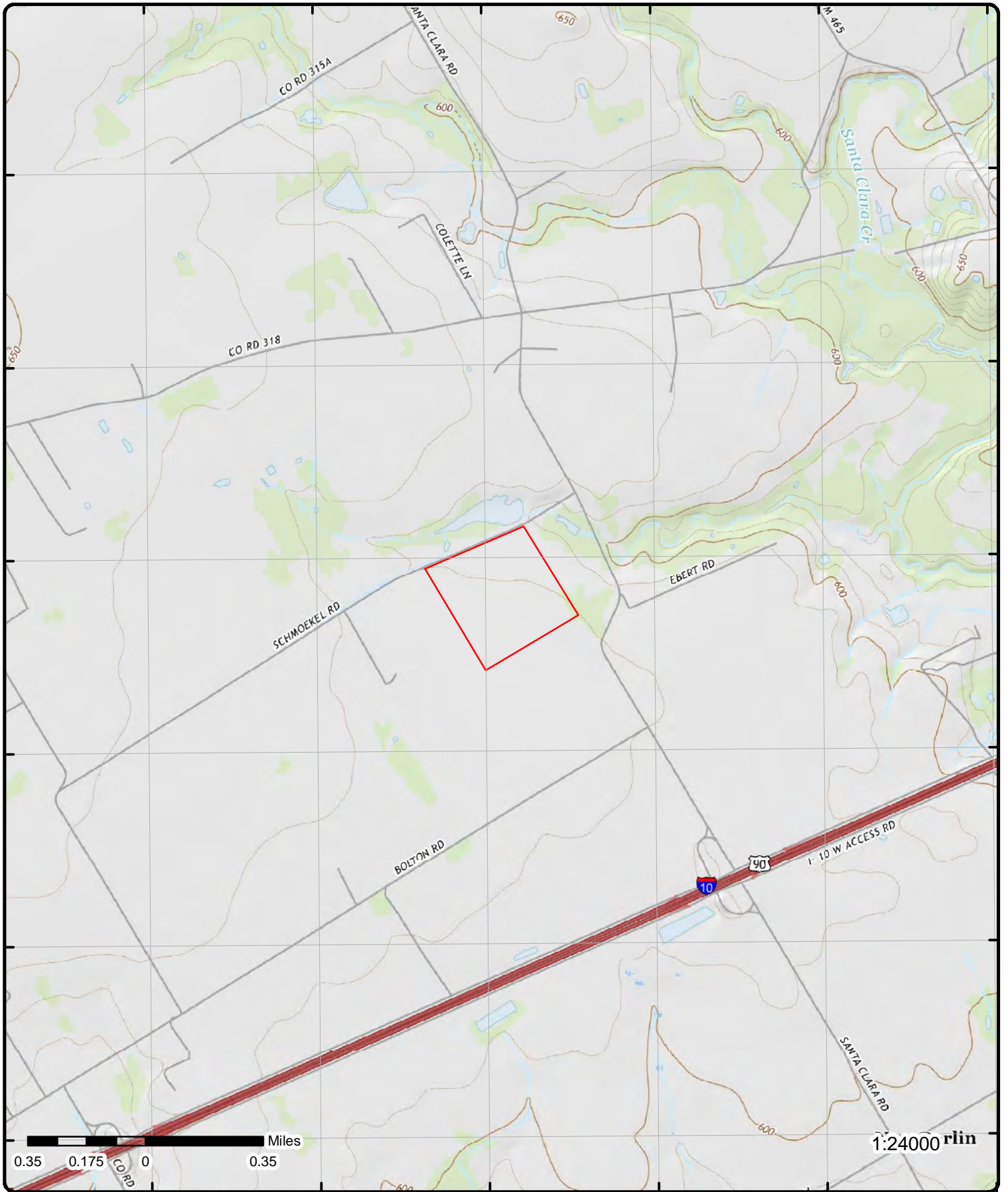
29°32'30"N

29°32'N

29°31'30"N

29°31'N

29°30'30"N



Topographic Map

Year: 2019

Order Number: 24052900480

Address: Schmoekel Road, TX



Quadrangle(s): Marion TX, McQueeney TX, Saint Hedwig TX

© ERIS Information Inc.

Source: USGS Topographic Map

Detail Report

| Map Key | Number of Records | Direction | Distance (mi/ft) | Elev/Diff (ft) | Site | DB |
|--------------------------|-------------------|-----------|------------------|-----------------|--|------|
| <u>1</u> | 1 of 1 | ENE | 0.15 / 796.41 | 602.35 / -19 | NEIL, ET AL, PROPERTIES MARION TX | FUDS |

FUDS Property No: K06TX1120
EMS Map Link: <https://fudsportal.usace.army.mil/ems/inventory/map?id=54113>
FUDS INST ID: TX69799FA11200
Status: Properties without projects
SDS ID:
NPL Status Code:
Eligibility: Eligible
Site Eligib:
Current Owner: PRIV: PRIVATE several private owners, Neil family owns largest portion of former site.
Has Project: No
DOD FUDS Pro: K06TX1120
Project Required: No
No Further Action:
Congressional District: 28
Congressional Dist 117: 15
Media ID:
Metadata ID:
Feature Desc:
EPA Region: 06
County: GUADALUPE
Latitude: 29.53361111
Longitude: -98.14444444
Fiscal year: 2021
USACE Division: SWD
USACE District: Fort Worth District (SWF)
Centroid Lat:
Centroid Long:
Se Anno Cad Data:
Shape Length:
Shape Area:
Shape Len:
X: -98.144470215
Y: 29.5336303710001
Data Source: U.S. Army Corps of Engineers Geospatial Open Data
Feature Description:

Gov. leased 113.61 acres at an unknown date. Army declared the site surplus on 24 March 1945. Army terminated leases and returned land to original owners. Land is currently under cultivation.

Property History:

| | | | | | | |
|--------------------------|--------|----|--------------------|---------------|--|--------|
| <u>2</u> | 1 of 2 | SE | 0.25 / 1,324.35 | 622.04 / 1 | MULCHCOMPOST STORAGE YARD 3330 S SANTA CLARA RD MARION TX | SWF/LF |
|--------------------------|--------|----|--------------------|---------------|--|--------|

ID: 100453
RN: RN109281584
Data Source: MSW: Revoked or Not Issued (Web)
Note: Documents related to facilities in Texas can be searched on TCEQ Records Online Central File Room (CFR): https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_SEARCH

| Map Key | Number of Records | Direction | Distance (mi/ft) | Elev/Diff (ft) | Site | DB |
|---------|-------------------|-----------|------------------|----------------|------|----|
|---------|-------------------|-----------|------------------|----------------|------|----|

Basic information, including RN numbers, for facilities in TX can be searched on the TCEQ Central Registry: <https://www15.tceq.texas.gov/crpub/>
 Information about how to use these resources can be found here: <https://www.tceq.texas.gov/assets/public/agency/How-to-Use-Central-File-Room-Online.pdf>
Historical Documents: ERIS does not have a document collection for this particular record; readers are referred to the TCEQ Records Services: <https://www.tceq.texas.gov/agency/data/records-services/reqinfo.html>

MSW - Active/Closed/Revoked/Not Issued

| | | | |
|-----------------------------|--------------------------------------|-----------------------|-------------------------|
| RN: | RN109281584 | Additional ID: | 100453 |
| Program: | MSW-NOI | County: | GUADALUPE |
| Legal Status: | WITHDRAWN | Region: | REGION 13 - SAN ANTONIO |
| Legal Status Date: | 12/5/2016 | Latitude: | 29.527239 |
| Phys Site Status: | NOT CONSTRUCTED | Longitude: | -98.147018 |
| Physical Type Code: | 5RR | | |
| Physical Type: | RESOURCE RECOVERY/RECYCLING FACILITY | | |
| Site Name: | MULCHCOMPOST STORAGE YARD | | |
| Phys Addr Line 1: | 3330 S SANTA CLARA RD | | |
| Phys Addr Line 2: | | | |
| Phys Addr State: | TX | | |
| Phys Addr ZIP: | 78124 | | |
| Phys Addr ZIP 4: | 4035 | | |
| Phys Addr City: | MARION | | |
| Near Phys Loc: | | | |
| Near Phys Loc City: | MARION | | |
| Near Phys Loc State: | TX | | |
| Near Phys Loc ZIP: | 78124 | | |

| | | | | | | |
|-------------------|--------|----|--------------------|---------------|---|--------|
| 2 | 2 of 2 | SE | 0.25 / 1,324.35 | 622.04 / 1 | MULCH-COMPOST STORAGE YARD 3330 S SANTA CLARA RD MARION TX | SWF/LF |
|-------------------|--------|----|--------------------|---------------|---|--------|

ID: 100473
RN: RN109281584
Data Source: MSW: Facilities (Web)
Note: Documents related to facilities in Texas can be searched on TCEQ Records Online Central File Room (CFR): https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_SEARCH
 Basic information, including RN numbers, for facilities in TX can be searched on the TCEQ Central Registry: <https://www15.tceq.texas.gov/crpub/>
 Information about how to use these resources can be found here: <https://www.tceq.texas.gov/assets/public/agency/How-to-Use-Central-File-Room-Online.pdf>
Historical Documents: ERIS does not have a document collection for this particular record; readers are referred to the TCEQ Records Services: <https://www.tceq.texas.gov/agency/data/records-services/reqinfo.html>

MSW - Active/Closed/Revoked/Not Issued

| | | | |
|-----------------------------|--|-----------------------|-------------------------|
| RN: | RN109281584 | Additional ID: | 100473 |
| Program: | MSW-NOI | County: | GUADALUPE |
| Legal Status: | ACKNOWLEDGED | Region: | REGION 13 - SAN ANTONIO |
| Legal Status Date: | 1/17/2017 | Latitude: | 29.527239 |
| Phys Site Status: | ACTIVE | Longitude: | -98.147018 |
| Physical Type Code: | 5RCX | | |
| Physical Type: | Notice of Intent to Operate a Recycling Facility, Composting | | |
| Site Name: | MULCH-COMPOST STORAGE YARD | | |
| Phys Addr Line 1: | 3330 S SANTA CLARA RD | | |
| Phys Addr Line 2: | | | |
| Phys Addr State: | TX | | |
| Phys Addr ZIP: | 78124 | | |
| Phys Addr ZIP 4: | 4035 | | |
| Phys Addr City: | MARION | | |
| Near Phys Loc: | | | |
| Near Phys Loc City: | MARION | | |
| Near Phys Loc State: | TX | | |
| Near Phys Loc ZIP: | 78124 | | |

Unplottable Summary

Total: 0 Unplottable sites

| DB | Company Name/Site Name | Address | City | Zip | ERIS ID |
|----|------------------------|---------|------|-----|---------|
|----|------------------------|---------|------|-----|---------|

No unplottable records were found that may be relevant for the search criteria.

Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List:

[NPL](#)

Sites on the United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

National Priority List - Proposed:

[PROPOSED NPL](#)

Sites proposed by the United States Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

Deleted NPL:

[DELETED NPL](#)

Sites deleted from the United States Environmental Protection Agency (EPA)'s National Priorities List. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

SEMS List 8R Active Site Inventory:

[SEMS](#)

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool.

Government Publication Date: Mar 27, 2024

SEMS List 8R Archive Sites:

[SEMS ARCHIVE](#)

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

Government Publication Date: Mar 27, 2024

Inventory of Open Dumps, June 1985:

[ODI](#)

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

EPA Report on the Status of Open Dumps on Indian Lands:

[IODI](#)

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

Comprehensive Environmental Response, Compensation and Liability Information System -

[CERCLIS](#)

CERCLIS:

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

CERCLIS - No Further Remedial Action Planned:

[CERCLIS NFRAP](#)

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens:

[CERCLIS LIENS](#)

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action:

[RCRA CORRACTS](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Apr 8, 2024

RCRA non-CORRACTS TSD Facilities:

[RCRA TSD](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Apr 8, 2024

RCRA Generator List:[RCRA LQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Apr 8, 2024

RCRA Small Quantity Generators List:[RCRA SQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Apr 8, 2024

RCRA Very Small Quantity Generators List:[RCRA VSQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Apr 8, 2024

RCRA Non-Generators:[RCRA NON GEN](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Apr 8, 2024

RCRA Sites with Controls:[RCRA CONTROLS](#)

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Apr 8, 2024

Federal Engineering Controls-ECs:[FED ENG](#)

List of Engineering controls (ECs) made available by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Apr 22, 2024

Federal Institutional Controls-ICs:[FED INST](#)

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Apr 22, 2024

Land Use Control Information System:

LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Institutional Control Boundaries at NPL sites:

NPL IC

Boundaries of Institutional Control areas at sites on the United States Environmental Protection Agency (EPA)'s National Priorities List, or Proposed or Deleted, made available by the EPA's Shared Enterprise Geodata and Services (SEGS). United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.

Government Publication Date: Apr 22, 2024

Emergency Response Notification System:

ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System:

ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System:

ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Feb 20, 2024

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database:

FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Feb 7, 2024

FEMA Underground Storage Tank Listing:

FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan:

FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

Government Publication Date: Jan 9, 2024

Delisted Facility Response Plans:

DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jan 9, 2024

Historical Gas Stations:

[HIST GAS STATIONS](#)

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries:

[REFN](#)

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Feb 28, 2024

Petroleum Product and Crude Oil Rail Terminals:

[BULK TERMINAL](#)

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from the Federal Communications Commission Data hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Sep 22, 2023

LIEN on Property:

[SEMS LIEN](#)

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Mar 27, 2024

Superfund Decision Documents:

[SUPERFUND ROD](#)

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Mar 27, 2024

Formerly Utilized Sites Remedial Action Program:

[DOE FUSRAP](#)

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

State

Superfund Sites Boundaries:

[SUPERFUND](#)

List of sites that may constitute an imminent and substantial endangerment to public health and safety or the environment due to a release or threatened release of hazardous substances into the environment provided by the Texas Commission on Environmental Quality (TCEQ).

Government Publication Date: Aug 10, 2021

State Superfund Registry:

[SHWS](#)

List of sites identified or evaluated by the Texas Commission on Environmental Quality (TCEQ) which may constitute an imminent and substantial endangerment to public health and safety or to the environment due to a release or threatened release of hazardous substances into the environment. The TCEQ updates the state Superfund sites list in accordance with the Texas Health and Safety Code (THSC). This database is state equivalent NPL.

Government Publication Date: Mar 4, 2024

Superfund Site Discovery and Assessment Program:

[SDA](#)

List of active and inactive Superfund Site Discovery and Assessment Program sites queried from the Texas Commission on Environmental Quality (TCEQ) Central Registry and IDA databases by the Remediation Division.

Government Publication Date: Feb 27, 2024

Delisted State Superfund Registry List:

[DELISTED SHWS](#)

List of sites that once appeared on - and have since been removed from - the State Superfund Registry made available by the Texas Commission on Environmental Quality (TCEQ).

Government Publication Date: Mar 6, 2024

Permitted Solid Waste Facilities:

[SWF/LF](#)

List of active, inactive, and post-closure Municipal Solid Waste landfills and processing facilities with issued permits and authorizations, as well as pending, withdrawn, or denied applications registered with the Texas Commission on Environmental Quality (TCEQ) under the Texas Administrative Code (TAC) Title 30 Chapter 330.

Government Publication Date: Jul 28, 2023

Closed Landfill Inventory:

[CLI](#)

Inventory of permitted and unauthorized closed or abandoned municipal solid waste landfills throughout Texas compiled by the Texas Commission on Environmental Quality (TCEQ), in collaboration with regional Councils of Government (COG).

Government Publication Date: Late 1990's

Houston-Galveston Closed Landfill Inventory:

[HGAC CLI](#)

List of closed and abandoned landfill sites which fall under the Houston Galveston Area Council of Government. Texas Councils of Governments (COGs) are required to maintain an inventory of closed municipal solid waste landfills for their regional solid waste management plans.

Government Publication Date: Oct 19, 2022

AACOG Closed Landfill Inventory:

[AACOG CLI](#)

A list of permitted and unpermitted closed landfill sites made available by the Alamo Area Council of Governments (AACOG). Alamo Area Council of Governments (AACOG) is requested to maintain an inventory of closed municipal solid waste landfills for their regional solid waste management plans.

Government Publication Date: Feb 6, 2020

Commercial Management Facilities for Hazardous Waste and Industrial Solid Wastes:

[IHW](#)

This publication lists facilities that have permits or authorizations from the Texas Commission on Environmental Quality (TCEQ) to receive, on a commercial basis, and manage hazardous waste, industrial nonhazardous waste, or both.

Government Publication Date: Oct 31, 2022

Industrial and Hazardous Waste - Receivers:

[IHW RECEIVER](#)

List of active, inactive, and post-closure Industrial and Hazardous Waste Receiver Facilities permitted by or registered with the Texas Commission on Environmental Quality (TCEQ) under the Texas Administrative Code (TAC) Title 30 Chapter 335.

Government Publication Date: Mar 14, 2024

Radioactive Waste Sites:

[RWS](#)

This Texas Commission on Environmental Quality (TCEQ) database contains all sites in the State of Texas designated as Radioactive Waste sites as of 2006. The TCEQ no longer maintains this site listing.

Government Publication Date: Jul 11, 2006

Leaking Petroleum Storage Tank Database:

[LPST](#)

List of cleanup sites where contamination was caused by spills, leaks, or other releases of petroleum or hazardous substances from underground and/or aboveground storage tanks regulated by the Texas Commission on Environmental Quality (TCEQ).

Government Publication Date: Mar 4, 2024

Delisted Leaking Storage Tanks:

[DELISTED LST](#)

List of cleanup sites that once appeared on - and have since been removed from - the list of Leaking Petroleum Storage Tank Cleanups made available by the Texas Commission on Environmental Quality (TCEQ).

Government Publication Date: Mar 4, 2024

Underground Petroleum Storage Tanks:

[UST](#)

List of facilities that have one or more Underground Storage Tank (UST)s registered and regulated by the Texas Commission on Environmental Quality (TCEQ).

Government Publication Date: Apr 22, 2024

Aboveground Storage Tanks:

[AST](#)

List of facilities that have one or more Aboveground Storage Tank (AST)s registered and regulated by the Texas Commission on Environmental Quality (TCEQ).

Government Publication Date: Apr 22, 2024

Petroleum Storage Tanks Database:

[PST](#)

List of facilities included on the list of tank facilities made available by the Texas Commission on Environmental Quality (TCEQ) that have no association as either underground or aboveground tanks.

Government Publication Date: Apr 22, 2024

Historical Tank Construction Notification:

[HIST TANK](#)

A list of facilities with historic petroleum storage tank construction notification activity made available by the Texas Commission on Environmental Quality (TCEQ). Any person who intends either to install a new or replacement underground storage tank (UST), to remove a UST from the ground, to conduct a permanent abandonment in-place of a UST, or make any repairs or improvements of a UST must submit a Construction Notification Form.

Government Publication Date: Apr 22, 2024

Austin Underground Storage Tanks:

[UST AUSTIN](#)

A list of underground gas storage tanks both current and historical from the City of Austin Open Data Portal. Data provided by Planning and Zoning, City of Austin.

Government Publication Date: Apr 7, 2024

Salt Caverns for Petroleum Storage:

[PETROL CAVERN](#)

Listing of salt caverns for petroleum storage, made available by the Railroad Commission of Texas. Salt caverns, constructed in naturally occurring salt domes or salt beds, are used as storage for hydrocarbons including crude oil and natural gases.

Government Publication Date: Sep 1, 2006

Delisted Storage Tanks:

[DTNK](#)

List of tank facilities that once appeared on - and have since been removed from - the Petroleum Storage Tanks Database made available by the Texas Commission on Environmental Quality (TCEQ).

Government Publication Date: Apr 22, 2024

Sites with Controls:

[AUL](#)

Sites under several Texas Commission on Environmental Quality (TCEQ) remediation programs which have institutional or engineering controls.

Government Publication Date: Mar 5, 2024

Voluntary Cleanup Program:

[VCP](#)

List of sites which have participated or are currently participating in the Voluntary Cleanup Program (VCP) administered by the Texas Commission on Environmental Quality (TCEQ). The VCP provides administrative, technical, and legal incentives to encourage the cleanup of contaminated sites in Texas.

Government Publication Date: Mar 25, 2024

Texas Railroad Commission Voluntary Cleanup Program:

[VCP RRC](#)

List of facilities which have participated in or are currently participating in the Voluntary Cleanup Program (VCP) operated by the Railroad Commission of Texas (RRC). The RRC VCP provides an incentive to remediate Oil & Gas related pollution.

Government Publication Date: May 13, 2024

Operator Cleanup Program:

[OP CLEANUP](#)

A list of sites in the Texas Railroad Commission (RRC)'s Operator Cleanup Program (OCP). The OCP, under the Site Remediation Section, is tasked with oversight of complex pollution cleanups performed by the oil and gas industry. Complex sites include those that occur in sensitive environmental areas as defined by 16 TAC3.91 (SWR 91) and may require site specific cleanup levels based on risk. When cleanup activities are successfully completed by the operator, Commission staff may issue a "No Further Action" letter acknowledging completion.

Government Publication Date: Mar 6, 2024

Innocent Owner/Operator Program:

[IOP](#)

A list of sites in the Innocent Owner/Operator Program (IOP) made available by Texas Commission of Environmental Quality (TCEQ) . IOP provides certificates to innocent owners or operators whom their properties are contaminated as a result of a release or migration of contaminants from a source or sources not located on the property, and they did not cause or contribute to the source or sources of contamination.

Government Publication Date: Mar 18, 2024

Brownfields Site Assessments Database:

[BROWNFIELDS](#)

The Texas Commission on Environmental Quality (TCEQ) Brownfields Site Assessment Program (BSA) layer is used to identify the geographic location of all "Active and Inactive BSA" sites within the State of Texas.

Government Publication Date: Mar 11, 2024

Texas Railroad Commission Brownfields:

[BROWN RRC](#)

List of sites which have participated or are currently participating in the Railroad Commission of Texas (RRC) Brownfields Response Program (BRP). The RRC BRP provides technical and financial support for redevelopment of abandoned oil and gas sites.

Government Publication Date: May 13, 2024

Municipal Setting Designation:

[MSD](#)

Municipal Setting Designations (MSD) list is maintained by Texas Commission on Environmental Quality (TCEQ). An MSD is an official state designation given to property within a municipality or its extraterritorial jurisdiction that certifies that designated groundwater at the property is not used as potable water, and is prohibited from future use as potable water because that groundwater is contaminated in excess of the applicable potable-water protective concentration level.

Government Publication Date: Apr 10, 2024

Tribal

Leaking Underground Storage Tanks (LUSTs) on Tribal/Indian Lands:

[INDIAN LUST](#)

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 6, which includes Texas, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Oct 6, 2017

Underground Storage Tanks on Tribal/Indian Lands:

[INDIAN UST](#)

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 6, which includes Texas, is provided by the United States Environmental Protection Agency (EPA).

Government Publication Date: Oct 24, 2023

Delisted Tribal Leaking Storage Tanks:

[DELISTED INDIAN LST](#)

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Oct 25, 2023

Delisted Tribal Underground Storage Tanks:

[DELISTED INDIAN UST](#)

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Oct 25, 2023

County

No County standard environmental record sources available for this State.

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data:

[PFAS GHG](#)

The U.S. Environmental Protection Agency's Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO₂e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. Includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures by DSSTox. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time.

Government Publication Date: May 9, 2024

On-Scene Coordinator Response Sites:

[OSC RESPONSE](#)

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.

Government Publication Date: Apr 4, 2024

Facility Registry Service/Facility Index:

[FINDS/FRS](#)

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Feb 9, 2024

Toxics Release Inventory (TRI) Program:

[TRIS](#)

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFOA/PFOS Contaminated Sites:

[PFAS NPL](#)

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Mar 19, 2024

Federal Agency Locations with Known or Suspected PFAS Detections:

[PFAS FED SITES](#)

List of Federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS), made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data. EPA outlines that these data are gathered from several federal entities, such as the Federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration, Department of Transportation, and Department of Energy. The dates this data was extracted for the PFAS Analytic Tools range from 2022 to 2024. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: Apr 1, 2024

SSEHRI PFAS Contamination Sites:

[PFAS SSEHRI](#)

This PFAS Contamination Site Tracker database is compiled by the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents, and this is cited in the tracker. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map, credited to the Northeastern University's PFAS Project Lab, Silent Spring Institute, and the PFAS-REACH team. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: <https://pfasproject.com/pfas-sites-and-community-resources/>

Government Publication Date: May 19, 2023

National Response Center PFAS Spills:

[ERNS PFAS](#)

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam," "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Apr 17, 2024

PFAS NPDES Discharge Monitoring:

[PFAS NPDES](#)

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: May 6, 2024

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory:

[PFAS TRI](#)

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

Perfluorinated Alkyl Substances (PFAS) Water Quality:

[PFAS WATER](#)

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

PFAS TSCA Manufacture and Import Facilities:

[PFAS TSCA](#)

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest :

[PFAS E-MANIFEST](#)

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Apr 29, 2024

PFAS Industry Sectors:

[PFAS IND](#)

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Apr 15, 2024

Hazardous Materials Information Reporting System:

[HMIRS](#)

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: Nov 26, 2023

National Clandestine Drug Labs:

[NCDL](#)

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act:

[TSCA](#)

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA:

[HIST TSCA](#)

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing:

[FTTS ADMIN](#)

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing:

FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List:

PRP

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Apr 22, 2024

State Coalition for Remediation of Drycleaners Listing:

SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRCD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS):

ICIS

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Government Publication Date: Aug 26, 2023

Drycleaner Facilities:

FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Jan 20, 2024

Delisted Drycleaner Facilities:

DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: Jan 20, 2024

Formerly Used Defense Sites:

FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

Government Publication Date: May 15, 2023

FUDS Munitions Response Sites:

FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: May 15, 2023

Former Military Nike Missile Sites:

FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents:

PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: May 6, 2024

Material Licensing Tracking System (MLTS):

MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites:

HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File:

MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: Feb 5, 2024

Surface Mining Control and Reclamation Act Sites:

SMCRA

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into eAMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: Jun 13, 2023

Mineral Resource Data System:

MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites:

LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Title II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Dec 12, 2023

Alternative Fueling Stations:

ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Apr 30, 2024

Superfunds Consent Decrees:

CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Sep 15, 2023

Air Facility System:

AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments:

SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Feb 29, 2024

Polychlorinated Biphenyl (PCB) Transformers:

PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers:

PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: May 23, 2024

State

Dry Cleaner Remediation Program Prioritization List:

PRIORITY CLEAN

The Texas Commission on Environmental Quality (TCEQ) implements environmental standards for dry cleaners. The Dry Cleaner Remediation Program (DCRP) establishes a prioritization list of dry cleaner sites and administers the Dry Cleaning Remediation fund to assist with remediation of contamination caused by dry cleaning solvents. Includes prioritized sites identified under the DCRP, as well as sites closed under the DCRP.

Government Publication Date: Mar 1, 2024

Registered Dry Cleaning Facilities:

DRYCLEANERS

The Texas Commission of Environment Quality (TCEQ) maintains a statewide registration list of current dry cleaners.

Government Publication Date: May 20, 2024

Delisted Drycleaning Facility List:

DELISTED DRYCLEANERS

A list of sites which were have been removed from the list of dry cleaning facilities registered with the Texas Commission of Environment Quality (TCEQ). Sites are removed when they are no longer used as dry cleaning facilities.

Government Publication Date: May 20, 2024

Groundwater Contamination Cases:

GWCC

List of sites present in the TCEQ Groundwater Contamination Viewer, which represent groundwater contamination cases in Texas as per TCEQ publication SFR-056 (current and some previous years). The Joint Groundwater Monitoring and Contamination Report (SFR-056) was designed and produced by the Texas Groundwater Protection Committee in fulfillment of requirements given in Section 26.406 of the Texas Water Code. The information does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

Government Publication Date: Dec 31, 2022

Historical Groundwater Contamination Cases:

GWCC HIST

List of sites from a Joint Groundwater Monitoring and Contamination Report provided by the Texas Commission on Environmental Quality (TCEQ) with the Railroad Commission of Texas (RRC). The annual report describes the status of groundwater monitoring activities conducted or required by each agency at regulated facilities or associated with regulated activities. The report provides a general overview of groundwater monitoring by participating members on a program by program basis. Groundwater contamination is broadly defined in the report as any detrimental alteration of the naturally occurring quality of groundwater.

Government Publication Date: Dec 31, 2018

Affected Property Assessment Reports:

APAR

List of sites for which an Affected Property Assessment Report has been submitted to the Texas Commission on Environmental Quality (TCEQ). An APAR is required when a person is addressing a release of COCs under 30 TAC Chapter 350, the Texas Risk Reduction Program (TRRP). The purpose of the APAR is to document all relevant affected property information to identify all release sources and chemicals of concern (COCs), determine the extent of all COCs, identify all transport/exposure pathways, and to determine if any response actions are necessary.

Government Publication Date: Mar 24, 2023

Spills Database:

SPILLS

List of Spills reported to Emergency Response Division of the Texas Commission on Environmental Quality (TCEQ).

Government Publication Date: Apr 24, 2024

Per- and Polyfluoroalkyl Substances (PFAS):

PFAS

A list of sites from the Central Registry and ARTS databases where Per- and Polyfluoroalkyl substances (PFAS) containing materials may be of concern. This list is made available by the Remediation Division of the Texas Commission on Environmental Quality (TCEQ).

Government Publication Date: Nov 7, 2023

Industrial and Hazardous Waste Sites with Corrective Actions:

IHW CORR ACTION

List of Industrial and Hazardous Waste sites with Corrective Actions made available by the Texas Commission of Environment Quality (TCEQ). The mission of the industrial and hazardous waste (IHW) corrective action program is to oversee the cleanup of sites contaminated from industrial and municipal hazardous and industrial nonhazardous wastes.

Government Publication Date: Mar 4, 2024

Land Application Permits:

LAND APPL

Texas Land Application Permits are a requirement from the Texas Commission on Environmental Quality for any domestic facility that disposes of treated effluent by land application such as surface irrigation, evaporation, drainfields or subsurface land application.

Government Publication Date: Apr 18, 2024

Notice of Violation:

NOV

List of sites that have been sent a Notice of Violation (NOV) by the Texas Commission on Environmental Quality (TCEQ) Office of Compliance and Enforcement. A Notice of Violation is sent out when a site falls out of compliance and has a prescribed time period to return to compliance.

Government Publication Date: May 2, 2022

Notices of Enforcement:

NOE

Listing of investigations resulting in a Notice of Enforcement (NOE), made available by the Texas Commission on Environmental Quality, Office of Compliance & Enforcement. Multiple violations may be due to identified noncompliance with different regulatory requirements (citations).

Government Publication Date: Jun 15, 2023

Environmental Liens Listing:

LIENS

List of sites/facilities against which the Texas Commission on Environmental Quality (TCEQ) has placed liens to recover cleanup costs associated with Federal or State Superfund cleanup activities.

Government Publication Date: Mar 5, 2024

Court Orders & Administrative Orders:

ORD

List of sites that have been sent an Administrative Order or Court Order by the Texas Commission on Environmental Quality (TCEQ) Office of Compliance and Enforcement.

Government Publication Date: Mar 14, 2024

Inactive RCRA and Non-RCRA Facilities:

HIST RCRA NONRCRA

A list of inactive or no longer registered Resource Conservation and Recovery Act (RCRA) and non-RCRA facilities, provided by the Texas Commission on Environmental Quality (TCEQ). This list includes both hazardous and non-hazardous waste generators, transporters, and receivers. If an unregistered/inactive industrial site generates less than 220 pounds of hazardous or Class 1 industrial waste, it does not have to notify or report to the TCEQ.

Government Publication Date: Mar 11, 2024

Recycle Texas Online Program:

RTOL

A list of recycling facilities under the Recycle Texas Online service/program made available by the Texas Commission of Environmental Quality (TCEQ). This program allowed facilities to self-report and post their own company/facility information. This program is no longer maintained and these data will not be updated.

Government Publication Date: Oct 10, 2011

Underground Injection Control:

UIC

List of underground injection control (UIC) permits in the Texas Commission on Environmental Quality (TCEQ) Central Registry database. Includes Class I, Class III, Class IV, Class 5, and non permitted UICs; does not include injection wells regulated by the Railroad Commission of Texas.

Government Publication Date: Jan 24, 2024

Industrial and Hazardous Waste - Generators:

IHW GENERATOR

List of active, inactive, and post-closure Industrial and Hazardous Waste Generator Facilities permitted by or registered with the Texas Commission on Environmental Quality (TCEQ) under the Texas Administrative Code (TAC) Title 30 Chapter 335.

Government Publication Date: Mar 14, 2024

Industrial and Hazardous Waste - Transporters:

IHW TRANSPORT

List of active, inactive, and post-closure Industrial and Hazardous Waste Transporter Facilities permitted by or registered with the Texas Commission on Environmental Quality (TCEQ) under the Texas Administrative Code (TAC) Title 30 Chapter 335.

Government Publication Date: Mar 14, 2024

New Source Review (NSR) Permits:

AIR PERMITS

A list of facilities that have applied for New Source Review air permits made available by the Texas Commission on Environmental Quality (TCEQ).

Government Publication Date: Mar 19, 2024

Point Source Emissions Inventory:

EMISSIONS

A list of Texas Commission on Environmental Quality (TCEQ) Point Source Emissions Inventory sites. The Point Source Emissions Inventory is an annual survey of chemical plants, refineries, electric utility plants and other industrial sites that meet the reporting criteria in the TCEQ emissions inventory rule (30 TAC §101.10Exit the TCEQ).

Government Publication Date: Sep 13, 2023

Tier 2 Report:

TIER 2

Historical listing of facilities in Texas that store hazardous chemicals and are required to report them under the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986. This data was provided by the Department of State Health Services (DSHS) and contains facility reports for the 2005 through the 2012 calendar years. Since 2012, agencies are unable to release this listing, as Tier II information is confidential under Texas Government Code Chapter 418, the Texas Disaster Act (TDA). Site specific inquiries can be made to the Texas Commission on Environmental Quality Tier II Chemical Reporting Division.

Government Publication Date: Dec 31, 2012

Edwards Aquifer Permits:

EDWARDS AQUIFER

Listing of Edwards Aquifer permits made available by the Texas Commission on Environmental Quality (TCEQ). The Edwards Aquifer is home to diverse fauna and is a drinking water source for the city of San Antonio and surrounding central Texas communities. Before building on the recharge, transition, or contributing zones of the Edwards Aquifer, a plan must first be reviewed and approved by the TCEQ Edwards Aquifer Protection Program.

Government Publication Date: Jul 6, 2023

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX E

HISTORICAL RESEARCH DOCUMENTATION

Historical Chain of Title
Historical Aerial Photography
Historical Topographic Maps

RPS TITLE, LLC

P.O. Box 1176, Kyle, Texas 78640 Telephone No. 281-419-5954

Date: May 14, 2024

Client: Horizon Environmental Services

Attn: James Pittman

RPS #: 202401351

Client Search #: 202401351

Through Date: May 5, 2024

SUBJECT PROPERTY:

Parcel No. 63974, Being 44 acres of land in the F. GARCIA SURVEY, ABSTRACT 141, Guadalupe County, Texas.

Parcel No. 63975, Being 23.50 acres of land in the F. GARCIA SURVEY, ABSTRACT 141, Guadalupe County, Texas.

Deed of Gift

Grantee(s): Larry Robert Neill

Grantor(s): Berta E. Neill, a Widow

Volume/Page: 1054-0449

File Date: 08/13/1993

Probate

Grantee(s): Mrs. Berta Neill

Grantor(s): The Estate of George G. Schumacher, deceased

Volume/Page: 478-562

File Date: 12/21/1973

Note: Mr. Schumacher died October 18, 1972

Probate

Grantee(s): George G. Schumacher

Grantor(s): The Estate of Emilie Schumacher, deceased

Volume/Page: 478-547

File Date: 12/21/1973

Note: Mrs. Schumacher died August 2, 1970

Warranty Deed (1/2 interest)

Grantee(s): Berta Neill

Grantor(s): George Schumacher

Volume/Page: 456-569

File Date: 08/14/1972

Deed (124 acres)
Grantee(s): George Schumacher
Grantor(s): R.N. Briggs and wife, Frances Briggs
Volume/Page: 257-468
File Date: 04/24/1952

Warranty Deed (124 acres out of 232.1 acres)
Grantee(s): R.N. Briggs and wife, Francis Briggs
Grantor(s): Ben C. Krueger
Volume/Page: 250-428
File Date: 03/12/1951

Warranty Deed (232.1 acres out of 506 acres)
Grantee(s): Ben C. Krueger
Grantor(s): C.A. Krueger and wife, Ida Krueger
Volume/Page: 227-487
File Date: 10/16/1947

Deed (506 acres)
Grantee(s): C.A. Krueger
Grantor(s): Edgar Weyel
Volume/Page: 227-492
File Date: 10/16/1947

EASEMENTS:

No easements of environmental concern noted during research.

LEASES:

None noted during research.

ENVIRONMENTAL LIENS:

None noted during research.

This search is provided to the above client for use in the historical background analysis of the subject property. Its use by third parties for any purpose is strictly prohibited. The information contained herein was obtained from the Deed Records of Guadalupe County, Texas and Real Property Services does not warranty or guaranty the accuracy or content of these records.



HISTORICAL AERIALS

Project Property: Neill 67.5-Acre Property

Schmoekel Road

Marion TX

Project No: 24110.001PI

Requested By: Horizon Environmental Services

Order No: 24052900480

Date Completed: May 31, 2024

Aerial Maps included in this report are produced by the sources listed above and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property. ERIS provides no warranty of accuracy or liability. The information contained in this report has been produced using aerial photos listed in above sources by ERIS Information Inc. (in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS'. The maps contained in this report do not purport to be and do not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

Environmental Risk Information Services

A division of Glacier Media Inc.

1.866.517.5204 | info@erisinfo.com | erisinfo.com

| Date | Source | Scale | Comments |
|-------------|---|--------------|----------------------------|
| 1938 | Agricultural Stabilization & Conserv. Service | 1" = 500' | |
| 1944 | Agricultural Stabilization & Conserv. Service | 1" = 500' | |
| 1950 | Agricultural Stabilization & Conserv. Service | 1" = 500' | |
| 1959 | Agricultural Stabilization & Conserv. Service | 1" = 500' | |
| 1964 | Agricultural Stabilization & Conserv. Service | 1" = 500' | Photo Index-Best Available |
| 1973 | United States Geological Survey | 1" = 500' | |
| 1983 | United States Geological Survey | 1" = 500' | |
| 1991 | Texas Department of Transportation | 1" = 500' | |
| 1995 | United States Geological Survey | 1" = 500' | |
| 2004 | United States Department of Agriculture | 1" = 500' | |
| 2005 | United States Department of Agriculture | 1" = 500' | |
| 2008 | United States Department of Agriculture | 1" = 500' | |
| 2010 | United States Department of Agriculture | 1" = 500' | |
| 2012 | United States Department of Agriculture | 1" = 500' | |
| 2014 | United States Department of Agriculture | 1" = 500' | |
| 2016 | United States Department of Agriculture | 1" = 500' | |
| 2018 | United States Department of Agriculture | 1" = 500' | |
| 2020 | United States Department of Agriculture | 1" = 500' | |
| 2023 | Maxar Technologies | 1" = 500' | |

Environmental Risk Information Services

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500
Feet



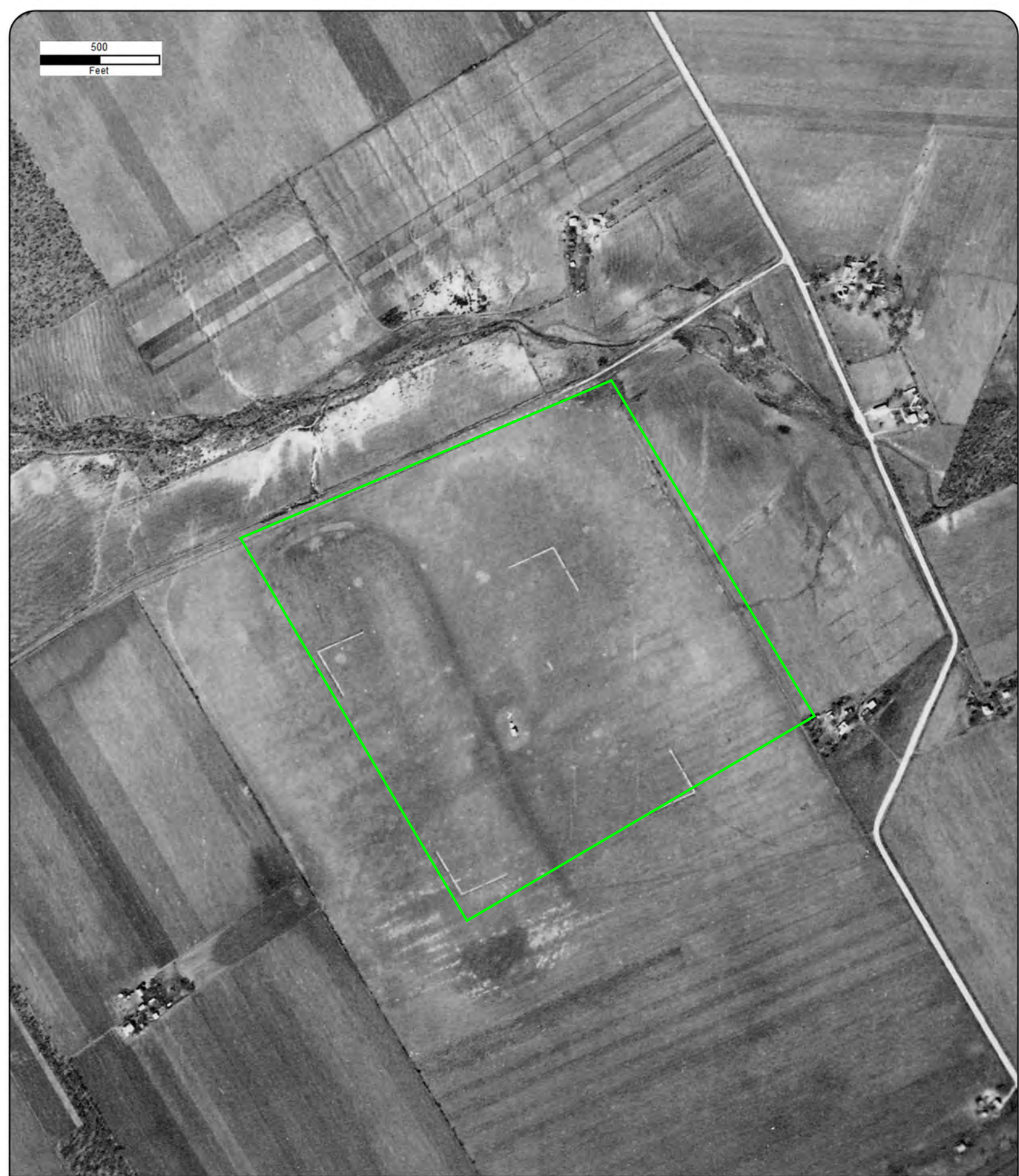
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Scale: 1" = 500'
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Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 1944
Source: ASCS
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 1950
Source: ASCS
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 1959
Source: ASCS
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480



500
Feet

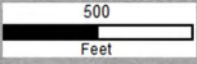


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Comment: Photo Index-Best Available

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Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services



Year: 1973
Source: USGS
Scale: 1" = 500'
Comment:

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Approx Center: -98.14920051,29.53169768

Order No: 24052900480



500
Feet

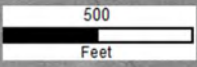


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Order No: 24052900480

HorizonTM
Environmental Services



Year: 1991
Source: TXDOT
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480



500
Feet



Year: 1995
Source: USGS
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 2004
Source: USDA
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 2005
Source: USDA
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 2008
Source: USDA
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 2010
Source: USDA
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 2012
Source: USDA
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



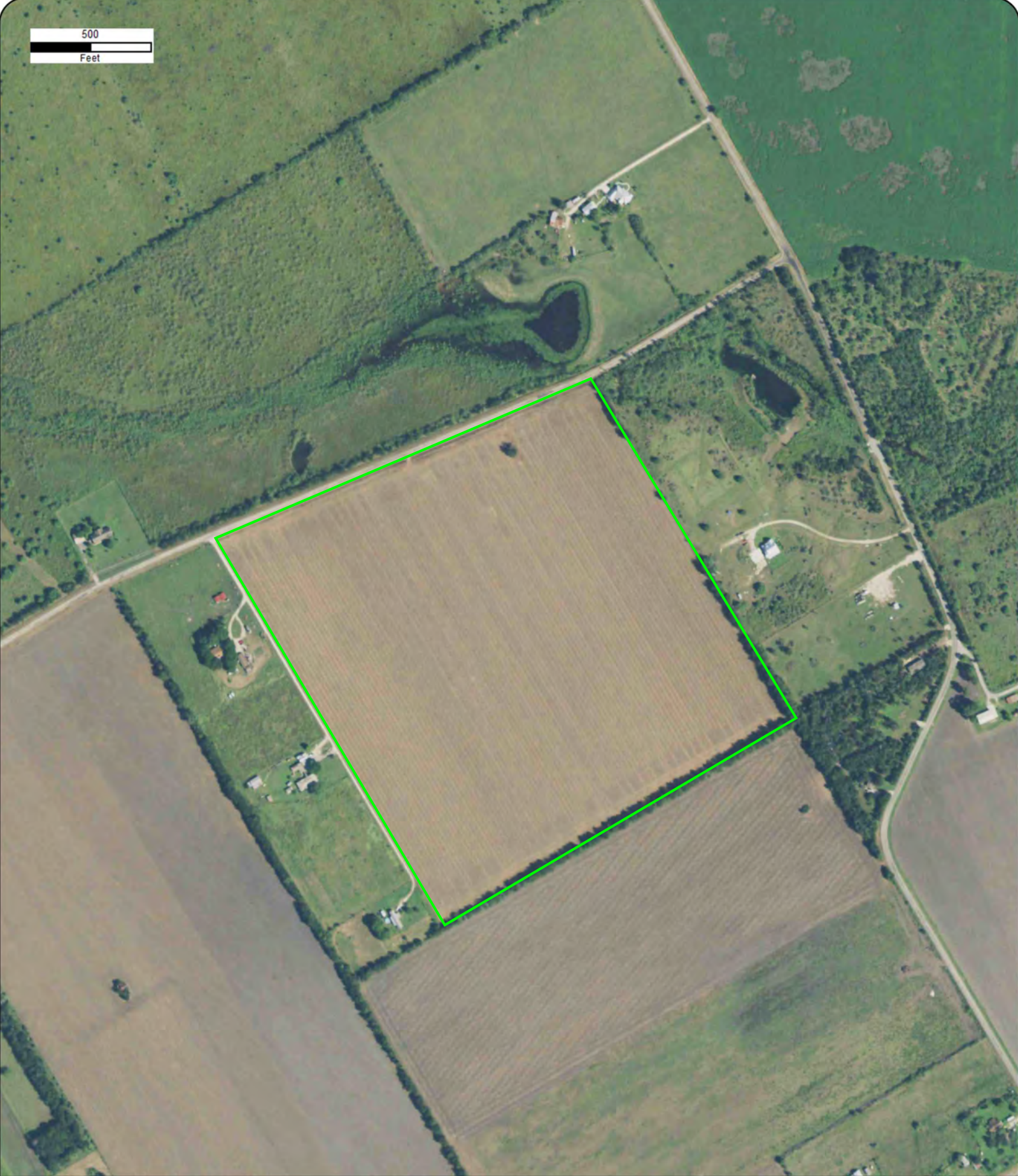
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Source: USDA
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 2016
Source: USDA
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 2018
Source: USDA
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 2020
Source: USDA
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480

HorizonTM
Environmental Services

500
Feet



Year: 2023
Source: MAXAR
Scale: 1" = 500'
Comment:

Address: Schmoekel Road, Marion, TX
Approx Center: -98.14920051,29.53169768

Order No: 24052900480





TOPOGRAPHIC MAPS

Project Property: Neill 67.5-Acre Property

Schmoekel Road
Marion TX None

Project No: 24110.001PI

Requested By: Horizon Environmental Services

Order No: 24052900480

Date Completed: May 29, 2024

We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

| Year | Map Series |
|------|------------|
| 1927 | 15 |
| 1958 | 7.5 |
| 1973 | 7.5 |
| 1992 | 7.5 |
| 2016 | 7.5 |
| 2019 | 7.5 |

Topographic Map Symbology for the maps may be available in the following documents:

Pre-1947

[Page 223 of 1918 Topographic Instructions](#)

[Page 130 of 1928 Topographic Instructions](#)

1947-2009

[Topographic Map Symbols](#)

2009-present

[US Topo Map Symbols](#)

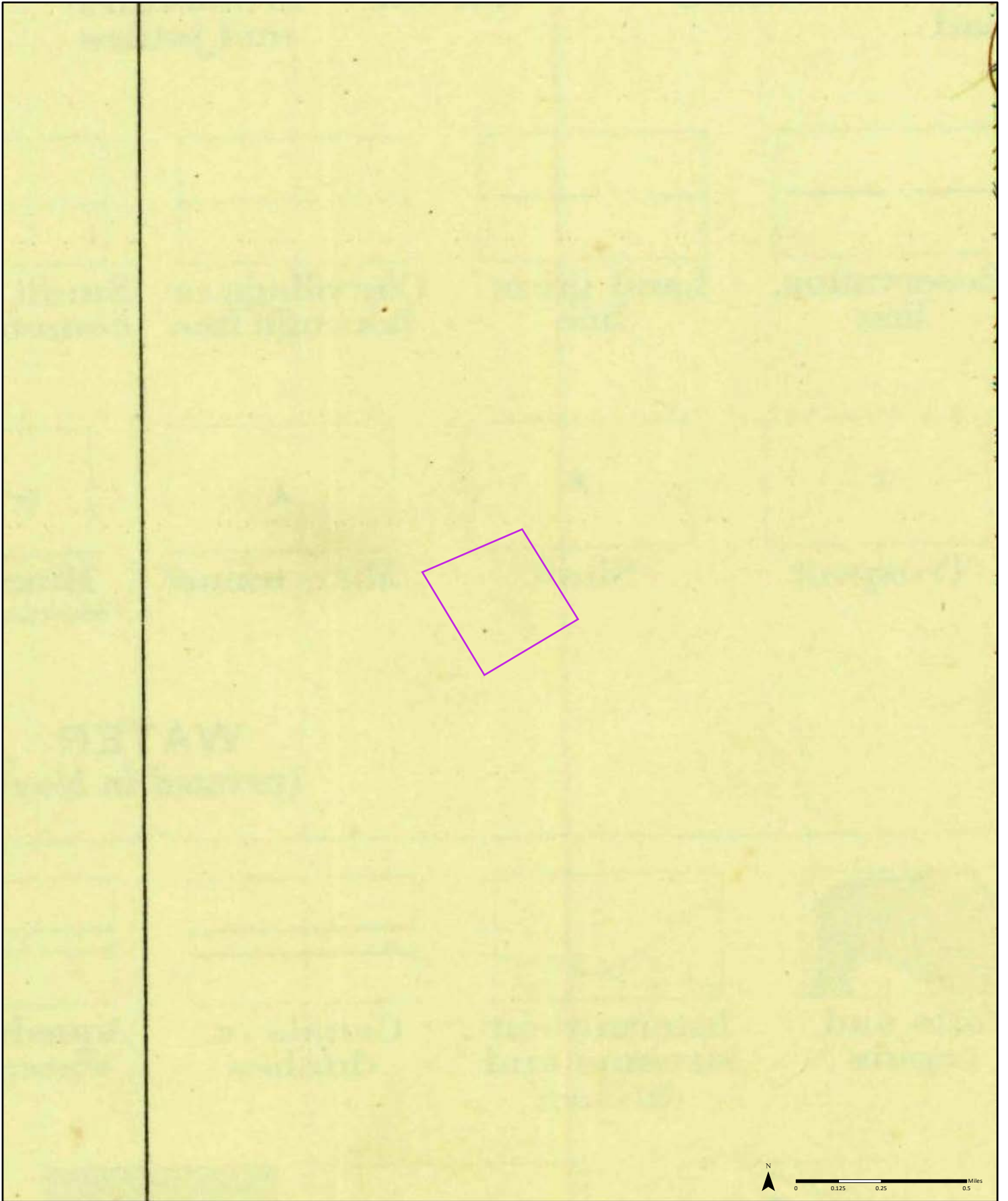
Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.

No warranty of Accuracy or Liability for ERIS: The information contained in this report has been produced by ERIS Information Inc.(in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS', using Topographic Maps produced by the USGS. This maps contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present you with information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

Environmental Risk Information Services

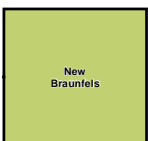
A division of Glacier Media Inc.

1.866.517.5204 | info@erisinfo.com | erisinfo.com

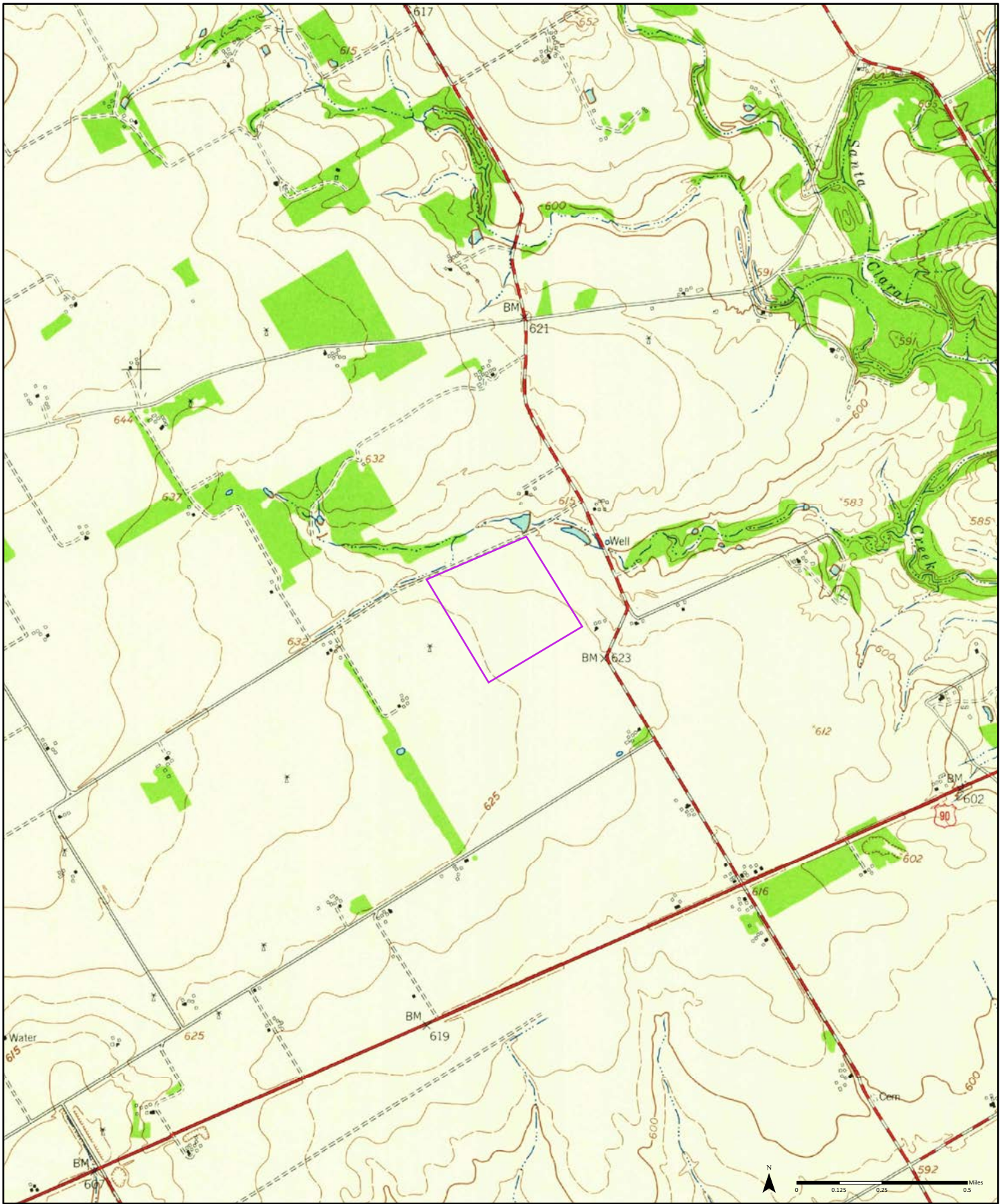


1927

Order No. 24052900480



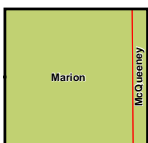
Available Quadrangle(s): New Braunfels, TX



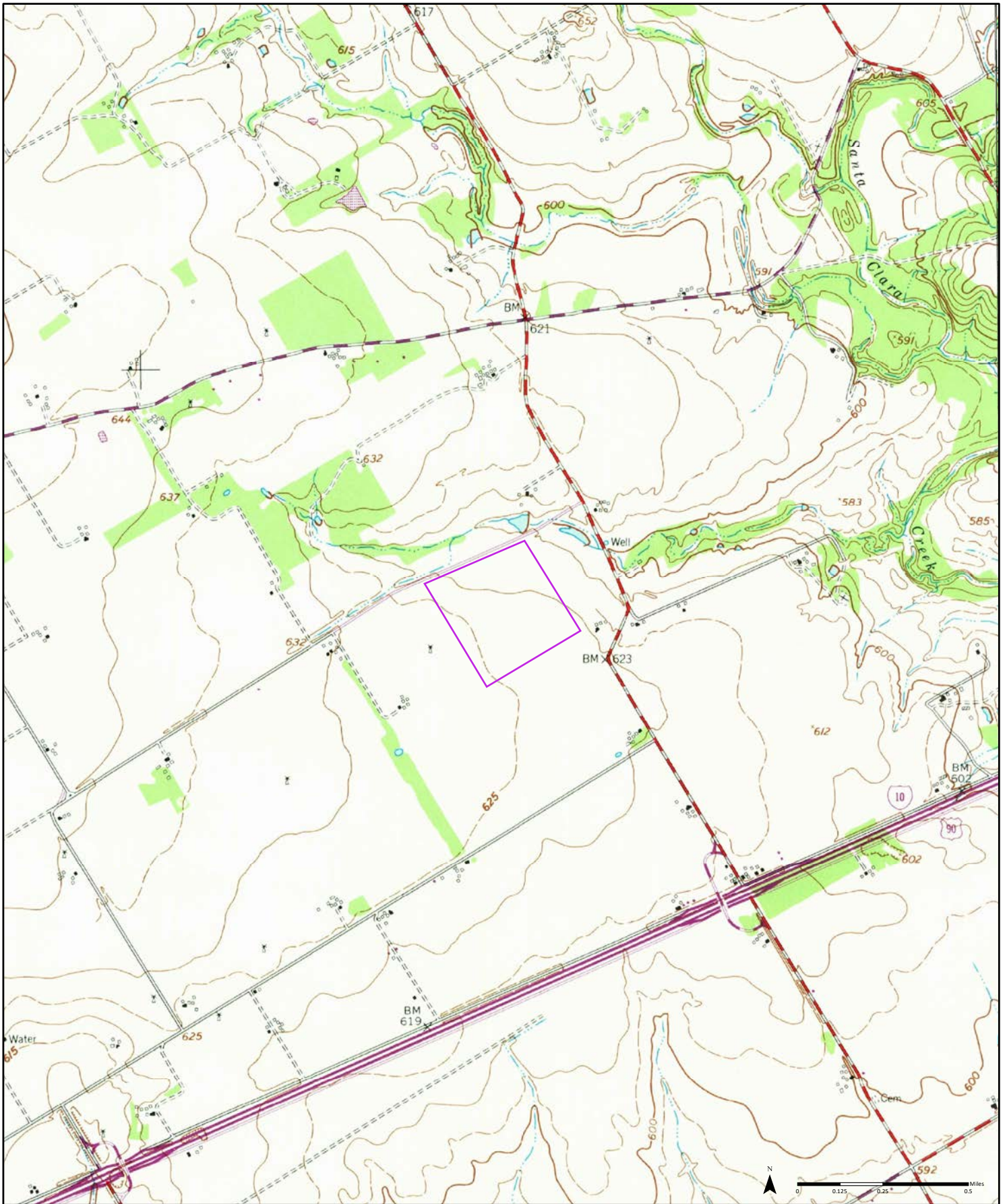
1958

(1-1958) Aerial Photo Year: 1956 (2-1958) Aerial Photo Year: 1956

Order No. 24052900480



Available Quadrangle(s): Marion, TX (2-1958)
 McQueeney, TX (1-1958)

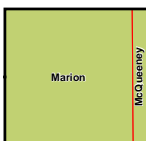


1973

(1-1973) Aerial Photo Year: 1973
 Photo Revision Year: 1973

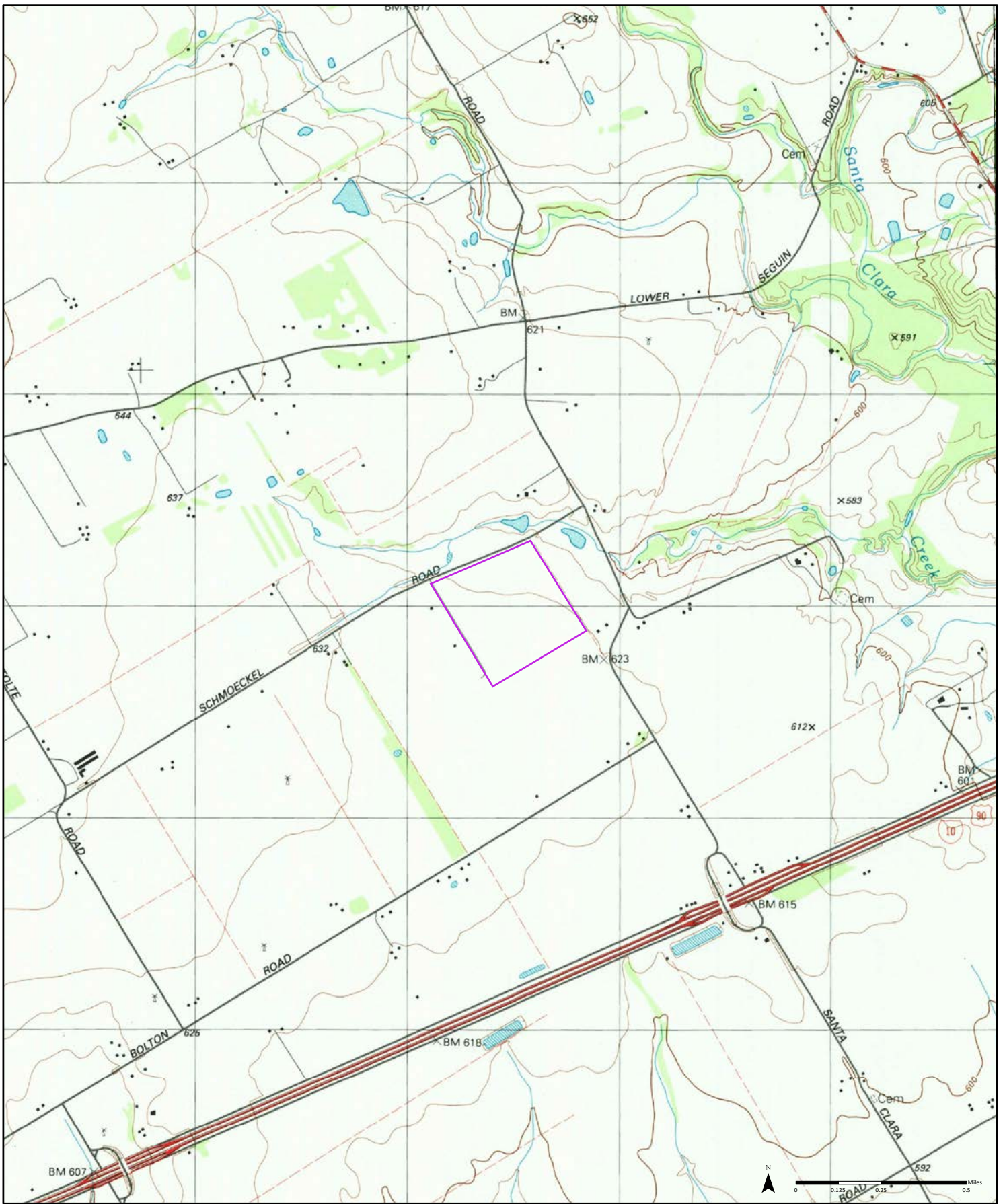
(2-1973) Aerial Photo Year: 1973
 Photo Revision Year: 1973

Order No. 24052900480



Available Quadrangle(s): Marion, TX (1-1973)
 McQueeney, TX (2-1973)

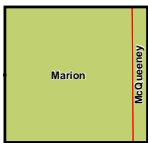




1992

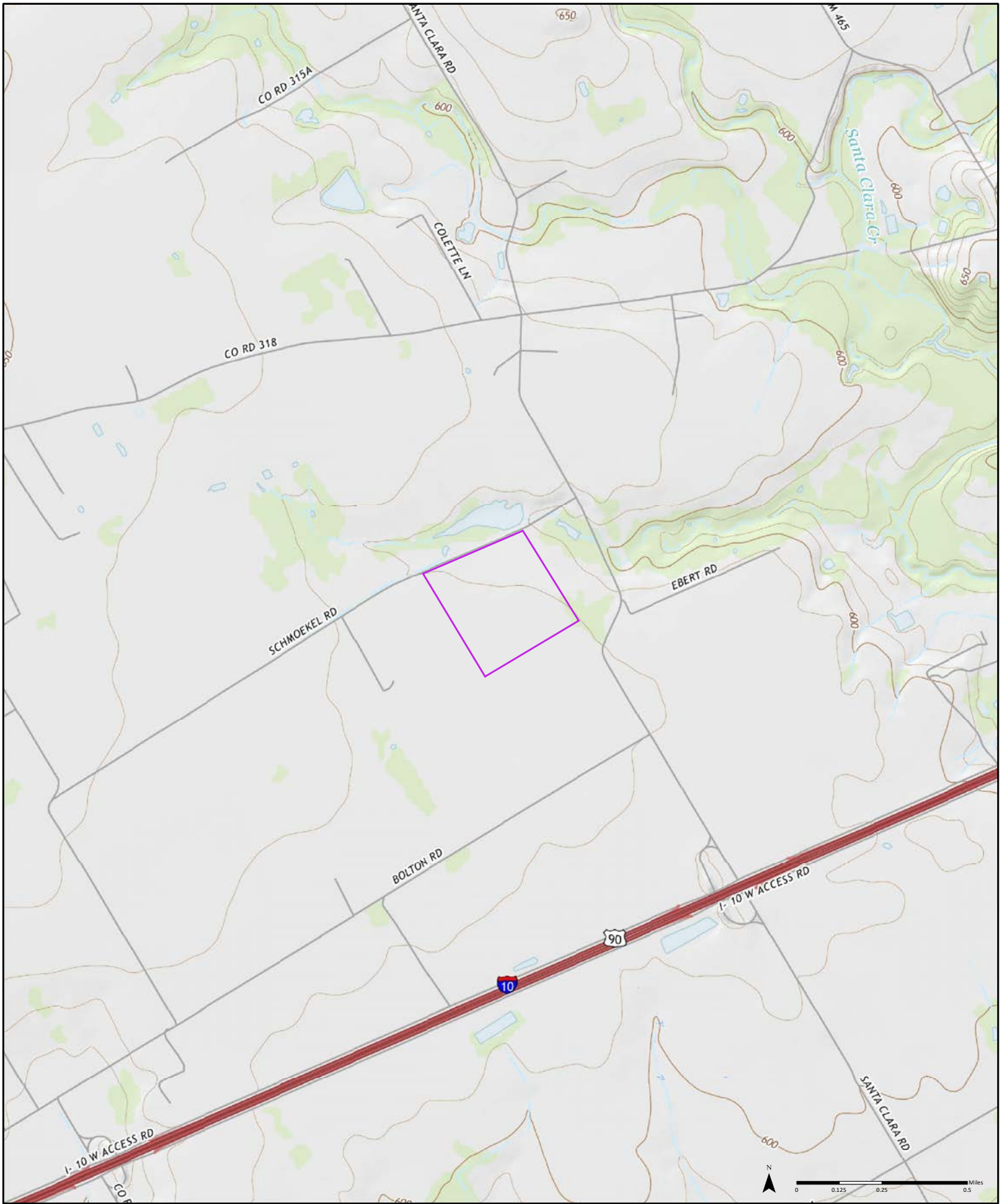
(1-1992) Aerial Photo Year: 1986
 (2-1973) Aerial Photo Year: 1973
 Photo Revision Year: 1973

Order No. 24052900480



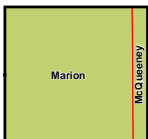
Available Quadrangle(s): Marion, TX (1-1992)
 McQueeney, TX (2-1973)





2016

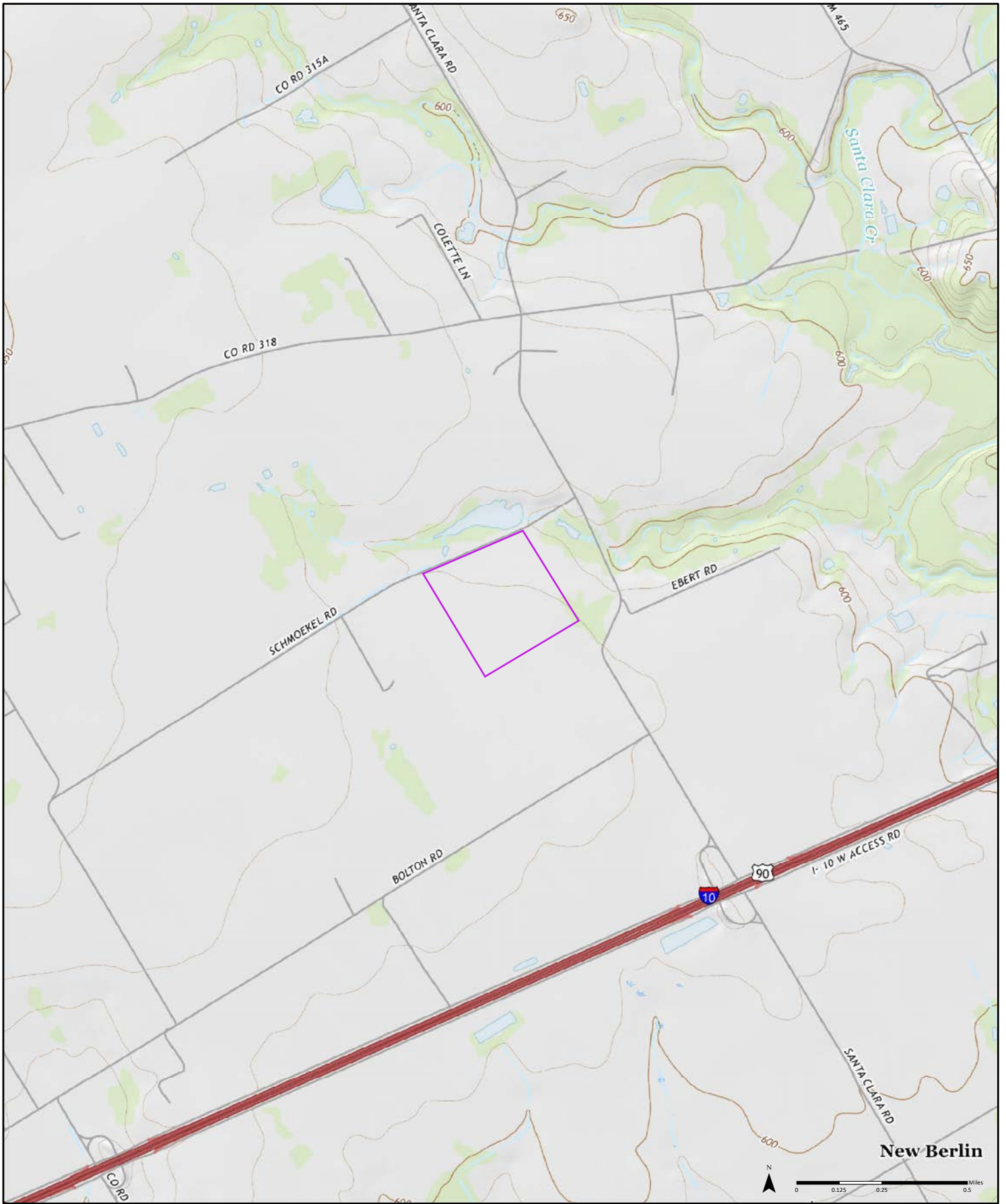
Order No. 24052900480



Available Quadrangle(s): Marion, TX
 McQueeney, TX

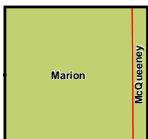
Source: USGS 7.5 Minute Topographic Map





2019

Order No. 24052900480



Available Quadrangle(s): Marion, TX
McQueeney, TX

Source: USGS 7.5 Minute Topographic Map



APPENDIX F
INTERVIEW DOCUMENTATION

Horizon Environmental Services

Horizon Use Only

Proj. Name: _____

HJN: _____ PM: _____

**PHASE I ENVIRONMENTAL SITE ASSESSMENT
LANDOWNER/OCCUPANT INTERVIEW QUESTIONNAIRE**

Instructions:

- Complete Landowner/Occupant Information section below.
- Respond to all questions (1 through 25).
- Sign on page 4 and return to: sflesher@horizon-esi.com

Landowner/Occupant Information

| | | | |
|-------------------|------------------------|---------------|---|
| Name: | LARRY R NEILL | LINDA S NEILL | Relationship to Property: |
| Representing: | ROSENBLATT LAW | | <input checked="" type="checkbox"/> Current Owner |
| | (Name of firm, if any) | | <input type="checkbox"/> Site Manager |
| Title: | OWNERS | | <input type="checkbox"/> Occupant |
| Address: | 5838 LOWER SEGUIN RD | | <input type="checkbox"/> Past Owner |
| City, State, ZIP: | CIBOLO, TX 78108 | | <input type="checkbox"/> Other: |
| Phone: | 210-273-1204 | | |
| E-mail: | LSN91678@GMAIL.COM | | |

1. How long have you owned, occupied, or been associated with the Property?

LAND IN FAMILY SINCE APPROXIMATELY 1951. INHERITED IN APPROXIMATELY 1992

2. Please describe in general what you know about the current use of the Property:

SINCE 1992, USED FOR GROWING CORN

3. Please describe in general what you know about any past uses of the Property:

PRIOR TO 1992, FAMILY RAISED CATTLE

4. Please describe in general what you know about the current use of adjoining properties:

APPEARS ADJOINING NEIGHBORS ONLY LIVE ON LAND NOW

5. Please describe in general what you know about any past uses of adjoining properties:

PREVIOUS ADJOINING PROPERTY OWNERS RASIED CATTLE

6. Have you observed evidence of or do you have knowledge of any current or previous use of the Property or any adjoining property for industrial uses?
-
- Yes (Explain below)
-
- No

7. Have you observed evidence of or do you have knowledge of any current or previous use of the Property or any adjoining property as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?
-
- Yes (Explain below)
-
- No

8. Have you observed evidence of or do you have knowledge of any current or previous storage or use of damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers greater than 5 gallons in volume or 50 gallons in the aggregate on the Property?

Yes (Explain below) No

9. Have you observed evidence of or do you have knowledge of any current or previous storage or use of industrial drums (typically 55-gallon) or sacks of chemicals on the Property?

Yes (Explain below) No

10. Have you observed evidence of or do you have knowledge that fill dirt has been brought onto the Property that originated from a contaminated site or that is of an unknown origin?

Yes (Explain below) No

11. Have you observed evidence of or do you have knowledge of any current or previous pits, ponds, or lagoons located on the Property in connection with waste treatment or waste disposal?

Yes (Explain below) No

12. Have you observed evidence of or do you have knowledge of any current or previous stained soil on the Property? Yes (Explain below) No

13. Have you observed evidence of or do you have knowledge of any current or previous registered or unregistered storage tanks (above or under ground) located on the Property?

Yes (Explain below) No

14. Have you observed evidence of or do you have knowledge of any current or previous vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the Property? Yes (Explain below) No

15. Have you observed evidence of or do you have knowledge of any current or previous leaks, spills, or staining by substances other than water, or foul odors, associated with any flooring, drains, walls, ceilings, or exposed grounds on the Property? Yes (Explain below) No

16. a. To your knowledge, is the Property served by a private well or non-public water system?

Yes (answer parts b. and c.) No (proceed to item no. 17) Unknown (proceed to item no. 17)

b. Have you observed evidence of or do you have knowledge of contaminants being identified in the well or system that exceed guidelines applicable to the water system?

Yes (Explain below) No

c. Have you observed evidence of or do you have knowledge of the well or system being designated as contaminated by any government environmental/health agency?

Yes (Explain below) No

17. Do you have knowledge of any environmental liens or governmental notifications regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products on the Property? Yes (Explain below) No

18. Do you know of any Activity/Use Limitations (AULs) such as land use restrictions, engineering controls, or institutional controls that are in place for the Property, or filed/recorded in a registry under federal, tribal, state, or local law? Yes (Explain below) No

19. Have you ever been informed of the past or current existence of hazardous substances or petroleum products or environmental violations with respect to the Property or any facility located on the Property?

Yes (Explain below) No

20. Are you aware of commonly known or reasonably ascertainable information about the Property that would help the Environmental Professional to identify conditions indicative of releases or threatened releases of hazardous substances or materials? For example,

a. Do you know the past uses of the Property? Yes (Explain below) No

b. Do you know of specific chemicals that are present or once were present at the Property?

Yes (Explain below) No

c. Do you know of spills or other chemical releases that have taken place at the Property?

Yes (Explain below) No

d. Do you know of any environmental cleanups that have taken place at the Property?

Yes (Explain below) No

[Empty text box for explanation]

21. Do you have any knowledge of an environmental assessment of the Property or facility that indicated the presence of hazardous substances or petroleum products on, or contamination of, the Property, or recommended further assessment of the Property? Yes (Explain below) No

[Empty text box for explanation]

22. Do you know of any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Property?

Yes (Explain below) No

[Empty text box for explanation]

23. Have you observed evidence of or do you have knowledge of the discharge of wastewater (not including sanitary waste or stormwater) from the Property onto or adjacent to the Property and/or into a sanitary waste or stormwater system? Yes (Explain below) No

[Empty text box for explanation]

24. Have you observed evidence of or do you have knowledge that any hazardous substances or petroleum products, cattle dipping troughs, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials have been dumped above grade, buried, and/or burned on the Property?

Yes (Explain below) No

[Empty text box for explanation]

25. Have you observed evidence of or do you have knowledge of any transformers, capacitors, or hydraulic equipment currently or previously located on the Property for which there are any records indicating the presence of PCBs? Yes (Explain below) No

[Empty text box for explanation]

Form Completed by

Signature:

Larry R. Neill

DocuSigned by:

Linda S. Neill

Please Return to:

Print Name: LARRY R NEILL;

LINDA S NEILL

sflesher@horizon-esi.com

Date: 5/24/2024

5/24/2024

5/24/2024

This form has been developed using the standards established in ASTM Practice E1527-21 for the purpose of supporting a Phase I Environmental Site Assessment to satisfy the federal "All Appropriate Inquiries" rule.

References:

(ASTM) American Society for Testing and Materials. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Designation E1527-21. West Conshohocken, Pennsylvania: ASTM, 2021.

US Environmental Protection Agency. "Standards and Practices for All Appropriate Inquiries; Final Rule." 40 CFR Part 312. 1 November 2005.

APPENDIX G
PHASE I ESA
SITE RECONNAISSANCE CHECKLIST

**Horizon Environmental Services
Phase I ESA Site Reconnaissance Checklist**

Project Name: Neill 67.5-Acre Property Job No.: 24110.001PI Date of Site Visit: 3 May 2024
 Location: Schmoekel Road, Marion, Guadalupe County Acreage: 67.5
 Site Contact: Michael Bernhard Inspector(s): James Pittman

| 1) Land Use | Site | Adjacent | | | | 2) Topography | 3) Site Access |
|--------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|--|
| | | N | S | E | W | | |
| Vacant | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> Flat | <input type="checkbox"/> Locked fence |
| Residential | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> Rolling | <input type="checkbox"/> Security |
| Commercial | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Steep | <input checked="" type="checkbox"/> Open |
| Agricultural | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> _____ | <input type="checkbox"/> Denied |
| Industrial | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| Other: _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |

| | | |
|---|---|---|
| 4) Vegetation <input type="checkbox"/> Sparse <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Dense <input type="checkbox"/> Void/dead areas <input type="checkbox"/> None | 5) Sewage Treatment <input checked="" type="checkbox"/> None <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown <input type="checkbox"/> _____ | 6) Water Supply <input type="checkbox"/> None <input type="checkbox"/> Well(s) <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Filled hand dug well |
| 7) Buildings <input type="checkbox"/> Occupied <input type="checkbox"/> Accessed <input checked="" type="checkbox"/> None <input type="checkbox"/> Evidence of previous structures <input type="checkbox"/> _____ | 8) Easements <input type="checkbox"/> Pipeline <input checked="" type="checkbox"/> Electric <input type="checkbox"/> Water Supply <input type="checkbox"/> Sewer Service <input type="checkbox"/> _____ | 9) Hydrologic Features <input type="checkbox"/> Ditch <input type="checkbox"/> Creek <input type="checkbox"/> Bayou <input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> Seep <input type="checkbox"/> Spring <input type="checkbox"/> Other natural feature <input type="checkbox"/> Other manmade feature <input type="checkbox"/> _____ |
| 10) Roads <input type="checkbox"/> Paved, onsite <input checked="" type="checkbox"/> Paved, bordering <input type="checkbox"/> Unpaved, onsite <input checked="" type="checkbox"/> Unpaved, bordering | 11) Estimated Percent of Total Acreage _____ % Buildings/Structures _____ % Roads/Parking (paved or unpaved) <u>100</u> % Agricultural/Vacant _____ % _____ | |

Other ASTM-Specific Features

| | None | On-Site | Adjacent | | None | On-Site | Adjacent |
|---|-------------------------------------|-------------------------------------|--------------------------|--|-------------------------------------|--------------------------|--------------------------|
| Exterior: | | | | 21) Hazardous substance/petroleum products or containers | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12) Pits, ponds, or lagoons | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 22) Storage drums (5+ gallon capacity) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13) Stained soil or pavement | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 23) Unidentified substance containers | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14) Stressed vegetation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 24) Storage tanks, vent pipes or fill pipes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15) Oil/gas wells or pipelines | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 25) Electric/hydraulic equipment (potential PCBs) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16) Water wells | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 26) Strong, pungent, or noxious odors | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17) Septic systems | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 27) Suspect pools of liquid | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18) Debris piles/evidence of solid waste disposal | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Interior: | | | |
| 19) Evidence of wastewater discharges | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 28) Heating/cooling facilities | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Exterior OR Interior: | | | | 29) Stains or corrosion on floors, walls, or ceilings | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20) Evidence of current or past industrial/manufacturing uses | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 30) Drains/sumps | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Phase I ESA Site Reconnaissance Checklist (continued)

Project Name: Neill 67.5-Acre Property

Job No.: 24110.001PI

Date of Site Visit: 3 May 2024

Pg. 1
Item
No.

Comment:

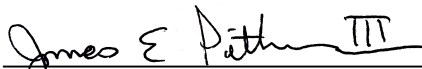
6,16 Evidence of an abandoned hand-dug water well was observed on the northern portion of the Property. The well was filled to approximately 4 feet from the surface with sediment.

8,25 Overhead powerlines were observed adjacent to the northern and western Property boundaries. Pole-mounted electrical transformers serving adjacent single-family residences were observed on the powerlines along the western boundary. Evidence of a buried cable line was observed adjacent to the northern Property boundary.

10 Schmoekel Road is located adjacent to the northern Property boundary. A gravel-based road providing access to adjacent homesites is located along the western Property boundary.

Other:

Documented by:



Signature

James E. Pittman III

Printed name

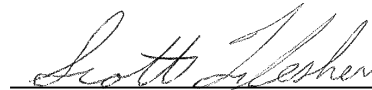
Ecological Project Manager, EP

Title

3 May 2024

Date

Reviewed by:



Signature

Scott Flesher

Printed name

VP, Ecological Program Manager, EP

Title

3 May 2024

Date

APPENDIX H

QUALIFICATIONS OF THE ENVIRONMENTAL PROFESSIONAL

Environmental Services

Education

BS, Environmental Science, Texas A&M University, Corpus Christi

Areas of Relevant Expertise

- ✓ Wetland Determination/Delineation
- ✓ Section 404/10 Permitting
- ✓ USACE HGM, TXRAM, and Stream Analysis
- ✓ Endangered Species Habitat Assessments, Surveys, and Permitting
- ✓ Mitigation Plans and Monitoring
- ✓ Phase I ESA (ASTM Practice E1527-21)
- ✓ TxDOT Categorical Exclusion and EAs
- ✓ Public Meetings and Coordination
- ✓ ESRI ArcGIS Desktop

Qualifications and Training

- ✓ Wetland Delineator Certification Program, Wetland Training Institute
- ✓ USFWS Permit ESPE0004032 (Golden-cheeked warbler)
- ✓ Qualified Environmental Professional (EP) under ASTM Practice E1527-21
- ✓ Texas Freshwater Mussel Identification Workshops and Classes

TxDOT Precertifications

- 1.9.1 Geographic Information System (GIS) and Data Analysis
- 2.3.1 Wetland Delineation
- 2.3.2 Conditional/Functional Assessment
- 2.4.1 Nationwide Permit
- 2.4.2 Clean Water Act Section 404 Permits
- 2.4.3 US Coast Guard and Corps of Engineers Permits
- 2.6.2 Impact Evaluation Assessments (Retired Category)
- 2.6.5 Protected Species Evaluations
- 2.13.1 Hazardous Materials Initial Site Assessment

Years of Experience

With This Firm: 17
With Other Firms: 2

Experience Summary

Mr. Flesher is a graduate of Texas A&M University – Corpus Christi, where he studied Environmental Science. As the Vice President for Horizon™, Mr. Flesher has over 19 years of experience in the field of wildlife biology, project management, permitting, and consulting. He is skilled and experienced in on-site investigations, including habitat assessments, wetland determinations and delineations, and Phase I and Phase II Environmental Site Assessments, as well as recognition of karst characteristics, recharge features, and suitable endangered species habitats. He has completed a wide variety NEPA and Cat Ex documents for various agencies including TxDOT, TWDB, USDA, USFS, and HUD. Mr. Flesher has also prepared numerous applications for Section 404/10 nationwide and individual permits for the US Army Corps of Engineers (USACE), which included conducting Hydrogeomorphic Model (HGM) and Texas Rapid Assessment Method (TXRAM) analyses for wetland impacts and mitigation. He has experience utilizing Trimble Geo HX (sub-foot accurate handheld GPS unit) for various field applications. He has participated in presence/absence surveys for various threatened or endangered species and is permitted by the US Fish and Wildlife Service (USFWS) to survey for golden-cheeked warblers. Mr. Flesher also contributes to Horizon's GIS mapping services, preparing presentation graphics for technical reports and permitting packages for a variety of project types and phases.

Education

Master of Science Candidate, Agriculture (Range and Wildlife Management),
Texas A&M University – Kingsville, 2010

Bachelor of Science, Agriculture (Range and Wildlife Management),
Texas A&M University – Kingsville, 2008

Areas of Relevant Expertise

- ✓ Wetland Determination/Delineation
- ✓ Endangered Species Habitat Assessments, Surveys, Permitting, and Relocation
- ✓ Phase I Environmental Site Assessments (ESA) (ASTM Practice E1527-21)
- ✓ NEPA Permitting
- ✓ Vegetation Identification and Composition Analysis
- ✓ City of Austin Environmental Resource Inventory
- ✓ GIS Technology

Training and Certifications

- ✓ Qualified Environmental Professional (EP) under ASTM Practice E1527-21
- ✓ Wetland Delineator Certification Program, Wetland Training Institute (2011)
- ✓ ARSC Reciprocal Basic Orientation Plus, Houston Area Safety Council (2012)
- ✓ Technical Service Advisor Training, Western Association of Fish and Wildlife Agencies (2014)

Years of Experience

With This Firm: 2.5

With Other Firms: 9

Experience Summary

Mr. Pittman is a graduate of Texas A&M University – Kingsville, where he studied Range and Wildlife Science. He has 11.5 years of experience conducting environmental field assessments and preparing technical reports for clients as well as local, state, and federal permit applications related to the National Environmental Policy Act (NEPA). He is skilled in on-site investigations including habitat assessments, wetland determinations and delineations, and Phase I ESAs. Mr. Pittman has prepared numerous applications for Section 404 and Section 10 permitting nationwide in addition to individual permits for the US Army Corps of Engineers (USACE), which includes conducting Hydrogeomorphic Model (HGM) and Texas Rapid Assessment Method (TXRAM) analyses for wetland impacts and mitigation. He has participated in presence/absence surveys for various threatened or endangered species, including freshwater mussels and the golden-cheeked warbler. Mr. Pittman also contributes to Horizon's geographic information system (GIS) mapping services by providing graphics support for Section 404 jurisdictional delineations and various other projects.

APPENDIX I

**HORIZON ENVIRONMENTAL SERVICES
CORPORATE DESCRIPTION**

CORPORATE DESCRIPTION

Horizon Environmental Services (Horizon) is particularly well qualified to provide both the technical and administrative support required for project planning and permitting efforts related to various federal, state, and local permits and/or approvals. Horizon's capabilities and experience are very broad in the area of National Environmental Policy Act (NEPA) compliance support, particularly as related to multidisciplinary Environmental Assessments/Environmental Impact Statements (EAs/EISs), jurisdictional wetlands, endangered species, cultural resources issues, and expert testimony.

Services that Horizon provides for various clients include multidisciplinary EAs/EISs in support of federal and state environmental reviews; jurisdictional wetland determinations; endangered species habitat assessments and surveys; archeological surveys and mitigation (prehistoric and historic); ecological risk and damage assessments; wildlife habitat and wetlands restoration/creation; baseline aquatic and terrestrial investigations (inland and coastal); geologic resource assessments; real estate environmental site assessments; environmental constraints analyses for alternative project sites, routes, and land development scenarios ("fatal flaw" analyses); post-project land use planning and mitigation; and permit management, including preparation, agency coordination, and expert testimony.

Horizon was founded in 1987, is currently based in Austin, Texas, and provides services nationally. Composed of senior professional personnel with many years of applied experience and specific training in environmental assessments, permitting, and management, members of Horizon's staff have worked on the majority of energy development and reservoir projects, either proposed or developed, in Texas and Louisiana from 1976 to the present. Our staff's experience and background have allowed Horizon to gain an applied knowledge of the environmental requirements of various federal and state regulations and permits affecting natural resource development and an excellent identity with agency personnel.

Horizon's key personnel assigned to various work efforts are committed to being available from work initiation through expert testimony, if required. Depending on the scope of environmental investigations required for a given project, Horizon may network with other qualified firms, not only to provide both environmental and engineering services in a cost- and time-efficient manner, but to assure that only the most technically qualified and experienced persons are providing personal attention to the work effort.

28 June 2024

Michael Bernhard
Land Acquisitions Analyst
KB Home
4800 Fredericksburg Road, Suite 100
San Antonio, Texas 78229

RE: Limited Soil Sampling Investigation
Neill 67.5-Acre Property
Schmoekel Road, Marion, Guadalupe County, Texas
HJN 24110.001SS

Dear Mr. Bernhard:

Horizon Environmental Services (Horizon) has conducted a limited soil sampling investigation for the Neill 67.5-Acre Property located off Schmoekel Road in Marion, Guadalupe County, Texas (the Property) (Appendix A, Figure 1).

Horizon conducted a site visit on 3 May 2024 and collected soil samples from three areas within the Property boundaries (S-1, S-2, and S-3) (Appendix A, Figure 2). Horizon took composite grab samples from within the top 6 to 10 inches of soil, sealed the samples in sterile jars, and placed them on ice. The samples were transported to a certified and accredited laboratory on 3 May 2024. A proper chain of custody was maintained, and the samples were analyzed for arsenic and chlorinated pesticides (chemicals of concern [COCs]).

Following receipt of the lab analysis results, Horizon compared them to the Texas Commission on Environmental Quality (TCEQ) May 2023 Texas Risk Reduction Program (TRRP) Tier I Protective Concentration Levels (PCLs) for Residential and Commercial/Industrial Soils (see Table 1, page 2). The Tier I PCLs are the default cleanup standards for the TRRP (TCEQ, 2023). The lab analysis results are summarized as follows:

Sample S-1:

- Showed a detectable concentration of arsenic that is below the TCEQ cleanup standard for residential and/or commercial use. Chlorinated pesticides were not detected.

Sample S-2:

- Showed a detectable concentration of arsenic that is below the TCEQ cleanup standard for residential and/or commercial use. Chlorinated pesticides were not detected.

Sample S-3:

- Showed a detectable concentration of arsenic that is below the TCEQ cleanup standard for residential and/or commercial use. Chlorinated pesticides were not detected.

Table 1
Laboratory Results vs. TCEQ Tier I PCLs

| Chemical of Concern (COC) | Sample S-1 (mg/Kg) | Sample S-2 (mg/Kg) | Sample S-3 (mg/Kg) | Tier 1 PCL: Residential Soil (mg/Kg)* | Tier 1 PCL: Commercial/Industrial Soil (mg/Kg)* | Median Background Concentration (mg/Kg) |
|---------------------------|--------------------|--------------------|--------------------|---------------------------------------|---|---|
| Arsenic | 6.35 | 7.07 | 6.10 | 24 | 200 | 5.9 |
| 4,4'-DDD | <0.00247 | <0.00243 | <0.00255 | 14 | 100 | N/A |
| 4,4'-DDE | <0.00247 | <0.00243 | <0.00255 | 10 | 73 | N/A |
| 4,4'-DDT | <0.00247 | <0.00243 | <0.00255 | 5.4 | 71 | N/A |
| Aldrin | <0.00247 | <0.00243 | <0.00255 | 0.05 | 1.0 | N/A |
| alpha-BHC | <0.00247 | <0.00243 | <0.00255 | 0.26 | 3.3 | N/A |
| alpha-Chlordane | <0.00247 | <0.00243 | <0.00255 | 13 | 54 | N/A |
| beta-BHC | <0.00247 | <0.00243 | <0.00255 | 0.93 | 12 | N/A |
| Chlordane (Technical) | <0.0123 | <0.0122 | <0.0128 | 6 | 66 | N/A |
| delta-BHC | <0.00247 | <0.00243 | <0.00255 | 2.9 | 12 | N/A |
| Dieldrin | <0.00247 | <0.00243 | <0.00255 | 0.15 | 1.2 | N/A |
| Endosulfan I | <0.00247 | <0.00243 | <0.00255 | 91 | 1400 | N/A |
| Endosulfan II | <0.00247 | <0.00243 | <0.00255 | 270 | 4100 | N/A |
| Endosulfan sulfate | <0.00247 | <0.00243 | <0.00255 | 380 | 4100 | N/A |
| Endrin | <0.00247 | <0.00243 | <0.00255 | 9 | 200 | N/A |
| Endrin aldehyde | <0.00247 | <0.00243 | <0.00255 | 19 | 200 | N/A |
| Endrin ketone | <0.00247 | <0.00243 | <0.00255 | 19 | 200 | N/A |
| gamma-BHC | <0.00247 | <0.00243 | <0.00255 | 1.1 | 18 | N/A |
| gamma-Chlordane | <0.00247 | <0.00243 | <0.00255 | 7.4 | 53 | N/A |
| Heptachlor | <0.00247 | <0.00243 | <0.00255 | 0.13 | 3.3 | N/A |
| Heptachlor epoxide | <0.00247 | <0.00243 | <0.00255 | 0.24 | 2.0 | N/A |
| Methoxychlor | <0.00247 | <0.00243 | <0.00255 | 270 | 3400 | N/A |
| Toxaphene | <0.0987 | <0.0973 | <0.102 | 1.2 | 17 | N/A |

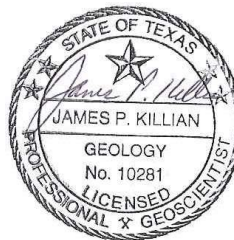
*PCLs are listed based on a 0.5-acre source area.

N/A – Not Applicable

Based on the results of this limited investigation, it is Horizon’s opinion that significant concentrations of arsenic and chlorinated pesticides are unlikely to exist within soils on the Property.

Sincerely,
For Horizon Environmental Services

Scott Flesher
Scott Flesher
VP | Ecological Program Director



James P. Killian
James Killian, PG¹
Principal Geoscientist

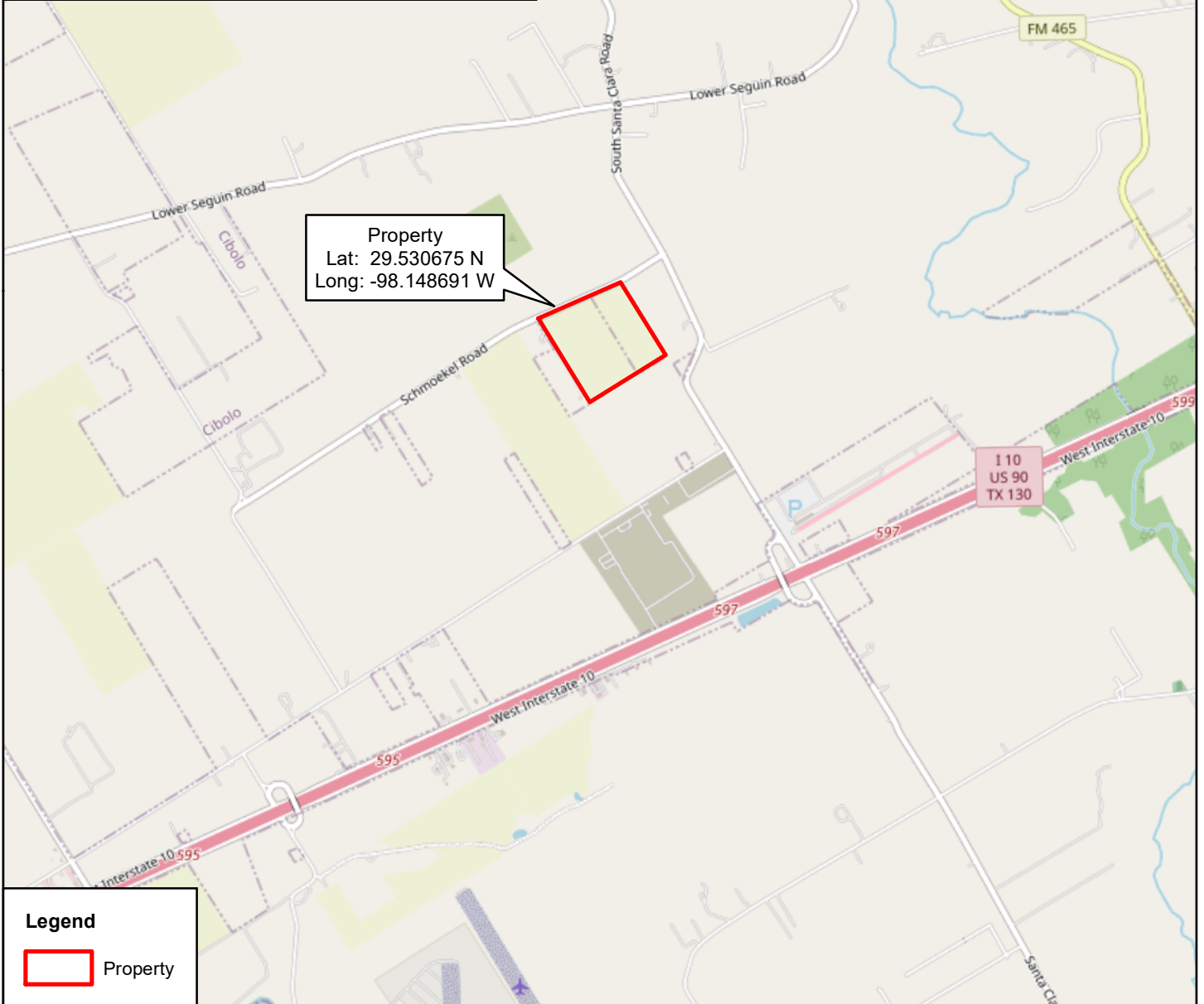
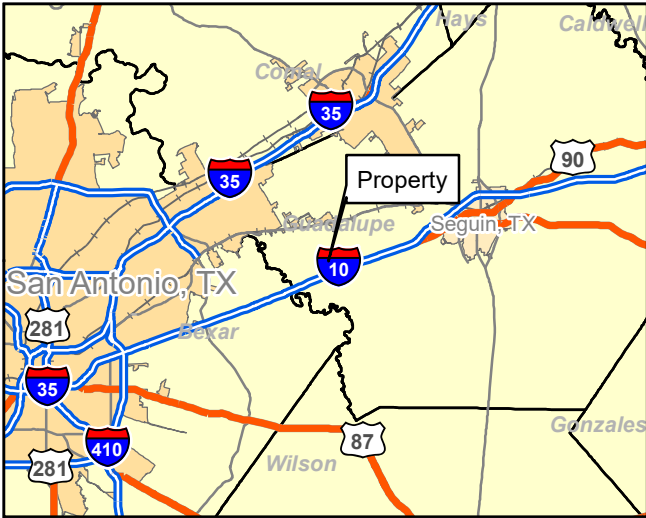
¹ Registered Professional Geoscientist, State of Texas

References

- (Nearmap) Nearmap US, Inc. Nearmap Vertical™ digital orthographic photograph, <<https://go.nearmap.com>>. Imagery date 10 January 2024.
- (OSM) OpenStreetMap contributors. OpenStreetMap, <<http://www.openstreetmap.org>>. Available under the Open Database License (www.opendatacommons.org/licenses/odbl). Accessed 5 June 2024.
- (TCEQ) Texas Commission on Environmental Quality. TRRP Tier 1 Protective Concentration Levels, <<https://www.tceq.texas.gov/remediation/trrp/trrppcls.html>>. Published 10 May 2023. Accessed 13 June 2024.

Appendix A

Vicinity Map
Soil Sample Locations Map



Legend

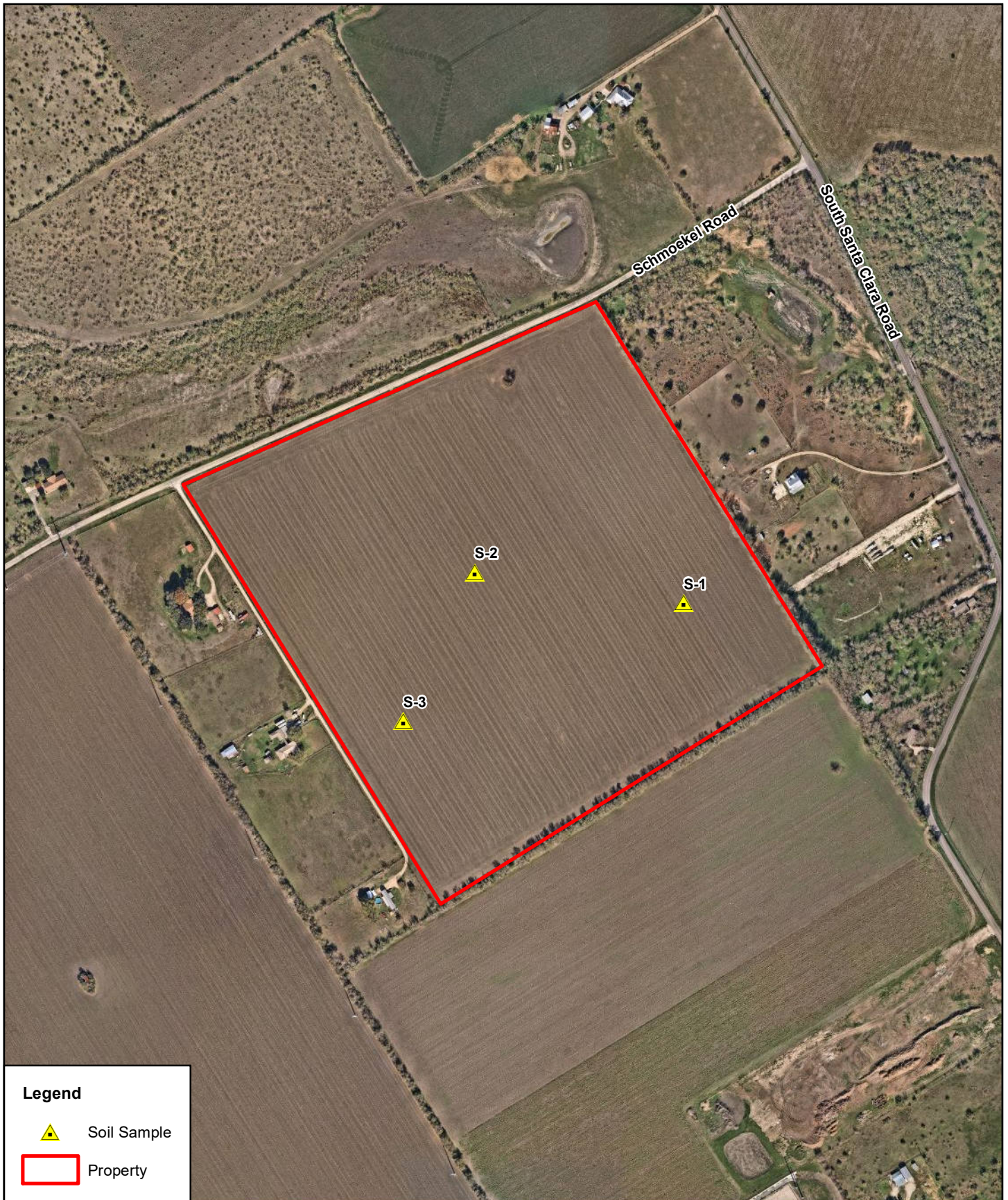
Property

HorizonTM
Environmental Services

| | |
|---------|------------|
| Date: | 06/04/2024 |
| Drawn: | KRW |
| HJN NO: | 24110 SS |
| Source: | OSM, 2024 |

Figure 1
Vicinity Map
Neill 67.5-Acre Property
Schmoekel Road
Marion, Guadalupe County, Texas

0 1,500 3,000
Feet



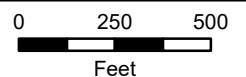
Legend

-  Soil Sample
-  Property



| | |
|---------|---------------|
| Date: | 06/13/2024 |
| Drawn: | KRW |
| HJN NO: | 24110 SS |
| Source: | Nearmap, 2023 |

Figure 2
Soil Sample Map
Neill 67.5-Acre Property
Schmoekel Road
Marion, Guadalupe County, Texas



Appendix B

Laboratory Results
Chain of Custody



May 13, 2024

James Pittman
Horizon Environmental Services, Inc.
1507 S Interstate 35
Austin, TX 78741
TEL: (512) 328-2430
FAX:
RE: Larry Neill Property

Order No.: 2405059

Dear James Pittman:

DHL Analytical, Inc. received 3 sample(s) on 5/3/2024 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont", is written over the typed name.

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211 - TX-C24-00120



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| AnalyticalQCSummaryReport 2405059 | 12 |


Sample Receipt Checklist

Client Name: Horizon Environmental Services, Inc.


Date Received: 5/3/2024

Work Order Number: 2405059

Received by: EL

Checklist completed by: 
Signature

5/3/2024
Date

Reviewed by: 
Initials

5/3/2024
Date

Carrier name: Hand Delivered

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Water - VOA vials have zero headspace? Yes No No VOA vials submitted NA
- Water - pH<2 acceptable upon receipt? Yes No NA LOT # _____
Adjusted? _____ Checked by _____
- Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt? Yes No NA LOT # _____
Adjusted? _____ Checked by _____
- Container/Temp Blank temperature in compliance? Yes No
- Cooler # 1
- Temp °C 1.2
- Seal Intact NP

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

CLIENT: Horizon Environmental Services, Inc.
Project: Larry Neill Property
Lab Order: 2405059

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

- Method SW6020B - Metals Analysis
- Method SW8270E-SIMSCAN - Pesticide Analysis
- Method D2216 - Percent Moisture Analysis

LOG IN

The samples were received and log-in performed on 5/3/24. A total of 3 samples were received. The samples arrived in good condition and were properly packaged.

PESTICIDE ANALYSIS

For Pesticide analysis performed on 5/6/24 the matrix spike and matrix spike duplicate recoveries were slightly above control limits for up to four compounds. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for these compounds. No further corrective actions were taken.

For Pesticide analysis performed on 5/6/24 the surrogate recovery for the method blank was slightly above control limits for 4-Terphenyl-d14. This is flagged accordingly. The remaining surrogate was within control limits. No further corrective actions were taken.

CLIENT: Horizon Environmental Services, Inc.
Project: Larry Neill Property
Lab Order: 2405059

Work Order Sample Summary

| Lab Smp ID | Client Sample ID | Tag Number | Date Collected | Date Recved |
|-------------------|-------------------------|-------------------|-----------------------|--------------------|
| 2405059-01 | S-1 | | 05/03/24 09:15 AM | 05/03/2024 |
| 2405059-02 | S-2 | | 05/03/24 09:35 AM | 05/03/2024 |
| 2405059-03 | S-3 | | 05/03/24 09:50 AM | 05/03/2024 |

Lab Order: 2405059
Client: Horizon Environmental Services, Inc.
Project: Larry Neill Property

PREP DATES REPORT

| Sample ID | Client Sample ID | Collection Date | Matrix | Test Number | Test Name | Prep Date | Batch ID |
|-------------|------------------|-------------------|--------|-------------|--------------------------------|-------------------|----------|
| 2405059-01A | S-1 | 05/03/24 09:15 AM | Soil | D2216 | Moisture Preparation | 05/06/24 09:40 AM | 115277 |
| | S-1 | 05/03/24 09:15 AM | Soil | SW3550C | Soil Prep Sonication: Pest | 05/06/24 09:28 AM | 115276 |
| | S-1 | 05/03/24 09:15 AM | Soil | SW3050B | Soil Prep Total Metals: ICP-MS | 05/09/24 11:05 AM | 115337 |
| 2405059-02A | S-2 | 05/03/24 09:35 AM | Soil | D2216 | Moisture Preparation | 05/06/24 09:40 AM | 115277 |
| | S-2 | 05/03/24 09:35 AM | Soil | SW3550C | Soil Prep Sonication: Pest | 05/06/24 09:28 AM | 115276 |
| | S-2 | 05/03/24 09:35 AM | Soil | SW3050B | Soil Prep Total Metals: ICP-MS | 05/09/24 11:05 AM | 115337 |
| 2405059-03A | S-3 | 05/03/24 09:50 AM | Soil | D2216 | Moisture Preparation | 05/06/24 09:40 AM | 115277 |
| | S-3 | 05/03/24 09:50 AM | Soil | SW3550C | Soil Prep Sonication: Pest | 05/06/24 09:28 AM | 115276 |
| | S-3 | 05/03/24 09:50 AM | Soil | SW3050B | Soil Prep Total Metals: ICP-MS | 05/09/24 11:05 AM | 115337 |

Lab Order: 2405059
Client: Horizon Environmental Services, Inc.
Project: Larry Neill Property

ANALYTICAL DATES REPORT

| Sample ID | Client Sample ID | Matrix | Test Number | Test Name | Batch ID | Dilution | Analysis Date | Run ID |
|-------------|------------------|--------|----------------|------------------------------|----------|----------|-------------------|-----------------|
| 2405059-01A | S-1 | Soil | D2216 | Percent Moisture | 115277 | 1 | 05/07/24 08:40 AM | PMOIST_240506A |
| | S-1 | Soil | W8270E-SimScar | Pesticide by GC/MS -Soil | 115276 | 1 | 05/06/24 06:49 PM | GCMS10_240506B |
| | S-1 | Soil | SW6020B | Trace Metals: ICP-MS - Solid | 115337 | 5 | 05/13/24 11:08 AM | ICP-MS5_240513A |
| 2405059-02A | S-2 | Soil | D2216 | Percent Moisture | 115277 | 1 | 05/07/24 08:40 AM | PMOIST_240506A |
| | S-2 | Soil | W8270E-SimScar | Pesticide by GC/MS -Soil | 115276 | 1 | 05/06/24 07:16 PM | GCMS10_240506B |
| | S-2 | Soil | SW6020B | Trace Metals: ICP-MS - Solid | 115337 | 5 | 05/13/24 10:21 AM | ICP-MS5_240513A |
| 2405059-03A | S-3 | Soil | D2216 | Percent Moisture | 115277 | 1 | 05/07/24 08:40 AM | PMOIST_240506A |
| | S-3 | Soil | W8270E-SimScar | Pesticide by GC/MS -Soil | 115276 | 1 | 05/06/24 07:44 PM | GCMS10_240506B |
| | S-3 | Soil | SW6020B | Trace Metals: ICP-MS - Solid | 115337 | 5 | 05/13/24 11:11 AM | ICP-MS5_240513A |

DHL Analytical, Inc.

Date: 13-May-24

CLIENT: Horizon Environmental Services, Inc.
Project: Larry Neill Property
Project No: 24110
Lab Order: 2405059

Client Sample ID: S-1
Lab ID: 2405059-01
Collection Date: 05/03/24 09:15 AM
Matrix: SOIL

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed |
|-------------------------------------|----------|------------------------|---------|---------------------|-----------|----|-------------------|
| TRACE METALS: ICP-MS - SOLID | | SW6020B | | Analyst: SP | | | |
| Arsenic | 6.35 | 0.597 | 1.19 | | mg/Kg-dry | 5 | 05/13/24 11:08 AM |
| PESTICIDE BY GC/MS -SOIL | | SW8270E-SIMSCAN | | Analyst: DEW | | | |
| 4,4'-DDD | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| 4,4'-DDE | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| 4,4'-DDT | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Aldrin | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| alpha-BHC | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| alpha-Chlordane | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| beta-BHC | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Chlordane | <0.0123 | 0.0123 | 0.0370 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| delta-BHC | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Dieldrin | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Endosulfan I | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Endosulfan II | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Endosulfan sulfate | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Endrin | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Endrin aldehyde | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Endrin ketone | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| gamma-BHC | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| gamma-Chlordane | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Heptachlor | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Heptachlor epoxide | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Methoxychlor | <0.00247 | 0.00247 | 0.00740 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Toxaphene | <0.0987 | 0.0987 | 0.308 | | mg/Kg-dry | 1 | 05/06/24 06:49 PM |
| Surr: 2-Fluorobiphenyl | 89.6 | 0 | 43-125 | | %REC | 1 | 05/06/24 06:49 PM |
| Surr: 4-Terphenyl-d14 | 115 | 0 | 32-125 | | %REC | 1 | 05/06/24 06:49 PM |
| PERCENT MOISTURE | | D2216 | | Analyst: KES | | | |
| Percent Moisture | 20.3 | 0 | 0 | | WT% | 1 | 05/07/24 08:40 AM |

| | | | | |
|--------------------|----|--|-----|---|
| Qualifiers: | * | Value exceeds TCLP Maximum Concentration Level | C | Sample Result or QC discussed in the Case Narrative |
| | DF | Dilution Factor | E | TPH pattern not Gas or Diesel Range Pattern |
| | J | Analyte detected between MDL and RL | MDL | Method Detection Limit |
| | ND | Not Detected at the Method Detection Limit | RL | Reporting Limit |
| | S | Spike Recovery outside control limits | N | Parameter not NELAP certified |

DHL Analytical, Inc.

Date: 13-May-24

CLIENT: Horizon Environmental Services, Inc.
Project: Larry Neill Property
Project No: 24110
Lab Order: 2405059

Client Sample ID: S-2
Lab ID: 2405059-02
Collection Date: 05/03/24 09:35 AM
Matrix: SOIL

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed |
|-------------------------------------|----------|------------------------|---------|---------------------|-----------|----|-------------------|
| TRACE METALS: ICP-MS - SOLID | | SW6020B | | Analyst: SP | | | |
| Arsenic | 7.07 | 0.543 | 1.09 | | mg/Kg-dry | 5 | 05/13/24 10:21 AM |
| PESTICIDE BY GC/MS -SOIL | | SW8270E-SIMSCAN | | Analyst: DEW | | | |
| 4,4'-DDD | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| 4,4'-DDE | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| 4,4'-DDT | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Aldrin | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| alpha-BHC | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| alpha-Chlordane | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| beta-BHC | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Chlordane | <0.0122 | 0.0122 | 0.0365 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| delta-BHC | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Dieldrin | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Endosulfan I | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Endosulfan II | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Endosulfan sulfate | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Endrin | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Endrin aldehyde | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Endrin ketone | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| gamma-BHC | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| gamma-Chlordane | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Heptachlor | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Heptachlor epoxide | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Methoxychlor | <0.00243 | 0.00243 | 0.00730 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Toxaphene | <0.0973 | 0.0973 | 0.304 | | mg/Kg-dry | 1 | 05/06/24 07:16 PM |
| Surr: 2-Fluorobiphenyl | 98.6 | 0 | 43-125 | | %REC | 1 | 05/06/24 07:16 PM |
| Surr: 4-Terphenyl-d14 | 124 | 0 | 32-125 | | %REC | 1 | 05/06/24 07:16 PM |
| PERCENT MOISTURE | | D2216 | | Analyst: KES | | | |
| Percent Moisture | 19.2 | 0 | 0 | | WT% | 1 | 05/07/24 08:40 AM |

Qualifiers:

| | | | |
|----|--|-----|---|
| * | Value exceeds TCLP Maximum Concentration Level | C | Sample Result or QC discussed in the Case Narrative |
| DF | Dilution Factor | E | TPH pattern not Gas or Diesel Range Pattern |
| J | Analyte detected between MDL and RL | MDL | Method Detection Limit |
| ND | Not Detected at the Method Detection Limit | RL | Reporting Limit |
| S | Spike Recovery outside control limits | N | Parameter not NELAP certified |

DHL Analytical, Inc.

Date: 13-May-24

CLIENT: Horizon Environmental Services, Inc.
Project: Larry Neill Property
Project No: 24110
Lab Order: 2405059

Client Sample ID: S-3
Lab ID: 2405059-03
Collection Date: 05/03/24 09:50 AM
Matrix: SOIL

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed |
|-------------------------------------|----------|------------------------|---------|---------------------|-----------|----|-------------------|
| TRACE METALS: ICP-MS - SOLID | | SW6020B | | Analyst: SP | | | |
| Arsenic | 6.10 | 0.589 | 1.18 | | mg/Kg-dry | 5 | 05/13/24 11:11 AM |
| PESTICIDE BY GC/MS -SOIL | | SW8270E-SIMSCAN | | Analyst: DEW | | | |
| 4,4'-DDD | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| 4,4'-DDE | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| 4,4'-DDT | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Aldrin | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| alpha-BHC | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| alpha-Chlordane | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| beta-BHC | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Chlordane | <0.0128 | 0.0128 | 0.0383 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| delta-BHC | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Dieldrin | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Endosulfan I | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Endosulfan II | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Endosulfan sulfate | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Endrin | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Endrin aldehyde | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Endrin ketone | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| gamma-BHC | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| gamma-Chlordane | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Heptachlor | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Heptachlor epoxide | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Methoxychlor | <0.00255 | 0.00255 | 0.00765 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Toxaphene | <0.102 | 0.102 | 0.319 | | mg/Kg-dry | 1 | 05/06/24 07:44 PM |
| Surr: 2-Fluorobiphenyl | 100 | 0 | 43-125 | | %REC | 1 | 05/06/24 07:44 PM |
| Surr: 4-Terphenyl-d14 | 126 | 0 | 32-125 | S | %REC | 1 | 05/06/24 07:44 PM |
| PERCENT MOISTURE | | D2216 | | Analyst: KES | | | |
| Percent Moisture | 22.1 | 0 | 0 | | WT% | 1 | 05/07/24 08:40 AM |

| | | | | |
|--------------------|----|--|-----|---|
| Qualifiers: | * | Value exceeds TCLP Maximum Concentration Level | C | Sample Result or QC discussed in the Case Narrative |
| | DF | Dilution Factor | E | TPH pattern not Gas or Diesel Range Pattern |
| | J | Analyte detected between MDL and RL | MDL | Method Detection Limit |
| | ND | Not Detected at the Method Detection Limit | RL | Reporting Limit |
| | S | Spike Recovery outside control limits | N | Parameter not NELAP certified |

CLIENT: Horizon Environmental Services, Inc.

ANALYTICAL QC SUMMARY REPORT

Work Order: 2405059

Project: Larry Neill Property

RunID: ICP-MS5_240513A

The QC data in batch 115337 applies to the following samples: 2405059-01A, 2405059-02A, 2405059-03A

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|----------------------------|---------|------|----------|-----------|------|----------|------|
| Sample ID: MB-115337 | Batch ID: 115337 | TestNo: SW6020B | Units: mg/Kg | | | | | | | |
| SampType: MBLK | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 10:10:00 AM | Prep Date: 5/9/2024 | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | <0.500 | 1.00 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|---|----------------------------|---------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-115337 | Batch ID: 115337 | TestNo: SW6020B | Units: mg/Kg | | | | | | | |
| SampType: LCS | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 10:13:00 AM | Prep Date: 5/9/2024 | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 49.3 | 1.00 | 50.00 | 0 | 98.6 | 80 | 120 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|---|----------------------------|---------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-115337 | Batch ID: 115337 | TestNo: SW6020B | Units: mg/Kg | | | | | | | |
| SampType: LCS | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 10:13:00 AM | Prep Date: 5/9/2024 | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 49.3 | 1.00 | 50.00 | 0 | 98.6 | 80 | 120 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|---|----------------------------|---------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-115337 | Batch ID: 115337 | TestNo: SW6020B | Units: mg/Kg | | | | | | | |
| SampType: LCS | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 10:13:00 AM | Prep Date: 5/9/2024 | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 49.3 | 1.00 | 50.00 | 0 | 98.6 | 80 | 120 | | | |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|---|----------------------------|---------|------|----------|-----------|------|----------|------|
| Sample ID: 2405059-02A SD | Batch ID: 115337 | TestNo: SW6020B | Units: mg/Kg-dry | | | | | | | |
| SampType: SD | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 10:23:00 AM | Prep Date: 5/9/2024 | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 6.94 | 5.43 | 0 | 7.066 | | | | 1.85 | 20 | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|---|----------------------------|---------|------|----------|-----------|------|----------|------|
| Sample ID: 2405059-02A PDS | Batch ID: 115337 | TestNo: SW6020B | Units: mg/Kg-dry | | | | | | | |
| SampType: PDS | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 10:49:00 AM | Prep Date: 5/9/2024 | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 58.5 | 1.09 | 54.28 | 7.066 | 94.8 | 75 | 125 | | | |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|---|----------------------------|---------|------|----------|-----------|------|----------|------|
| Sample ID: 2405059-02A MS | Batch ID: 115337 | TestNo: SW6020B | Units: mg/Kg-dry | | | | | | | |
| SampType: MS | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 10:52:00 AM | Prep Date: 5/9/2024 | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 60.8 | 1.10 | 55.25 | 7.066 | 97.3 | 75 | 125 | | | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|---|----------------------------|---------|------|----------|-----------|-------|----------|------|
| Sample ID: 2405059-02A MSD | Batch ID: 115337 | TestNo: SW6020B | Units: mg/Kg-dry | | | | | | | |
| SampType: MSD | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 10:54:00 AM | Prep Date: 5/9/2024 | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 60.7 | 1.10 | 55.25 | 7.066 | 97.1 | 75 | 125 | 0.217 | 25 | |

- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - J Analyte detected between MDL and RL
 - ND Not Detected at the Method Detection Limit
 - RL Reporting Limit
 - J Analyte detected between SDL and RL
 - DF Dilution Factor
 - MDL Method Detection Limit
 - R RPD outside accepted control limits
 - S Spike Recovery outside control limits
 - N Parameter not NELAP certified

CLIENT: Horizon Environmental Services, Inc.
Work Order: 2405059
Project: Larry Neill Property

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240513A

| Sample ID: ICV-240513 | Batch ID: R133004 | TestNo: SW6020B | Units: mg/L | | | | | | | |
|------------------------------|--------------------------------|--|--------------------|---------|------|----------|-----------|------|----------|------|
| SampType: ICV | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 9:35:00 AM | Prep Date: | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|---------|--------|---------|-------|---|------|----|-----|--|--|--|
| Arsenic | 0.0995 | 0.00500 | 0.100 | 0 | 99.5 | 90 | 110 | | | |
|---------|--------|---------|-------|---|------|----|-----|--|--|--|

| Sample ID: LCVL-240513 | Batch ID: R133004 | TestNo: SW6020B | Units: mg/L | | | | | | | |
|-------------------------------|--------------------------------|--|--------------------|---------|------|----------|-----------|------|----------|------|
| SampType: LCVL | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 9:58:00 AM | Prep Date: | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|---------|---------|---------|---------|---|------|----|-----|--|--|--|
| Arsenic | 0.00487 | 0.00500 | 0.00500 | 0 | 97.4 | 80 | 120 | | | |
|---------|---------|---------|---------|---|------|----|-----|--|--|--|

| Sample ID: CCV1-240513 | Batch ID: R133004 | TestNo: SW6020B | Units: mg/L | | | | | | | |
|-------------------------------|--------------------------------|---|--------------------|---------|------|----------|-----------|------|----------|------|
| SampType: CCV | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 11:00:00 AM | Prep Date: | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|---------|-------|---------|-------|---|------|----|-----|--|--|--|
| Arsenic | 0.199 | 0.00500 | 0.200 | 0 | 99.4 | 90 | 110 | | | |
|---------|-------|---------|-------|---|------|----|-----|--|--|--|

| Sample ID: CCV2-240513 | Batch ID: R133004 | TestNo: SW6020B | Units: mg/L | | | | | | | |
|-------------------------------|--------------------------------|---|--------------------|---------|------|----------|-----------|------|----------|------|
| SampType: CCV | Run ID: ICP-MS5_240513A | Analysis Date: 5/13/2024 11:15:00 AM | Prep Date: | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|---------|-------|---------|-------|---|------|----|-----|--|--|--|
| Arsenic | 0.194 | 0.00500 | 0.200 | 0 | 97.2 | 90 | 110 | | | |
|---------|-------|---------|-------|---|------|----|-----|--|--|--|

| | | |
|--------------------|---|--|
| Qualifiers: | <p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p> | <p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAP certified</p> |
|--------------------|---|--|

CLIENT: Horizon Environmental Services, Inc.
Work Order: 2405059
Project: Larry Neill Property

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS10_240506B

The QC data in batch 115276 applies to the following samples: 2405059-01A, 2405059-02A, 2405059-03A

| | | | |
|------------------------------|-------------------------------|---|----------------------------|
| Sample ID: LCS-115276 | Batch ID: 115276 | TestNo: SW8270E-SimSc | Units: mg/Kg |
| SampType: LCS | Run ID: GCMS10_240506B | Analysis Date: 5/6/2024 4:58:00 PM | Prep Date: 5/6/2024 |

| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|------------------------|--------|---------|-----------|---------|------|----------|-----------|------|----------|------|
| 4,4'-DDD | 0.109 | 0.00600 | 0.1000 | 0 | 109 | 52 | 143 | | | |
| 4,4'-DDE | 0.0975 | 0.00600 | 0.1000 | 0 | 97.5 | 47 | 126 | | | |
| 4,4'-DDT | 0.106 | 0.00600 | 0.1000 | 0 | 106 | 39 | 146 | | | |
| Aldrin | 0.0875 | 0.00600 | 0.1000 | 0 | 87.5 | 49 | 111 | | | |
| alpha-BHC | 0.0804 | 0.00600 | 0.1000 | 0 | 80.4 | 45 | 102 | | | |
| alpha-Chlordane | 0.0997 | 0.00600 | 0.1000 | 0 | 99.7 | 47 | 117 | | | |
| beta-BHC | 0.0848 | 0.00600 | 0.1000 | 0 | 84.8 | 40 | 97 | | | |
| delta-BHC | 0.0830 | 0.00600 | 0.1000 | 0 | 83.0 | 51 | 116 | | | |
| Dieldrin | 0.0964 | 0.00600 | 0.1000 | 0 | 96.4 | 50 | 117 | | | |
| Endosulfan I | 0.0942 | 0.00600 | 0.1000 | 0 | 94.2 | 36 | 134 | | | |
| Endosulfan II | 0.0970 | 0.00600 | 0.1000 | 0 | 97.0 | 51 | 126 | | | |
| Endosulfan sulfate | 0.104 | 0.00600 | 0.1000 | 0 | 104 | 49 | 127 | | | |
| Endrin | 0.111 | 0.00600 | 0.1000 | 0 | 111 | 51 | 127 | | | |
| Endrin aldehyde | 0.0882 | 0.00600 | 0.1000 | 0 | 88.2 | 37 | 132 | | | |
| Endrin ketone | 0.103 | 0.00600 | 0.1000 | 0 | 103 | 43 | 136 | | | |
| gamma-BHC | 0.0811 | 0.00600 | 0.1000 | 0 | 81.1 | 41 | 97 | | | |
| gamma-Chlordane | 0.0992 | 0.00600 | 0.1000 | 0 | 99.2 | 46 | 108 | | | |
| Heptachlor | 0.0917 | 0.00600 | 0.1000 | 0 | 91.7 | 48 | 144 | | | |
| Heptachlor epoxide | 0.0995 | 0.00600 | 0.1000 | 0 | 99.5 | 49 | 116 | | | |
| Methoxychlor | 0.113 | 0.00600 | 0.1000 | 0 | 113 | 52 | 157 | | | |
| Surr: 2-Fluorobiphenyl | 0.860 | | 1.000 | | 86.0 | 43 | 125 | | | |
| Surr: 4-Terphenyl-d14 | 1.07 | | 1.000 | | 107 | 32 | 125 | | | |

| | | | |
|-----------------------------|-------------------------------|---|----------------------------|
| Sample ID: MB-115276 | Batch ID: 115276 | TestNo: SW8270E-SimSc | Units: mg/Kg |
| SampType: MBLK | Run ID: GCMS10_240506B | Analysis Date: 5/6/2024 6:21:00 PM | Prep Date: 5/6/2024 |

| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|--------------------|----------|---------|-----------|---------|------|----------|-----------|------|----------|------|
| 4,4'-DDD | <0.00200 | 0.00600 | | | | | | | | |
| 4,4'-DDE | <0.00200 | 0.00600 | | | | | | | | |
| 4,4'-DDT | <0.00200 | 0.00600 | | | | | | | | |
| Aldrin | <0.00200 | 0.00600 | | | | | | | | |
| alpha-BHC | <0.00200 | 0.00600 | | | | | | | | |
| alpha-Chlordane | <0.00200 | 0.00600 | | | | | | | | |
| beta-BHC | <0.00200 | 0.00600 | | | | | | | | |
| Chlordane | <0.0100 | 0.0300 | | | | | | | | |
| delta-BHC | <0.00200 | 0.00600 | | | | | | | | |
| Dieldrin | <0.00200 | 0.00600 | | | | | | | | |
| Endosulfan I | <0.00200 | 0.00600 | | | | | | | | |
| Endosulfan II | <0.00200 | 0.00600 | | | | | | | | |
| Endosulfan sulfate | <0.00200 | 0.00600 | | | | | | | | |

Qualifiers:

| | |
|---|---|
| B Analyte detected in the associated Method Blank | DF Dilution Factor |
| J Analyte detected between MDL and RL | MDL Method Detection Limit |
| ND Not Detected at the Method Detection Limit | R RPD outside accepted control limits |
| RL Reporting Limit | S Spike Recovery outside control limits |
| J Analyte detected between SDL and RL | N Parameter not NELAP certified |

CLIENT: Horizon Environmental Services, Inc.
Work Order: 2405059
Project: Larry Neill Property

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS10_240506B

| | | | |
|-----------------------------|-------------------------------|---|----------------------------|
| Sample ID: MB-115276 | Batch ID: 115276 | TestNo: SW8270E-SimSc | Units: mg/Kg |
| SampType: MBLK | Run ID: GCMS10_240506B | Analysis Date: 5/6/2024 6:21:00 PM | Prep Date: 5/6/2024 |

| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|------------------------|----------|---------|-----------|---------|------|----------|-----------|------|----------|------|
| Endrin | <0.00200 | 0.00600 | | | | | | | | |
| Endrin aldehyde | <0.00200 | 0.00600 | | | | | | | | |
| Endrin ketone | <0.00200 | 0.00600 | | | | | | | | |
| gamma-BHC | <0.00200 | 0.00600 | | | | | | | | |
| gamma-Chlordane | <0.00200 | 0.00600 | | | | | | | | |
| Heptachlor | <0.00200 | 0.00600 | | | | | | | | |
| Heptachlor epoxide | <0.00200 | 0.00600 | | | | | | | | |
| Methoxychlor | <0.00200 | 0.00600 | | | | | | | | |
| Toxaphene | <0.0800 | 0.250 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 1.01 | | 1.000 | | 101 | 43 | 125 | | | |
| Surr: 4-Terphenyl-d14 | 1.30 | | 1.000 | | 130 | 32 | 125 | | | S |

| | | | |
|---------------------------------|-------------------------------|---|----------------------------|
| Sample ID: 2405059-02AMS | Batch ID: 115276 | TestNo: SW8270E-SimSc | Units: mg/Kg-dry |
| SampType: MS | Run ID: GCMS10_240506B | Analysis Date: 5/6/2024 8:12:00 PM | Prep Date: 5/6/2024 |

| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|------------------------|--------|---------|-----------|---------|------|----------|-----------|------|----------|------|
| 4,4'-DDD | 0.158 | 0.00732 | 0.1220 | 0 | 130 | 52 | 143 | | | |
| 4,4'-DDE | 0.143 | 0.00732 | 0.1220 | 0 | 117 | 47 | 126 | | | |
| 4,4'-DDT | 0.150 | 0.00732 | 0.1220 | 0 | 123 | 39 | 146 | | | |
| Aldrin | 0.125 | 0.00732 | 0.1220 | 0 | 102 | 49 | 111 | | | |
| alpha-BHC | 0.114 | 0.00732 | 0.1220 | 0 | 93.1 | 45 | 102 | | | |
| alpha-Chlordane | 0.144 | 0.00732 | 0.1220 | 0 | 118 | 47 | 117 | | | S |
| beta-BHC | 0.123 | 0.00732 | 0.1220 | 0 | 101 | 40 | 97 | | | S |
| delta-BHC | 0.118 | 0.00732 | 0.1220 | 0 | 96.7 | 51 | 116 | | | |
| Dieldrin | 0.134 | 0.00732 | 0.1220 | 0 | 110 | 50 | 117 | | | |
| Endosulfan I | 0.135 | 0.00732 | 0.1220 | 0 | 110 | 36 | 134 | | | |
| Endosulfan II | 0.141 | 0.00732 | 0.1220 | 0 | 115 | 51 | 126 | | | |
| Endosulfan sulfate | 0.150 | 0.00732 | 0.1220 | 0 | 123 | 49 | 127 | | | |
| Endrin | 0.159 | 0.00732 | 0.1220 | 0 | 131 | 51 | 127 | | | S |
| Endrin aldehyde | 0.140 | 0.00732 | 0.1220 | 0 | 115 | 37 | 132 | | | |
| Endrin ketone | 0.148 | 0.00732 | 0.1220 | 0 | 122 | 43 | 136 | | | |
| gamma-BHC | 0.115 | 0.00732 | 0.1220 | 0 | 94.1 | 41 | 97 | | | |
| gamma-Chlordane | 0.141 | 0.00732 | 0.1220 | 0 | 116 | 46 | 108 | | | S |
| Heptachlor | 0.128 | 0.00732 | 0.1220 | 0 | 105 | 48 | 144 | | | |
| Heptachlor epoxide | 0.140 | 0.00732 | 0.1220 | 0 | 115 | 49 | 116 | | | |
| Methoxychlor | 0.160 | 0.00732 | 0.1220 | 0 | 131 | 52 | 157 | | | |
| Surr: 2-Fluorobiphenyl | 1.21 | | 1.220 | | 99.4 | 43 | 125 | | | |
| Surr: 4-Terphenyl-d14 | 1.51 | | 1.220 | | 124 | 32 | 125 | | | |

Qualifiers: B Analyte detected in the associated Method Blank DF Dilution Factor
J Analyte detected between MDL and RL MDL Method Detection Limit
ND Not Detected at the Method Detection Limit R RPD outside accepted control limits
RL Reporting Limit S Spike Recovery outside control limits
J Analyte detected between SDL and RL N Parameter not NELAP certified

CLIENT: Horizon Environmental Services, Inc.
Work Order: 2405059
Project: Larry Neill Property

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS10_240506B

| | | | |
|----------------------------------|-------------------------------|---|----------------------------|
| Sample ID: 2405059-02AMSD | Batch ID: 115276 | TestNo: SW8270E-SimSc | Units: mg/Kg-dry |
| SampType: MSD | Run ID: GCMS10_240506B | Analysis Date: 5/6/2024 8:40:00 PM | Prep Date: 5/6/2024 |

| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|------------------------|--------|---------|-----------|---------|------|----------|-----------|------|----------|------|
| 4,4'-DDD | 0.152 | 0.00734 | 0.1223 | 0 | 124 | 52 | 143 | 3.99 | 30 | |
| 4,4'-DDE | 0.132 | 0.00734 | 0.1223 | 0 | 108 | 47 | 126 | 8.12 | 30 | |
| 4,4'-DDT | 0.140 | 0.00734 | 0.1223 | 0 | 114 | 39 | 146 | 6.81 | 30 | |
| Aldrin | 0.116 | 0.00734 | 0.1223 | 0 | 94.5 | 49 | 111 | 7.57 | 30 | |
| alpha-BHC | 0.104 | 0.00734 | 0.1223 | 0 | 85.0 | 45 | 102 | 8.89 | 30 | |
| alpha-Chlordane | 0.138 | 0.00734 | 0.1223 | 0 | 113 | 47 | 117 | 3.96 | 30 | |
| beta-BHC | 0.114 | 0.00734 | 0.1223 | 0 | 93.6 | 40 | 97 | 7.32 | 30 | |
| delta-BHC | 0.111 | 0.00734 | 0.1223 | 0 | 91.2 | 51 | 116 | 5.66 | 30 | |
| Dieldrin | 0.127 | 0.00734 | 0.1223 | 0 | 104 | 50 | 117 | 5.38 | 30 | |
| Endosulfan I | 0.124 | 0.00734 | 0.1223 | 0 | 101 | 36 | 134 | 8.15 | 30 | |
| Endosulfan II | 0.128 | 0.00734 | 0.1223 | 0 | 105 | 51 | 126 | 9.14 | 30 | |
| Endosulfan sulfate | 0.141 | 0.00734 | 0.1223 | 0 | 116 | 49 | 127 | 5.62 | 30 | |
| Endrin | 0.150 | 0.00734 | 0.1223 | 0 | 123 | 51 | 127 | 5.91 | 30 | |
| Endrin aldehyde | 0.111 | 0.00734 | 0.1223 | 0 | 90.5 | 37 | 132 | 23.4 | 30 | |
| Endrin ketone | 0.135 | 0.00734 | 0.1223 | 0 | 111 | 43 | 136 | 9.16 | 30 | |
| gamma-BHC | 0.108 | 0.00734 | 0.1223 | 0 | 88.4 | 41 | 97 | 6.04 | 30 | |
| gamma-Chlordane | 0.136 | 0.00734 | 0.1223 | 0 | 111 | 46 | 108 | 3.77 | 30 | S |
| Heptachlor | 0.121 | 0.00734 | 0.1223 | 0 | 99.3 | 48 | 144 | 5.35 | 30 | |
| Heptachlor epoxide | 0.131 | 0.00734 | 0.1223 | 0 | 107 | 49 | 116 | 6.76 | 30 | |
| Methoxychlor | 0.149 | 0.00734 | 0.1223 | 0 | 122 | 52 | 157 | 6.89 | 30 | |
| Surr: 2-Fluorobiphenyl | 1.09 | | 1.223 | | 89.5 | 43 | 125 | 0 | | |
| Surr: 4-Terphenyl-d14 | 1.41 | | 1.223 | | 115 | 32 | 125 | 0 | | |

| | | |
|--------------------|---|---|
| Qualifiers: | B Analyte detected in the associated Method Blank | DF Dilution Factor |
| | J Analyte detected between MDL and RL | MDL Method Detection Limit |
| | ND Not Detected at the Method Detection Limit | R RPD outside accepted control limits |
| | RL Reporting Limit | S Spike Recovery outside control limits |
| | J Analyte detected between SDL and RL | N Parameter not NELAP certified |

CLIENT: Horizon Environmental Services, Inc.
Work Order: 2405059
Project: Larry Neill Property

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS10_240506B

| | | | |
|------------------------------|-------------------------------|--|---------------------|
| Sample ID: ICV-240506 | Batch ID: R132907 | TestNo: SW8270E-SimSc | Units: mg/Kg |
| SampType: ICV | Run ID: GCMS10_240506B | Analysis Date: 5/6/2024 10:37:00 AM | Prep Date: |

| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|------------------------|--------|---------|-----------|---------|------|----------|-----------|------|----------|------|
| 4,4'-DDD | 0.246 | 0.00600 | 0.2000 | 0 | 123 | 70 | 130 | | | |
| 4,4'-DDE | 0.225 | 0.00600 | 0.2000 | 0 | 112 | 70 | 130 | | | |
| 4,4'-DDT | 0.241 | 0.00600 | 0.2000 | 0 | 120 | 70 | 130 | | | |
| Aldrin | 0.203 | 0.00600 | 0.2000 | 0 | 101 | 70 | 130 | | | |
| alpha-BHC | 0.197 | 0.00600 | 0.2000 | 0 | 98.7 | 70 | 130 | | | |
| alpha-Chlordane | 0.228 | 0.00600 | 0.2000 | 0 | 114 | 70 | 130 | | | |
| beta-BHC | 0.208 | 0.00600 | 0.2000 | 0 | 104 | 70 | 130 | | | |
| delta-BHC | 0.186 | 0.00600 | 0.2000 | 0 | 93.1 | 70 | 130 | | | |
| Dieldrin | 0.209 | 0.00600 | 0.2000 | 0 | 105 | 70 | 130 | | | |
| Endosulfan I | 0.215 | 0.00600 | 0.2000 | 0 | 108 | 70 | 130 | | | |
| Endosulfan II | 0.211 | 0.00600 | 0.2000 | 0 | 105 | 70 | 130 | | | |
| Endosulfan sulfate | 0.225 | 0.00600 | 0.2000 | 0 | 112 | 70 | 130 | | | |
| Endrin | 0.232 | 0.00600 | 0.2000 | 0 | 116 | 70 | 130 | | | |
| Endrin aldehyde | 0.218 | 0.00600 | 0.2000 | 0 | 109 | 70 | 130 | | | |
| Endrin ketone | 0.230 | 0.00600 | 0.2000 | 0 | 115 | 70 | 130 | | | |
| gamma-BHC | 0.203 | 0.00600 | 0.2000 | 0 | 102 | 70 | 130 | | | |
| gamma-Chlordane | 0.221 | 0.00600 | 0.2000 | 0 | 111 | 70 | 130 | | | |
| Heptachlor | 0.207 | 0.00600 | 0.2000 | 0 | 103 | 70 | 130 | | | |
| Heptachlor epoxide | 0.222 | 0.00600 | 0.2000 | 0 | 111 | 70 | 130 | | | |
| Methoxychlor | 0.240 | 0.00600 | 0.2000 | 0 | 120 | 70 | 130 | | | |
| Surr: 2-Fluorobiphenyl | 0.828 | | 0.8000 | | 103 | 70 | 130 | | | |
| Surr: 4-Terphenyl-d14 | 0.872 | | 0.8000 | | 109 | 70 | 130 | | | |

| | | | |
|---------------------------------|-------------------------------|---|---------------------|
| Sample ID: ICV-240506 CT | Batch ID: R132907 | TestNo: SW8270E-SimSc | Units: mg/Kg |
| SampType: ICV | Run ID: GCMS10_240506B | Analysis Date: 5/6/2024 4:15:00 PM | Prep Date: |

| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|--------|-----------|---------|------|----------|-----------|------|----------|------|
| Chlordane | 2.90 | 0.0300 | 2.500 | 0 | 116 | 70 | 130 | | | |
| Toxaphene | 2.81 | 0.250 | 2.500 | 0 | 112 | 70 | 130 | | | |

Qualifiers:

| | |
|---|---|
| B Analyte detected in the associated Method Blank | DF Dilution Factor |
| J Analyte detected between MDL and RL | MDL Method Detection Limit |
| ND Not Detected at the Method Detection Limit | R RPD outside accepted control limits |
| RL Reporting Limit | S Spike Recovery outside control limits |
| J Analyte detected between SDL and RL | N Parameter not NELAP certified |

CLIENT: Horizon Environmental Services, Inc.
Work Order: 2405059
Project: Larry Neill Property

ANALYTICAL QC SUMMARY REPORT

RunID: PMOIST_240506A

The QC data in batch 115277 applies to the following samples: 2405059-01A, 2405059-02A, 2405059-03A

| Sample ID: 2404315-01A-DUP | Batch ID: 115277 | TestNo: D2216 | Units: WT% | | | | | | | |
|-----------------------------------|-------------------------------|---|----------------------------|---------|------|----------|-----------|------|----------|------|
| SampType: DUP | Run ID: PMOIST_240506A | Analysis Date: 5/7/2024 8:40:00 AM | Prep Date: 5/6/2024 | | | | | | | |
| Analyte | Result | RL | SPK value | Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Percent Moisture | 25.7 | 0 | 0 | 25.33 | | | | 1.48 | 30 | |

Qualifiers:

| | |
|---|---|
| B Analyte detected in the associated Method Blank | DF Dilution Factor |
| J Analyte detected between MDL and RL | MDL Method Detection Limit |
| ND Not Detected at the Method Detection Limit | R RPD outside accepted control limits |
| RL Reporting Limit | S Spike Recovery outside control limits |
| J Analyte detected between SDL and RL | N Parameter not NELAP certified |

APPENDIX 3.3

SERVICE AVAILABILITY LETTERS



September 25, 2024

RE: Luis Garza
9830 Colonnade Boulevard, Suite 300
San Antonio, TX 78230
Parcel ID- 63975 and Parcel ID- 63974

The above-mentioned tract(s) is in the Guadalupe Valley Electric Cooperative certified service territory. GVEC can provide electric service to this property pending agreements with the developer as set forth in GVEC's tariffs.

Sincerely,

A handwritten signature in black ink that reads "Casie Boos". The signature is written in a cursive, flowing style.

Casie Boos
Project Coordinator

cboos@gvec.org

830.857.5127

6400 IH 10 W

Seguin, Texas 78155



9/24/24

Luis Garza,
LJA Engineers
9830 Colonnade Boulevard, Suite 300,
San Antonio, TX 78230
210.503.2700

Re: May Serve Letter by Charter Communications

Thank you for your interest in receiving Charter service. The purpose of this letter is to confirm that the property at **Schmoekel Rd and S Santa Clara Rd, Marion, TX 78124** is within an area that Charter may lawfully serve. However, it is not a commitment to provide service to the Property. Prior to any determination as to whether service can or will be provided to the Property, Charter will conduct a survey of the Property and will need the following information from you:

- Exact site address and legal description
- Is this an existing building or new construction?
- Site plans, blue prints, plat maps or any similar data
- The location of any existing utilities or utility easements
- _____

Please forward this information to **Email: Stx.NewDevelopment@charter.com** Upon receipt, a Charter representative will be assigned to you to work through the process. Ultimately, a mutually acceptable service agreement for the Property will be required and your cooperation in the process is appreciated.

For future reference, please send all utility coordination, abandonments, encroachments, plat signatures, or serviceability requests, or notices of relocation to Email: Stx.NewDevelopment@charter.com. Please share this information with whoever needs these services.

Sincerely,
Jamie Craig
Jamie Craig



LJA

Luis Garza

Schmoekel Rd S Santa Clara Rd

Cibolo Texas

Dear Luis Garza,

This letter is in response to your request for information on the availability of service at Schmoekel Rd S Santa Clara Rd Cibolo Texas or development by AT&T.

This letter acknowledges that the above referenced Schmoekel Rd S Santa Clara Rd Cibolo, Texas is located in an area served by AT&T. Any service arrangements for the list development, location, or development will be subject to later discussions and agreements between the developer and AT&T. Please be advised that this letter is not a commitment by AT&T to provide service to the project, location or development.

Please contact me at the phone number included in this letter with any questions.

Thank you for contacting AT&T.

Richard Martinez

rx7953@exo.att.com

210-371-6367

APPENDIX 3.4

LETTERS OF CORRESPONDENCE



City of Cibolo
 Planning and Engineering Department
 200 S. Main Street, Cibolo, TX 78108
 P: 210.658.9900, F: 210.658.8065
 E: planning@cibolotx.gov

Application for
 Letter of Certification

A Letter of Certification is used to facilitate the City's plat application, site plan review, or other construction document review processes. Department reviewers may include: Planning, Engineering, Public Works, Parks and Fire Marshal. Utility reviewers may include, Guadalupe Valley Electric Cooperative (GVEC), Cibolo Creek Municipal Authority (CCMA), CPS Energy, and Green Valley Special Utility District (GVSUD). Other reviewers may include: Texas Department of Transportation, Guadalupe County, or a third party consultant.

APPLICANT INFORMATION

Applicant: **KB Homes** Point of Contact: **Daniel Phife**
 Email: **dphife@kbhome.com** Phone: **(210) 301-2868**

Project For Review: Neil Tract

- Minor Plat Preliminary Plat Final Plat Preliminary/Final Plat Replat
 Site Plan Other: Land Study

REVIEWER INFORMATION AND RECOMMENDATION

Organization / Department: **GVEC** Person Reviewing: **Casie Boos**
 Email: **cboos@gvec.org** Phone: **830-857-5127**

- I recommend approval of the following Project: _____
 I recommend approval with the following conditions: _____

The above mentioned tract is in the GVEC certified service territory. GVEC an provide electric service to this property pending easement aquisition and agreements with the developer as set forth in GVEC's tariffs.

Signature: *Casie Boos*

Date: **9/24/24**

RETURN TO APPLICANT DATE

It is the applicant's responsibility to submit a completed Letter of Certification in person, by fax, or email to the Planning and Engineering Department (contact information provided above). The applicant should assign a return date with the following in mind:

A Letter of Certification for preliminary plats, final plats and replats, or any other type of plat where the Planning and Zoning Commission and/or the City Council is the approving authority, the Letter of Certification must be received in accordance with the Plat Review Checklist. A completed application may be submitted within the plat timeline. The plats review cycle is documented by the "Plats and Land Study Calendar," available online at: <https://cms2.revize.com/revize/cibolo/Document%20Center/Business/Development%20Process/Development%20Tools/Plat%20Application%20Calendar.pdf>.

A Letter of Certification of minor plats, site plans or any construction documents where the City Manager or his/her designee (City Engineer or City Planner) is the approving authority is not subject to any calendar cycle.

Return By (date): **1 Oct 2024**



City of Cibolo
 Planning and Engineering Department
 200 S. Main Street, Cibolo, TX 78108
 P: 210.658.9900, F: 210.658.8065
 E: planning@cibolotx.gov

Application for
 Letter of Certification

A Letter of Certification is used to facilitate the City's plat application, site plan review, or other construction document review processes. Department reviewers may include: Planning, Engineering, Public Works, Parks and Fire Marshal. Utility reviewers may include, Guadalupe Valley Electric Cooperative (GVEC), Cibolo Creek Municipal Authority (CCMA), CPS Energy, and Green Valley Special Utility District (GVSUD). Other reviewers may include: Texas Department of Transportation, Guadalupe County, or a third party consultant.

APPLICANT INFORMATION

Applicant: KB Homes Point of Contact: Daniel Phife
 Email: dphife@kbhome.com Phone: (210) 301-2868

Project For Review: Neil Tract

- Minor Plat Preliminary Plat Final Plat Preliminary/Final Plat Replat
 Site Plan Other: Land Study

REVIEWER INFORMATION AND RECOMMENDATION

Organization / Department: GVSUD Person Reviewing: Travis Bashan
 Email: Tbashan@gvsud.org Phone: _____

- I recommend approval of the following Project: _____
 I recommend approval with the following conditions: _____

Signature: [Signature] Date: 9/27/24

RETURN TO APPLICANT DATE

It is the applicant's responsibility to submit a completed Letter of Certification in person, by fax, or email to the Planning and Engineering Department (contact information provided above). The applicant should assign a return date with the following in mind:

A Letter of Certification for preliminary plats, final plats and replats, or any other type of plat where the Planning and Zoning Commission and/or the City Council is the approving authority, the Letter of Certification must be received in accordance with the Plat Review Checklist. A completed application may be submitted within the plat timeline. The plats review cycle is documented by the "Plats and Land Study Calendar," available online at:
<https://cms2.revize.com/revize/cibolo/Document%20Center/Business/Development%20Process/Development%20Tools/Plat%20Application%20Calendar.pdf>.

A Letter of Certification of minor plats, site plans or any construction documents where the City Manager or his/her designee (City Engineer or City Planner) is the approving authority is not subject to any calendar cycle.
 Return By (date): 1 Oct 2024



City of Cibolo
 Planning and Engineering Department
 200 S. Main Street, Cibolo, TX 78108
 P: 210.658.9900, F: 210.658.8065
 E: planning@cibolotx.gov

Application for
 Letter of Certification

A Letter of Certification is used to facilitate the City's plat application, site plan review, or other construction document review processes. Department reviewers may include: Planning, Engineering, Public Works, Parks and Fire Marshal. Utility reviewers may include, Guadalupe Valley Electric Cooperative (GVEC), Cibolo Creek Municipal Authority (CCMA), CPS Energy, and Green Valley Special Utility District (GVSUD). Other reviewers may include: Texas Department of Transportation, Guadalupe County, or a third party consultant.

APPLICANT INFORMATION

Applicant: LJA Point of Contact: Nicholas Gower
 Email: ngower@lja.com Phone: (210) 503-2744

Project For Review: Neil Tract

- Minor Plat Preliminary Plat Final Plat Preliminary/Final Plat Replat
 Site Plan Other: Land Study

REVIEWER INFORMATION AND RECOMMENDATION

Organization / Department: AT&T Person Reviewing: _____

Email: _____ Phone: _____

I recommend approval of the following Project: _____

I recommend approval with the following conditions: _____

PLEASE INCLUDE AT&T IN ANY ELECTRIC EASEMENTS GRANTED. IF ANY EXISTING AT&T FACALITIES NEED TO BE MOVED, REMOVED, REPLACED OR RELOCATED, CWOTS (CUSTOM WORK ORDER/CONSTRUCTION) CHARGES WILL APPLY.

Signature: *Thomas South*

Date: 10/2/2024

RETURN TO APPLICANT DATE

It is the applicant's responsibility to submit a completed Letter of Certification in person, by fax, or email to the Planning and Engineering Department (contact information provided above). The applicant should assign a return date with the following in mind:

A Letter of Certification for preliminary plats, final plats and replats, or any other type of plat where the Planning and Zoning Commission and/or the City Council is the approving authority, the Letter of Certification must be received in accordance with the Plat Review Checklist. A completed application may be submitted within the plat timeline. The plats review cycle is documented by the "Plats and Land Study Calendar," available online at: <https://cms2.revize.com/revize/cibolo/Document%20Center/Business/Development%20Process/Development%20Tools/Plat%20Application%20Calendar.pdf>.

A Letter of Certification of minor plats, site plans or any construction documents where the City Manager or his/her designee (City Engineer or City Planner) is the approving authority is not subject to any calendar cycle.

Return By (date): **1 Oct 2024**



City of Cibolo
 Planning and Engineering Department
 200 S. Main Street, Cibolo, TX 78108
 P: 210.658.9900, F: 210.658.8065
 E: planning@cibolotx.gov

Application for
 Letter of Certification

A Letter of Certification is used to facilitate the City's plat application, site plan review, or other construction document review processes. Department reviewers may include: Planning, Engineering, Public Works, Parks and Fire Marshal. Utility reviewers may include, Guadalupe Valley Electric Cooperative (GVEC), Cibolo Creek Municipal Authority (CCMA), CPS Energy, and Green Valley Special Utility District (GVSUD). Other reviewers may include: Texas Department of Transportation, Guadalupe County, or a third party consultant.

APPLICANT INFORMATION

Applicant: LJA Point of Contact: Nicholas Gower
 Email: ngower@lja.com Phone: (210) 503-2744

Project For Review: Neil Tract

- Minor Plat Preliminary Plat Final Plat Preliminary/Final Plat Replat
 Site Plan Other: Land Study

REVIEWER INFORMATION AND RECOMMENDATION

Organization / Department: Spectrum Person Reviewing: _____

Email: _____ Phone: _____

I recommend approval of the following Project: _____

I recommend approval with the following conditions: _____

Signature: Jamie Craig Spectrum Cable Date: 9/24/24

RETURN TO APPLICANT DATE

It is the applicant's responsibility to submit a completed Letter of Certification in person, by fax, or email to the Planning and Engineering Department (contact information provided above). The applicant should assign a return date with the following in mind:

A Letter of Certification for preliminary plats, final plats and replats, or any other type of plat where the Planning and Zoning Commission and/or the City Council is the approving authority, the Letter of Certification must be received in accordance with the Plat Review Checklist. A completed application may be submitted within the plat timeline. The plats review cycle is documented by the "Plats and Land Study Calendar," available online at: <https://cms2.revize.com/revize/cibolo/Document%20Center/Business/Development%20Process/Development%20Tools/Plat%20Application%20Calendar.pdf>.

A Letter of Certification of minor plats, site plans or any construction documents where the City Manager or his/her designee (City Engineer or City Planner) is the approving authority is not subject to any calendar cycle.

Return By (date): **1 Oct 2024**

APPENDIX 3.5

WATER SERVICE FEASIBILITY STUDY



TRANSMITTAL

TRANSMITTAL ID:

DATE:

PURPOSE:

VIA:

GVSUD PROJECT NAME:

GVSUD PROJECT NUMBER:

SUBJECT:

FROM

| NAME | COMPANY | EMAIL | PHONE |
|------|---------|-------|-------|
| | | | |

TO

| NAME | COMPANY | EMAIL | PHONE |
|------|---------|-------|-------|
| | | | |

WE ARE SENDING YOU ATTACHED UNDER SEPARATE COVER VIA _____

Feasibility Study Plan Approval Letter Revised Plans/Plats Documents

NSSA Invoice Testing Reports Other _____

| QUANTITY | DESCRIPTION |
|----------|-------------|
| | |
| | |
| | |
| | |

THESE ARE TRANSMITTED as checked below:

For Approval For Correction Approved For Your Use

For Signature As Requested For Review and Comment

REMARKS:

COPY TO:

SIGNED:



UTILITY ENGINEERING GROUP

Memorandum

Date: June 14, 2024

To: Mr. Gabe Cantu
Manager – Development & CIP
Green Valley Special Utility District
605 FM 465
Marion, Texas 78124

From: Utility Engineering Group, PLLC
Garry Montgomery, P.E.
191 N. Union Avenue
New Braunfels, Texas 78130



RE: Neill Tract – Schmoekel Road – City of Cibolo ETJ – Water Service Request

Project Name: Neill Tract

Equivalent Dwelling Unit (EDU) requested: 351 Residential, 4 Irrigation EDUs

Project Description: GVSUD received a request for service for a 351 lot residential subdivision within the District's water CCN. The development will be completed as a phased development.

Project Service Requirements: To serve the tract, the applicant will be required to connect to the proposed 16 inch waterline west of the tract on Schmoekel Road and extend a 12-inch waterline through their development frontage along Schmoekel Road.

Developer Cost: The developer cost associated with these meter sets are estimated to total \$2,295,075 for impact fee, water acquisition fees, tap, meter set, and deposit. The water acquisition fees at the current rate of \$2,000 per EDU will be due at the time of construction plan submission and total \$710,000. Final fees will be based on the then applicable fee at the time that the payment is due to the District as approved by the Board of Directors. The waterline extension is estimated to cost \$407,740. The developer will be responsible for the cost of the waterline and any associated easements. GVSUD will design, bid and manage the project through construction.

GVSUD Cost: No GVSUD oversizing or extension costs are associated with this application.

Contract Conditions: All standard contract provisions apply.

- End Memo -



Green Valley Special Utility District

Neill Tract

Water Service Feasibility Study

June 2024

Prepared by:
Utility Engineering Group,
PLLC
191 N. Union Avenue
New Braunfels, Texas 78130
Phone: (830) 214-0521 (Office)
TBPE Firm No. 18712
UEG Project No. 6096-261

Location Map:



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1. Introduction

Green Valley Special Utility District (GVSUD) received the subject application for a residential development from KB Homes for the property located on Schmoekel Road just east of Santa Clara Road in Marion, Texas also referred to as the Neill Tract on May 16, 2024.

This feasibility study reviews and analyzes the proposed development layout, required easements, and projected water demand. UEG has included water use projections based on the application for service and historical water use for the District.

Once this feasibility study has been reviewed by GVSUD staff the applicant will receive a copy for review, and if the terms are acceptable a water service contract will be established for the development.

2. Land Use Projections

The subject tract is located within the City of Cibolo Extra Territorial Jurisdiction (ETJ) and Guadalupe County. The property is located west of the intersection of Schmoekel Road and Santa Clara Road on the south side of the Schmoekel Road right of way. The property currently is undeveloped and has access to water service from GVSUD. The applicant intends to develop a total of 351 residential lots on the 67.5-acre tract. The applicant has requested a total of 351 - 5/8" x 3/4" water meters for potable demand and 4 irrigation meters for a total of 355 Equivalent Dwelling Units (EDU) The historic water demand for connections within the District has been 0.34 acre-feet per connection, however we typically project a demand of 0.4 acre-feet per connection as a conservative assumption. With the 0.4 acre-feet per connection demand, this request totals 142 acre-feet per year.

3. Water Availability

GVSUD currently has adequate water supply available to meet the application request

under the Canyon Regional Water Authority (CRWA) Water Supply Contract through the Wells Ranch Phase II and the ARWA Phase I agreement. To aid in GVSUD's long-term planning efforts, we encourage developers to manage the water resources in the most efficient manner. This can be achieved by reducing irrigation demand, water conservation efforts and ensuring that waterline installation is completed correctly, and with adequate bedding materials. This reduces the number of leaks and associated water losses within the system over time.

Based on the number of services and amount of water requested in this application, UEG concludes that GVSUD has adequate water supply to meet the request for potable water for the proposed subdivision.

4. Existing GVSUD Infrastructure

The following section quantifies the impact to existing GVSUD storage, pumping and distribution infrastructure. This analysis also investigates the impact of the request on the GVSUD water supplies. These supplies include well water and surface/groundwater from the District's Wholesale Provider(s).

4.1 Impact to Water Supply

GVSUD currently has adequate water supply for this development through the District's Wholesale Provider, Canyon Regional Water Authority (CRWA) and the ARWA Phase I project. GVSUD will serve this development from the Bolton Road Meter Station and Wagner Booster Pump Station. These facilities provide adequate pump, storage and production capacity to meet the long-term need of the property based on the application for service. No additional water rights or production capacity is required for the District to meet the request of this application. In the future this tract will be served by Plant 15 on Lower Seguin Road and utilize CRWA Wells Ranch Water.

4.2 Impact to the District's Distribution System

Currently, GVSUD is planning a 16-inch distribution waterline that will be located approximately 500 feet west of the subject tract. The applicant will be responsible for the cost of installing their internal waterlines as well as all other appurtenances including fire hydrants within the property which must be compliant with the fireflow criteria of the local jurisdiction. The applicant will also be responsible for the cost of design, easement acquisition and construction to install a 12 inch main along the road frontage of Schmoekel Road to tie into the 16 inch main that the District has currently in design and easement acquisition phase located west of the development parcel as shown on the attached GIS exhibit. No additional distribution system upgrades will be required by the District.

4.3 Calculated Pressure

The proposed development will be served by the Bolton Road Meter Station, which serves a pressure plane elevation of 821 feet msl. There is a pressure reducing valve at this site, this valve may need to be adjusted depending on build out of the area. Based on the topographic survey, the proposed development has an approximate maximum elevation of 625 feet msl. This equates to 196 feet of head, or a static pressure of 85 psi. The lowest elevation on the tract is 620 msl. This equates to 201 feet of head, or a static pressure of 87 psi.

4.4 Impact to Water Storage

The Wagner Booster Pump Station currently has 4,000,000 Gallons of Storage Capacity onsite for retail customers. This site can also be supplied by the Bolton Road Meter Station depending on system operation. Both supplies provide adequate storage, pumping capacity and pressure. GVSUD also has redundant storage within the distribution system to reliably serve this proposed Subdivision. No additional storage is required to meet this request.

5. Fireflow Demand Request

The applicant is required to meet the fireflow requirements for the authority having jurisdiction over the property location. In this case the applicant's property falls within the City of Cibolo ETJ and Guadalupe County. The county will require compliance with the International Fire Code and the applicant requests 1,500 gpm at 25 psi residual pressure. This is common for residential land uses.

The District has adequate water supply, pumping capacity and distribution lines to meet the fireflow demand requested with the line extensions proposed in Section 4 of this report. The applicant will be responsible for ensuring that the internal water distribution system for the development is adequately sized to meet the required flows and spacing requirements of the applicable local codes.

6. Estimated Costs

The applicant has requested 351 residential connections with 5/8"x 3/4" meters plus 4 standard irrigation meters, totaling 355 EDUs of service. As of June 1, 2019, the District cost of a residential connection is \$6,465 per connection. This cost includes the impact fees, water acquisition fees, meter costs, inspection and account deposit. This equates to a total of \$2,295,075 for the 355 standard water meters. The water acquisition fee, included in the total cost provided above, will be due at the time of construction plan submission and totals \$710,000 at the current rate of \$2,000 per EDU. All fees will be at the then applicable rate as approved by the board at the time payment is due for the development.

The waterline extension is estimated to cost \$407,740 including easements, design, construction and inspection costs. GVSUD will manage the design, easement acquisition and construction for the distribution main on Schmoekel Road. The developer will be billed in accordance with the NSSA for the project.

7. Conclusions and Recommendations

Green Valley Special Utility District's existing water system is capable of serving this proposed development with domestic water service. The conclusions and recommendations outlined in this report are met by the proposed development and approved by the GVSUD Board of Directors.

The following conditions are provided for GVSUD's consideration:

- A. The applicant complies with GVSUD's current policies and pays all applicable fees at the time of Development.
- B. The required easement certification is provided on the recorded plat and any required easements are dedicated to the District. Attachment 2 contains the certification required by the District. If a right-of-way dedication is required by the City, additional easement and expenses may be assessed.
- C. GVSUD staff and consultants approve the location, size, material type and all appurtenances prior to construction and final acceptance of the project. GVSUD standard waterline specifications and details shall be followed and a GVSUD inspector shall be present during installation and testing of the infrastructure.
- D. Electric, telephone, and any other utilities shall remain outside of the GVSUD easement unless specifically agreed to in writing by GVSUD.
- E. Fire hydrants shall be spaced as required by the International Fire Code and City of Santa Clara.
- F. After construction completion and GVSUD acceptance, all water distribution improvements shall be dedicated to and maintained by GVSUD. The contractor and/or developer shall warranty all construction and material for a period of one year. All system improvements that are not prepared by GVSUD must be submitted to GVSUD for review and approval prior to construction. Any work completed without approved plans and inspection by GVSUD will be removed and/or replaced by the applicant at the sole expense of the applicant.
- G. The applicant is responsible for the design and construction of its internal waterline through the development. All easements required by GVSUD shall be granted and/or acquired at the developer's cost. The applicant is also responsible

for the cost of extending/tying in to the proposed 16 inch waterline on Schmoekel Road and terminating the extension at the eastern end of their parcel on Schmoekel Road which will be designed and managed through construction by GVSUD.

This water service feasibility study is subject to the approval and/or modification by the GVSUD Board of Directors after consideration of the information provided herein and the application of the policies of GVSUD. This study is based on the application for service submitted May 16, 2024 if changes or additions are made to the development this study should be revisited.

Attachment 1 – Easement Certification

8. GREEN VALLEY SPECIAL UTILITY DISTRICT CERTIFICATE

This land development plat has been submitted to and approved by Green Valley Special Utility District for Easements. Upon request of the Customer and payment of the required fees, the District will provide domestic water service and/or wastewater service to each lot in this Subdivision, by Agreement with the Developer.

Agent
Green Valley Special Utility District

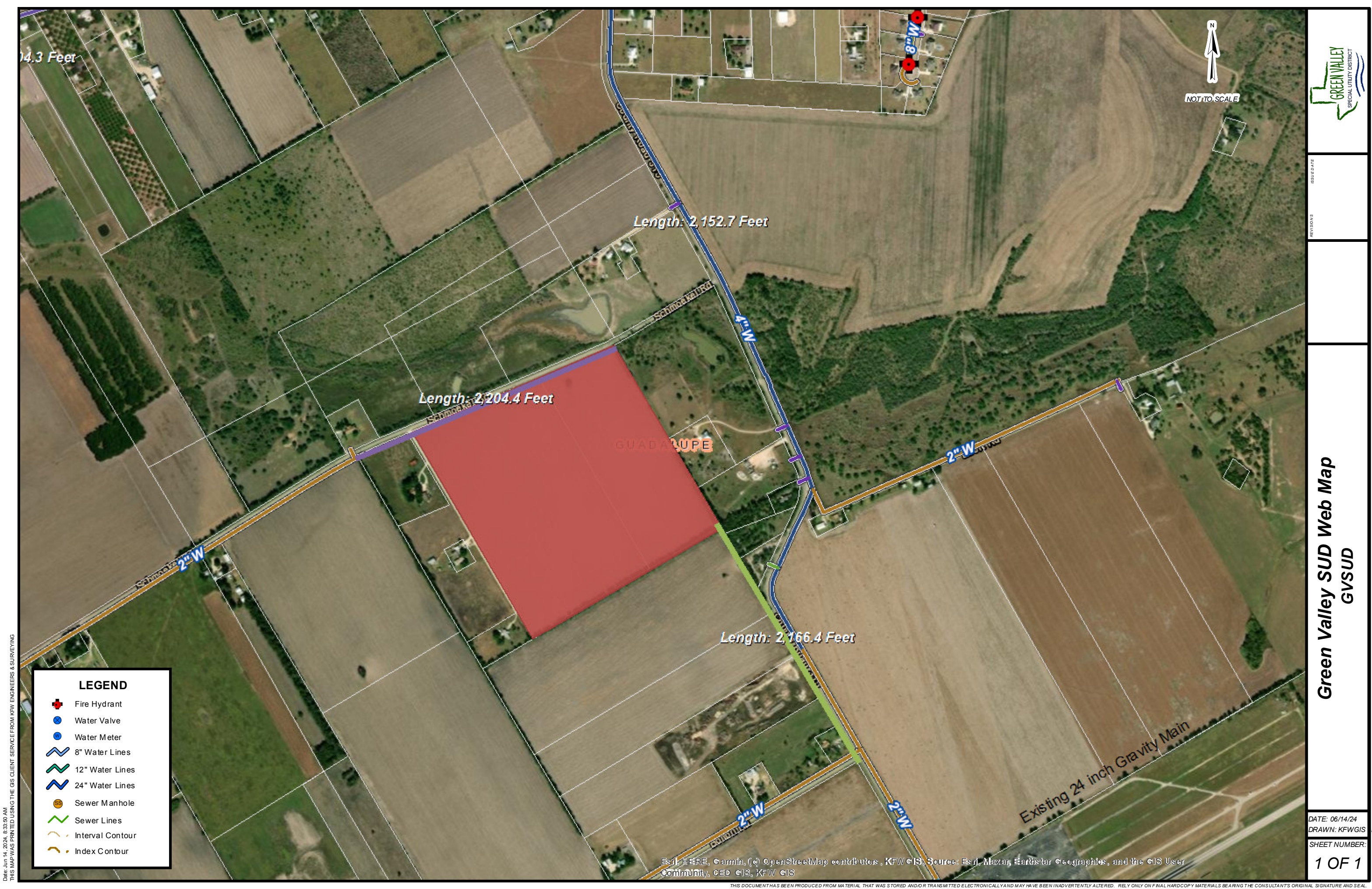
9. EASEMENT CERTIFICATE

The Owner of the land shown on this plat and whose name is subscribed hereto, in person or through a duly authorized agent, dedicates to the Green Valley Special Utility District of Marion, Texas, its successors and assigns, a perpetual Easement marked as “GVSUD Waterline Easement”, “GVSUD Sewer Easement” or “GVSUD Reuse Water Easement” as applicable with the right to erect, construct, install, and lay and thereafter access and use, operate, inspect, repair, maintain, replace, upgrade, parallel and remove water or waste-water transmission, collection and/or distribution lines and appurtenances and any other facilities necessary to serve Grantors’ property, as well as the Grantee’s current and future system-wide customers, together with the right of ingress and egress under, over and across Grantor's adjacent lands and in all streets and byways for the purpose for which the above mentioned rights are granted, including the right to remove from said lands all trees, shrubs, grasses, pavements, fences, structures, improvements, or other obstructions which may interfere with the facility or the access thereto.

It is agreed and understood that no other utilities shall be installed within our easement to include but not limited to permanent structures and/or buildings, concrete slabs, sidewalks, walls, and pavements. Any monetary loss to Green Valley SUD resulting from modifications required of utility equipment located within said Easements due to grade change or ground elevation alterations shall be charged to the person or persons deemed responsible for said grade changes or ground elevation alterations. Upon entering in and upon said Easement, the District will endeavor to restore the land surface to a useable condition but is not obligated to restore it to a pre-existing condition.

The Easement conveyed herein was obtained or improved through Federal financial assistance. This Easement is subject to the provision of Title VI of the Civil Rights Act of 1964, and the regulations issued pursuant thereto for so long as the Easement continues to be used for the same or similar purpose for which financial assistance was extended or for so long as the Grantee owns it, whichever is longer.

Attachment 2 – GIS Exhibit



REVISED
REVISIONS

Green Valley SUD Web Map
GVSUD



| LEGEND | |
|--------|------------------|
| | Fire Hydrant |
| | Water Valve |
| | Water Meter |
| | 8" Water Lines |
| | 12" Water Lines |
| | 24" Water Lines |
| | Sewer Manhole |
| | Sewer Lines |
| | Interval Contour |
| | Index Contour |

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Esri, HERE, Garmin, (c) OpenStreetMap contributors, KFW GIS, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, GED GIS, KFW GIS

DATE: 06/14/24
DRAWN: KFWGIS KFW GIS

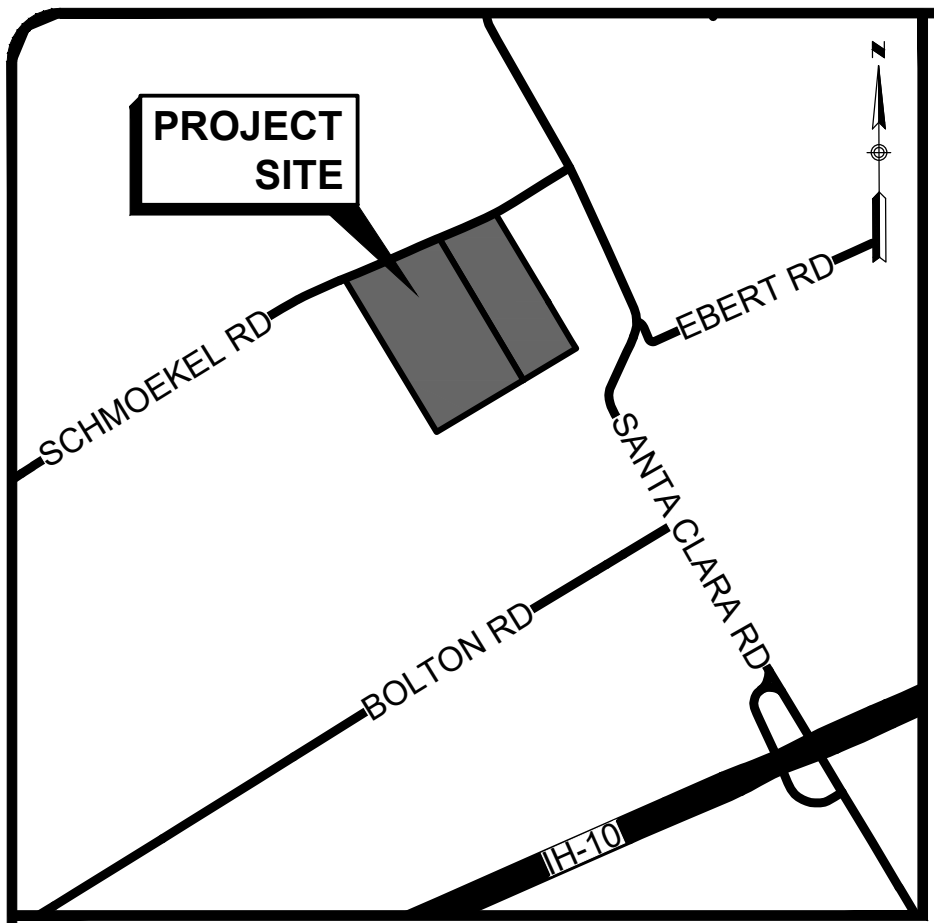
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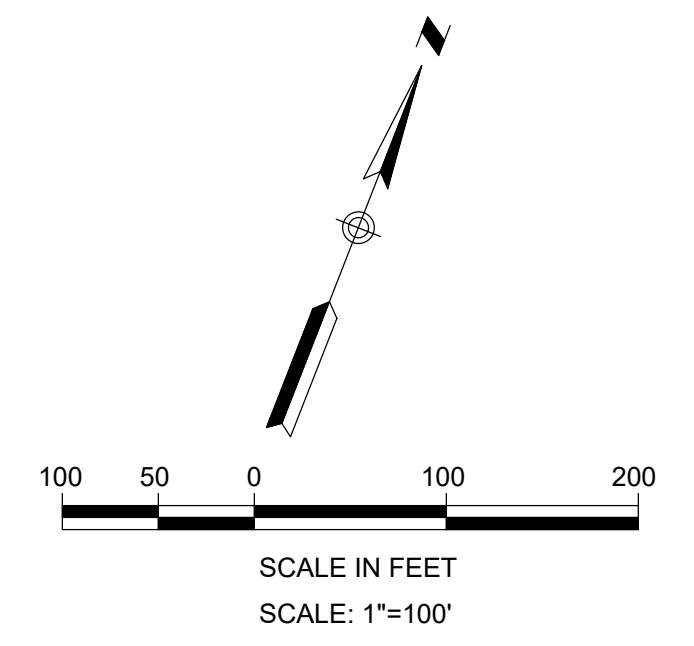
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Attachment 3 – Developer’s Land Plan

PROJECT SITE

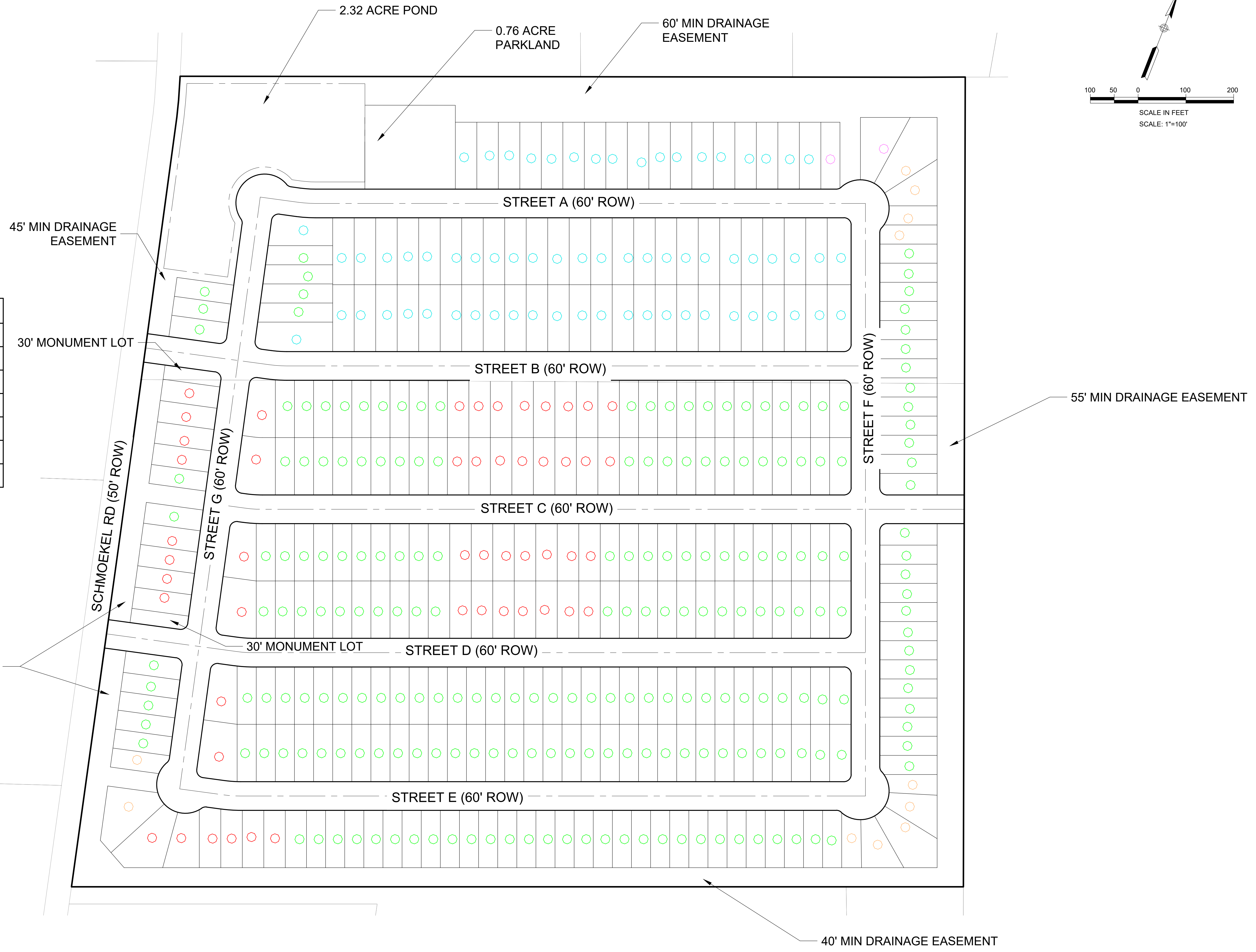


LOCATION MAP
1" = 2000'



LOT COUNT

| | |
|--------------------------|------------|
| 40' x 100' LOT | 11 |
| 40' x 120' LOT (TYPICAL) | 221 |
| 40' x 130' LOT (TYPICAL) | 2 |
| 40' LOT TOTAL: | 234 |
| 45' x 120' LOT (TYPICAL) | 50 |
| 45' x 140' LOT (TYPICAL) | 67 |
| 45' LOT TOTAL: | 117 |
| TOTAL: | 351 |



**SCHMOEKEL 68 AC CIBOLO
PRELIMINARY LAND PLAN**

| NO. | REVISIONS | DESCRIPTION | BY | DATE |
|-----|-----------|-------------|----|------|
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| DATE: | DESIGNED BY: | CHECKED BY: | DRAWING NAME: |
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LJA Engineering, Inc.
 9830 Colonnade Blvd.
 Suite 300
 San Antonio, Texas 78230
 Phone 210-503-2700
 Fax 210-503-2749
 TBPE No. T-1386

JOB NUMBER:

SHEET NO.
1
OF 1 SHEETS

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 User: njs
 Last Modified: May 02, 24 - 15:40
 Plot Date/Time: May 02, 24 - 15:41:35

APPENDIX 3.6

WASTEWATER SERVICE FEASIBILITY STUDY



TRANSMITTAL

TRANSMITTAL ID:

DATE:

PURPOSE:

VIA:

GVSUD PROJECT NAME:

GVSUD PROJECT NUMBER:

SUBJECT:

FROM

| NAME | COMPANY | EMAIL | PHONE |
|------|---------|-------|-------|
| | | | |

TO

| NAME | COMPANY | EMAIL | PHONE |
|------|---------|-------|-------|
| | | | |

WE ARE SENDING YOU ATTACHED UNDER SEPARATE COVER VIA _____

Feasibility Study Plan Approval Letter Revised Plans/Plats Documents

NSSA Invoice Testing Reports Other _____

| QUANTITY | DESCRIPTION |
|----------|-------------|
| | |
| | |
| | |
| | |

THESE ARE TRANSMITTED as checked below:

For Approval For Correction Approved For Your Use

For Signature As Requested For Review and Comment

REMARKS:

COPY TO:

SIGNED:



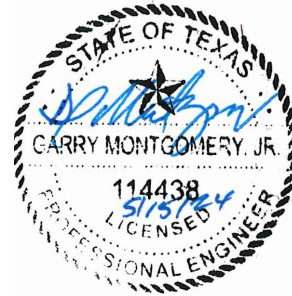
UTILITY ENGINEERING GROUP

Memorandum

Date: June 14, 2024

To: Mr. Gabriel Cantu
Green Valley Special Utility District
605 FM 465
Marion, Texas 78124

From: Utility Engineering Group, PLLC
Garry Montgomery, P.E.
191 N. Union Avenue
New Braunfels, Texas 78130



RE: Neill Tract – City of Cibolo ETJ – Sewer Service Request

Project Name: Neill Tract

Equivalent Dwelling Unit (EDU) requested: 351 Residential EDUs

Project Description: GVSUD received a request for service for a 351 EDU residential development within the District's sewer CCN. The development will be served by the Santa Clara WWTP through the Phase I collection system and an offsite extension to the development.

Project Service Requirements: To serve the tract, the developer will be responsible for the cost of the design and construction of the collection system for the development and connect to the collection main along Bolton Road as shown on the attached GIS exhibit and described in the study. The developer is responsible for the cost of easements, design and construction of the offsite gravity main. GVSUD will control the design, easement acquisition and construction of the offsite gravity main and the developer will be billed as discussed in the NSSA for the project.

Developer Cost: The developer CIAC fee associated with this application totals \$2,100,735 at the current rate. The CIAC fee will be due at the time of construction plan submittal and will be assessed at the then applicable rate as set by the Board of Directors. The offsite gravity main extension is estimated to cost \$487,440.

GVSUD Cost: GVSUD cost participation is not required for service to this tract as presented in the study with the exception of the required plant expansion to meet development demand.

Contract Conditions: Standard contract conditions apply.

- End Memo -

Prepared For:



Green Valley Special Utility District
P.O. Box 99
Marion, TX 78124
Phone: 830-914-2330
Fax: 830-420-4138

Prepared By:

Green Valley Special Utility District Neill Tract Wastewater Service Feasibility Study



Location Map:



UTILITY ENGINEERING GROUP PLLC

Utility Engineering Group, PLLC
191 N. Union Avenue
New Braunfels, Texas 78130
Phone: (830) 214-0521 (Office)
TBPE Firm No. 18712
UEG Project No. 6096-261

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1. Introduction

Green Valley Special Utility District (GVSUD) received the subject application for non-standard wastewater service from Mosaic Development for their residential development on May 16, 2024. Utility Engineering Group, PLLC (UEG) was authorized to prepare a wastewater feasibility study for the proposed development on May 31, 2024.

This wastewater feasibility study reviews and analyzes the proposed development layout, required easements, and projected wastewater treatment capacities. UEG has included wastewater projections based on the application for service and the land use projections for the development. The design assumptions are consistent with the GVSUD Wastewater Design Criteria and the Texas Commission on Environmental Quality (TCEQ).

Once this feasibility study has been reviewed by GVSUD staff it will be presented to the applicant for review, and if the terms are acceptable, a wastewater service contract will be executed for the proposed development.

2. Land Use Projections

The Neill Tract property is located within the City of Cibolo Extra Territorial Jurisdiction (ETJ) and Guadalupe County. The property is located east of Santa Clara Rd; and fronts Schmoekel Road. Currently, the property is vacant and does not have any wastewater service from GVSUD or any other entity. The applicant intends to develop 4 phases on the property with a total of 351 Equivalent Dwelling Units (EDUs). Timing of service to this tract will be discussed in further detail in section 4 of this report. The wastewater connections will adhere to Green Valley's Wastewater planning factors, their Equivalent Dwelling Units (EDU) conversion factors, the anticipated Average Daily Flows, Peak Dry Weather Flow, and Peak Wet Weather Flow projections. The evaluation of the overall connections and actual demand request for this property will be

further analyzed and discussed later in this report.

3. Wastewater Service Approach

The District has the required TPDES permit to serve this tract through the Santa Clara Creek WWTP. This development will utilize capacity in the Santa Clara WWTP, future plant expansion and associated collection system.

4. Proposed GVSUD Infrastructure

The following section identifies the demand, impact, and approach the District will take to provide permanent wastewater services to this tract. This analysis will also investigate the impact of the requested services within the District's wastewater system and associated capacity requirements.

4.1 Impact to Wastewater Demand

The District has experienced growth within this sewershed and has a phased discharge permit and wastewater treatment plant (WWTP) to serve the growth in this sewershed. This development will utilize excess capacity in the second phase plant expansion and permit as currently issued. The District has begun planning the expansion of the WWTP and this development will utilize capacity in that plant. Service will not be available to the development until the expansion of the wastewater treatment plant is completed.

4.2 District's Collection System and Approach

The Santa Clara Creek No. 1 Wastewater Treatment Plant is located near IH-10 and Linne Rd and is currently in operation. The first phase of the plant is 250,000 gallons per day with future expansions up to 2.5 million gallons per day. GVSUD has constructed a 14.2 mile gravity trunk main that delivers flow to the Treatment Facility and provide service to over 18,000 acres of service area within the CCN and Santa

Clara Creek Sewershed. The 24 inch gravity main that this development will utilize has been constructed and is in service. The development will be served by a new gravity main extension to the existing gravity main that is located on the southern right of way of Bolton Road as shown on the attached GIS exhibit, just south of the development. The applicant will be responsible for the costs associated with the offsite sewer extension with a minimum 12-inch gravity main/manholes, easement acquisition, permitting and construction. GVSUD will manage the project design, easement acquisition and construction.

GVSUD has acquired the required Texas Pollutant Discharge Elimination System Permit (WQ0015360001) to serve the interim phase of the facility consisting of 0.25 million gallons per day (MGD) of treated effluent and included a second phase of 0.625 MGD in the most recent renewal. Ultimately, the District will expand the Santa Clara facility to a 2.5 MGD plant which is currently permitted under the same discharge permit.

This development can be served by the existing 24 inch gravity main on Bolton and Santa Clara Road south of the development or through the proposed gravity main in the Marion Oaks development which will begin construction soon. We anticipate this development being served by the Bolton/Santa Clara gravity main, however, once design commences on the development, GVSUD will consider either service option. The development will be responsible for verifying and providing an analysis of the Marion Oaks gravity main to ensure adequate capacity is available or identify any oversizing/upgrades that need to occur in that segment of collection system.

4.3 Wastewater Planning and Determination

UEG will utilize GVSUD wastewater planning factors in order to provide an accurate flow for both proposed tracts. The contributing factors are as follow:

- Wastewater Flow: 300gpd/EDU

- Infiltration/Inflow: 300gpd/Acre.
- Peaking Factor Dry Weather Flow: 4.0

| Landplan Usage | EDU Conversion Factor | Total EDU's | Area (Acres) | Average Dry Weather Flow (GPM) | Peak Dry Weather Flow (GPM) | Peak Wet Weather Flow (GPM) |
|-----------------------|------------------------------|--------------------|---------------------|---------------------------------------|------------------------------------|------------------------------------|
| Neill Tract | 5.2 | 351 | 67.5 | 73.1 | 292.5 | 306.6 |

The District’s wastewater planning factors were approved by the Board of Directors and are consistent with the Texas Commission on Environmental Quality (TCEQ) regulations.

4.4 Proposed Land Plan Wastewater Projections

Based on the land plan study, the density per acre equates to 5.2 EDU/AC for the proposed subdivision. A total of 351 EDU of service have been requested by the applicant, which will produce an effluent of approximately 306.6 gpm, or a Peak Wet Weather Flow of approximately 441,450 gallons per day at full buildout. The average day flow to the treatment plant would be approximately 105,300 gallons per day, which will be the basis of CIAC fee calculations and permitting. The District will need to expand the plant well in advance of the final buildout of this proposed development.

5. Estimated Costs

Currently, the District’s cost per Wastewater EDU is \$5,985 which is a contribution from the developer in aid of construction. The Contribution in Aid of Construction (CIAC) will be due at the time of construction plan submission and totals \$2,100,735 at the current rate. The total estimated cost of the 12 inch gravity main extension to and through the development frontage is \$487,440 for the 2,166 lf of gravity main, manholes, restoration, design and construction administration.

The developer will also be responsible for the easements and the cost of design/construction for the offsite sewer main. GVSUD will acquire the offsite easements at the developer's expense.

6. Conclusions and Recommendations

The following conditions are provided for GVSUD's consideration:

- A. The applicant complies with GVSUD's current policies and pays all applicable fees at the time of Development.
- B. The required easement certification is provided on the recorded plat and any required easements are dedicated to the District. Attachment 2 contains the certification required by the District.
- C. GVSUD staff and consultants approve the location, size, material type and all appurtenances prior to construction and final acceptance of the project. GVSUD standard wastewater specifications shall be followed and a GVSUD inspector shall be present during installation and testing of the infrastructure. The applicant is responsible for the design and costs associated with the internal infrastructure to serve their development, including but not limited to: gravity mains, manholes, lift stations, forcemains and associated appurtenances to deliver flow to the GVSUD collection system. GVSUD may elect to oversize components of the Developer's collection system to serve adjacent tracts. We request that the developer and their design team work closely with GVSUD during design to ensure that the collection system is acceptable to GVSUD.
- D. Electric, telephone, and any other utilities shall remain outside of the GVSUD easement unless specifically agreed to in writing by GVSUD.
- E. After construction completion and GVSUD acceptance, all wastewater collection improvements shall be dedicated to and maintained by GVSUD. The contractor and/or developer shall warranty all construction and material for a period of one year. All system improvements that are not prepared by GVSUD must be submitted to GVSUD for review and approval prior to construction. All infrastructure design shall conform to the GVSUD and TCEQ design guidelines,

standards and details. Any work completed without approved plans and inspection by GVSUD will be removed and/or replaced by the applicant at the sole expense of the applicant.

- F. The developer will be responsible for the cost of the CIAC fees, the fee at the time of this study is \$5,985 per EDU. The developer will pay the fee as approved by the Board at the time of construction plan approval with subsequent units of the development. Service will not be available until the plant expansion is funded, designed and constructed.
- G. The developer will be responsible for any easements and the cost of design/construction of the offsite sewer main to service the tract as discussed in this study.

This wastewater feasibility study is subject to the approval and/or modification by the GVSUD Board of Directors after consideration of the information provided herein and the application of the policies of GVSUD. This study is based on the application for service submitted May 16, 2024. If changes or additions are made to the development this study should be revisited.

Attachment 1 – Easement Certification

7. GREEN VALLEY SPECIAL UTILITY DISTRICT CERTIFICATE

This land development plat has been submitted to and approved by Green Valley Special Utility District for Easements. Upon request of the Customer and payment of the required fees, the District will provide domestic water service and/or wastewater service to each lot in this Subdivision, by Agreement with the Developer.

Agent
Green Valley Special Utility District

8. EASEMENT CERTIFICATE

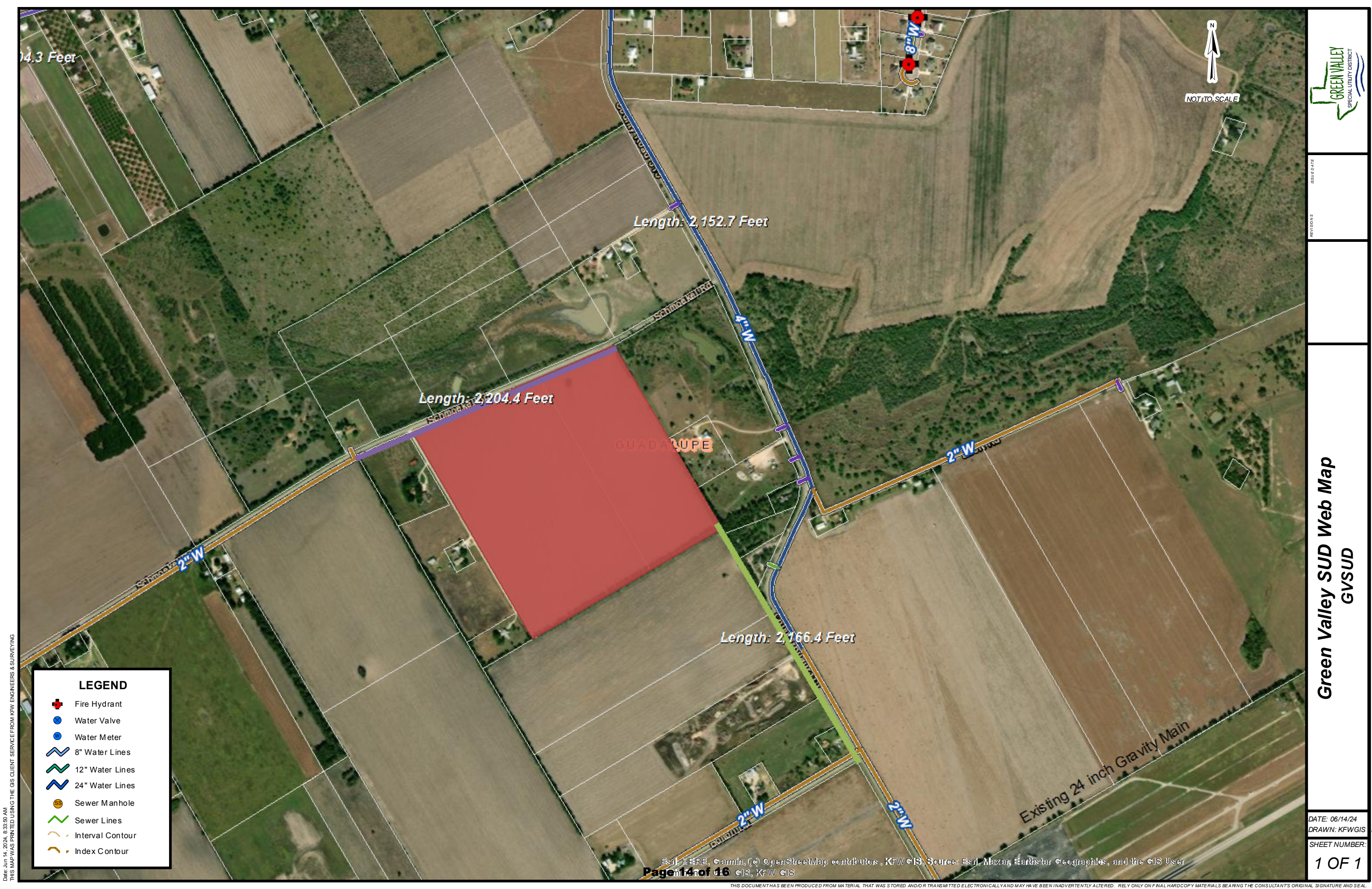
The Owner of the land shown on this plat and whose name is subscribed hereto, in person or through a duly authorized agent, dedicates to the Green Valley Special Utility District of Marion, Texas, its successors and assigns, a perpetual Easement marked as “GVSUD Waterline Easement”, “GVSUD Sewer Easement” or “GVSUD Reuse Water Easement” as applicable with the right to erect, construct, install, and lay and thereafter access and use, operate, inspect, repair, maintain, replace, upgrade, parallel and remove water or waste-water transmission, collection and/or distribution lines and appurtenances and any other facilities necessary to serve Grantors’ property, as well as the Grantee’s current and future system-wide customers, together with the right of ingress and egress under, over and across Grantor's adjacent lands and in all streets and byways for the purpose for which the above mentioned rights are granted, including the right to remove from said lands all trees, shrubs, grasses, pavements, fences, structures, improvements, or other obstructions which may interfere with the facility or the access thereto.

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REV 05/24

Attachment 2 – GIS Exhibit



Date: Jun 14, 2024, 8:33:50 AM
 THIS MAP WAS PRINTED USING THE GIS CLIENT SERVICE FROM KFW ENGINEERS & SURVEYING

LEGEND

- + Fire Hydrant
- ⊗ Water Valve
- Water Meter
- 8" Water Lines
- 12" Water Lines
- 24" Water Lines
- Sewer Manhole
- Sewer Lines
- Interval Contour
- Index Contour



Green Valley SUD Web Map
GVSUD

DATE: 06/14/24
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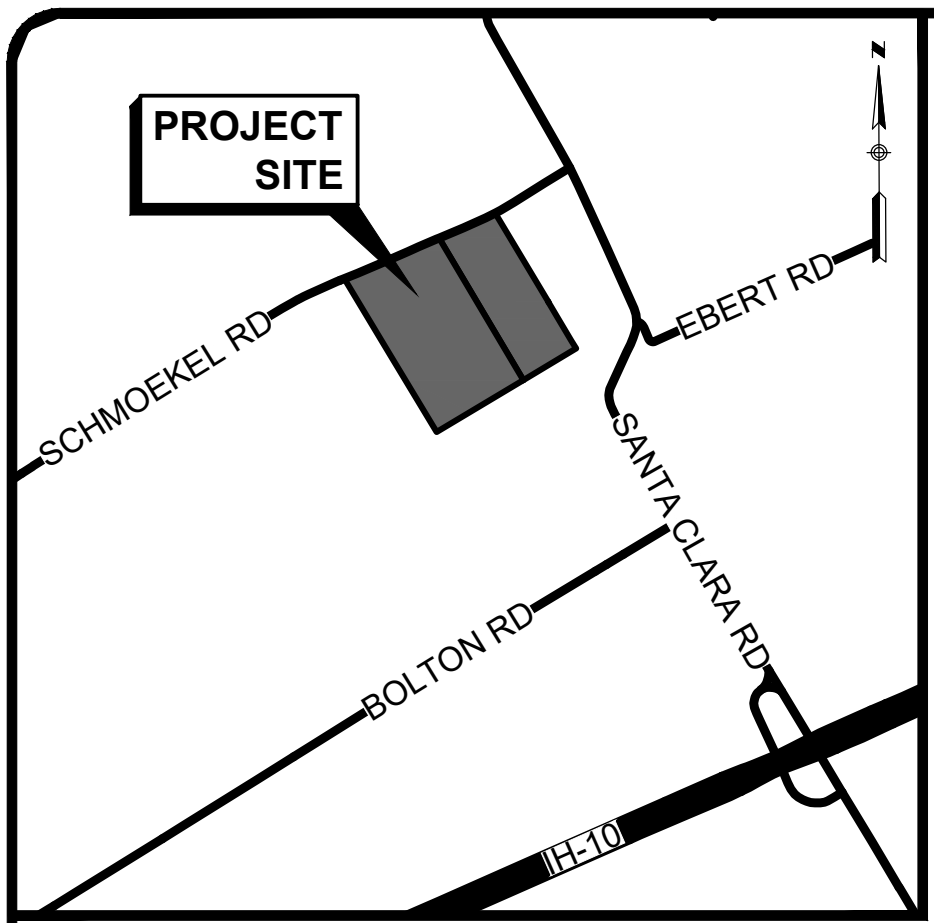
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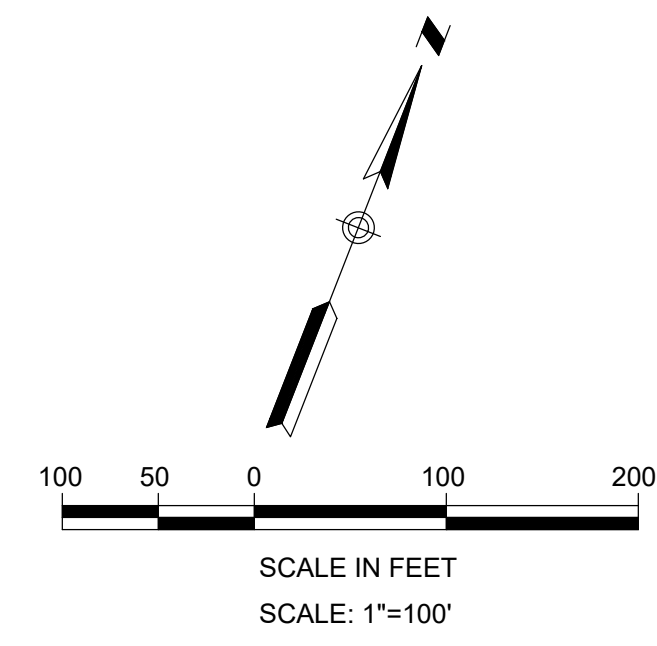
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Attachment 3 – Developer Land Plan

PROJECT SITE

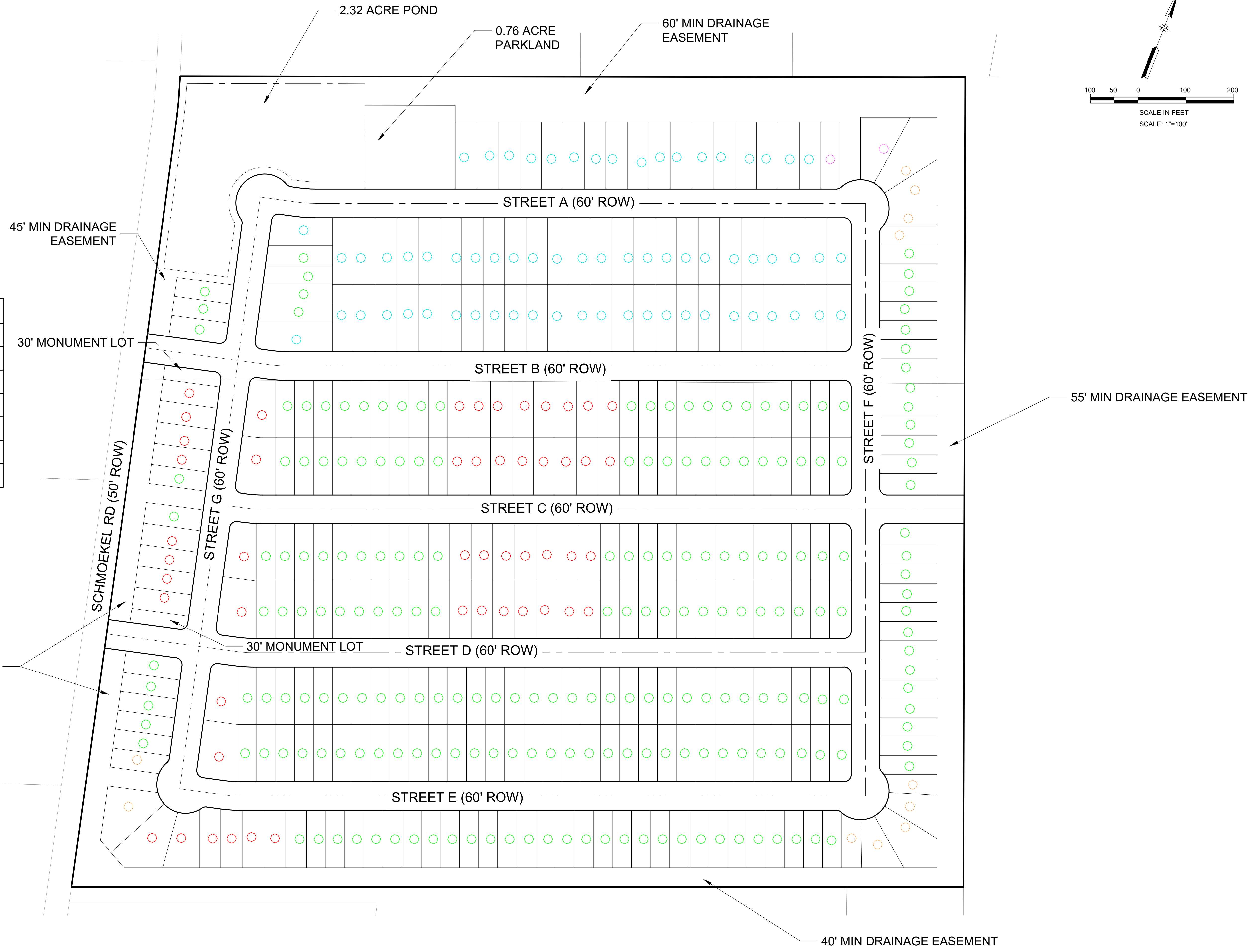


LOCATION MAP
1" = 2000'



LOT COUNT

| | |
|--------------------------|------------|
| 40' x 100' LOT | 11 |
| 40' x 120' LOT (TYPICAL) | 221 |
| 40' x 130' LOT (TYPICAL) | 2 |
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| TOTAL: | 351 |



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 Last Modified: May 02, 24 - 15:43
 Plot Date/Time: May 02, 24 - 15:43:25

**SCHMOEKEL 68 AC CIBOLO
PRELIMINARY LAND PLAN**

| NO. | REVISIONS | DESCRIPTION | BY | DATE |
|-----|-----------|-------------|----|------|
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| DATE: | DESIGNED BY: | DRAWN BY: | CHECKED BY: | DRAWING NAME: |
| | | | | |

Phone 210-503-2700
 Fax 210-503-2749
 TBP# No. T-1386

LJA Engineering, Inc.
 9830 Colonnade Blvd.
 Suite 300
 San Antonio, Texas 78230

JOB NUMBER:
 SHEET NO. **1**
 OF 1 SHEETS

APPENDIX 3.7

STREET NAMES

APPENDIX 3.8

TRAFFIC IMPACT ANALYSIS



Neil Tract

Schmoekel Road & Santa Clara Road

TRAFFIC IMPACT ANALYSIS

PREPARED FOR:



PREPARED BY:



10/07/2024

Oscar Michael Garza, PE, PTP, PTOE, RSP1
Legacy Engineering Group

Guadalupe County

October 2024

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APPENDIX F – PAGES TAKEN FROM MARION OAKS TIA REPORT

APPENDIX G – PAGES TAKEN FROM DOVE SONG TIA REPORT

APPENDIX H – APPROACH VOLUMES

APPENDIX I – RECOMMENDED ROADWAY IMPROVEMENTS

PROJECT DESCRIPTION

INTRODUCTION

Legacy Engineering Group was retained to prepare a Traffic Impact Analysis for the proposed Neil Tract development located near the intersection of Santa Clara Road and Schmoekel Road near Marion, Texas. A general project location map is shown in Figure 1 with a zoom-in of the study area.

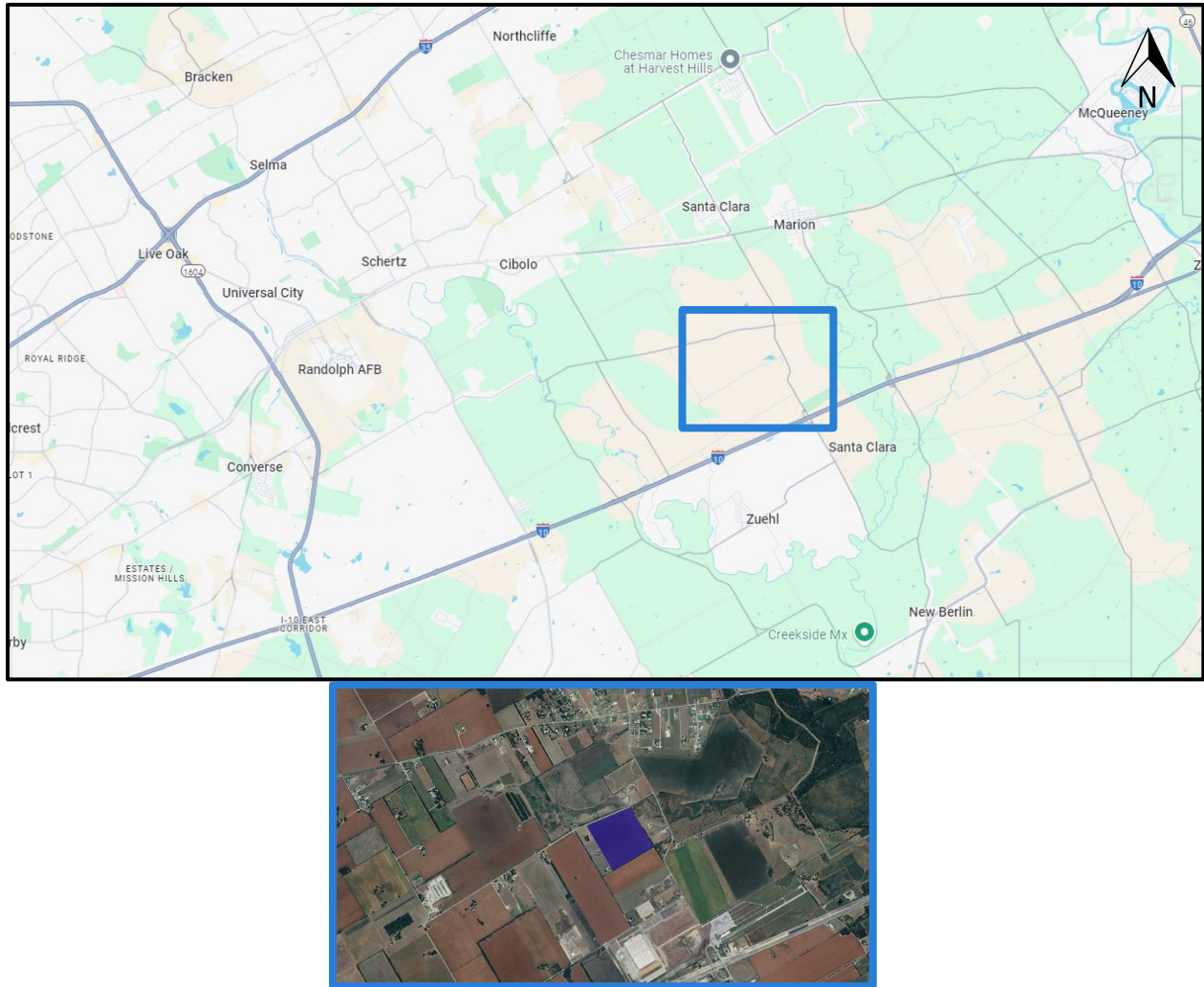


Figure 1 – Project Location Map

As per the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition), the proposed development will generate as many as 233 trips during the weekday AM peak hour and 313 trips during the weekday PM peak hour.

In accordance with Guadalupe County requirements, a Traffic Impact Analysis (TIA) has been prepared for this project. Figure 2 shows the proposed site plan.

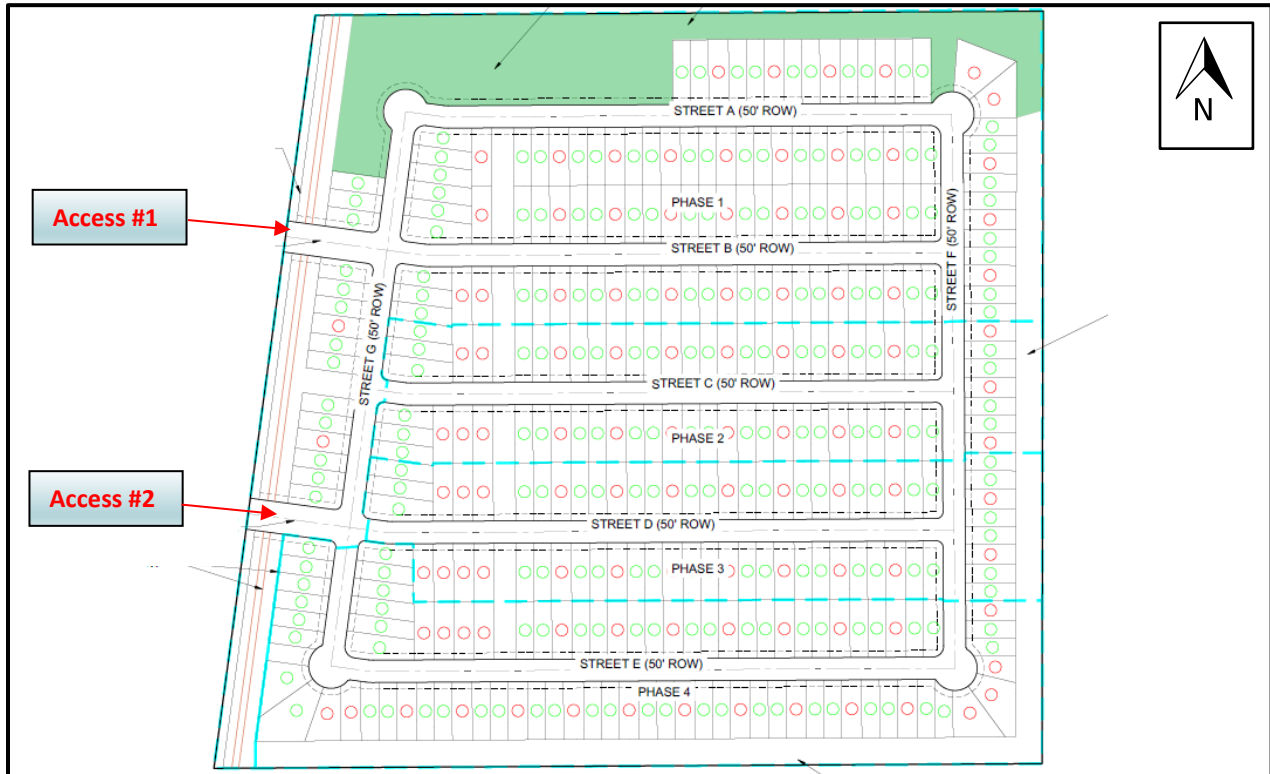


Figure 2 – Proposed Development Site Plan

The proposed development will include a 333-unit Single-Family Detached Housing (ITE Code: 210) Subdivision with two proposed access points, Access #1 and Access #2, located along Schmoekel Road approximately 1,400 LF and 2,100 west of Santa Clara Road, respectively. Both access points will function as full access intersections and are shown in Figure 2.

PROJECT STUDY AREA

The proposed project study area is highlighted in Figure 3 (an aerial image obtained from Google Earth Pro) and includes the study intersections (Schmoekel Road & Stotle Road, Lower Seguin Road & Santa Clara Road, Santa Clara Road & Schmoekel Road, Santa Clara Road & Bolton Road, and the proposed access locations.)



Figure 3 – Aerial Image of Proposed Development & Study Intersections

PHASE TIME-LINE

The proposed development is anticipated to be constructed in two phases over three years. A 9% growth rate, agreed upon with the scoping meeting, was considered within this analysis. Additionally, background traffic was incorporated into this analysis from the TIA Reports conducted for the nearby Kayden Springs, Marion Oaks, and Dove Song developments.

The LOS analysis will be conducted in two phases as follows:

1. 2025 – Phase I – 125 Single-Family Detached Houses (ITE Code: 210)
2. 2027 – Full Build-Out – 208 Single-Family Detached Houses (ITE Code: 210) (333 total dwelling units)

EXISTING CONDITIONS

EXISTING ROADWAYS

Santa Clara Road

Santa Clara Road is a two-lane undivided roadway which extends in a general north-south direction and has a variable speed limit of 35-45 mph within the study limits. Santa Clara Road can be seen in Figure 4 below.



Figure 4 – Santa Clara Road Facing South

Schmoekel Road

Schmoekel Road is a two-lane undivided roadway which extends in a general east-west direction and has a posted speed limit of 40 mph. Schmoekel Road can be seen in Figure 5 below.



Figure 5 – Schmoekel Road Facing West

Lower Seguin Road

Lower Seguin Road is a two-lane undivided roadway which extends in a general east-west direction and has a posted speed limit of 40 mph. Lower Seguin Road can be seen in Figure 6 below.



Figure 6 – Lower Seguin Road Facing West

Stotle Road

Stotle Road is a two-lane undivided roadway which extends in a general north-south direction and has a posted speed limit of 25 mph. Stotle Road can be seen in Figure 7 below.



Figure 7 – Stotle Road Facing North

Bolton Road

Bolton Road is a two-lane undivided roadway which extends in a general east-west direction and has a posted speed limit of 45 mph. Bolton Road can be seen in Figure 8 below.



Figure 8 – Bolton Road Facing West

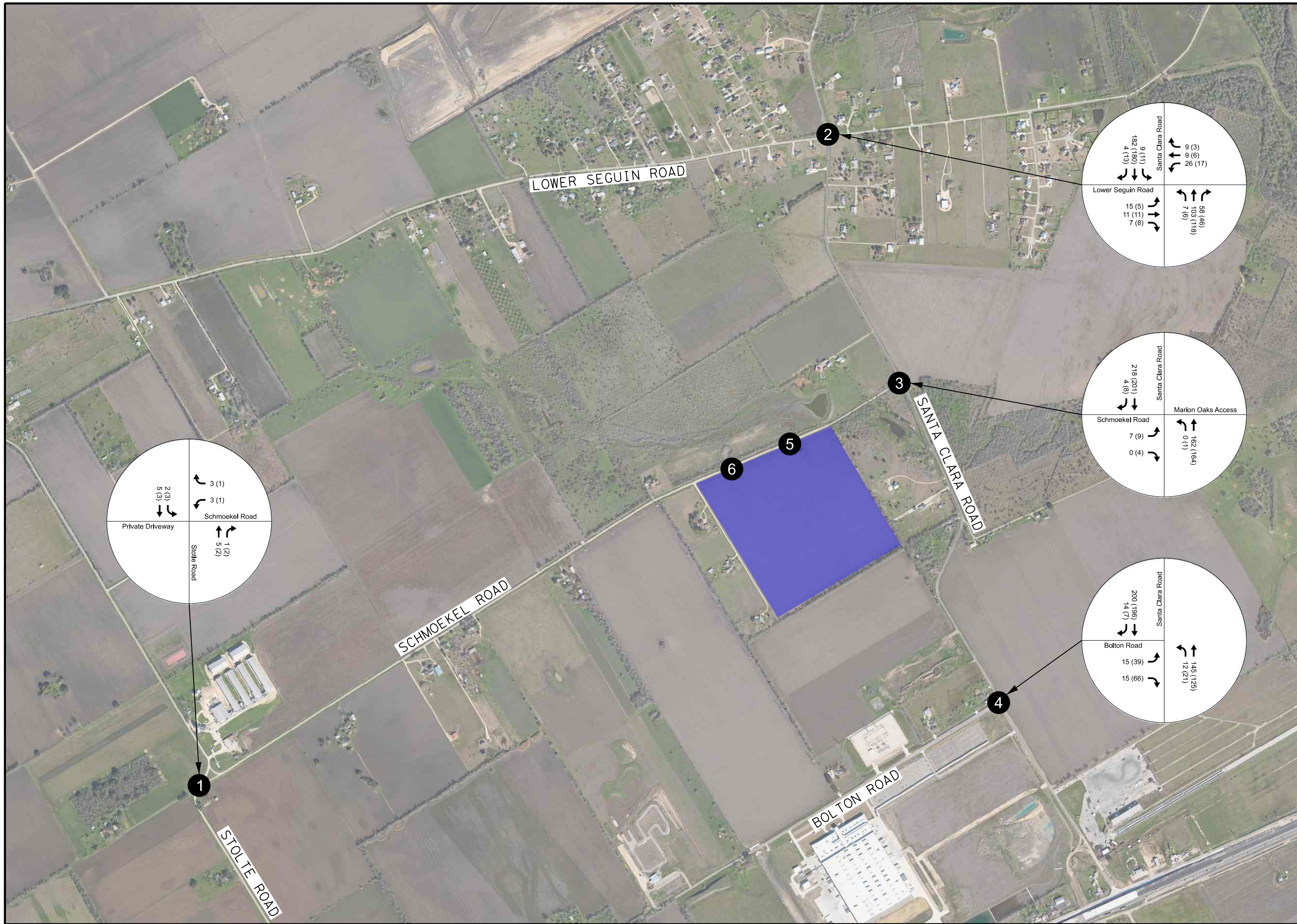
TRAFFIC DATA

Traffic data, in the form of Turning Movement Counts (TMC's), was collected at the intersections of Santa Clara Road & Lower Seguin Road, Santa Clara Road & Schmoekel Road, and Santa Clara Road & Bolton Road on Tuesday, August 27, 2024, and at the intersection of Stotle Road & Schmoekel Road on Wednesday, August 28, 2024. The AM & PM peak hours were determined to be 7:15 AM to 8:15 AM and 5:00 PM to 6:00 PM, respectively. A growth rate of 9% was utilized to develop projected traffic volumes.

Additionally, please note that background traffic data was taken from the Kayden Springs, Marion Oaks, and Dove Song TIA Reports and incorporated into the report for all projected traffic volumes.

Please note all traffic data can be found within Appendix B.

The following traffic exhibits summarize the existing/projected traffic volumes without the proposed development.



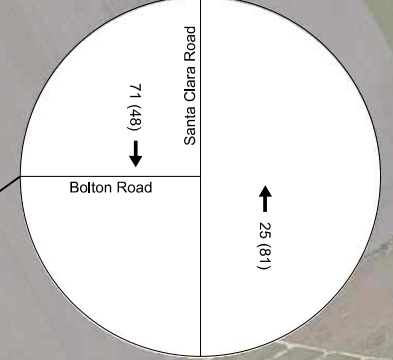
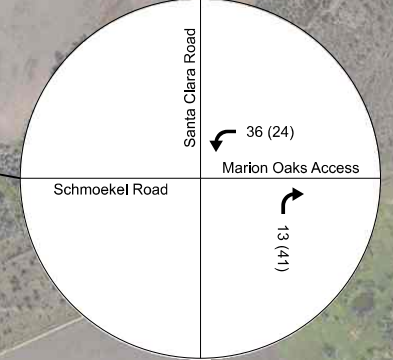
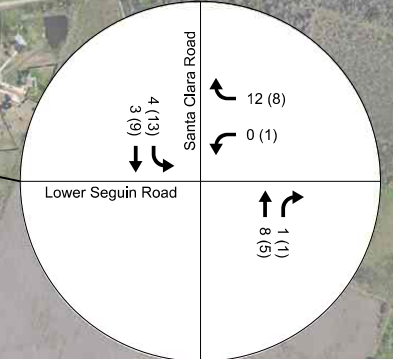
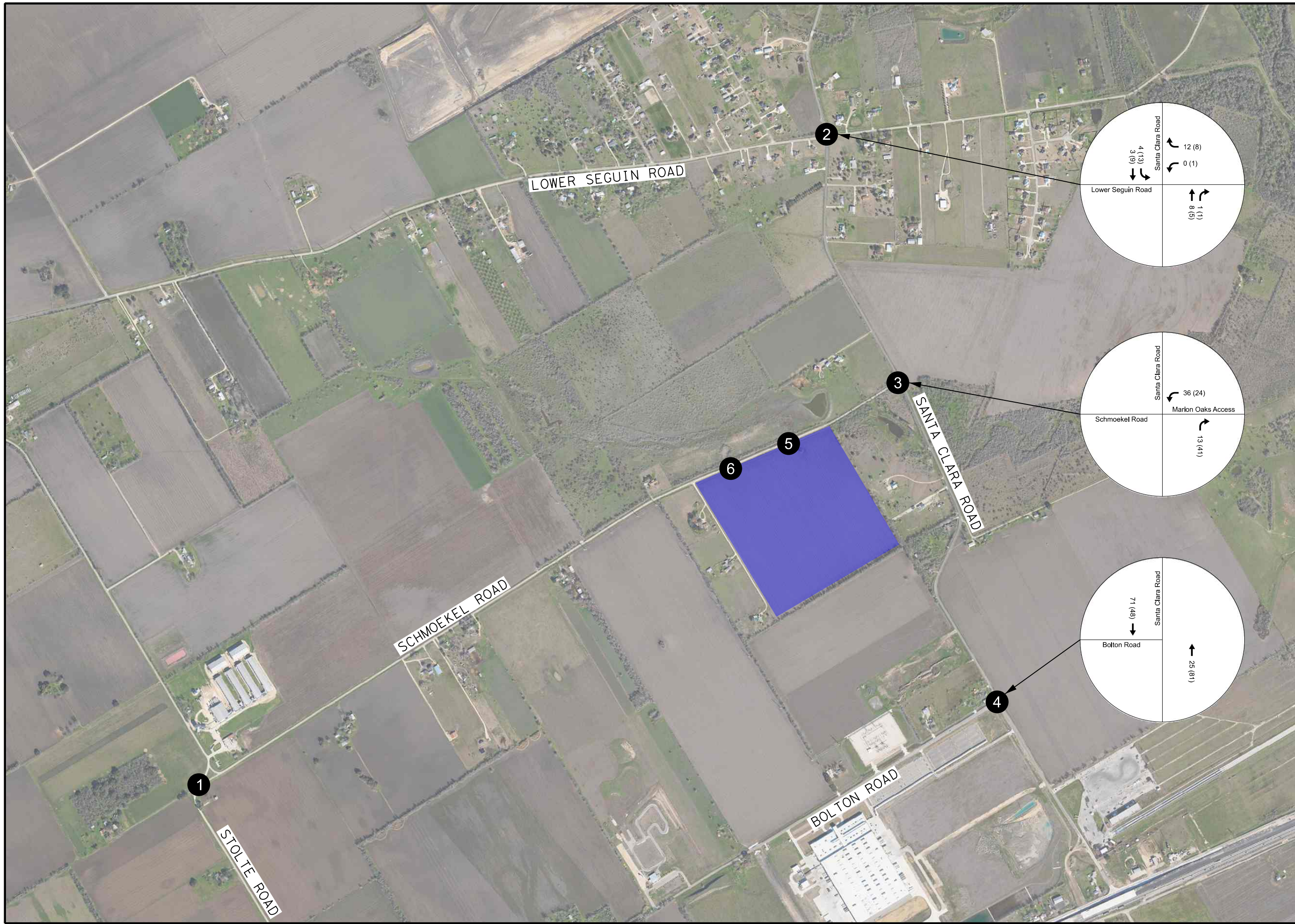
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



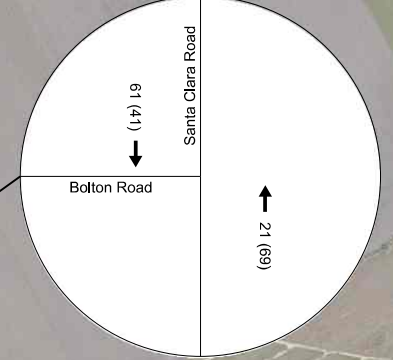
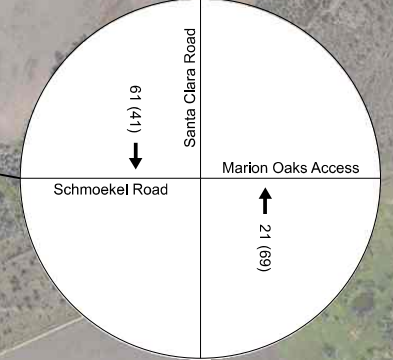
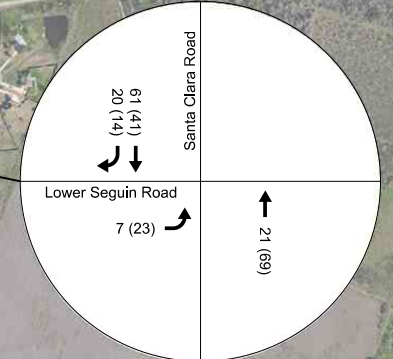
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



Neil Tract
Along Schmoekel Road East of Santa Clara Road
Background Traffic Volumes - Dove Song (2025)

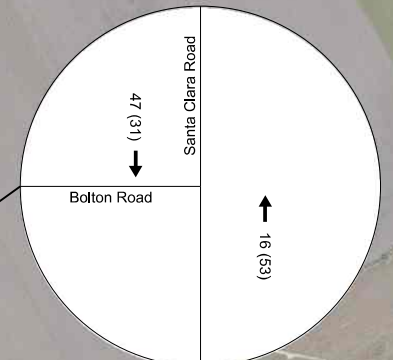
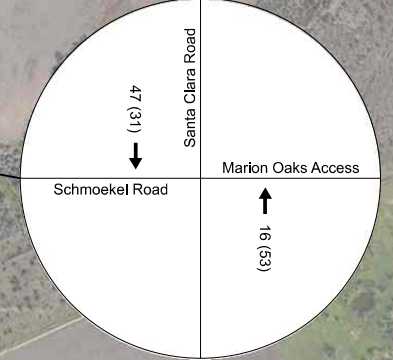
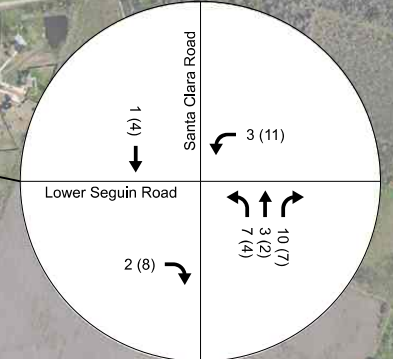
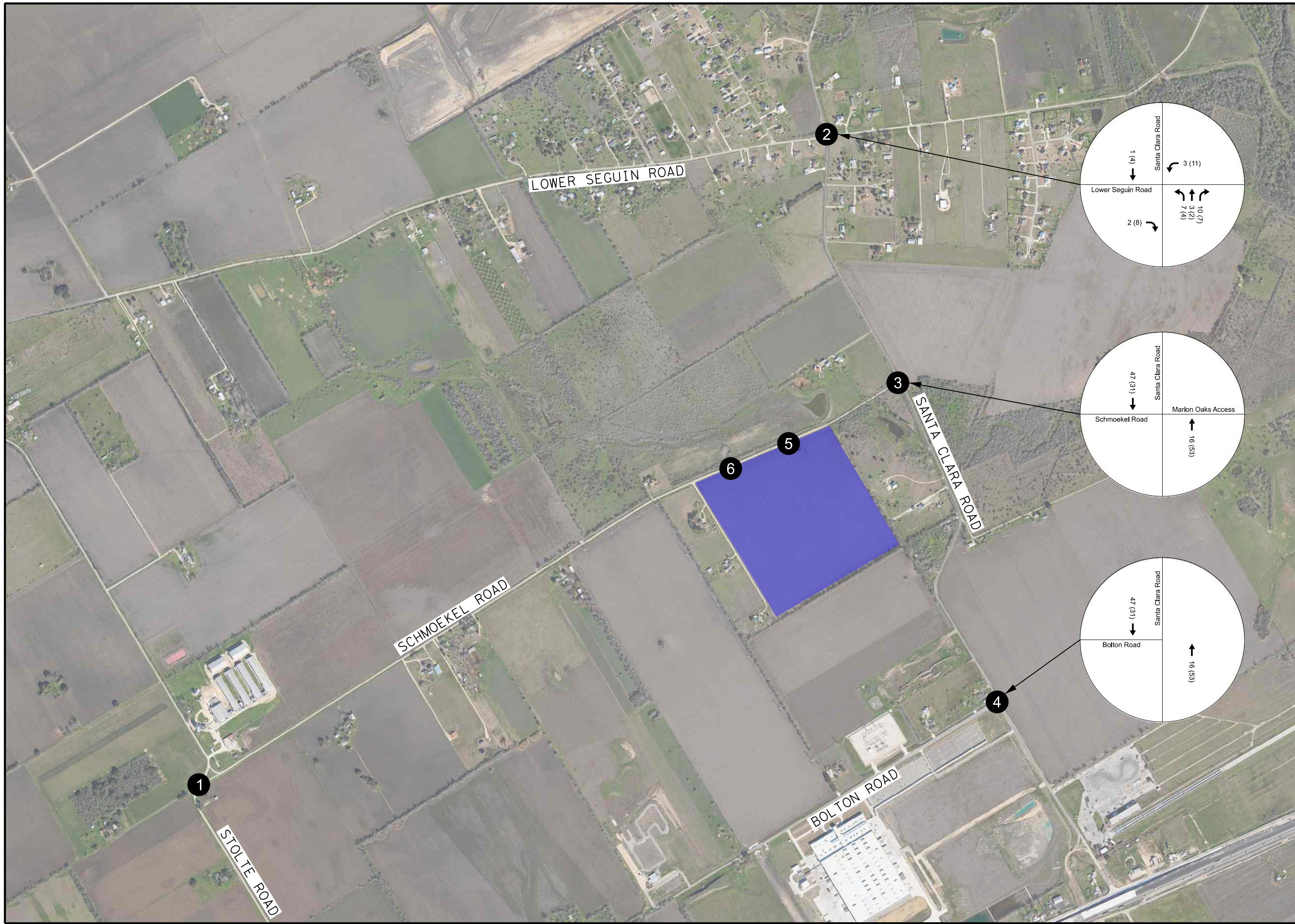
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



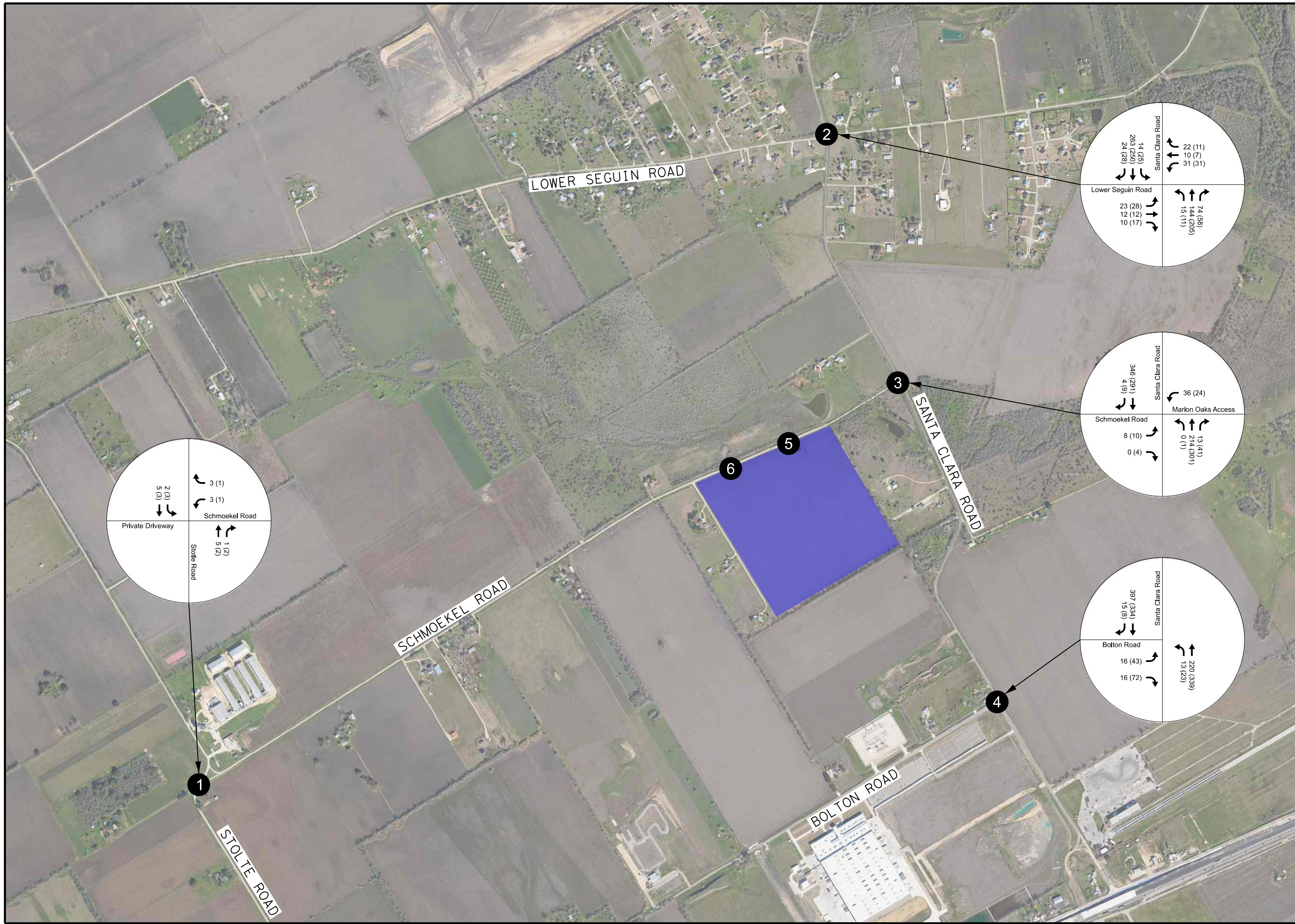
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



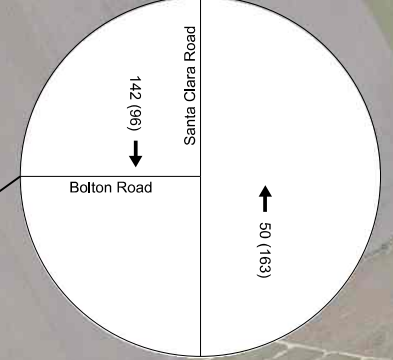
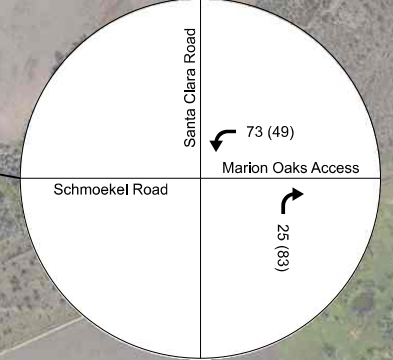
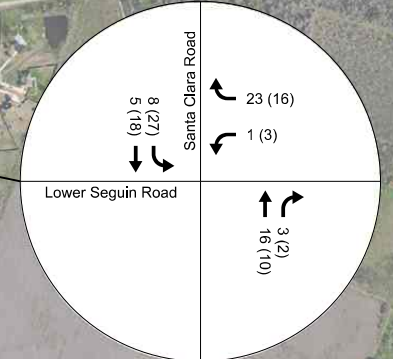
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



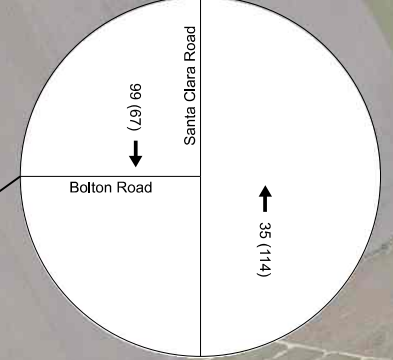
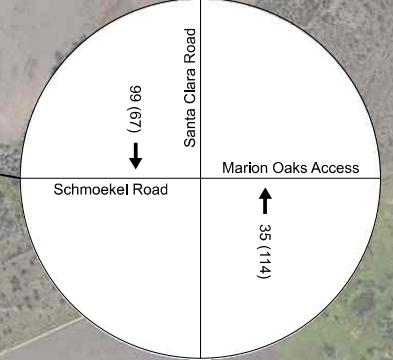
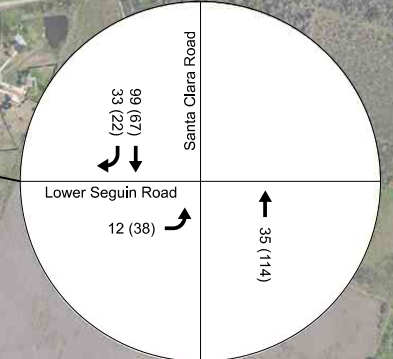
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



Neil Tract
Along Schmoekel Road East of Santa Clara Road
Background Traffic Volumes - Dove Song (2027)

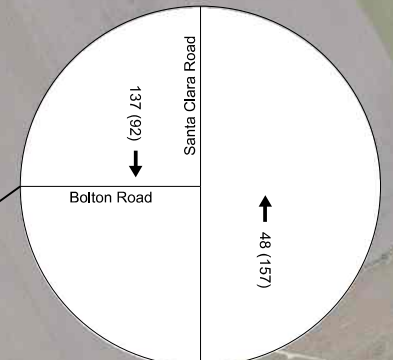
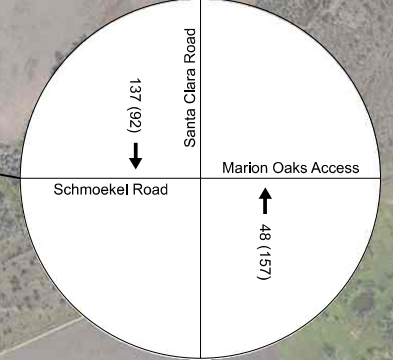
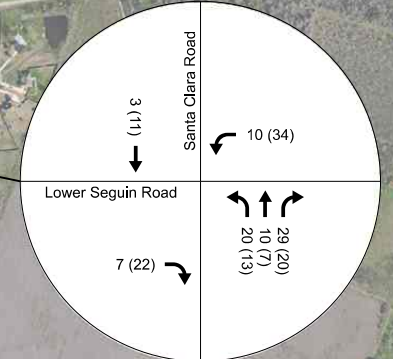
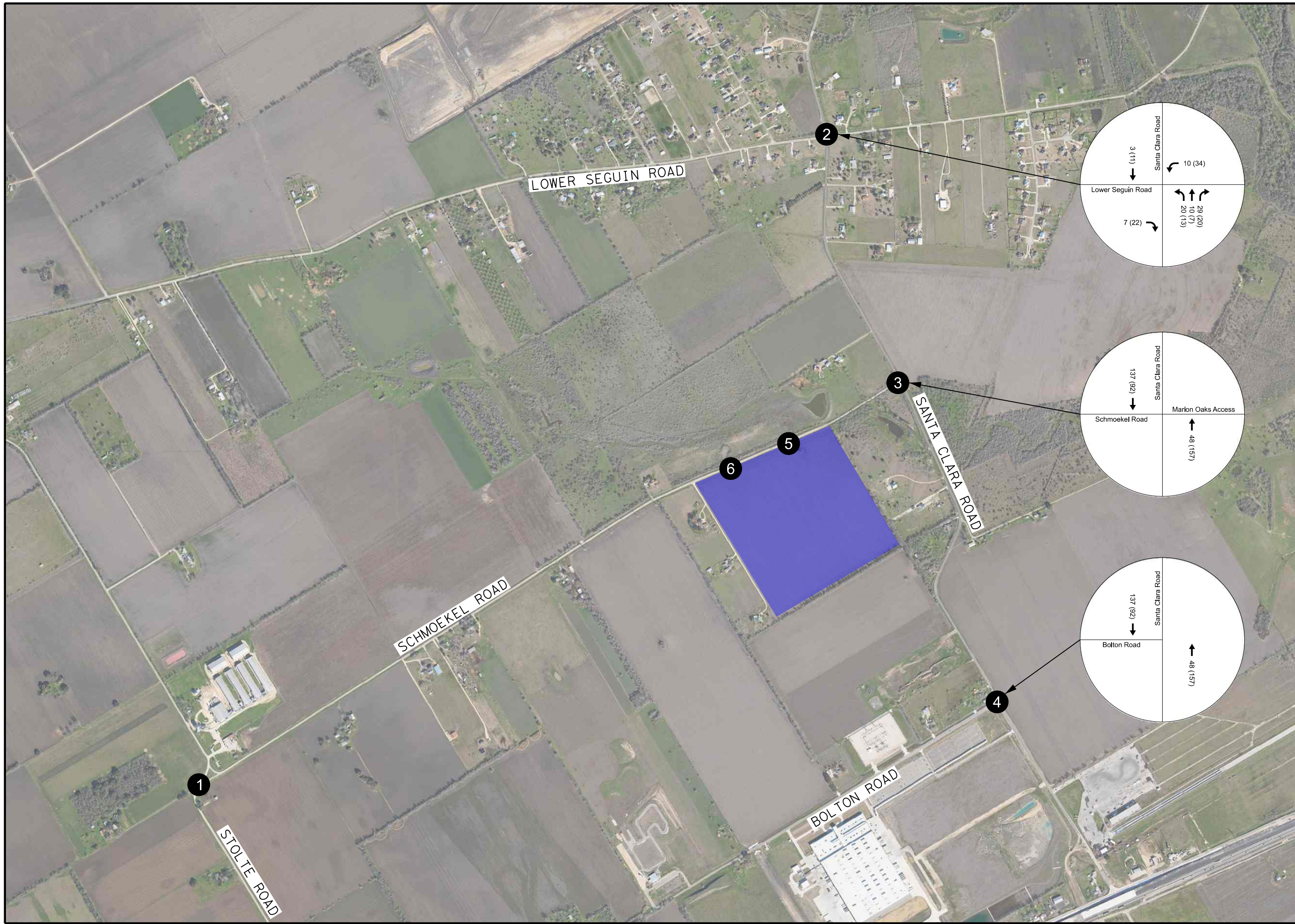
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



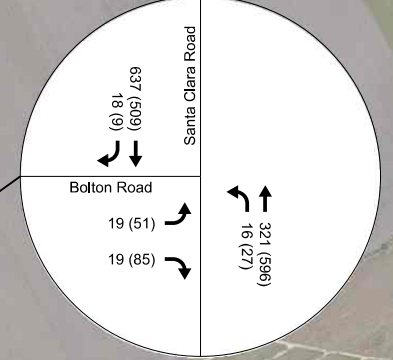
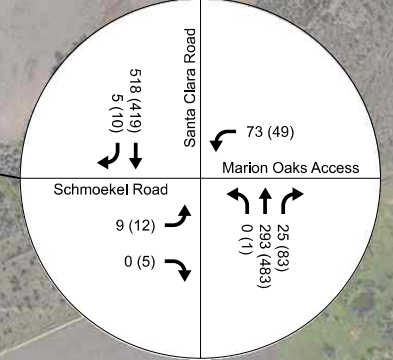
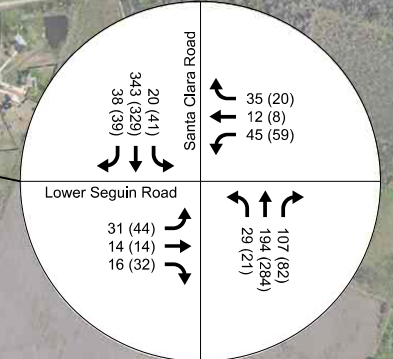
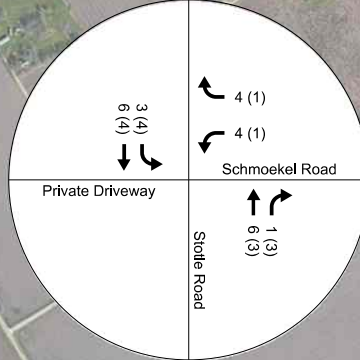
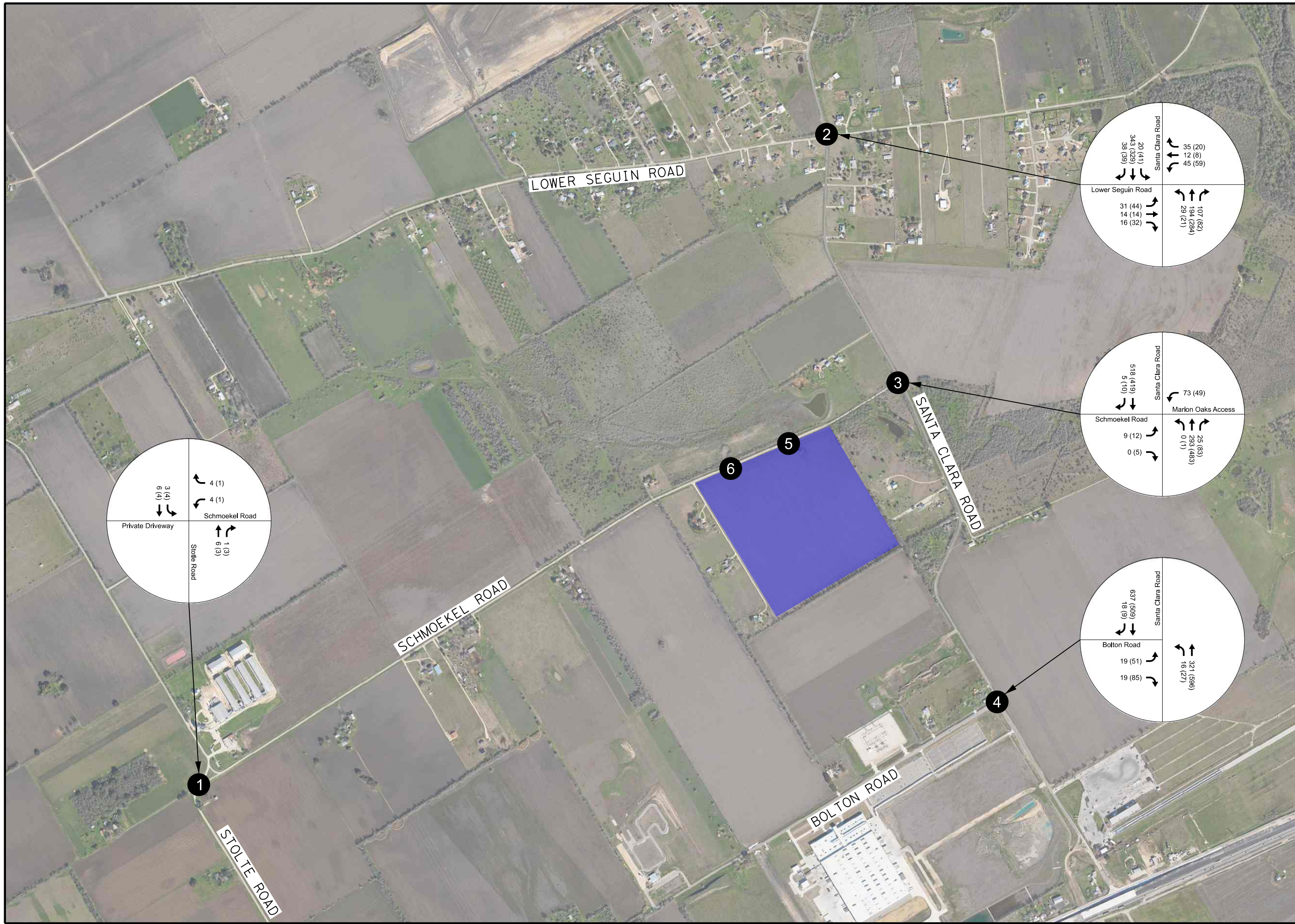
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



INTERSECTIONS TO BE ANALYZED

The six intersection(s) to be analyzed are shown below in Figure 9 and numbered as follows:

1. Stotle Road & Schmoekel Road
2. Lower Seguin Road & Santa Clara Road
3. Schmoekel Road & Santa Clara Road
4. Bolton Road & Santa Clara Road
5. Schmoekel Road & Access #1
6. Schmoekel Road & Access #2



Figure 9 – Aerial with Intersections to be Analyzed

ANALYSIS & IMPACT

TRIP GENERATION

The proposed development’s trip generation was calculated utilizing the ITE Trip Generation Manual (11th Edition). Trips were calculated using the total number of dwelling units located within the development. Table 1 shows the calculated trips in Phase I and Table 2 shows the calculated trips for Full Build-Out.

Table 1 – Trip Generation (Phase I)

| Neil Tract | | | | | | | |
|---------------------|-----|--|------------|-----------------|-----------|-----------------|-----------|
| Phase I | | Single-Family Detached Housing (ITE Code: 210) | | | | | |
| Dwelling Units | 125 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak | |
| Trips/D.U. | | 9.43 | | 0.70 | | 0.94 | |
| % Enter / % Exit | | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | | 1,179 | | 88 | | 118 | |
| Enter / Exit | | 589 | 590 | 23 | 65 | 74 | 43 |

Table 2 – Trip Generation (Full Build-Out)

| Neil Tract | | | | | | | |
|---------------------|-----|--|--------------|-----------------|------------|-----------------|------------|
| Full Build-Out | | Single-Family Detached Housing (ITE Code: 210) | | | | | |
| Dwelling Units | 333 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak | |
| Trips/D.U. | | 9.43 | | 0.70 | | 0.94 | |
| % Enter / % Exit | | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | | 3,140 | | 233 | | 313 | |
| Enter / Exit | | 1,570 | 1,570 | 61 | 172 | 197 | 116 |

TRIP DISTRIBUTION

The trip distribution for the proposed development was established based upon four factors:

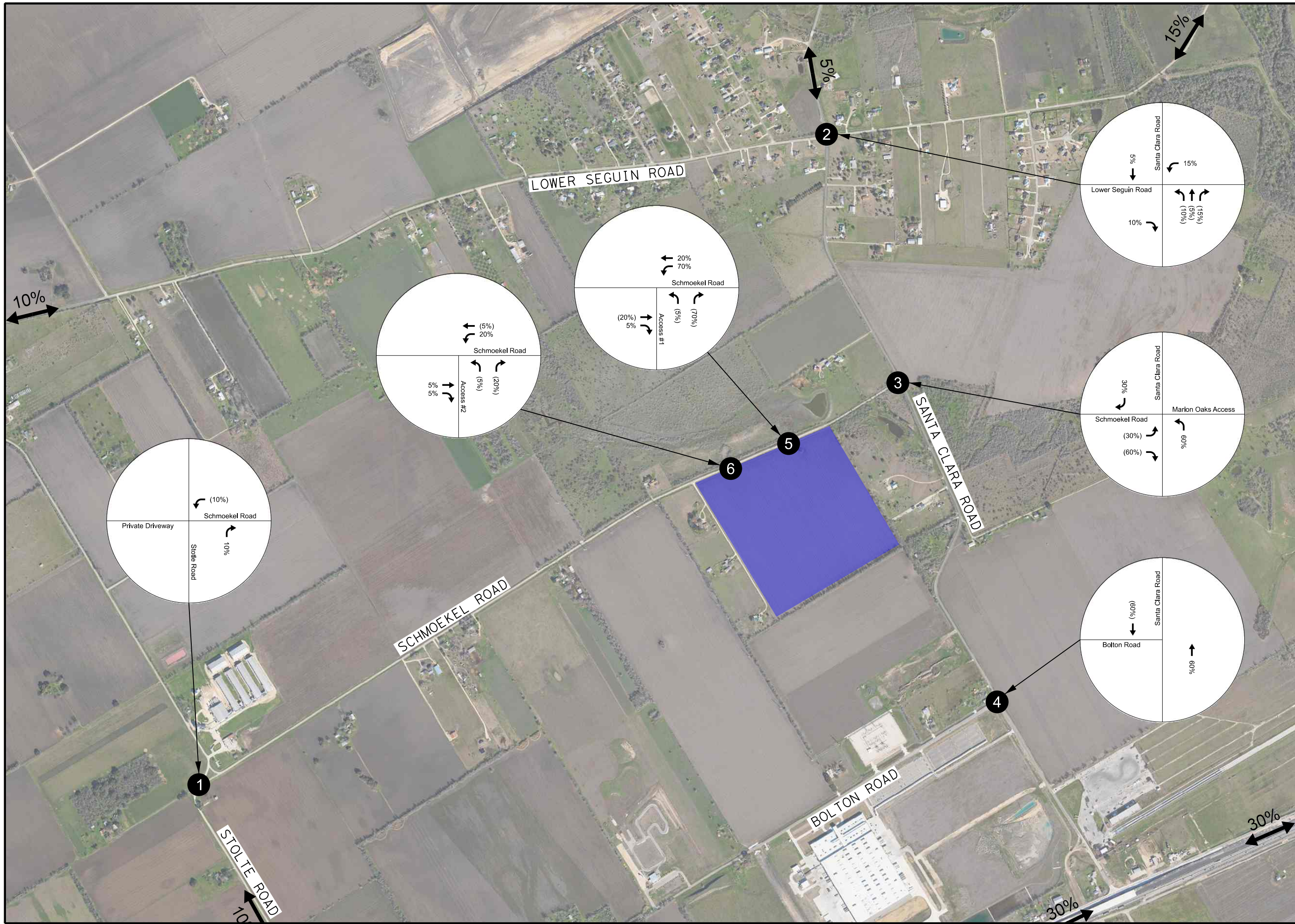
- 1) Traffic engineering judgment
- 2) Existing traffic data / travel patterns
- 3) Anticipated development circulation and driveway utilization
- 4) Existing travel demand patterns within the study area

The global trip distribution entailed distributing the development traffic in general directions (North, South, East, West) into and out of the development and network. Figure 10 shows the Trip Distributions for the proposed development.



Figure 10 – Trip Distribution for the Proposed Development

The following exhibits show the detailed trip distribution (percentages & volumes) and Projected with Development traffic volumes for the proposed development.



Neil Tract
Along Schmoekel Road East of Santa Clara Road

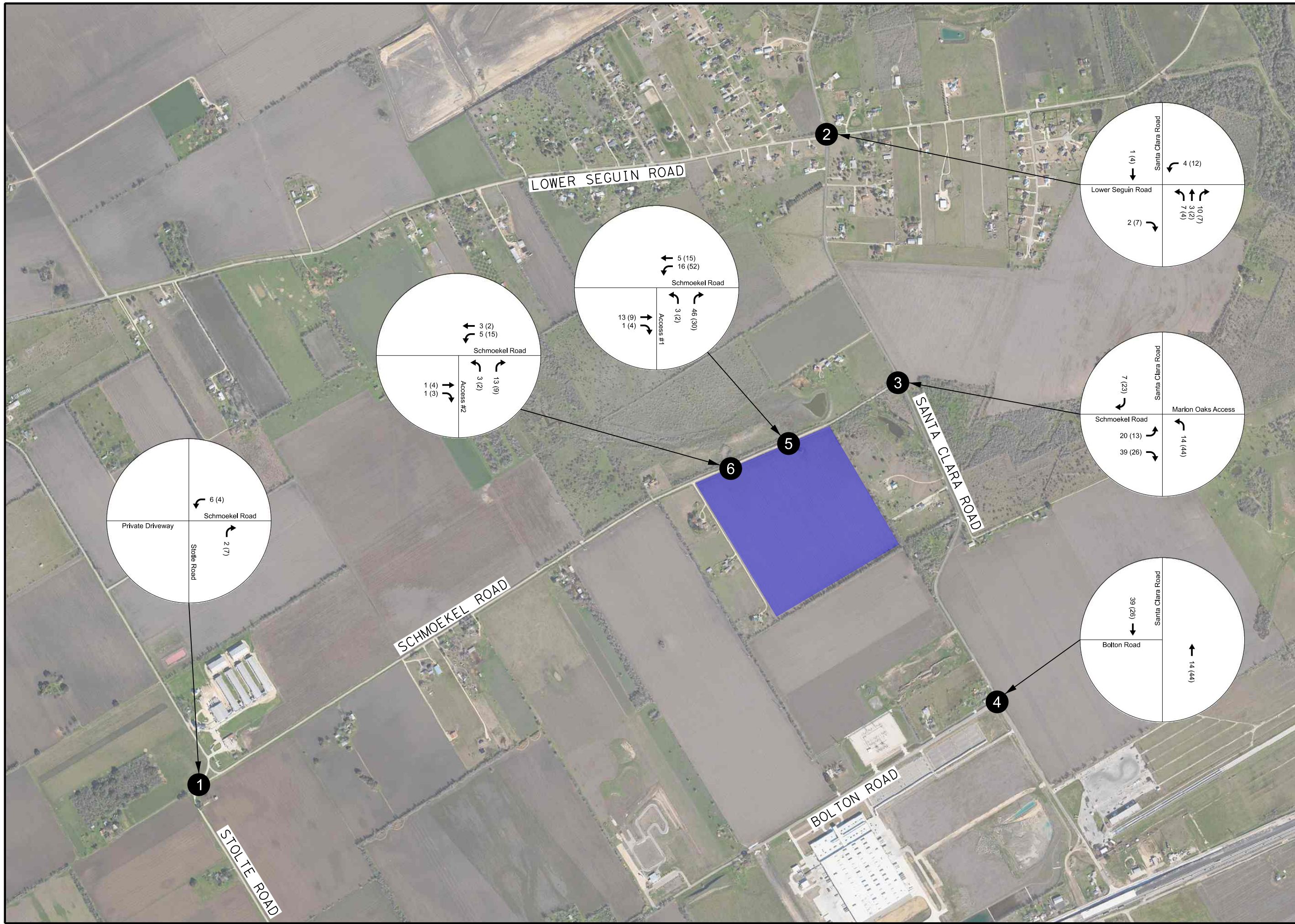
Trip Distribution (Percentages)

Legend
Enter % / (Exit %)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



Neil Tract
Along Schmoekel Road East of Santa Clara Road
Trip Distribution (Volumes) Phase I

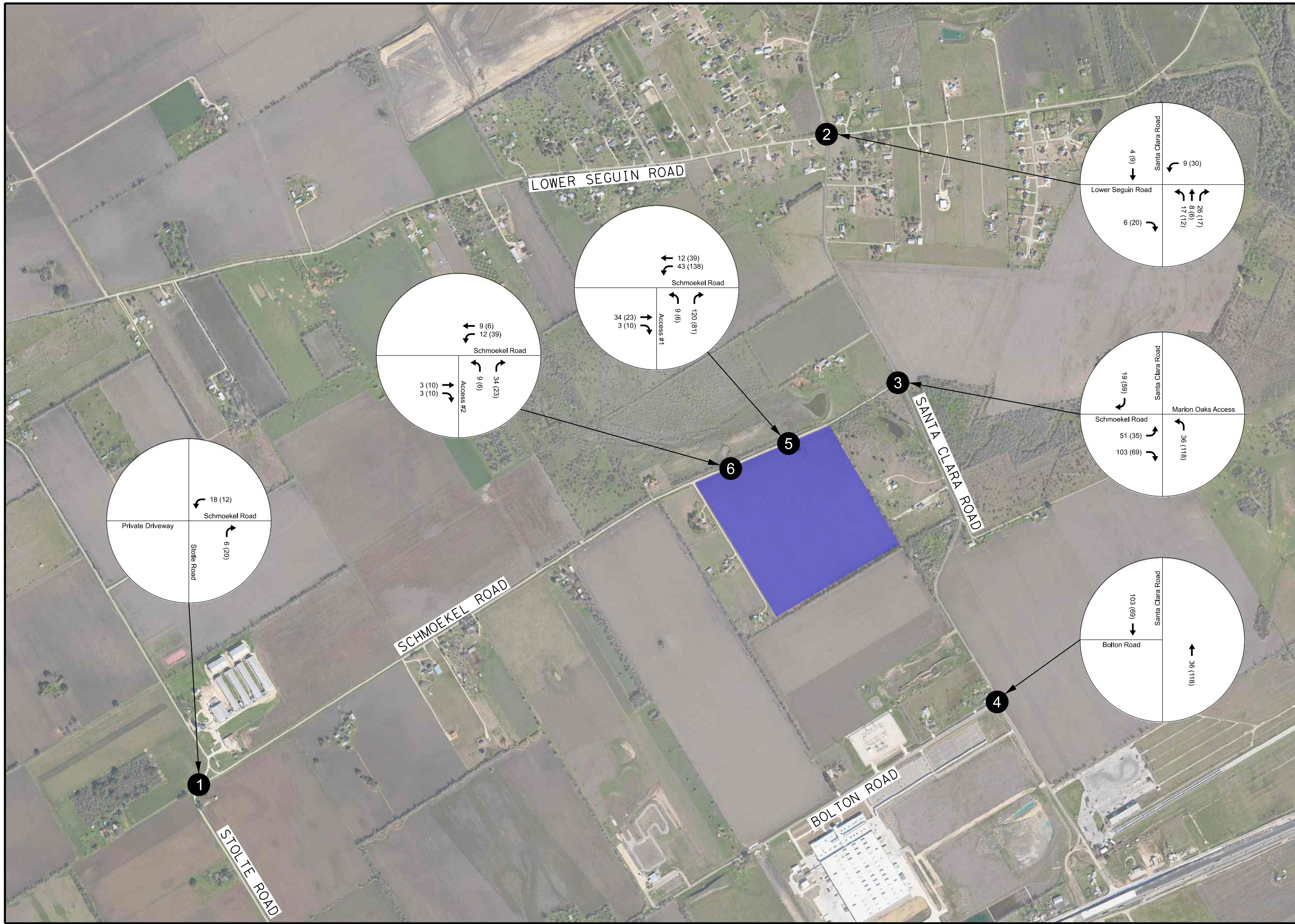
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



Neil Tract
Along Schmoekel Road East of Santa Clara Road
Trip Distribution (Volumes) Phase II

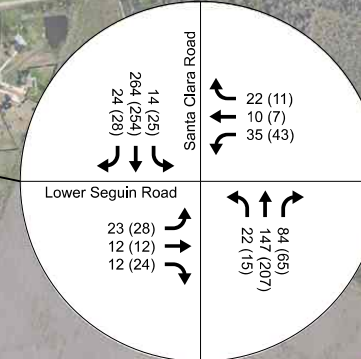
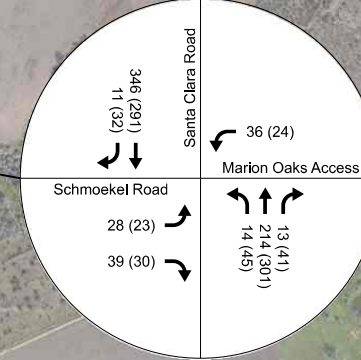
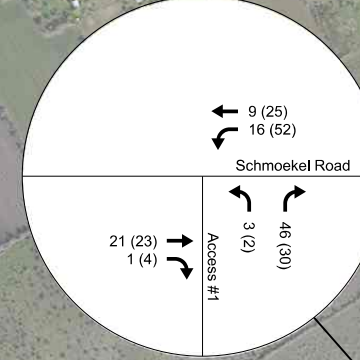
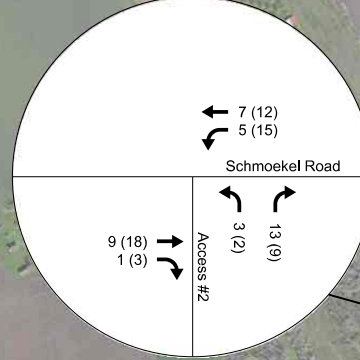
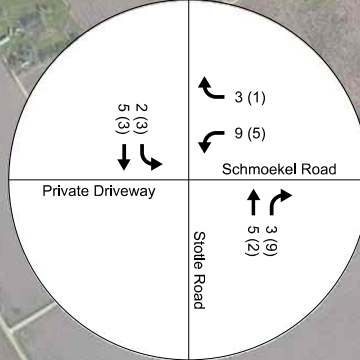
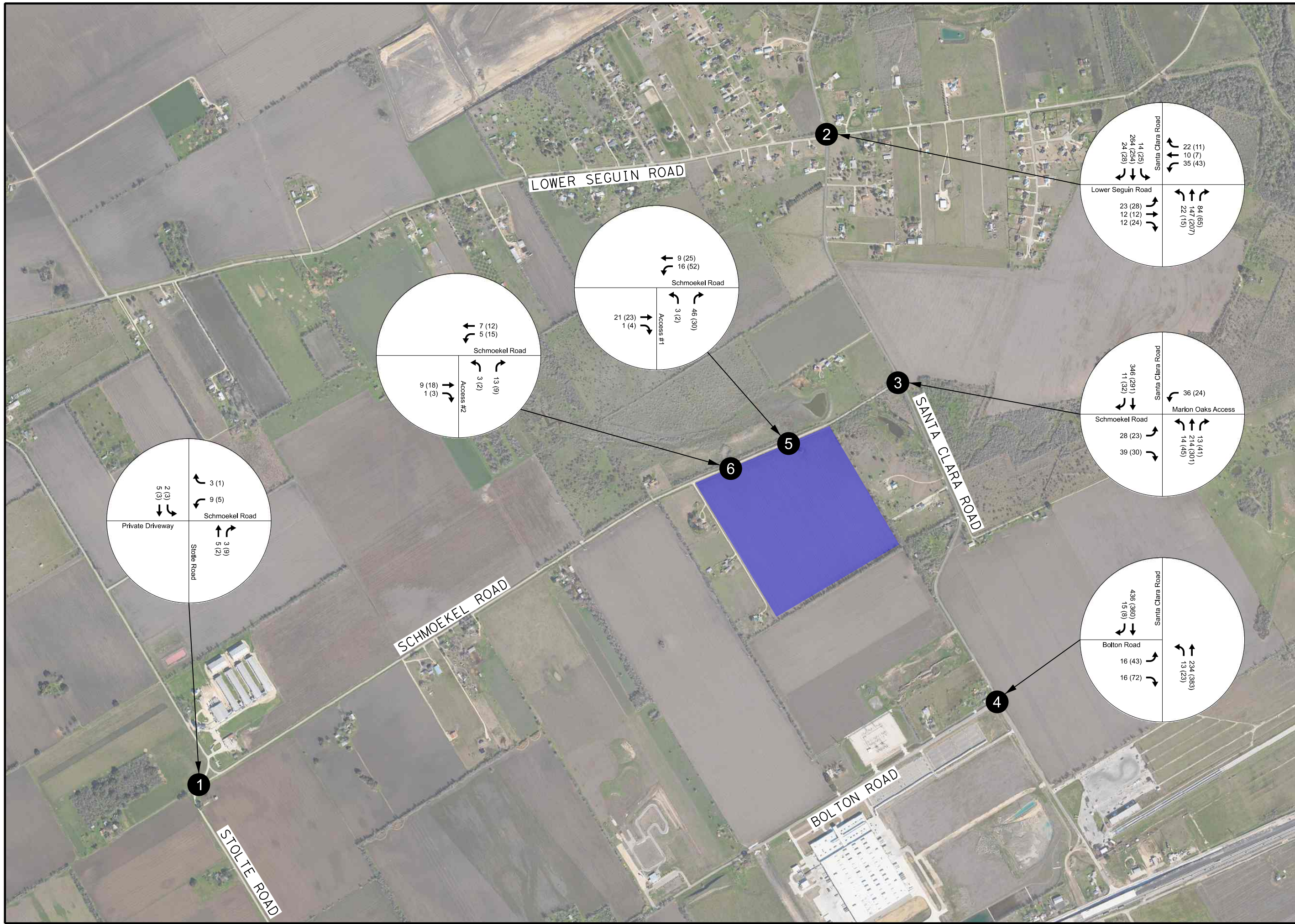
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



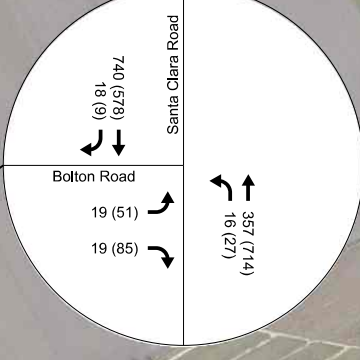
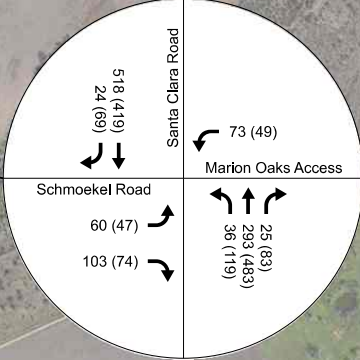
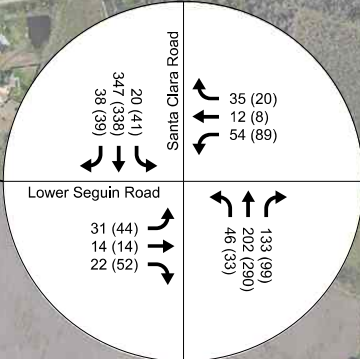
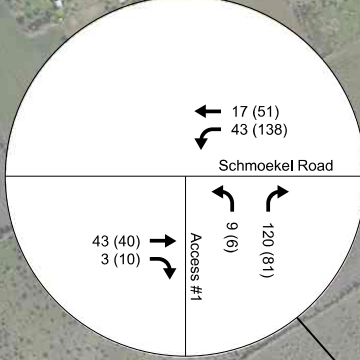
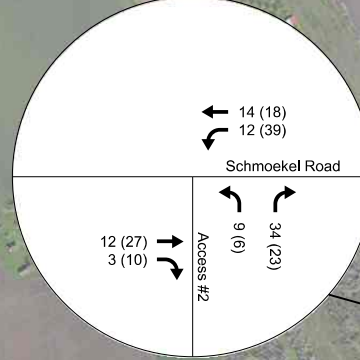
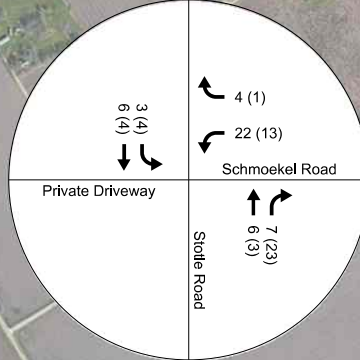
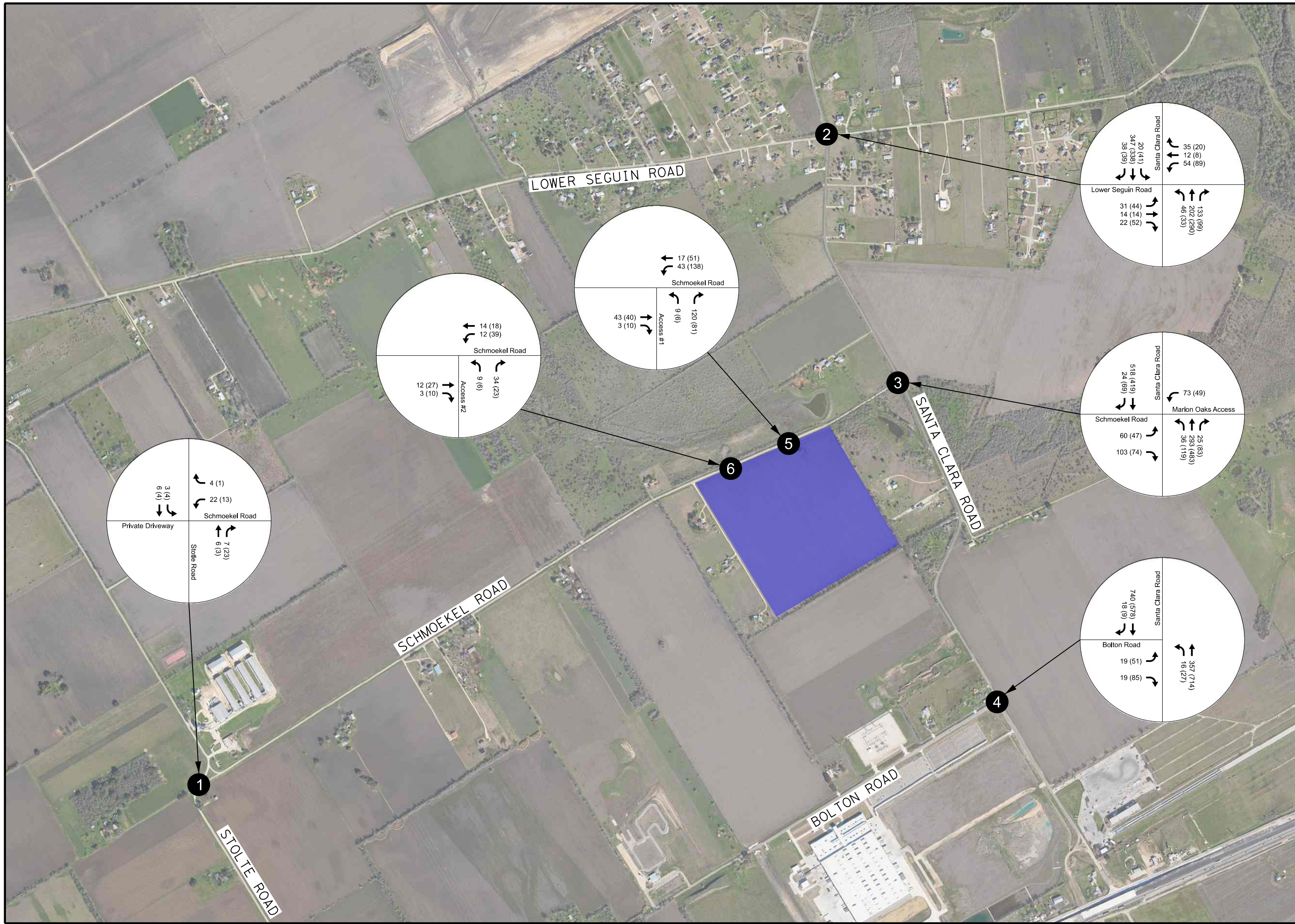
Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'



Legend

AM / (PM)

Intersection No. XX%

Global Distribution %

DATE:
10/4/2024
SCALE:
1" = 1012.5'

LEVEL OF SERVICE ANALYSIS

The traffic simulation analysis was conducted using Synchro 12.0 Traffic Simulation Software. The analysis process involved the development of a base model, calibration of the base model, and an alternative comparison to the base model. Development of the base model involves the creation of a system network, also referred to as the link-node diagram. The network development includes link-node assignments, traffic control, traffic signalization, roadway geometry, lane designations & assignments, traffic volumes, and turning movements. A traffic analysis was conducted for three scenarios which include existing, projected, and projected with development traffic conditions for the morning (AM) & evening (PM) peak periods. The AM peak period was determined to be 7:15 AM – 8:15 AM, and the PM peak period was determined to be 5:00 PM – 6:00 PM. A screenshot of the Synchro Model created for this study can be seen in Figure 11.



Figure 11 – Synchro Model Screenshot

Based on criteria found in the *Highway Capacity Manual 6th Edition (HCM)*, the critical minor street approach is used to determine the Levels of Service (LOS) for Two-Way Stop Controlled (TWSC) intersections. For signalized intersections, the LOS is determined based on the measures of effectiveness obtained from the traffic simulation output and the average control delay in seconds per vehicle (sec/veh) from the model.

Table 3 shows the average control delay ranges with the corresponding LOS for both TWSC and signalized intersections.

Table 3 – Average Control Delay Ranges

| Level of Service | Average Control Delay (sec/veh) Intersection (Signalized) | Average Control Delay (sec/veh) Per Approach (TWSC) |
|------------------|--|--|
| A | ≤ 10 | ≤10 |
| B | > 10 – ≤20 | > 10 – ≤15 |
| C | > 20 – ≤35 | > 15 – ≤25 |
| D | > 35 – ≤55 | > 25 – ≤35 |
| E | > 55 – ≤80 | > 35 – ≤50 |
| F | > 80 | > 50 |

Tables 4 – 9 present a summary of the intersection and approach LOS values obtained from the traffic simulation.

Table 4 – Schmoekel Road and Stolte Road LOS Results

| Schmoekel Road & Stolte Road | Intersection Analysis | | | | | | | | | |
|------------------------------|------------------------|-----|------------------------|-----|----------------------------|-----|--------------------------|-----|----------------------|-----|
| | Northbound Stolte Road | | Southbound Stolte Road | | Eastbound Private Driveway | | Westbound Schmoekel Road | | Intersection Average | |
| | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS |
| AM Peak Period | | | | | | | | | | |
| Existing (2024) | 0.0 | A | 2.1 | A | 0.0 | A | 8.5 | A | 3.5 | A |
| Projected (2025) | 0.0 | A | 2.1 | A | 0.0 | A | 8.5 | A | 3.5 | A |
| Projected (2027) | 0.0 | A | 2.4 | A | 0.0 | A | 8.5 | A | 3.7 | A |
| Proj. w/Dev (2025) | 0.0 | A | 2.1 | A | 0.0 | A | 8.6 | A | 4.4 | A |
| Proj. w/Dev (2027) | 0.0 | A | 2.4 | A | 0.0 | A | 8.7 | A | 5.2 | A |
| PM Peak Period | | | | | | | | | | |
| Existing (2024) | 0.0 | A | 3.6 | A | 0.0 | A | 8.5 | A | 3.2 | A |
| Projected (2025) | 0.0 | A | 3.6 | A | 0.0 | A | 8.5 | A | 3.2 | A |
| Projected (2027) | 0.0 | A | 3.6 | A | 0.0 | A | 8.5 | A | 2.9 | A |
| Proj. w/Dev (2025) | 0.0 | A | 3.6 | A | 0.0 | A | 8.6 | A | 3.2 | A |
| Proj. w/Dev (2027) | 0.0 | A | 3.6 | A | 0.0 | A | 8.7 | A | 3.1 | A |

Table 5 – Lower Seguin Road & Santa Clara Road LOS Results

| Lower Seguin Road & Santa Clara Road | Intersection Analysis | | | | | | | | | |
|--------------------------------------|-----------------------------|-----|-----------------------------|-----|------------------------|-----|------------------------|-----|----------------------|-----|
| | Northbound Santa Clara Road | | Southbound Santa Clara Road | | Eastbound Lower Seguin | | Westbound Lower Seguin | | Intersection Average | |
| | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS |
| AM Peak Period | | | | | | | | | | |
| Existing (2024) | 0.3 | A | 0.4 | A | 11.6 | B | 11.6 | B | 2.3 | A |
| Projected (2025) | 0.5 | A | 0.4 | A | 14.1 | B | 13.4 | B | 2.7 | A |
| Projected (2027) | 0.7 | A | 0.4 | A | 18.9 | C | 18.2 | C | 3.6 | A |
| Proj. w/Dev (2025) | 0.7 | A | 0.4 | A | 14.4 | B | 14.0 | B | 2.9 | A |
| Proj. w/Dev (2027) | 1.0 | A | 0.4 | A | 20.5 | C | 21.9 | C | 4.3 | A |
| PM Peak Period | | | | | | | | | | |
| Existing (2024) | 0.3 | A | 0.4 | A | 11.3 | B | 11.8 | B | 1.7 | A |
| Projected (2025) | 0.3 | A | 0.7 | A | 14.5 | B | 15.0 | C | 2.7 | A |
| Projected (2027) | 0.4 | A | 0.8 | A | 21.7 | C | 25.6 | D | 4.8 | A |
| Proj. w/Dev (2025) | 0.4 | A | 0.6 | A | 14.5 | B | 16.3 | C | 3.1 | A |
| Proj. w/Dev (2027) | 0.6 | A | 0.8 | A | 22.9 | C | 40.9 | E | 7.4 | A |

Table 6 – Santa Clara Road and Schmoekel Road LOS Results

| Santa Clara Road & Schmoekel Road | Intersection Analysis | | | | | | | | | |
|-----------------------------------|-----------------------------|-----|-----------------------------|-----|--------------------------|-----|------------------------------|-----|----------------------|-----|
| | Northbound Santa Clara Road | | Southbound Santa Clara Road | | Eastbound Schmoekel Road | | Westbound Marion Oaks Access | | Intersection Average | |
| | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS |
| AM Peak Period | | | | | | | | | | |
| Existing (2024) | 0.0 | A | 0.0 | A | 11.7 | B | 0.0 | A | 0.2 | A |
| Projected (2025) | 0.0 | A | 0.0 | A | 14.2 | B | 14.8 | B | 1.0 | A |
| Projected (2027) | 0.0 | A | 0.0 | A | 19.4 | C | 24.2 | C | 2.1 | A |
| Proj. w/Dev (2025) | 0.5 | A | 0.0 | A | 13.3 | B | 16.8 | C | 2.3 | A |
| Proj. w/Dev (2027) | 0.9 | A | 0.0 | A | 26.1 | C | 47.8 | E | 7.1 | A |
| PM Peak Period | | | | | | | | | | |
| Existing (2024) | 0.0 | A | 0.0 | A | 11.0 | B | 0.0 | A | 0.4 | A |
| Projected (2025) | 0.0 | A | 0.0 | A | 13.7 | B | 15.2 | C | 0.8 | A |
| Projected (2027) | 0.0 | A | 0.0 | A | 19.8 | C | 26.1 | D | 1.5 | A |
| Proj. w/Dev (2025) | 0.9 | A | 0.0 | A | 14.3 | B | 18.7 | C | 2.0 | A |
| Proj. w/Dev (2027) | 1.6 | A | 0.0 | A | 41.6 | E | 77.4 | F | 7.4 | A |

Table 7 – Santa Clara Road and Bolton Road LOS Results

| Santa Clara Road & Schmoekel Road | Intersection Analysis | | | | | | | | | |
|-----------------------------------|-----------------------------|-----|-----------------------------|-----|-----------------------|-----|-------------|-----|----------------------|-----|
| | Northbound Santa Clara Road | | Southbound Santa Clara Road | | Eastbound Bolton Road | | Westbound | | Intersection Average | |
| | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS |
| AM Peak Period | | | | | | | | | | |
| Existing (2024) | 0.6 | A | 0.0 | A | 10.4 | B | | | 1.0 | A |
| Projected (2025) | 0.5 | A | 0.0 | A | 12.8 | B | | | 0.8 | A |
| Projected (2027) | 0.4 | A | 0.0 | A | 17.8 | C | | | 0.8 | A |
| Proj. w/Dev (2025) | 0.4 | A | 0.0 | A | 13.4 | B | | | 0.7 | A |
| Proj. w/Dev (2027) | 0.4 | A | 0.0 | A | 20.7 | A | | | 0.8 | A |
| PM Peak Period | | | | | | | | | | |
| Existing (2024) | 1.1 | A | 0.0 | A | 10.4 | B | | | 2.8 | A |
| Projected (2025) | 0.5 | A | 0.0 | A | 13.2 | B | | | 2.1 | A |
| Projected (2027) | 0.4 | A | 0.0 | A | 21.0 | C | | | 2.4 | A |
| Proj. w/Dev (2025) | 0.5 | A | 0.0 | A | 14.0 | B | | | 2.0 | A |
| Proj. w/Dev (2027) | 0.3 | A | 0.0 | A | 27.8 | D | | | 2.7 | A |

Table 8 – Schmoekel Road and Access #1 LOS Results

| Schmoekel Road & Access #1 | Intersection Analysis | | | | | | | | | |
|----------------------------|-----------------------------|-----|-------------|-----|----------------------------|-----|---------------------|-----|----------------------|-----|
| | Northbound Santa Clara Road | | Southbound | | Eastbound Santa Clara Road | | Westbound Access #1 | | Intersection Average | |
| | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS |
| AM Peak Period | | | | | | | | | | |
| Proj. w/Dev (2025) | 8.6 | A | | | 0.0 | A | 4.7 | A | 5.6 | A |
| Proj. w/Dev (2027) | 9.2 | A | | | 0.0 | A | 5.3 | A | 6.4 | A |
| PM Peak Period | | | | | | | | | | |
| Proj. w/Dev (2025) | 8.6 | A | | | 0.0 | A | 5.0 | A | 4.9 | A |
| Proj. w/Dev (2027) | 9.2 | A | | | 0.0 | A | 5.5 | A | 5.6 | A |

Table 9 – Schmoekel Road and Access #2 LOS Results

| Schmoekel Road & Access #2 | Intersection Analysis | | | | | | | | | |
|----------------------------|-----------------------|-----|-------------|-----|--------------------------|-----|--------------------------|-----|----------------------|-----|
| | Northbound Access #2 | | Southbound | | Eastbound Schmoekel Road | | Westbound Schmoekel Road | | Intersection Average | |
| | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS |
| AM Peak Period | | | | | | | | | | |
| Proj. w/Dev (2025) | 8.5 | A | | | 0.0 | A | 3.0 | A | 4.5 | A |
| Proj. w/Dev (2027) | 8.6 | A | | | 0.0 | A | 3.4 | A | 5.5 | A |
| PM Peak Period | | | | | | | | | | |
| Proj. w/Dev (2025) | 8.5 | A | | | 0.0 | A | 4.0 | A | 3.4 | A |
| Proj. w/Dev (2027) | 8.8 | A | | | 0.0 | A | 5.0 | A | 4.4 | A |

Please note that all LOS results are shown in detail within Appendix C (Synchro Output Reports).

OPERATIONAL CONSIDERATIONS

LOS ANALYSIS RESULTS

The results of the LOS Analysis found that the westbound approach to the Lower Seguin Road and Santa Clara Road intersection is expected to demonstrate unacceptable LOS values upon Full Build-Out of the proposed development. Mitigation measures will be applied and analyzed.

The results of the LOS Analysis found that the eastbound and westbound approaches to the Santa Clara Road and Schmoekel Road intersection are expected to demonstrate unacceptable LOS values upon Full Build-Out of the proposed development. Mitigation measures will be applied and analyzed.

The results of the LOS analysis found that the eastbound approach to the Santa Clara Road and Bolton Road intersection is expected to demonstrate unacceptable LOS values upon Full Build-Out of the proposed development. Mitigation measures would be applied and analyzed; however, the eastbound approach currently provides a dedicated lane for left- and right-turn movements and the proposed development is only expected to send northbound and southbound through traffic to this intersection. Therefore, mitigation measures will not be applied and analyzed.

The results of this analysis found that all other study intersections considered within this analysis are expected to operate at acceptable LOS values upon completion of the proposed development.

POTENTIAL MITIGATION IMPROVEMENTS

The following mitigation measures will be applied and analyzed:

Santa Clara Road and Lower Seguin Road:

- Convert intersection to all-way stop-control
Note: This improvement was previously recommended by the Marion Oaks development

Santa Clara Road and Schmoekel Road:

- Construct 180 LF eastbound right-turn lane

Table 10 – Lower Seguin Road & Santa Clara Road Mitigation Results

| Lower Seguin Road & Santa Clara Road | Intersection Analysis | | | | | | | | | |
|--------------------------------------|-----------------------------|-----|-----------------------------|-----|------------------------|-----|------------------------|-----|----------------------|-----|
| | Northbound Santa Clara Road | | Southbound Santa Clara Road | | Eastbound Lower Seguin | | Westbound Lower Seguin | | Intersection Average | |
| | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS |
| AM Peak Period | | | | | | | | | | |
| Projected (2027) | 0.7 | A | 0.4 | A | 18.9 | C | 18.2 | C | 3.6 | A |
| Proj. w/Dev (2027) | 1.0 | A | 0.4 | A | 20.5 | C | 21.9 | C | 4.3 | A |
| Mitigation1 (2027) | 14.2 | B | 15.6 | C | 10.1 | B | 10.5 | B | 14.1 | B |
| PM Peak Period | | | | | | | | | | |
| Projected (2027) | 0.4 | A | 0.8 | A | 21.7 | C | 25.6 | D | 4.8 | A |
| Proj. w/Dev (2027) | 0.6 | A | 0.8 | A | 22.9 | C | 40.9 | E | 7.4 | A |
| Mitigation1 (2027) | 18.9 | C | 19.4 | B | 11.3 | B | 11.8 | B | 17.5 | C |

Table 11 – Santa Clara Road & Schmoekel Road Mitigation Results

| Santa Clara Road & Schmoekel Road | Intersection Analysis | | | | | | | | | |
|-----------------------------------|-----------------------------|-----|-----------------------------|-----|--------------------------|-----|------------------------------|-----|----------------------|-----|
| | Northbound Santa Clara Road | | Southbound Santa Clara Road | | Eastbound Schmoekel Road | | Westbound Marion Oaks Access | | Intersection Average | |
| | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS | Delay (Sec) | LOS |
| AM Peak Period | | | | | | | | | | |
| Projected (2027) | 0.0 | A | 0.0 | A | 19.4 | C | 24.2 | C | 2.1 | A |
| Proj. w/Dev (2027) | 0.9 | A | 0.0 | A | 26.1 | C | 47.8 | E | 7.1 | A |
| Mitigation1 (2027) | 0.9 | A | 0.0 | A | 19.2 | C | 47.8 | E | 6.1 | A |
| PM Peak Period | | | | | | | | | | |
| Projected (2027) | 0.0 | A | 0.0 | A | 19.8 | C | 26.1 | D | 1.5 | A |
| Proj. w/Dev (2027) | 1.6 | A | 0.0 | A | 41.6 | E | 77.4 | F | 7.4 | A |
| Mitigation1 (2027) | 4.6 | A | 0.0 | A | 30.8 | D | 77.4 | F | 6.4 | A |

As shown in Table 10, the mitigation measures applied at the Lower Seguin Road & Santa Clara Road intersection is expected to improve delays to acceptable LOS values. Additional mitigation measures will not be applied or analyzed.

As shown in Table 11, the mitigation measures applied at the Santa Clara Road & Schmoekel Road intersection are not expected to improve delays to acceptable LOS values. Converting the intersection to all-way stop-control was considered but is not expected to improve delays; therefore, a partial traffic signal warrant analysis will be conducted.

PARTIAL TRAFFIC SIGNAL WARRANT ANALYSIS: SANTA CLARA ROAD & SCHMOEKEL ROAD

Since the intersection of Santa Clara Road and Schmoekel Road is expected to demonstrate unacceptable LOS values during the Projected with Development (2027) scenario, a partial traffic signal warrant analysis was conducted to determine if this intersection warrants the installation of a traffic signal.

A traffic signal may be warranted at some intersections when each of any four hours of an average day has a total traffic volume on the major street and an approach traffic volume on the minor street, which if plotted would fall above the appropriate curve (1 lane & 1 lane) of Figures 4C-1 and/or 4C-2 of the TxMUTCD. The traffic volumes utilized to perform this analysis are as follows:

- 7:00 AM to 8:00 AM: 576 Major Roadway, 10 Minor Roadway
- 8:00 AM to 9:00 AM: 533 Major Roadway, 20 Minor Roadway
- 4:00 PM to 5:00 PM: 1,067 Major Roadway, 69 Minor Roadway
- 5:00 PM to 6:00 PM: 1,124 Major Roadway, 66 Minor Roadway

Figure 12 shows the results of this analysis.

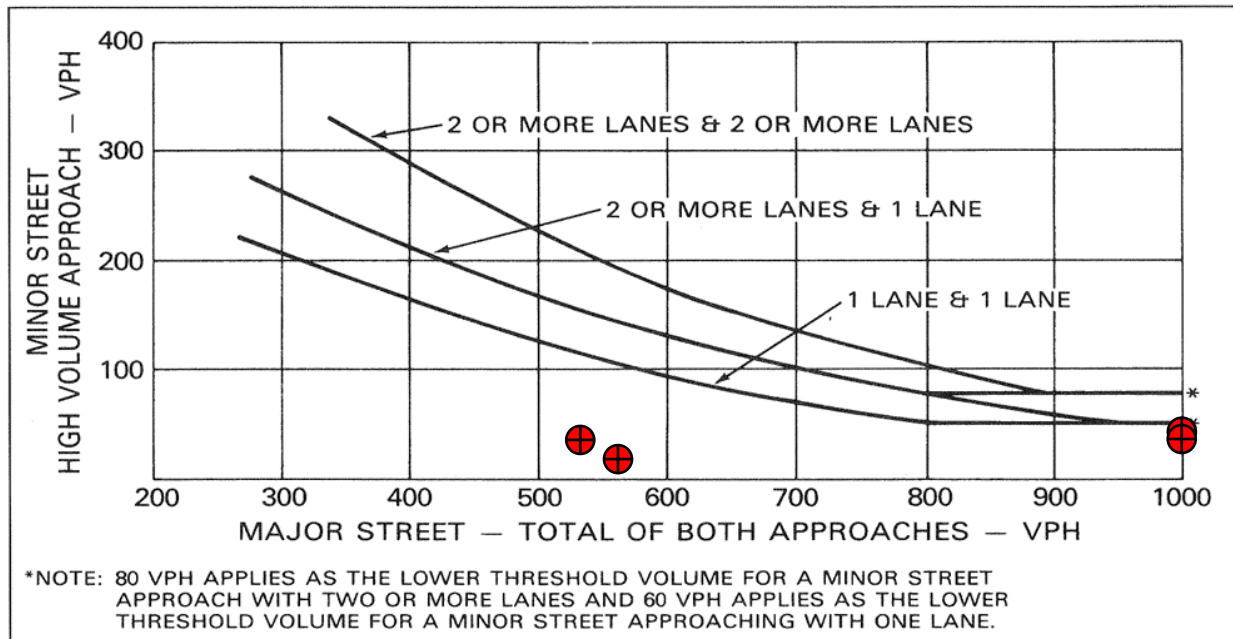


Figure 12 – TxMUTCD Figure 4C-2. Four-Hour Volume Warrant (70% Warrant)

As shown in Figure 12, this warrant has not been satisfied.

Warrant 3 – Peak Hour Volume

The peak hour volume warrant is intended for application when traffic conditions are such that, for one hour of the day, minor street traffic suffers undue delays upon entering or crossing the major street. This warrant should be applied only in unusual cases, such as for office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge a large number of vehicles over a short time. Satisfying this warrant is determined by traffic volumes which if plotted would fall above the appropriate curve (1 lane & 1 lane) found on Figures 4C-3 and 4C-4 of the TxMUTCD. The traffic volumes utilized to perform this analysis are as follows:

- 5:00 PM to 6:00 PM: 1,124 Major Roadway, 66 Minor Roadway

The results of this analysis can be seen in Figure 13:

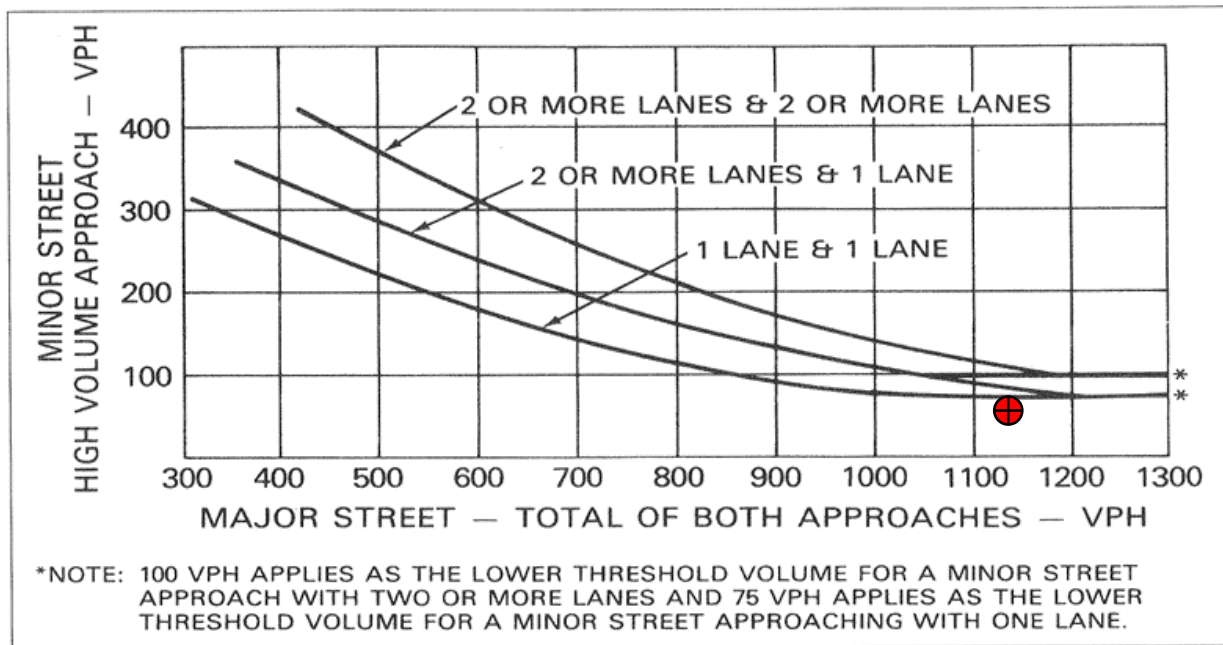


Figure 13 – TxMUTCD Figure 4C-4. Peak Hour Volume Warrant (70% Factor)

As shown in Figure 13, this warrant has not been satisfied.

As shown above, the Santa Clara Road and Schmoekel Road is not expected to warrant conversion to signal control upon completion of the proposed development.

DRIVEWAY TURN-LANE ANALYSIS

Table 2-3 of the TxDOT Access Management Manual shows the Auxiliary Lane Thresholds for left-turn and right-turn lanes on state system roadways. Table 2-3 shows that turn lanes are required when the turn volumes exceed 60 vehicles per hour on a speed zone of less than 45 miles per hour or when turn volumes exceed 50 vehicles per hour on a speed zone of greater than or equal to 45 miles per hour. The current speed limit along Schmoekel Road is 40 mph.

Upon completion of the proposed development, Access #1 is projected to have entering left-turn volumes of 43 vehicles during the AM peak period and 138 vehicles during the PM peak period. Therefore, a left-turn lane is required along Schmoekel Road at Access #1 upon completion of the proposed development. **Based on the 40-mph speed limit, a 365 LF left-turn lane is recommended, which includes a 265 LF deceleration lane and 100 LF of storage.**

Upon completion of the proposed development, Access #1 is projected to have entering right-turn volumes of 3 vehicles during the AM peak period and 10 vehicles during the PM peak period. Therefore, a right-turn lane is not required along Schmoekel Road at Access #1 upon completion of the proposed development.

Upon completion of the proposed development, Access #2 is projected to have entering left-turn volumes of 12 vehicles during the AM peak period and 39 vehicles during the PM peak period. Therefore, a left-turn lane is not required along Schmoekel Road at Access #2 upon completion of the proposed development.

Upon completion of the proposed development, Access #2 is projected to have entering right-turn volumes of 3 vehicles during the AM peak period and 10 vehicles during the PM peak period. Therefore, a right-turn lane is not required along Schmoekel Road at Access #2 upon completion of the proposed development.

COST ESTIMATE

The estimated cost of all recommended roadway improvements is as follows:

Santa Clara Road and Lower Seguin Road:

- Convert intersection to all-way stop-control (Full Build-Out) \$10,000
Note: This improvement was previously recommended by the Marion Oaks development

Santa Clara Road and Schmoekel Road:

- Construct 180 LF eastbound right-turn lane (Full Build-Out) \$150,000

Schmoekel Road and Access #1:

- Construct 365 LF westbound left-turn lane (Full Build-Out) \$250,000

The total estimated cost of all recommended roadway improvements is approximately \$410,000.

CONCLUSION & RECOMMENDATION

The primary purpose of this analysis was to assess the impacts of the proposed Neil Tract within the project study area. A total of six intersections were analyzed during the AM and PM peak periods in accordance with TxDOT requirements.

The results of the LOS Analysis found that the westbound approach to the Lower Seguin Road and Santa Clara Road intersection is expected to demonstrate unacceptable LOS values upon Full Build-Out of the proposed development. Mitigation measures were applied and analyzed and found to improve delays to acceptable LOS values. No further mitigation measures were applied and analyzed.

The results of the LOS Analysis found that the eastbound and westbound approaches to the Santa Clara Road and Schmoekel Road intersection are expected to demonstrate unacceptable LOS values upon Full Build-Out of the proposed development. Mitigation measures will be applied and analyzed but found not to improve delays to acceptable LOS values. A partial traffic signal warrant analysis was conducted but found not to warrant upon completion of the proposed development. Further mitigation measures were deemed unfeasible.

The results of the LOS analysis found that the eastbound approach to the Santa Clara Road and Bolton Road intersection is expected to demonstrate unacceptable LOS values upon Full Build-Out of the proposed development. Mitigation measures would be applied and analyzed; however, the eastbound approach currently provides a dedicated lane for left- and right-turn movements and the proposed development is only expected to send northbound and southbound through traffic to this intersection. Therefore, mitigation measures will not be applied and analyzed.

The results of this analysis found that all other study intersections considered within this analysis are expected to operate at acceptable LOS values upon completion of the proposed development.

Table 2-3 of the TxDOT Access Management Manual shows the Auxiliary Lane Thresholds for left-turn and right-turn lanes on state system roadways. Table 2-3 shows that turn lanes are required when the turn volumes exceed 60 vehicles per hour on a speed zone of less than 45 miles per hour or when turn volumes exceed 50 vehicles per hour on a speed zone of greater than or equal to 45 miles per hour. The current speed limit along Schmoekel Road is 40 mph.

Upon completion of the proposed development, Access #1 is projected to have entering left-turn volumes of 43 vehicles during the AM peak period and 138 vehicles during the PM peak period. Therefore, a left-turn lane is required along Schmoekel Road at Access #1 upon completion of the proposed development. **Based on the 40-mph speed limit, a 365 LF left-turn lane is recommended, which includes a 265 LF deceleration lane and 100 LF of storage.**

Santa Clara Road and Lower Seguin Road:

- Convert intersection to all-way stop-control (Full Build-Out) \$10,000
Note: This improvement was previously recommended by the Marion Oaks development

Santa Clara Road and Schmoekel Road:

- Construct 180 LF eastbound right-turn lane (Full Build-Out) \$150,000

Schmoekel Road and Access #1:

- Construct 365 LF westbound left-turn lane (Full Build-Out) \$250,000

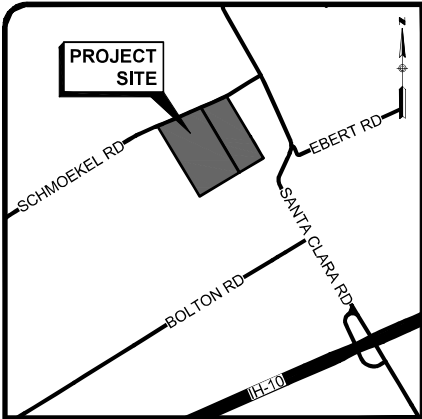
The total estimated cost of all recommended roadway improvements is approximately \$410,000.



10/07/2024

Oscar Michael Garza, PE, PTP, PTOE, RSP₁
Legacy Engineering Group

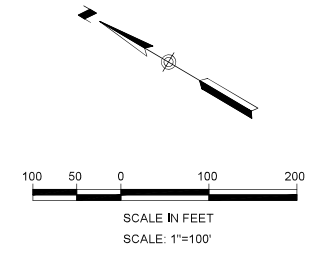
APPENDIX A – SITE PLAN



LOCATION MAP
1" = 2000'

LOT COUNT

| | 40' LOT TOTAL: | 45' LOT TOTAL: | LOT TOTAL: |
|---------|----------------|----------------|------------|
| | | | |
| PHASE 1 | 88 | 36 | 124 |
| PHASE 2 | 42 | 22 | 64 |
| PHASE 3 | 41 | 23 | 64 |
| PHASE 4 | 54 | 27 | 81 |
| TOTAL: | 225 | 108 | 333 |



K:\S1414_08_Home\2002_Nell_Town\420_Site_Development_Plan\Draw-Civil\2024-08-12_Revise_Plan.dwg
 User: njgaur
 Plot Date/Time: Aug 27, 24 - 16:58:13

SCHMOEKEL 68 AC CIBOLO
PRELIMINARY LAND PLAN

| NO. | REVISIONS | DESCRIPTION | DATE | BY |
|-----|-----------|-------------|------|----|
| | | | | |

| | | |
|--------------|---------------|-------------|
| DESIGNED BY: | DRAWN BY: | CHECKED BY: |
| | | |
| DATE: | DRAWING NAME: | |

LJA Engineering, Inc.
 9630 Colonnade Blvd.,
 Suite 300,
 San Antonio, Texas 78230
 Phone 210.533.2700
 Fax 210.533.2749
 TBPE No. F-1986

JOB NUMBER:

SHEET NO.
1
 OF 1 SHEETS

APPENDIX B – TRAFFIC DATA

Santa Clara Rd at Lower Seguin Rd - TMC

Tue Aug 27, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1218681, Location: 29.543908, -98.148159



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

| Leg Direction | Santa Clara Rd Southbound | | | | | | Lower Seguin Rd Westbound | | | | | | Santa Clara Rd Northbound | | | | | | Lower Seguin Rd Eastbound | | | | | | Int |
|--------------------------------|---------------------------|-------|-------|----|-------|------|---------------------------|-------|-------|----|-------|------|---------------------------|-------|-------|----|-------|------|---------------------------|-------|-------|----|-------|------|-------|
| | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | |
| 2024-08-27 7:00AM | 2 | 25 | 1 | 0 | 28 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 21 | 26 | 1 | 0 | 48 | 0 | 1 | 3 | 4 | 0 | 8 | 0 | 87 |
| 7:15AM | 1 | 42 | 4 | 0 | 47 | 0 | 5 | 1 | 9 | 0 | 15 | 0 | 22 | 29 | 2 | 0 | 53 | 0 | 4 | 3 | 3 | 0 | 10 | 0 | 125 |
| 7:30AM | 0 | 49 | 1 | 0 | 50 | 0 | 0 | 4 | 8 | 0 | 12 | 0 | 15 | 29 | 3 | 0 | 47 | 0 | 1 | 3 | 6 | 0 | 10 | 0 | 119 |
| 7:45AM | 1 | 42 | 2 | 0 | 45 | 0 | 1 | 1 | 5 | 0 | 7 | 0 | 11 | 21 | 1 | 0 | 33 | 0 | 1 | 1 | 5 | 0 | 7 | 0 | 92 |
| Hourly Total | 4 | 158 | 8 | 0 | 170 | 0 | 7 | 6 | 24 | 0 | 37 | 0 | 69 | 105 | 7 | 0 | 181 | 0 | 7 | 10 | 18 | 0 | 35 | 0 | 423 |
| 8:00AM | 2 | 49 | 2 | 0 | 53 | 0 | 3 | 3 | 4 | 0 | 10 | 0 | 10 | 24 | 1 | 0 | 35 | 0 | 1 | 4 | 1 | 0 | 6 | 0 | 104 |
| 8:15AM | 3 | 25 | 1 | 0 | 29 | 0 | 1 | 3 | 3 | 0 | 7 | 0 | 4 | 28 | 0 | 0 | 32 | 0 | 2 | 1 | 3 | 0 | 6 | 0 | 74 |
| 8:30AM | 0 | 28 | 0 | 0 | 28 | 0 | 1 | 1 | 3 | 0 | 5 | 0 | 4 | 19 | 1 | 0 | 24 | 0 | 0 | 1 | 2 | 0 | 3 | 0 | 60 |
| 8:45AM | 3 | 20 | 2 | 0 | 25 | 0 | 3 | 0 | 1 | 0 | 4 | 0 | 3 | 22 | 0 | 0 | 25 | 0 | 2 | 2 | 2 | 0 | 6 | 0 | 60 |
| Hourly Total | 8 | 122 | 5 | 0 | 135 | 0 | 8 | 7 | 11 | 0 | 26 | 0 | 21 | 93 | 2 | 0 | 116 | 0 | 5 | 8 | 8 | 0 | 21 | 0 | 298 |
| 4:00PM | 2 | 37 | 4 | 0 | 43 | 0 | 2 | 7 | 6 | 0 | 15 | 0 | 7 | 42 | 5 | 0 | 54 | 0 | 2 | 1 | 2 | 0 | 5 | 0 | 117 |
| 4:15PM | 1 | 21 | 3 | 0 | 25 | 0 | 5 | 4 | 10 | 0 | 19 | 0 | 4 | 27 | 1 | 0 | 32 | 0 | 1 | 2 | 1 | 0 | 4 | 0 | 80 |
| 4:30PM | 2 | 43 | 2 | 0 | 47 | 0 | 1 | 0 | 6 | 0 | 7 | 0 | 7 | 30 | 2 | 0 | 39 | 0 | 4 | 3 | 0 | 0 | 7 | 0 | 100 |
| 4:45PM | 3 | 28 | 2 | 0 | 33 | 0 | 2 | 1 | 2 | 0 | 5 | 0 | 6 | 27 | 6 | 0 | 39 | 0 | 2 | 1 | 1 | 0 | 4 | 0 | 81 |
| Hourly Total | 8 | 129 | 11 | 0 | 148 | 0 | 10 | 12 | 24 | 0 | 46 | 0 | 24 | 126 | 14 | 0 | 164 | 0 | 9 | 7 | 4 | 0 | 20 | 0 | 378 |
| 5:00PM | 4 | 30 | 2 | 0 | 36 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 12 | 34 | 3 | 0 | 49 | 0 | 3 | 2 | 0 | 0 | 5 | 0 | 93 |
| 5:15PM | 1 | 43 | 5 | 0 | 49 | 0 | 0 | 1 | 4 | 0 | 5 | 0 | 12 | 23 | 2 | 0 | 37 | 0 | 2 | 3 | 4 | 0 | 9 | 0 | 100 |
| 5:30PM | 2 | 52 | 2 | 0 | 56 | 0 | 1 | 1 | 7 | 0 | 9 | 0 | 10 | 28 | 1 | 0 | 39 | 0 | 2 | 3 | 0 | 0 | 5 | 0 | 109 |
| 5:45PM | 6 | 55 | 2 | 0 | 63 | 0 | 1 | 4 | 4 | 0 | 9 | 0 | 12 | 33 | 0 | 0 | 45 | 0 | 1 | 3 | 1 | 0 | 5 | 0 | 122 |
| Hourly Total | 13 | 180 | 11 | 0 | 204 | 0 | 3 | 6 | 17 | 0 | 26 | 0 | 46 | 118 | 6 | 0 | 170 | 0 | 8 | 11 | 5 | 0 | 24 | 0 | 424 |
| Total | 33 | 589 | 35 | 0 | 657 | 0 | 28 | 31 | 76 | 0 | 135 | 0 | 160 | 442 | 29 | 0 | 631 | 0 | 29 | 36 | 35 | 0 | 100 | 0 | 1523 |
| % Approach | 5.0% | 89.6% | 5.3% | 0% | - | - | 20.7% | 23.0% | 56.3% | 0% | - | - | 25.4% | 70.0% | 4.6% | 0% | - | - | 29.0% | 36.0% | 35.0% | 0% | - | - | - |
| % Total | 2.2% | 38.7% | 2.3% | 0% | 43.1% | - | 1.8% | 2.0% | 5.0% | 0% | 8.9% | - | 10.5% | 29.0% | 1.9% | 0% | 41.4% | - | 1.9% | 2.4% | 2.3% | 0% | 6.6% | - | - |
| Motorcycles | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 |
| % Motorcycles | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% |
| Lights | 33 | 573 | 32 | 0 | 638 | - | 25 | 31 | 74 | 0 | 130 | - | 157 | 426 | 28 | 0 | 611 | - | 27 | 36 | 34 | 0 | 97 | - | 1476 |
| % Lights | 100% | 97.3% | 91.4% | 0% | 97.1% | - | 89.3% | 100% | 97.4% | 0% | 96.3% | - | 98.1% | 96.4% | 96.6% | 0% | 96.8% | - | 93.1% | 100% | 97.1% | 0% | 97.0% | - | 96.9% |
| Single-Unit Trucks | 0 | 12 | 1 | 0 | 13 | - | 1 | 0 | 1 | 0 | 2 | - | 1 | 10 | 0 | 0 | 11 | - | 1 | 0 | 0 | 0 | 1 | - | 27 |
| % Single-Unit Trucks | 0% | 2.0% | 2.9% | 0% | 2.0% | - | 3.6% | 0% | 1.3% | 0% | 1.5% | - | 0.6% | 2.3% | 0% | 0% | 1.7% | - | 3.4% | 0% | 0% | 0% | 1.0% | - | 1.8% |
| Articulated Trucks | 0 | 4 | 0 | 0 | 4 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 4 | 0 | 0 | 4 | - | 0 | 0 | 0 | 0 | 0 | - | 8 |
| % Articulated Trucks | 0% | 0.7% | 0% | 0% | 0.6% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0.9% | 0% | 0% | 0.6% | - | 0% | 0% | 0% | 0% | 0% | - | 0.5% |
| Buses | 0 | 0 | 2 | 0 | 2 | - | 2 | 0 | 1 | 0 | 3 | - | 2 | 2 | 1 | 0 | 5 | - | 1 | 0 | 1 | 0 | 2 | - | 12 |
| % Buses | 0% | 0% | 5.7% | 0% | 0.3% | - | 7.1% | 0% | 1.3% | 0% | 2.2% | - | 1.3% | 0.5% | 3.4% | 0% | 0.8% | - | 3.4% | 0% | 2.9% | 0% | 2.0% | - | 0.8% |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 |
| % Bicycles on Road | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% |
| Pedestrians | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Santa Clara Rd at Lower Seguin Rd - TMC

Tue Aug 27, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

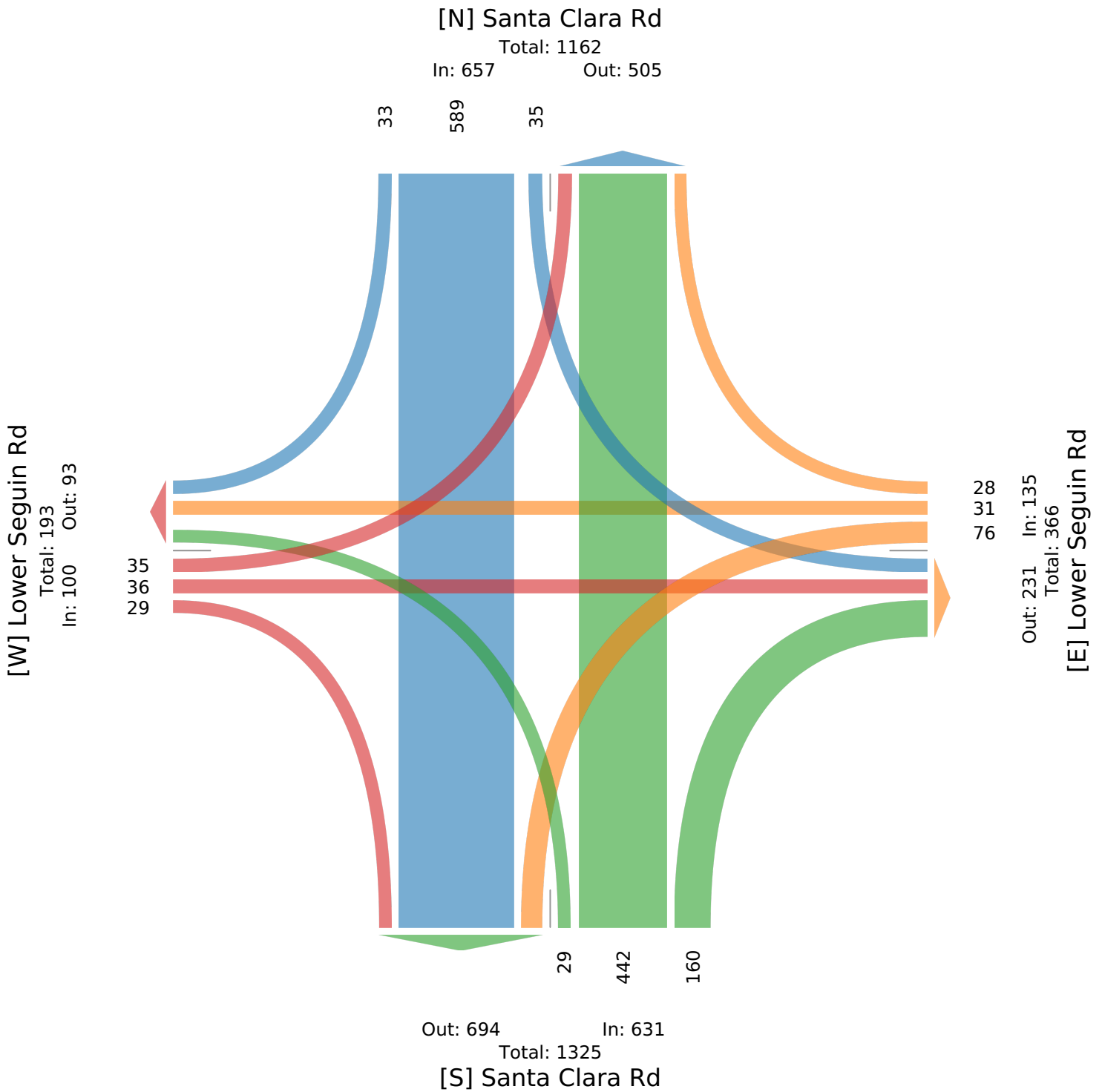
All Movements

ID: 1218681, Location: 29.543908, -98.148159



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave., Pasadena, TX, 77503, US



Santa Clara Rd at Lower Seguin Rd - TMC

Tue Aug 27, 2024

AM Peak (7:15 AM - 8:15 AM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1218681, Location: 29.543908, -98.148159



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

| Leg Direction | Santa Clara Rd Southbound | | | | | Lower Seguin Rd Westbound | | | | | Santa Clara Rd Northbound | | | | | Lower Seguin Rd Eastbound | | | | | Int | | | | |
|-----------------------------|---------------------------|------------|----------|----------|--------------|---------------------------|----------|----------|-----------|----------|---------------------------|----------|-----------|------------|----------|---------------------------|--------------|----------|----------|-----------|-----------|----------|--------------|----------|------------|
| | R | T | L | U | App Ped* | R | T | L | U | App Ped* | R | T | L | U | App Ped* | R | T | L | U | App Ped* | | | | | |
| 2024-08-27 7:15AM | 1 | 42 | 4 | 0 | 47 | 0 | 5 | 1 | 9 | 0 | 15 | 0 | 22 | 29 | 2 | 0 | 53 | 0 | 4 | 3 | 3 | 0 | 10 | 0 | 125 |
| 7:30AM | 0 | 49 | 1 | 0 | 50 | 0 | 0 | 4 | 8 | 0 | 12 | 0 | 15 | 29 | 3 | 0 | 47 | 0 | 1 | 3 | 6 | 0 | 10 | 0 | 119 |
| 7:45AM | 1 | 42 | 2 | 0 | 45 | 0 | 1 | 1 | 5 | 0 | 7 | 0 | 11 | 21 | 1 | 0 | 33 | 0 | 1 | 1 | 5 | 0 | 7 | 0 | 92 |
| 8:00AM | 2 | 49 | 2 | 0 | 53 | 0 | 3 | 3 | 4 | 0 | 10 | 0 | 10 | 24 | 1 | 0 | 35 | 0 | 1 | 4 | 1 | 0 | 6 | 0 | 104 |
| Total | 4 | 182 | 9 | 0 | 195 | 0 | 9 | 9 | 26 | 0 | 44 | 0 | 58 | 103 | 7 | 0 | 168 | 0 | 7 | 11 | 15 | 0 | 33 | 0 | 440 |
| % Approach | 2.1% | 93.3% | 4.6% | 0% | - | - | 20.5% | 20.5% | 59.1% | 0% | - | - | 34.5% | 61.3% | 4.2% | 0% | - | - | 21.2% | 33.3% | 45.5% | 0% | - | - | - |
| % Total | 0.9% | 41.4% | 2.0% | 0% | 44.3% | - | 2.0% | 2.0% | 5.9% | 0% | 10.0% | - | 13.2% | 23.4% | 1.6% | 0% | 38.2% | - | 1.6% | 2.5% | 3.4% | 0% | 7.5% | - | - |
| PHF | 0.500 | 0.929 | 0.563 | - | 0.920 | - | 0.450 | 0.563 | 0.722 | - | 0.733 | - | 0.659 | 0.888 | 0.583 | - | 0.792 | - | 0.438 | 0.688 | 0.625 | - | 0.825 | - | 0.880 |
| Motorcycles | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 |
| % Motorcycles | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% |
| Lights | 4 | 175 | 9 | 0 | 188 | - | 7 | 9 | 24 | 0 | 40 | - | 57 | 97 | 6 | 0 | 160 | - | 6 | 11 | 14 | 0 | 31 | - | 419 |
| % Lights | 100% | 96.2% | 100% | 0% | 96.4% | - | 77.8% | 100% | 92.3% | 0% | 90.9% | - | 98.3% | 94.2% | 85.7% | 0% | 95.2% | - | 85.7% | 100% | 93.3% | 0% | 93.9% | - | 95.2% |
| Single-Unit Trucks | 0 | 5 | 0 | 0 | 5 | - | 1 | 0 | 1 | 0 | 2 | - | 0 | 6 | 0 | 0 | 6 | - | 1 | 0 | 0 | 0 | 1 | - | 14 |
| % Single-Unit Trucks | 0% | 2.7% | 0% | 0% | 2.6% | - | 11.1% | 0% | 3.8% | 0% | 4.5% | - | 0% | 5.8% | 0% | 0% | 3.6% | - | 14.3% | 0% | 0% | 0% | 3.0% | - | 3.2% |
| Articulated Trucks | 0 | 2 | 0 | 0 | 2 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 2 |
| % Articulated Trucks | 0% | 1.1% | 0% | 0% | 1.0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0.5% |
| Buses | 0 | 0 | 0 | 0 | 0 | - | 1 | 0 | 1 | 0 | 2 | - | 1 | 0 | 1 | 0 | 2 | - | 0 | 0 | 1 | 0 | 1 | - | 5 |
| % Buses | 0% | 0% | 0% | 0% | 0% | - | 11.1% | 0% | 3.8% | 0% | 4.5% | - | 1.7% | 0% | 14.3% | 0% | 1.2% | - | 0% | 0% | 6.7% | 0% | 3.0% | - | 1.1% |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 |
| % Bicycles on Road | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% |
| Pedestrians | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Santa Clara Rd at Lower Seguin Rd - TMC

Tue Aug 27, 2024

AM Peak (7:15 AM - 8:15 AM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

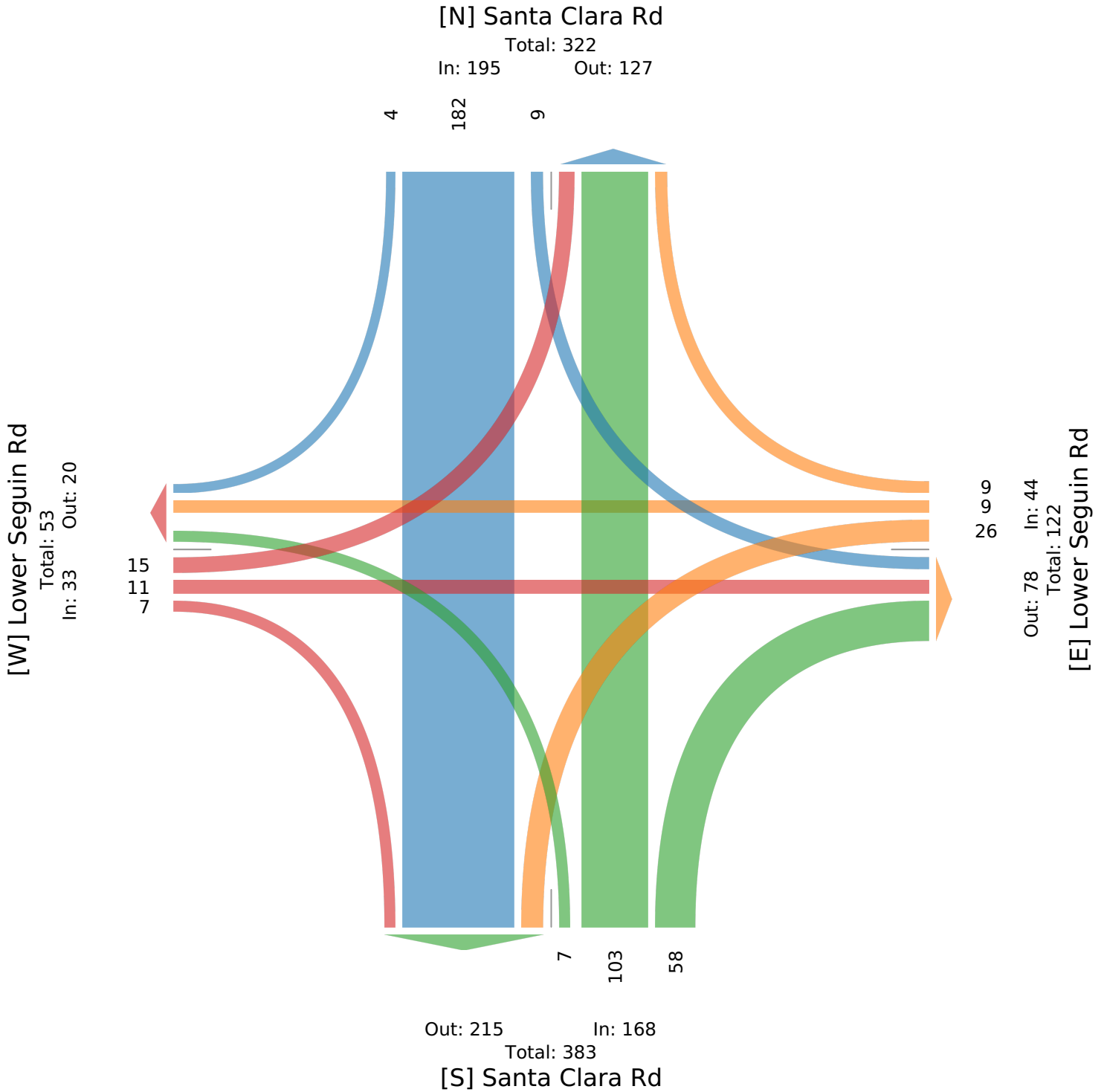
All Movements

ID: 1218681, Location: 29.543908, -98.148159



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Santa Clara Rd at Lower Seguin Rd - TMC

Tue Aug 27, 2024

PM Peak (5 PM - 6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1218681, Location: 29.543908, -98.148159



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

| Leg Direction | Santa Clara Rd Southbound | | | | | Lower Seguin Rd Westbound | | | | | Santa Clara Rd Northbound | | | | | Lower Seguin Rd Eastbound | | | | | Int | | | | |
|--------------------------------|---------------------------|-------|-------|----|----------|---------------------------|-------|-------|-------|----------|---------------------------|---|-------|-------|----------|---------------------------|-------|---|-------|----------|-------|----|-------|----|-------|
| | R | T | L | U | App Ped* | R | T | L | U | App Ped* | R | T | L | U | App Ped* | R | T | L | U | App Ped* | | | | | |
| 2024-08-27 5:00PM | 4 | 30 | 2 | 0 | 36 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 12 | 34 | 3 | 0 | 49 | 0 | 3 | 2 | 0 | 0 | 5 | 0 | 93 |
| 5:15PM | 1 | 43 | 5 | 0 | 49 | 0 | 0 | 1 | 4 | 0 | 5 | 0 | 12 | 23 | 2 | 0 | 37 | 0 | 2 | 3 | 4 | 0 | 9 | 0 | 100 |
| 5:30PM | 2 | 52 | 2 | 0 | 56 | 0 | 1 | 1 | 7 | 0 | 9 | 0 | 10 | 28 | 1 | 0 | 39 | 0 | 2 | 3 | 0 | 0 | 5 | 0 | 109 |
| 5:45PM | 6 | 55 | 2 | 0 | 63 | 0 | 1 | 4 | 4 | 0 | 9 | 0 | 12 | 33 | 0 | 0 | 45 | 0 | 1 | 3 | 1 | 0 | 5 | 0 | 122 |
| Total | 13 | 180 | 11 | 0 | 204 | 0 | 3 | 6 | 17 | 0 | 26 | 0 | 46 | 118 | 6 | 0 | 170 | 0 | 8 | 11 | 5 | 0 | 24 | 0 | 424 |
| % Approach | 6.4% | 88.2% | 5.4% | 0% | - | - | 11.5% | 23.1% | 65.4% | 0% | - | - | 27.1% | 69.4% | 3.5% | 0% | - | - | 33.3% | 45.8% | 20.8% | 0% | - | - | - |
| % Total | 3.1% | 42.5% | 2.6% | 0% | 48.1% | - | 0.7% | 1.4% | 4.0% | 0% | 6.1% | - | 10.8% | 27.8% | 1.4% | 0% | 40.1% | - | 1.9% | 2.6% | 1.2% | 0% | 5.7% | - | - |
| PHF | 0.542 | 0.818 | 0.550 | - | 0.810 | - | 0.750 | 0.375 | 0.607 | - | 0.722 | - | 0.958 | 0.868 | 0.500 | - | 0.867 | - | 0.667 | 0.917 | 0.313 | - | 0.667 | - | 0.869 |
| Motorcycles | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Motorcycles | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Lights | 13 | 178 | 11 | 0 | 202 | - | 3 | 6 | 17 | 0 | 26 | - | 45 | 118 | 6 | 0 | 169 | - | 8 | 11 | 5 | 0 | 24 | - | 421 |
| % Lights | 100% | 98.9% | 100% | 0% | 99.0% | - | 100% | 100% | 100% | 0% | 100% | - | 97.8% | 100% | 100% | 0% | 99.4% | - | 100% | 100% | 100% | 0% | 100% | - | 99.3% |
| Single-Unit Trucks | 0 | 2 | 0 | 0 | 2 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| % Single-Unit Trucks | 0% | 1.1% | 0% | 0% | 1.0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | 0% | 0.5% |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated Trucks | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Buses | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 1 | 0 | 0 | 0 | 1 | - | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| % Buses | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 2.2% | 0% | 0% | 0% | 0.6% | - | 0% | 0% | 0% | 0% | 0% | 0% | 0.2% |
| Bicycles on Road | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Bicycles on Road | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Santa Clara Rd at Lower Seguin Rd - TMC

Tue Aug 27, 2024

PM Peak (5 PM - 6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

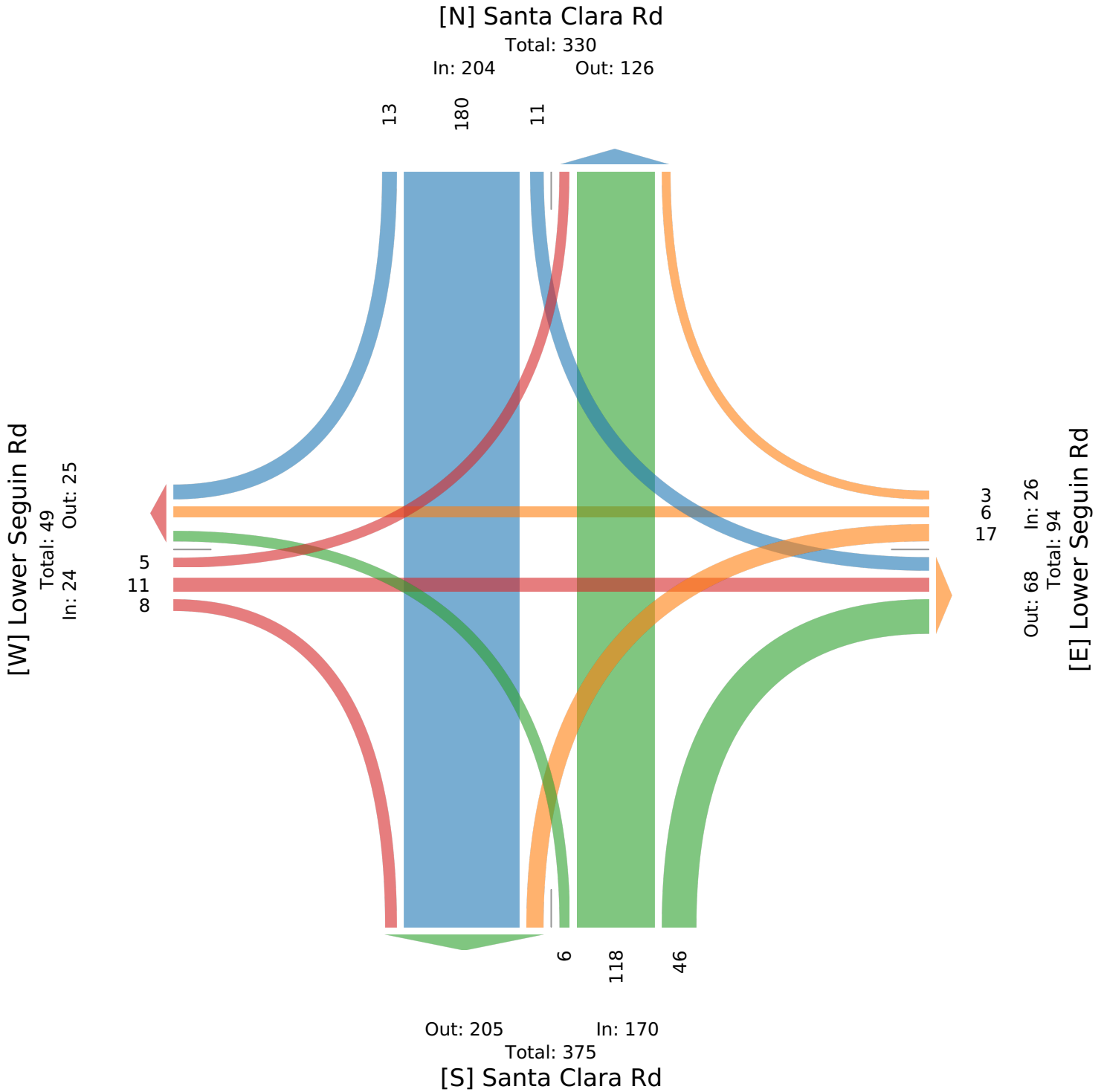
All Movements

ID: 1218681, Location: 29.543908, -98.148159



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave., Pasadena, TX, 77503, US



Santa Clara Rd at Schmoekel Rd - TMC

Tue Aug 27, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1218682, Location: 29.536071, -98.145551



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

| Leg Direction | Santa Clara Rd Southbound | | | | | Santa Clara Rd Northbound | | | | | Schmoekel Rd Eastbound | | | | | |
|--------------------------------|---------------------------|-------|----|-------|------|---------------------------|------|----|-------|------|------------------------|-------|----|-------|------|-------|
| Time | R | T | U | App | Ped* | T | L | U | App | Ped* | R | L | U | App | Ped* | Int |
| 2024-08-27 7:00AM | 1 | 24 | 0 | 25 | 0 | 51 | 0 | 0 | 51 | 0 | 0 | 1 | 0 | 1 | 0 | 77 |
| 7:15AM | 2 | 55 | 0 | 57 | 0 | 52 | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 109 |
| 7:30AM | 2 | 58 | 0 | 60 | 0 | 41 | 0 | 0 | 41 | 0 | 0 | 3 | 0 | 3 | 0 | 104 |
| 7:45AM | 0 | 48 | 0 | 48 | 0 | 35 | 0 | 0 | 35 | 0 | 0 | 2 | 0 | 2 | 0 | 85 |
| Hourly Total | 5 | 185 | 0 | 190 | 0 | 179 | 0 | 0 | 179 | 0 | 0 | 6 | 0 | 6 | 0 | 375 |
| 8:00AM | 0 | 57 | 0 | 57 | 0 | 34 | 0 | 0 | 34 | 0 | 0 | 2 | 0 | 2 | 0 | 93 |
| 8:15AM | 1 | 30 | 0 | 31 | 0 | 32 | 0 | 0 | 32 | 0 | 0 | 1 | 0 | 1 | 0 | 64 |
| 8:30AM | 2 | 29 | 0 | 31 | 0 | 23 | 1 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 55 |
| 8:45AM | 1 | 24 | 0 | 25 | 0 | 27 | 0 | 0 | 27 | 0 | 0 | 1 | 0 | 1 | 0 | 53 |
| Hourly Total | 4 | 140 | 0 | 144 | 0 | 116 | 1 | 0 | 117 | 0 | 0 | 4 | 0 | 4 | 0 | 265 |
| 4:00PM | 2 | 39 | 0 | 41 | 0 | 46 | 1 | 0 | 47 | 0 | 5 | 5 | 0 | 10 | 0 | 98 |
| 4:15PM | 1 | 33 | 0 | 34 | 0 | 35 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 69 |
| 4:30PM | 3 | 46 | 0 | 49 | 0 | 36 | 0 | 0 | 36 | 0 | 0 | 1 | 0 | 1 | 0 | 86 |
| 4:45PM | 0 | 26 | 0 | 26 | 0 | 37 | 2 | 0 | 39 | 0 | 0 | 2 | 0 | 2 | 0 | 67 |
| Hourly Total | 6 | 144 | 0 | 150 | 0 | 154 | 3 | 0 | 157 | 0 | 5 | 8 | 0 | 13 | 0 | 320 |
| 5:00PM | 1 | 37 | 0 | 38 | 0 | 44 | 0 | 0 | 44 | 0 | 3 | 7 | 0 | 10 | 0 | 92 |
| 5:15PM | 1 | 49 | 0 | 50 | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 1 | 0 | 1 | 0 | 82 |
| 5:30PM | 4 | 55 | 0 | 59 | 0 | 42 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 101 |
| 5:45PM | 2 | 60 | 0 | 62 | 0 | 47 | 1 | 0 | 48 | 0 | 1 | 1 | 0 | 2 | 0 | 112 |
| Hourly Total | 8 | 201 | 0 | 209 | 0 | 164 | 1 | 0 | 165 | 0 | 4 | 9 | 0 | 13 | 0 | 387 |
| Total | 23 | 670 | 0 | 693 | 0 | 613 | 5 | 0 | 618 | 0 | 9 | 27 | 0 | 36 | 0 | 1347 |
| % Approach | 3.3% | 96.7% | 0% | - | - | 99.2% | 0.8% | 0% | - | - | 25.0% | 75.0% | 0% | - | - | - |
| % Total | 1.7% | 49.7% | 0% | 51.4% | - | 45.5% | 0.4% | 0% | 45.9% | - | 0.7% | 2.0% | 0% | 2.7% | - | - |
| Motorcycles | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Motorcycles | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Lights | 21 | 650 | 0 | 671 | - | 589 | 5 | 0 | 594 | - | 8 | 26 | 0 | 34 | - | 1299 |
| % Lights | 91.3% | 97.0% | 0% | 96.8% | - | 96.1% | 100% | 0% | 96.1% | - | 88.9% | 96.3% | 0% | 94.4% | - | 96.4% |
| Single-Unit Trucks | 0 | 16 | 0 | 16 | - | 16 | 0 | 0 | 16 | - | 1 | 0 | 0 | 1 | - | 33 |
| % Single-Unit Trucks | 0% | 2.4% | 0% | 2.3% | - | 2.6% | 0% | 0% | 2.6% | - | 11.1% | 0% | 0% | 2.8% | - | 2.4% |
| Articulated Trucks | 0 | 4 | 0 | 4 | - | 3 | 0 | 0 | 3 | - | 0 | 0 | 0 | 0 | - | 7 |
| % Articulated Trucks | 0% | 0.6% | 0% | 0.6% | - | 0.5% | 0% | 0% | 0.5% | - | 0% | 0% | 0% | 0% | - | 0.5% |
| Buses | 2 | 0 | 0 | 2 | - | 5 | 0 | 0 | 5 | - | 0 | 1 | 0 | 1 | - | 8 |
| % Buses | 8.7% | 0% | 0% | 0.3% | - | 0.8% | 0% | 0% | 0.8% | - | 0% | 3.7% | 0% | 2.8% | - | 0.6% |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Bicycles on Road | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Santa Clara Rd at Schmoekel Rd - TMC

Tue Aug 27, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

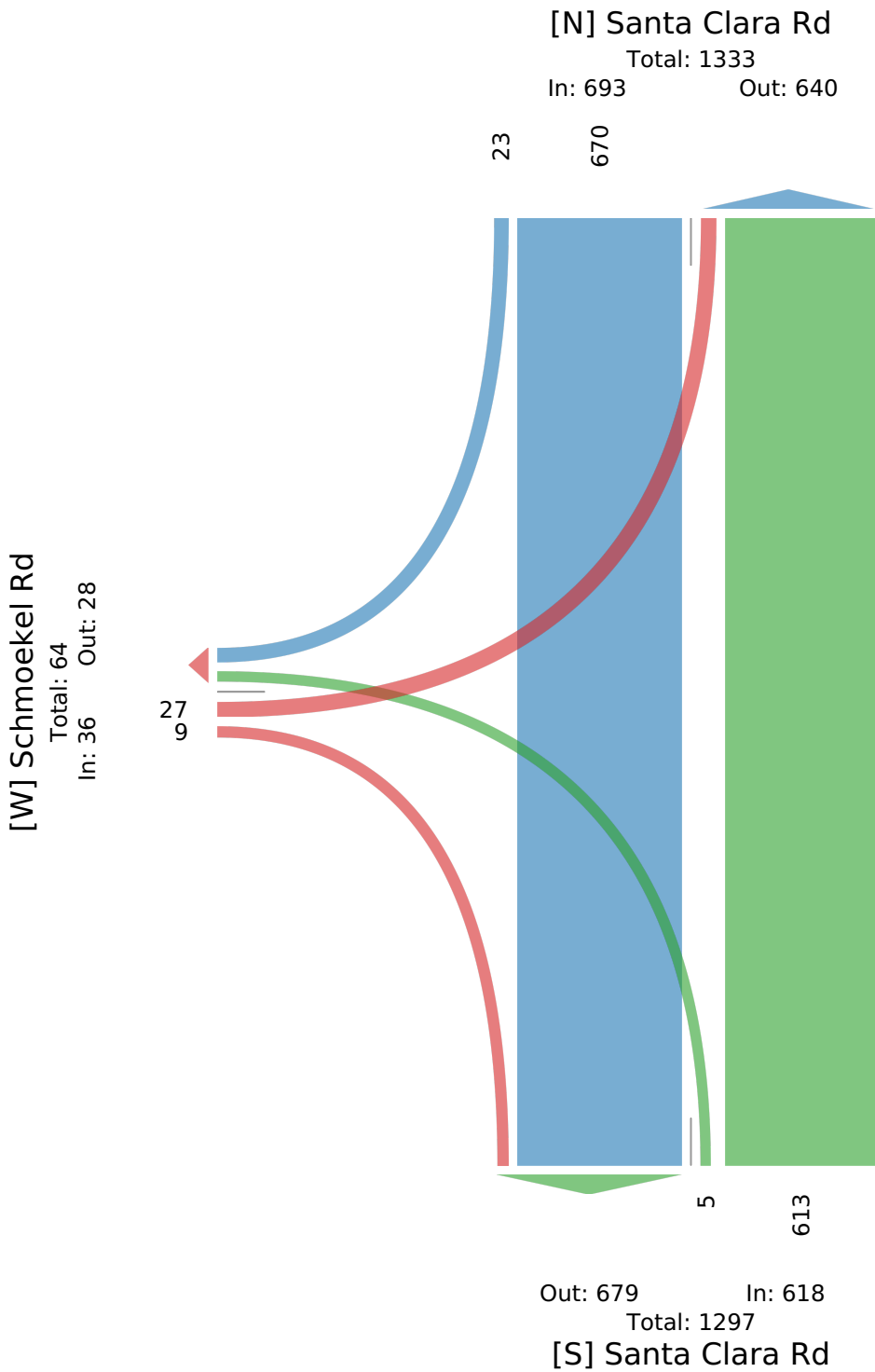
All Movements

ID: 1218682, Location: 29.536071, -98.145551



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave., Pasadena, TX, 77503, US



Santa Clara Rd at Schmoekel Rd - TMC

Tue Aug 27, 2024

AM Peak (7:15 AM - 8:15 AM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1218682, Location: 29.536071, -98.145551



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

| Leg Direction | Santa Clara Rd Southbound | | | | | Santa Clara Rd Northbound | | | | | Schmoekel Rd Eastbound | | | | | |
|-----------------------------|---------------------------|------------|----------|--------------|----------|---------------------------|----------|----------|--------------|----------|------------------------|----------|----------|--------------|----------|------------|
| Time | R | T | U | App | Ped* | T | L | U | App | Ped* | R | L | U | App | Ped* | Int |
| 2024-08-27 7:15AM | 2 | 55 | 0 | 57 | 0 | 52 | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 109 |
| 7:30AM | 2 | 58 | 0 | 60 | 0 | 41 | 0 | 0 | 41 | 0 | 0 | 3 | 0 | 3 | 0 | 104 |
| 7:45AM | 0 | 48 | 0 | 48 | 0 | 35 | 0 | 0 | 35 | 0 | 0 | 2 | 0 | 2 | 0 | 85 |
| 8:00AM | 0 | 57 | 0 | 57 | 0 | 34 | 0 | 0 | 34 | 0 | 0 | 2 | 0 | 2 | 0 | 93 |
| Total | 4 | 218 | 0 | 222 | 0 | 162 | 0 | 0 | 162 | 0 | 0 | 7 | 0 | 7 | 0 | 391 |
| % Approach | 1.8% | 98.2% | 0% | - | - | 100% | 0% | 0% | - | - | 0% | 100% | 0% | - | - | - |
| % Total | 1.0% | 55.8% | 0% | 56.8% | - | 41.4% | 0% | 0% | 41.4% | - | 0% | 1.8% | 0% | 1.8% | - | - |
| PHF | 0.500 | 0.940 | - | 0.925 | - | 0.779 | - | - | 0.779 | - | - | 0.583 | - | 0.583 | - | 0.897 |
| Motorcycles | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Motorcycles | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Lights | 3 | 206 | 0 | 209 | - | 150 | 0 | 0 | 150 | - | 0 | 6 | 0 | 6 | - | 365 |
| % Lights | 75.0% | 94.5% | 0% | 94.1% | - | 92.6% | 0% | 0% | 92.6% | - | 0% | 85.7% | 0% | 85.7% | - | 93.4% |
| Single-Unit Trucks | 0 | 10 | 0 | 10 | - | 10 | 0 | 0 | 10 | - | 0 | 0 | 0 | 0 | - | 20 |
| % Single-Unit Trucks | 0% | 4.6% | 0% | 4.5% | - | 6.2% | 0% | 0% | 6.2% | - | 0% | 0% | 0% | 0% | - | 5.1% |
| Articulated Trucks | 0 | 2 | 0 | 2 | - | 1 | 0 | 0 | 1 | - | 0 | 0 | 0 | 0 | - | 3 |
| % Articulated Trucks | 0% | 0.9% | 0% | 0.9% | - | 0.6% | 0% | 0% | 0.6% | - | 0% | 0% | 0% | 0% | - | 0.8% |
| Buses | 1 | 0 | 0 | 1 | - | 1 | 0 | 0 | 1 | - | 0 | 1 | 0 | 1 | - | 3 |
| % Buses | 25.0% | 0% | 0% | 0.5% | - | 0.6% | 0% | 0% | 0.6% | - | 0% | 14.3% | 0% | 14.3% | - | 0.8% |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Bicycles on Road | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Santa Clara Rd at Schmoekel Rd - TMC

Tue Aug 27, 2024

AM Peak (7:15 AM - 8:15 AM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

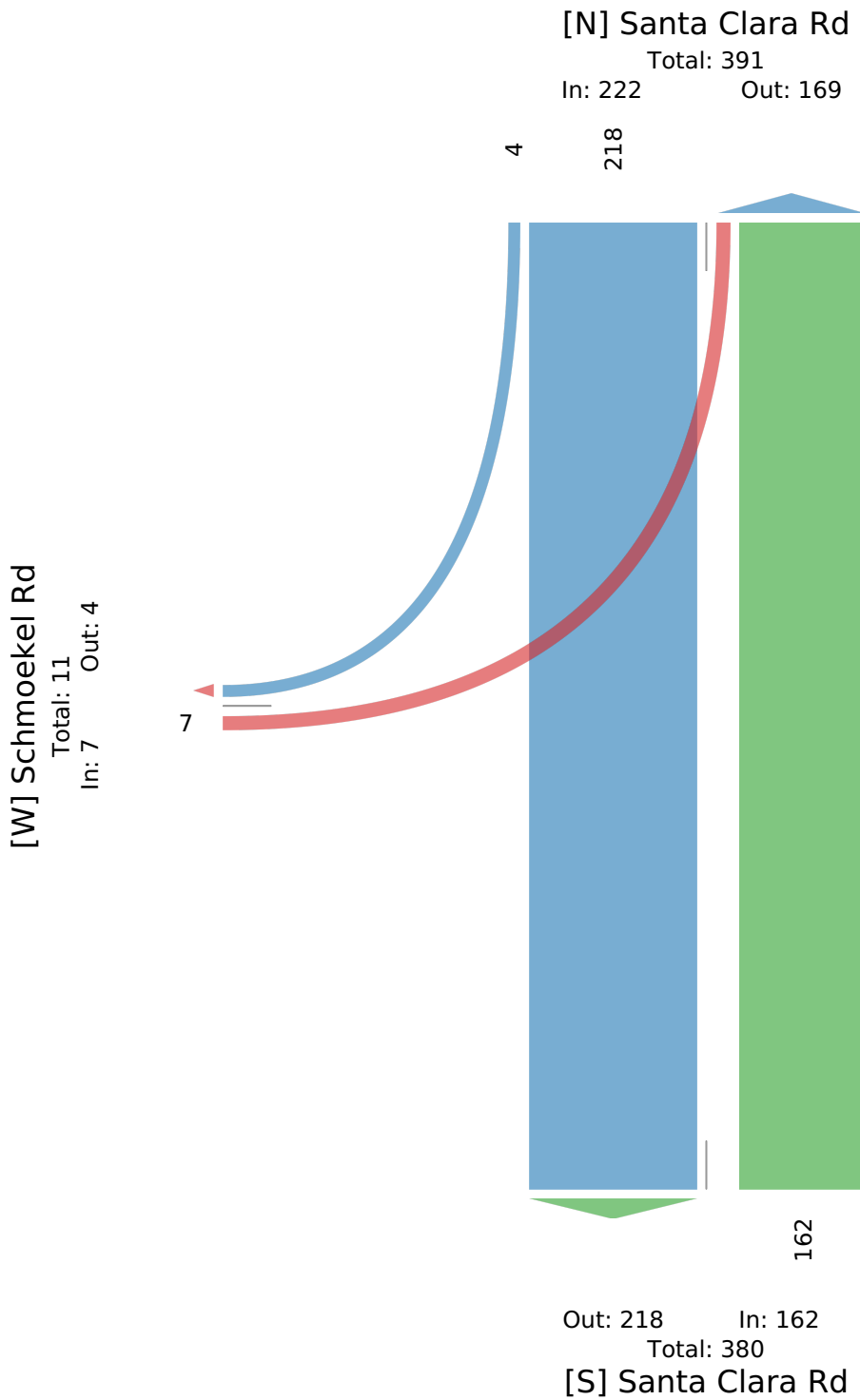
All Movements

ID: 1218682, Location: 29.536071, -98.145551



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave., Pasadena, TX, 77503, US



Santa Clara Rd at Schmoekel Rd - TMC

Tue Aug 27, 2024

PM Peak (5 PM - 6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1218682, Location: 29.536071, -98.145551



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

| Leg Direction | Santa Clara Rd Southbound | | | | | Santa Clara Rd Northbound | | | | | Schmoekel Rd Eastbound | | | | | |
|-----------------------------|---------------------------|-------|----|-------|------|---------------------------|-------|----|-------|------|------------------------|-------|----|-------|------|-------|
| Time | R | T | U | App | Ped* | T | L | U | App | Ped* | R | L | U | App | Ped* | Int |
| 2024-08-27 5:00PM | 1 | 37 | 0 | 38 | 0 | 44 | 0 | 0 | 44 | 0 | 3 | 7 | 0 | 10 | 0 | 92 |
| 5:15PM | 1 | 49 | 0 | 50 | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 1 | 0 | 1 | 0 | 82 |
| 5:30PM | 4 | 55 | 0 | 59 | 0 | 42 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 101 |
| 5:45PM | 2 | 60 | 0 | 62 | 0 | 47 | 1 | 0 | 48 | 0 | 1 | 1 | 0 | 2 | 0 | 112 |
| Total | 8 | 201 | 0 | 209 | 0 | 164 | 1 | 0 | 165 | 0 | 4 | 9 | 0 | 13 | 0 | 387 |
| % Approach | 3.8% | 96.2% | 0% | - | - | 99.4% | 0.6% | 0% | - | - | 30.8% | 69.2% | 0% | - | - | - |
| % Total | 2.1% | 51.9% | 0% | 54.0% | - | 42.4% | 0.3% | 0% | 42.6% | - | 1.0% | 2.3% | 0% | 3.4% | - | - |
| PHF | 0.500 | 0.838 | - | 0.843 | - | 0.872 | 0.250 | - | 0.859 | - | 0.333 | 0.321 | - | 0.325 | - | 0.864 |
| Motorcycles | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Motorcycles | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Lights | 8 | 199 | 0 | 207 | - | 162 | 1 | 0 | 163 | - | 4 | 9 | 0 | 13 | - | 383 |
| % Lights | 100% | 99.0% | 0% | 99.0% | - | 98.8% | 100% | 0% | 98.8% | - | 100% | 100% | 0% | 100% | - | 99.0% |
| Single-Unit Trucks | 0 | 2 | 0 | 2 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 2 |
| % Single-Unit Trucks | 0% | 1.0% | 0% | 1.0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0.5% |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Articulated Trucks | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Buses | 0 | 0 | 0 | 0 | - | 2 | 0 | 0 | 2 | - | 0 | 0 | 0 | 0 | - | 2 |
| % Buses | 0% | 0% | 0% | 0% | - | 1.2% | 0% | 0% | 1.2% | - | 0% | 0% | 0% | 0% | - | 0.5% |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Bicycles on Road | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Santa Clara Rd at Schmoekel Rd - TMC

Tue Aug 27, 2024

PM Peak (5 PM - 6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

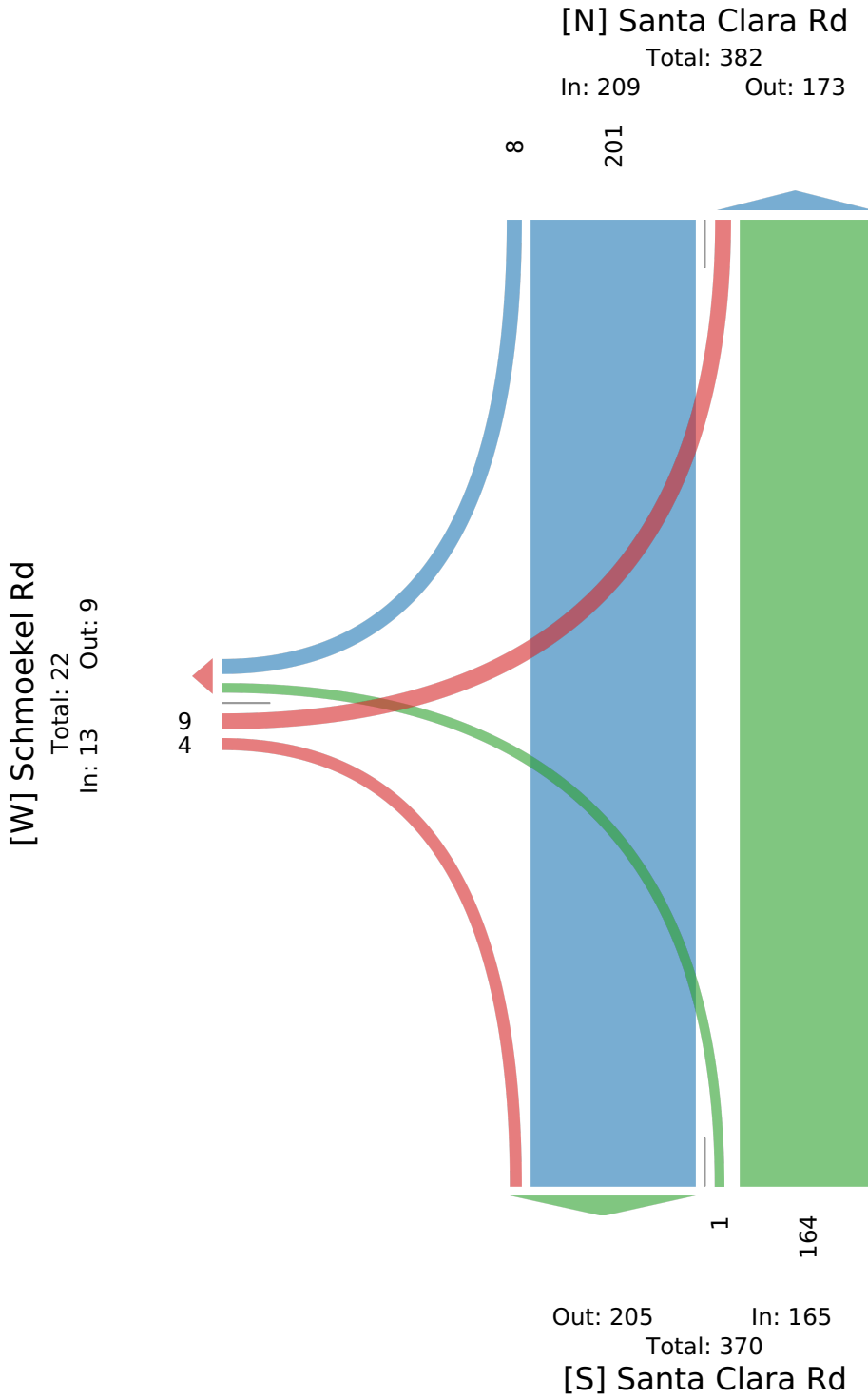
All Movements

ID: 1218682, Location: 29.536071, -98.145551



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave., Pasadena, TX, 77503, US



Santa Clara Rd at Bolton Rd - TMC

Tue Aug 27, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1218683, Location: 29.525923, -98.142058



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

| Leg Direction | Santa Clara Rd Southbound | | | | | Santa Clara Rd Northbound | | | | | Bolton Rd Eastbound | | | | | |
|--------------------------------|---------------------------|-------|----|-------|------|---------------------------|-------|----|-------|------|---------------------|-------|----|-------|------|-------|
| Time | R | T | U | App | Ped* | T | L | U | App | Ped* | R | L | U | App | Ped* | Int |
| 2024-08-27 7:00AM | 2 | 21 | 0 | 23 | 0 | 51 | 5 | 0 | 56 | 0 | 6 | 3 | 0 | 9 | 0 | 88 |
| 7:15AM | 4 | 48 | 0 | 52 | 0 | 47 | 1 | 0 | 48 | 0 | 7 | 5 | 0 | 12 | 0 | 112 |
| 7:30AM | 7 | 56 | 0 | 63 | 0 | 39 | 2 | 0 | 41 | 0 | 3 | 3 | 0 | 6 | 0 | 110 |
| 7:45AM | 1 | 42 | 0 | 43 | 0 | 30 | 4 | 0 | 34 | 0 | 1 | 3 | 0 | 4 | 0 | 81 |
| Hourly Total | 14 | 167 | 0 | 181 | 0 | 167 | 12 | 0 | 179 | 0 | 17 | 14 | 0 | 31 | 0 | 391 |
| 8:00AM | 2 | 54 | 0 | 56 | 0 | 29 | 5 | 0 | 34 | 0 | 4 | 4 | 0 | 8 | 0 | 98 |
| 8:15AM | 1 | 32 | 0 | 33 | 0 | 30 | 3 | 0 | 33 | 0 | 2 | 3 | 0 | 5 | 0 | 71 |
| 8:30AM | 2 | 24 | 0 | 26 | 0 | 23 | 1 | 0 | 24 | 0 | 2 | 0 | 0 | 2 | 0 | 52 |
| 8:45AM | 3 | 22 | 0 | 25 | 0 | 22 | 2 | 0 | 24 | 0 | 3 | 2 | 0 | 5 | 0 | 54 |
| Hourly Total | 8 | 132 | 0 | 140 | 0 | 104 | 11 | 0 | 115 | 0 | 11 | 9 | 0 | 20 | 0 | 275 |
| 4:00PM | 3 | 39 | 0 | 42 | 0 | 25 | 1 | 0 | 26 | 0 | 26 | 22 | 0 | 48 | 0 | 116 |
| 4:15PM | 4 | 31 | 0 | 35 | 0 | 28 | 5 | 0 | 33 | 0 | 14 | 5 | 0 | 19 | 0 | 87 |
| 4:30PM | 2 | 43 | 0 | 45 | 0 | 23 | 7 | 0 | 30 | 0 | 13 | 11 | 0 | 24 | 0 | 99 |
| 4:45PM | 0 | 26 | 0 | 26 | 0 | 35 | 4 | 0 | 39 | 0 | 11 | 8 | 0 | 19 | 0 | 84 |
| Hourly Total | 9 | 139 | 0 | 148 | 0 | 111 | 17 | 0 | 128 | 0 | 64 | 46 | 0 | 110 | 0 | 386 |
| 5:00PM | 1 | 38 | 0 | 39 | 0 | 29 | 4 | 0 | 33 | 0 | 26 | 13 | 0 | 39 | 0 | 111 |
| 5:15PM | 2 | 45 | 0 | 47 | 0 | 24 | 2 | 0 | 26 | 0 | 6 | 6 | 0 | 12 | 0 | 85 |
| 5:30PM | 2 | 56 | 0 | 58 | 0 | 38 | 7 | 0 | 45 | 0 | 16 | 8 | 0 | 24 | 0 | 127 |
| 5:45PM | 2 | 57 | 0 | 59 | 0 | 34 | 8 | 0 | 42 | 0 | 18 | 12 | 0 | 30 | 0 | 131 |
| Hourly Total | 7 | 196 | 0 | 203 | 0 | 125 | 21 | 0 | 146 | 0 | 66 | 39 | 0 | 105 | 0 | 454 |
| Total | 38 | 634 | 0 | 672 | 0 | 507 | 61 | 0 | 568 | 0 | 158 | 108 | 0 | 266 | 0 | 1506 |
| % Approach | 5.7% | 94.3% | 0% | - | - | 89.3% | 10.7% | 0% | - | - | 59.4% | 40.6% | 0% | - | - | - |
| % Total | 2.5% | 42.1% | 0% | 44.6% | - | 33.7% | 4.1% | 0% | 37.7% | - | 10.5% | 7.2% | 0% | 17.7% | - | - |
| Motorcycles | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Motorcycles | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Lights | 37 | 618 | 0 | 655 | - | 487 | 48 | 0 | 535 | - | 155 | 105 | 0 | 260 | - | 1450 |
| % Lights | 97.4% | 97.5% | 0% | 97.5% | - | 96.1% | 78.7% | 0% | 94.2% | - | 98.1% | 97.2% | 0% | 97.7% | - | 96.3% |
| Single-Unit Trucks | 1 | 12 | 0 | 13 | - | 13 | 4 | 0 | 17 | - | 0 | 3 | 0 | 3 | - | 33 |
| % Single-Unit Trucks | 2.6% | 1.9% | 0% | 1.9% | - | 2.6% | 6.6% | 0% | 3.0% | - | 0% | 2.8% | 0% | 1.1% | - | 2.2% |
| Articulated Trucks | 0 | 4 | 0 | 4 | - | 3 | 9 | 0 | 12 | - | 3 | 0 | 0 | 3 | - | 19 |
| % Articulated Trucks | 0% | 0.6% | 0% | 0.6% | - | 0.6% | 14.8% | 0% | 2.1% | - | 1.9% | 0% | 0% | 1.1% | - | 1.3% |
| Buses | 0 | 0 | 0 | 0 | - | 4 | 0 | 0 | 4 | - | 0 | 0 | 0 | 0 | - | 4 |
| % Buses | 0% | 0% | 0% | 0% | - | 0.8% | 0% | 0% | 0.7% | - | 0% | 0% | 0% | 0% | - | 0.3% |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Bicycles on Road | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Santa Clara Rd at Bolton Rd - TMC

Tue Aug 27, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

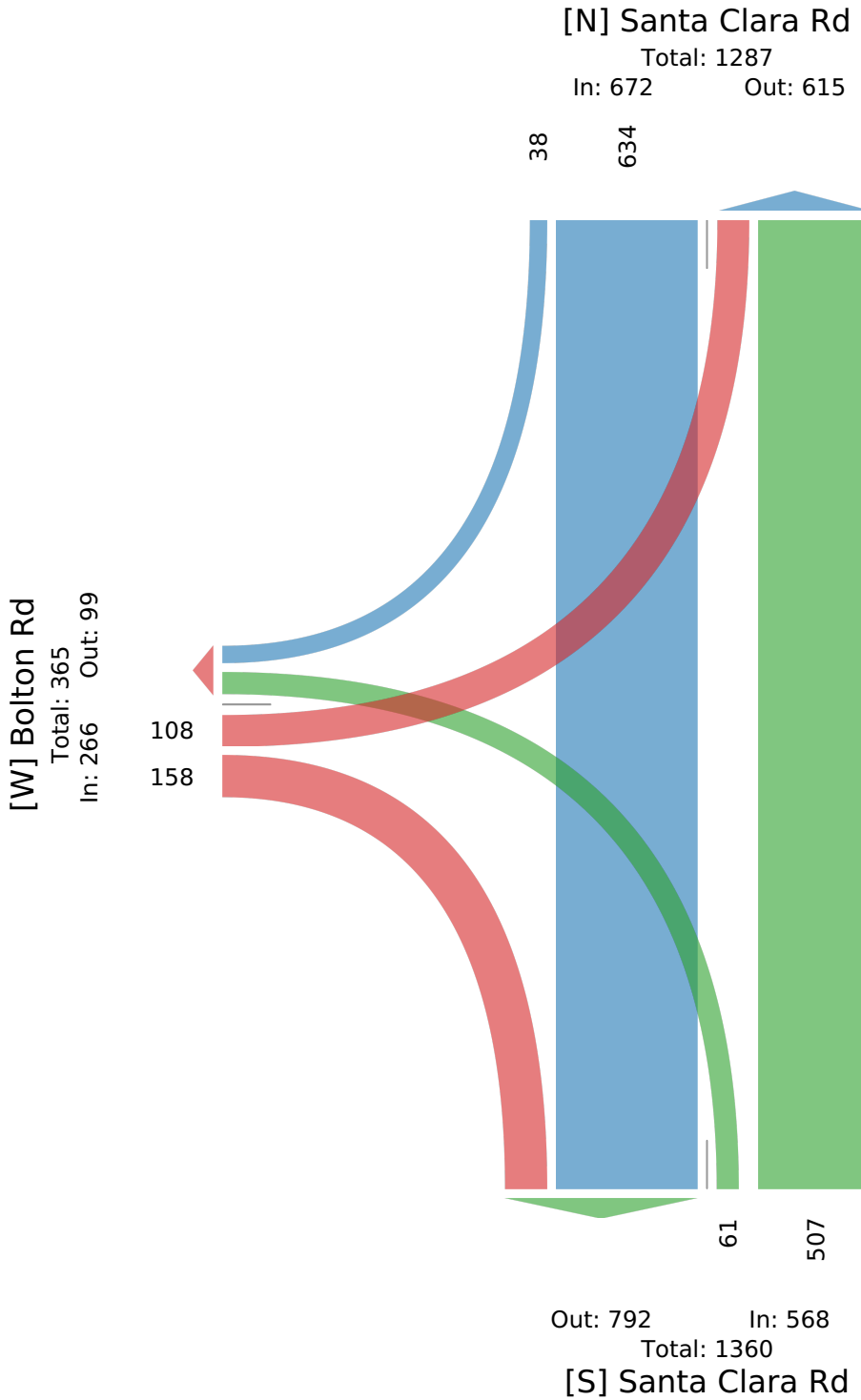
All Movements

ID: 1218683, Location: 29.525923, -98.142058



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave., Pasadena, TX, 77503, US



Santa Clara Rd at Bolton Rd - TMC

Tue Aug 27, 2024

AM Peak (7:15 AM - 8:15 AM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1218683, Location: 29.525923, -98.142058



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

| Leg Direction | Santa Clara Rd Southbound | | | | | Santa Clara Rd Northbound | | | | | Bolton Rd Eastbound | | | | | |
|-----------------------------|---------------------------|-------|----|-------|------|---------------------------|-------|----|-------|------|---------------------|-------|----|-------|------|-------|
| Time | R | T | U | App | Ped* | T | L | U | App | Ped* | R | L | U | App | Ped* | Int |
| 2024-08-27 7:15AM | 4 | 48 | 0 | 52 | 0 | 47 | 1 | 0 | 48 | 0 | 7 | 5 | 0 | 12 | 0 | 112 |
| 7:30AM | 7 | 56 | 0 | 63 | 0 | 39 | 2 | 0 | 41 | 0 | 3 | 3 | 0 | 6 | 0 | 110 |
| 7:45AM | 1 | 42 | 0 | 43 | 0 | 30 | 4 | 0 | 34 | 0 | 1 | 3 | 0 | 4 | 0 | 81 |
| 8:00AM | 2 | 54 | 0 | 56 | 0 | 29 | 5 | 0 | 34 | 0 | 4 | 4 | 0 | 8 | 0 | 98 |
| Total | 14 | 200 | 0 | 214 | 0 | 145 | 12 | 0 | 157 | 0 | 15 | 15 | 0 | 30 | 0 | 401 |
| % Approach | 6.5% | 93.5% | 0% | - | - | 92.4% | 7.6% | 0% | - | - | 50.0% | 50.0% | 0% | - | - | - |
| % Total | 3.5% | 49.9% | 0% | 53.4% | - | 36.2% | 3.0% | 0% | 39.2% | - | 3.7% | 3.7% | 0% | 7.5% | - | - |
| PHF | 0.500 | 0.893 | - | 0.849 | - | 0.771 | 0.600 | - | 0.818 | - | 0.536 | 0.750 | - | 0.625 | - | 0.895 |
| Motorcycles | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Motorcycles | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Lights | 13 | 193 | 0 | 206 | - | 136 | 11 | 0 | 147 | - | 13 | 12 | 0 | 25 | - | 378 |
| % Lights | 92.9% | 96.5% | 0% | 96.3% | - | 93.8% | 91.7% | 0% | 93.6% | - | 86.7% | 80.0% | 0% | 83.3% | - | 94.3% |
| Single-Unit Trucks | 1 | 6 | 0 | 7 | - | 8 | 0 | 0 | 8 | - | 0 | 3 | 0 | 3 | - | 18 |
| % Single-Unit Trucks | 7.1% | 3.0% | 0% | 3.3% | - | 5.5% | 0% | 0% | 5.1% | - | 0% | 20.0% | 0% | 10.0% | - | 4.5% |
| Articulated Trucks | 0 | 1 | 0 | 1 | - | 0 | 1 | 0 | 1 | - | 2 | 0 | 0 | 2 | - | 4 |
| % Articulated Trucks | 0% | 0.5% | 0% | 0.5% | - | 0% | 8.3% | 0% | 0.6% | - | 13.3% | 0% | 0% | 6.7% | - | 1.0% |
| Buses | 0 | 0 | 0 | 0 | - | 1 | 0 | 0 | 1 | - | 0 | 0 | 0 | 0 | - | 1 |
| % Buses | 0% | 0% | 0% | 0% | - | 0.7% | 0% | 0% | 0.6% | - | 0% | 0% | 0% | 0% | - | 0.2% |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Bicycles on Road | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Santa Clara Rd at Bolton Rd - TMC

Tue Aug 27, 2024

AM Peak (7:15 AM - 8:15 AM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

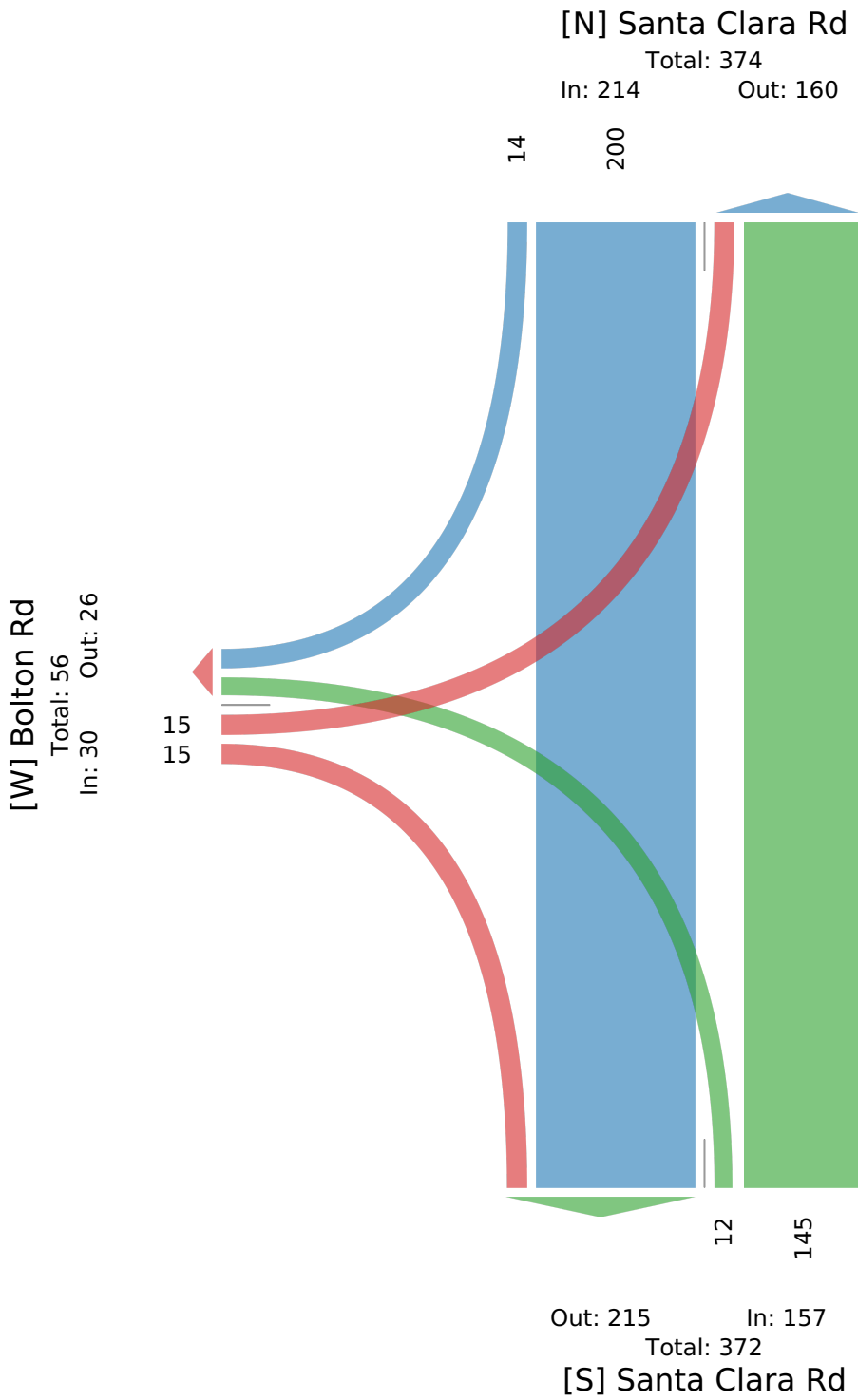
All Movements

ID: 1218683, Location: 29.525923, -98.142058



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave., Pasadena, TX, 77503, US



Santa Clara Rd at Bolton Rd - TMC

Tue Aug 27, 2024

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1218683, Location: 29.525923, -98.142058



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

| Leg Direction | Santa Clara Rd Southbound | | | | | Santa Clara Rd Northbound | | | | | Bolton Rd Eastbound | | | | | |
|-----------------------------|---------------------------|-------|----|-------|------|---------------------------|-------|----|-------|------|---------------------|-------|----|-------|------|-------|
| Time | R | T | U | App | Ped* | T | L | U | App | Ped* | R | L | U | App | Ped* | Int |
| 2024-08-27 5:00PM | 1 | 38 | 0 | 39 | 0 | 29 | 4 | 0 | 33 | 0 | 26 | 13 | 0 | 39 | 0 | 111 |
| 5:15PM | 2 | 45 | 0 | 47 | 0 | 24 | 2 | 0 | 26 | 0 | 6 | 6 | 0 | 12 | 0 | 85 |
| 5:30PM | 2 | 56 | 0 | 58 | 0 | 38 | 7 | 0 | 45 | 0 | 16 | 8 | 0 | 24 | 0 | 127 |
| 5:45PM | 2 | 57 | 0 | 59 | 0 | 34 | 8 | 0 | 42 | 0 | 18 | 12 | 0 | 30 | 0 | 131 |
| Total | 7 | 196 | 0 | 203 | 0 | 125 | 21 | 0 | 146 | 0 | 66 | 39 | 0 | 105 | 0 | 454 |
| % Approach | 3.4% | 96.6% | 0% | - | - | 85.6% | 14.4% | 0% | - | - | 62.9% | 37.1% | 0% | - | - | - |
| % Total | 1.5% | 43.2% | 0% | 44.7% | - | 27.5% | 4.6% | 0% | 32.2% | - | 14.5% | 8.6% | 0% | 23.1% | - | - |
| PHF | 0.875 | 0.860 | - | 0.860 | - | 0.822 | 0.656 | - | 0.811 | - | 0.635 | 0.750 | - | 0.673 | - | 0.866 |
| Motorcycles | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Motorcycles | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Lights | 7 | 194 | 0 | 201 | - | 124 | 19 | 0 | 143 | - | 66 | 39 | 0 | 105 | - | 449 |
| % Lights | 100% | 99.0% | 0% | 99.0% | - | 99.2% | 90.5% | 0% | 97.9% | - | 100% | 100% | 0% | 100% | - | 98.9% |
| Single-Unit Trucks | 0 | 2 | 0 | 2 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 2 |
| % Single-Unit Trucks | 0% | 1.0% | 0% | 1.0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0.4% |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 2 | 0 | 2 | - | 0 | 0 | 0 | 0 | - | 2 |
| % Articulated Trucks | 0% | 0% | 0% | 0% | - | 0% | 9.5% | 0% | 1.4% | - | 0% | 0% | 0% | 0% | - | 0.4% |
| Buses | 0 | 0 | 0 | 0 | - | 1 | 0 | 0 | 1 | - | 0 | 0 | 0 | 0 | - | 1 |
| % Buses | 0% | 0% | 0% | 0% | - | 0.8% | 0% | 0% | 0.7% | - | 0% | 0% | 0% | 0% | - | 0.2% |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Bicycles on Road | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Santa Clara Rd at Bolton Rd - TMC

Tue Aug 27, 2024

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

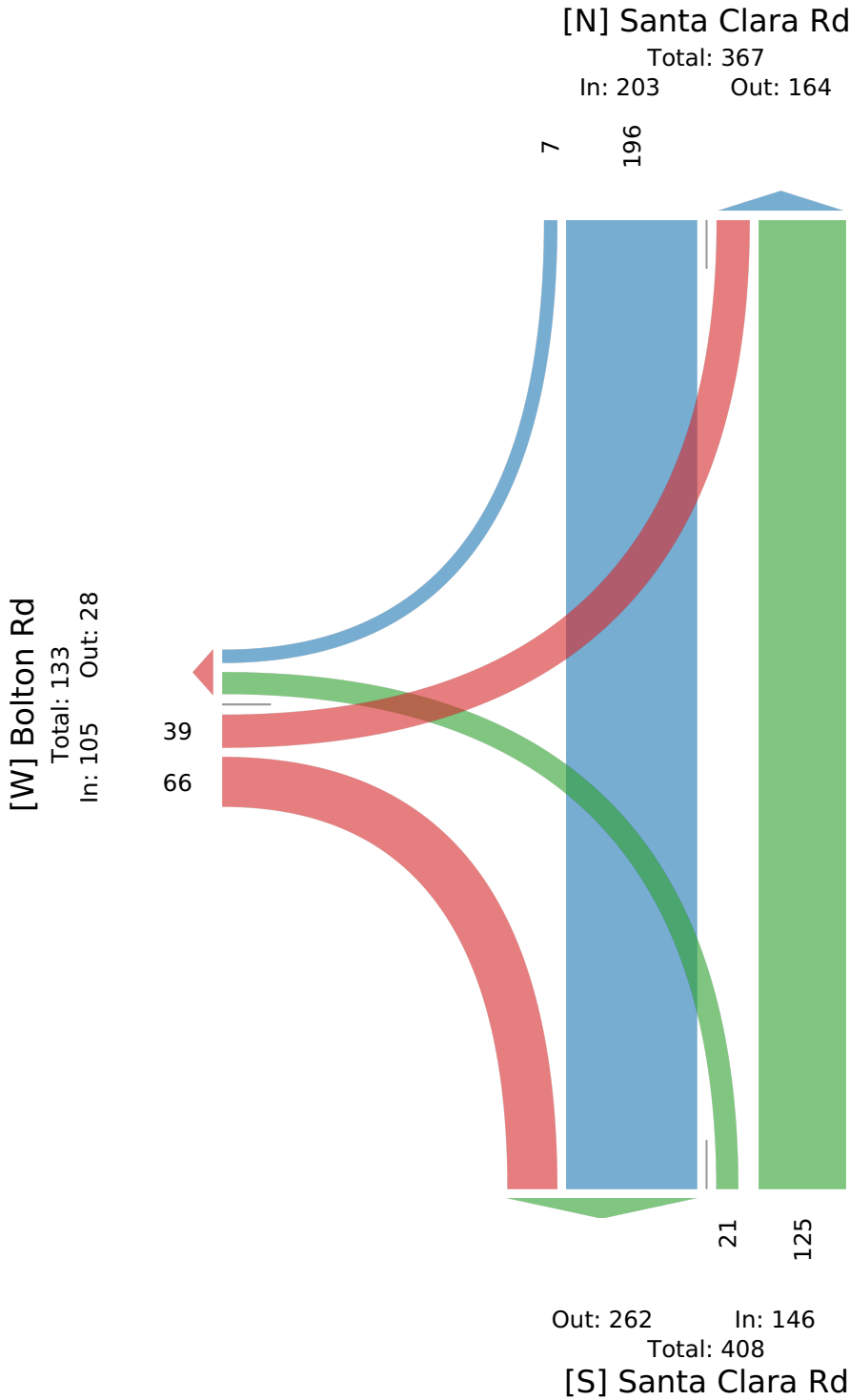
All Movements


ID: 1218683, Location: 29.525923, -98.142058




Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave., Pasadena, TX, 77503, US



| Neill Tract | | | | | | | | | | | | | | | | |
|------------------------------|----------------------------|------|-------|---------|----------------|------|-------|---------|---|------|-------|---------|------------------|------|-------|---------|
| Job Name: | Neill Tract | | | | | | | |  | | | | | | | |
| N/S Road Name: | Stolte Road | | | | | | | | | | | | | | | |
| W/E Road Name: | Schmoekel Road | | | | | | | | | | | | | | | |
| City, State - County: | Marion, Texas | | | | | | | | | | | | | | | |
| Date: | Wednesday, August 28, 2024 | | | | | | | | | | | | | | | |
| Intersection Type: | | | | | | | | | | | | | | | | |
| Time Period: | 7:00 AM | - | | | | | | | | | | | | | | |
| Peak Hour: | 7:00 AM | - | | | | | | | 9:00 AM | | | | | | | |
| | Stolte Road | | | | Schmoekel Road | | | | Stolte Road | | | | Private Driveway | | | |
| | SouthBound | | | | WestBound | | | | NorthBound | | | | EastBound | | | |
| Start Time | Left | Thru | Right | U-Turns | Left | Thru | Right | U-Turns | Left | Thru | Right | U-Turns | Left | Thru | Right | U-Turns |
| 7:00 - 7:15 AM | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| 7:15 - 7:30 AM | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| 7:30 - 7:45 AM | 1 | 2 | 0 | | 1 | 0 | 2 | | 0 | 2 | 0 | | 0 | 0 | 0 | |
| 7:45 - 8:00 AM | 1 | 1 | 0 | | 1 | 0 | 0 | | 0 | 1 | 0 | | 0 | 0 | 0 | |
| 8:00 - 8:15 AM | 0 | 2 | 0 | | 1 | 0 | 1 | | 0 | 2 | 1 | | 0 | 0 | 0 | |
| 8:15 - 8:30 AM | 0 | 5 | 0 | | 2 | 0 | 2 | | 0 | 2 | 1 | | 0 | 0 | 0 | |
| 8:30 - 8:45 AM | 0 | 1 | 0 | | 0 | 0 | 1 | | 0 | 1 | 0 | | 0 | 0 | 0 | |
| 8:45 - 9:00 AM | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Total | 2 | 11 | 0 | 0 | 5 | 0 | 6 | 0 | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 |
| Peak Grand Total | | | | | | | | | | | | | | | | |
| Peak Total | | | | | | | | | | | | | | | | |
| Peak Percent | | | | | | | | | | | | | | | | |
| Comments | Sunny Day | | | | | | | | | | | | | | | |

| Neill Tract | | | | | | | | | | | | | | | | |
|------------------------------|----------------------------|------|-------|---------|----------------|------|-------|---------|---|------|-------|---------|------------------|------|-------|---------|
| Job Name: | Neill Tract | | | | | | | |  | | | | | | | |
| N/S Road Name: | Stolte Road | | | | | | | | | | | | | | | |
| W/E Road Name: | Schmoekel Road | | | | | | | | | | | | | | | |
| City, State - County: | Marion, Texas | | | | | | | | | | | | | | | |
| Date: | Wednesday, August 28, 2024 | | | | | | | | | | | | | | | |
| Intersection Type: | | | | | | | | | | | | | | | | |
| Time Period: | 4:30 PM | - | | | | | | 5:30 PM | | | | | | | | |
| Peak Hour: | 4:00 PM | - | | | | | | 6:00 PM | | | | | | | | |
| | Stolte Road | | | | Schmoekel Road | | | | Stolte Road | | | | Private Driveway | | | |
| | SouthBound | | | | WestBound | | | | NorthBound | | | | EastBound | | | |
| Start Time | Left | Thru | Right | U-Turns | Left | Thru | Right | U-Turns | Left | Thru | Right | U-Turns | Left | Thru | Right | U-Turns |
| 4:00 - 4:15 PM | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| 4:15 - 4:30 PM | 0 | 1 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| 4:30 - 4:45 PM | 1 | 3 | 0 | | 2 | 0 | 2 | | 0 | 0 | 1 | | 0 | 0 | 0 | |
| 4:45 - 5:00 PM | 1 | 2 | 0 | | 2 | 1 | 1 | | 0 | 1 | 1 | | 0 | 0 | 0 | |
| 8:00 - 8:15 AM | 2 | 2 | 0 | | 1 | 0 | 1 | | 0 | 1 | 2 | | 0 | 0 | 0 | |
| 8:15 - 8:30 AM | 1 | 1 | 0 | | 0 | 0 | 0 | | 0 | 1 | 0 | | 0 | 0 | 0 | |
| 8:30 - 8:45 AM | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| 8:45 - 9:00 AM | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Total | 5 | 9 | 0 | 0 | 5 | 1 | 4 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 |
| Peak Grand Total | | | | | | | | | | | | | | | | |
| Peak Total | | | | | | | | | | | | | | | | |
| Peak Percent | | | | | | | | | | | | | | | | |
| Comments | Windy / Cloudy | | | | | | | | | | | | | | | |

APPENDIX C – SYNCHRO OUTPUT REPORTS

HCM 6th TWSC
1: Stolte Road & Schmoekel Rd

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 3.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 5 | 1 | 2 | 5 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 5 | 1 | 2 | 5 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 5 | 1 | 2 | 5 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 16 | 15 | 5 | 15 | 15 | 6 | 5 | 0 | 0 | 6 | 0 | 0 |
| Stage 1 | 9 | 9 | - | 6 | 6 | - | - | - | - | - | - | - |
| Stage 2 | 7 | 6 | - | 9 | 9 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 999 | 879 | 1078 | 1001 | 879 | 1077 | 1616 | - | - | 1615 | - | - |
| Stage 1 | 1012 | 888 | - | 1016 | 891 | - | - | - | - | - | - | - |
| Stage 2 | 1015 | 891 | - | 1012 | 888 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 995 | 878 | 1078 | 1000 | 878 | 1077 | 1616 | - | - | 1615 | - | - |
| Mov Cap-2 Maneuver | 995 | 878 | - | 1000 | 878 | - | - | - | - | - | - | - |
| Stage 1 | 1012 | 887 | - | 1016 | 891 | - | - | - | - | - | - | - |
| Stage 2 | 1012 | 891 | - | 1011 | 887 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|------------------------|----|--|-----|--|----|--|-----|--|
| HCM Control Delay, s/v | 0 | | 8.5 | | 0 | | 2.1 | |
| HCM LOS | A | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1616 | - | - | - | 1037 | 1615 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.006 | 0.001 | - | - |
| HCM Control Delay (s/veh) | 0 | - | - | 0 | 8.5 | 7.2 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | - | 0 | 0 | - | - |

HCM 6th TWSC
2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 15 | 11 | 7 | 26 | 9 | 9 | 7 | 103 | 58 | 9 | 182 | 4 |
| Future Vol, veh/h | 15 | 11 | 7 | 26 | 9 | 9 | 7 | 103 | 58 | 9 | 182 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 16 | 12 | 8 | 28 | 10 | 10 | 8 | 112 | 63 | 10 | 198 | 4 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 390 | 411 | 200 | 390 | 382 | 144 | 202 | 0 | 0 | 175 | 0 | 0 |
| Stage 1 | 220 | 220 | - | 160 | 160 | - | - | - | - | - | - | - |
| Stage 2 | 170 | 191 | - | 230 | 222 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 569 | 531 | 841 | 569 | 551 | 903 | 1370 | - | - | 1401 | - | - |
| Stage 1 | 782 | 721 | - | 842 | 766 | - | - | - | - | - | - | - |
| Stage 2 | 832 | 742 | - | 773 | 720 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 549 | 523 | 841 | 548 | 543 | 903 | 1370 | - | - | 1401 | - | - |
| Mov Cap-2 Maneuver | 549 | 523 | - | 548 | 543 | - | - | - | - | - | - | - |
| Stage 1 | 777 | 715 | - | 836 | 761 | - | - | - | - | - | - | - |
| Stage 2 | 807 | 737 | - | 747 | 714 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|-----|
| HCM Control Delay, s/v | 11.6 | 11.6 | 0.3 | 0.4 |
| HCM LOS | B | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1370 | - | - | 582 | 595 | 1401 | - | - |
| HCM Lane V/C Ratio | 0.006 | - | - | 0.062 | 0.08 | 0.007 | - | - |
| HCM Control Delay (s/veh) | 7.6 | 0 | - | 11.6 | 11.6 | 7.6 | 0 | - |
| HCM Lane LOS | A | A | - | B | B | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.2 | 0.3 | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 162 | 0 | 0 | 218 | 4 |
| Future Vol, veh/h | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 162 | 0 | 0 | 218 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 176 | 0 | 0 | 237 | 4 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 415 | 415 | 239 | 415 | 417 | 176 | 241 | 0 | 0 | - | - | 0 |
| Stage 1 | 239 | 239 | - | 176 | 176 | - | - | - | - | - | - | - |
| Stage 2 | 176 | 176 | - | 239 | 241 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 548 | 528 | 800 | 548 | 527 | 867 | 1326 | - | - | 0 | - | - |
| Stage 1 | 764 | 708 | - | 826 | 753 | - | - | - | - | 0 | - | - |
| Stage 2 | 826 | 753 | - | 764 | 706 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 548 | 528 | 800 | 548 | 527 | 867 | 1326 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 548 | 528 | - | 548 | 527 | - | - | - | - | - | - | - |
| Stage 1 | 764 | 708 | - | 826 | 753 | - | - | - | - | - | - | - |
| Stage 2 | 826 | 753 | - | 764 | 706 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|----|----|----|
| HCM Control Delay, s/v | 11.7 | 0 | 0 | 0 |
| HCM LOS | B | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1326 | - | - | 548 | - | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.014 | - | - | - |
| HCM Control Delay (s/veh) | 0 | - | - | 11.7 | 0 | - | - |
| HCM Lane LOS | A | - | - | B | A | - | - |
| HCM 95th %tile Q (veh) | 0 | - | - | 0 | - | - | - |

HCM 6th TWSC
4: Santa Clara Rd & Bolton Road

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 15 | 15 | 12 | 145 | 200 | 14 |
| Future Vol, veh/h | 15 | 15 | 12 | 145 | 200 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 16 | 16 | 13 | 158 | 217 | 15 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 409 | 225 | 232 | 0 | 0 |
| Stage 1 | 225 | - | - | - | - |
| Stage 2 | 184 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - |
| Pot Cap-1 Maneuver | 599 | 814 | 1336 | - | - |
| Stage 1 | 812 | - | - | - | - |
| Stage 2 | 848 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 592 | 814 | 1336 | - | - |
| Mov Cap-2 Maneuver | 592 | - | - | - | - |
| Stage 1 | 803 | - | - | - | - |
| Stage 2 | 848 | - | - | - | - |

| Approach | EB | NB | SB |
|------------------------|------|-----|----|
| HCM Control Delay, s/v | 10.4 | 0.6 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---------------------------|------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1336 | - | 592 | 814 | - | - |
| HCM Lane V/C Ratio | 0.01 | - | 0.028 | 0.02 | - | - |
| HCM Control Delay (s/veh) | 7.7 | 0 | 11.3 | 9.5 | - | - |
| HCM Lane LOS | A | A | B | A | - | - |
| HCM 95th %tile Q (veh) | 0 | - | 0.1 | 0.1 | - | - |

HCM 6th TWSC
1: Stolte Road & Schmoekel Rd

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 3.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 3 | 3 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 3 | 3 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 3 | 3 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 13 | 13 | 3 | 12 | 12 | 3 | 3 | 0 | 0 | 4 | 0 | 0 |
| Stage 1 | 9 | 9 | - | 3 | 3 | - | - | - | - | - | - | - |
| Stage 2 | 4 | 4 | - | 9 | 9 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 1004 | 881 | 1081 | 1005 | 883 | 1081 | 1619 | - | - | 1618 | - | - |
| Stage 1 | 1012 | 888 | - | 1020 | 893 | - | - | - | - | - | - | - |
| Stage 2 | 1018 | 892 | - | 1012 | 888 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1001 | 879 | 1081 | 1003 | 881 | 1081 | 1619 | - | - | 1618 | - | - |
| Mov Cap-2 Maneuver | 1001 | 879 | - | 1003 | 881 | - | - | - | - | - | - | - |
| Stage 1 | 1012 | 886 | - | 1020 | 893 | - | - | - | - | - | - | - |
| Stage 2 | 1017 | 892 | - | 1010 | 886 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|----|-----|----|-----|
| HCM Control Delay, s/v | 0 | 8.5 | 0 | 3.6 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1619 | - | - | - | 1041 | 1618 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.002 | 0.002 | - | - |
| HCM Control Delay (s/veh) | 0 | - | - | 0 | 8.5 | 7.2 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | - | 0 | 0 | - | - |

HCM 6th TWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 5 | 11 | 8 | 17 | 6 | 3 | 6 | 118 | 46 | 11 | 180 | 13 |
| Future Vol, veh/h | 5 | 11 | 8 | 17 | 6 | 3 | 6 | 118 | 46 | 11 | 180 | 13 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 12 | 9 | 18 | 7 | 3 | 7 | 128 | 50 | 12 | 196 | 14 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 399 | 419 | 203 | 405 | 401 | 153 | 210 | 0 | 0 | 178 | 0 | 0 |
| Stage 1 | 227 | 227 | - | 167 | 167 | - | - | - | - | - | - | - |
| Stage 2 | 172 | 192 | - | 238 | 234 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 561 | 525 | 838 | 556 | 538 | 893 | 1361 | - | - | 1398 | - | - |
| Stage 1 | 776 | 716 | - | 835 | 760 | - | - | - | - | - | - | - |
| Stage 2 | 830 | 742 | - | 765 | 711 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 547 | 517 | 838 | 534 | 529 | 893 | 1361 | - | - | 1398 | - | - |
| Mov Cap-2 Maneuver | 547 | 517 | - | 534 | 529 | - | - | - | - | - | - | - |
| Stage 1 | 771 | 709 | - | 830 | 755 | - | - | - | - | - | - | - |
| Stage 2 | 815 | 738 | - | 737 | 704 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|-----|
| HCM Control Delay, s/v | 11.3 | 11.8 | 0.3 | 0.4 |
| HCM LOS | B | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1361 | - | - | 601 | 559 | 1398 | - | - |
| HCM Lane V/C Ratio | 0.005 | - | - | 0.043 | 0.051 | 0.009 | - | - |
| HCM Control Delay (s/veh) | 7.7 | 0 | - | 11.3 | 11.8 | 7.6 | 0 | - |
| HCM Lane LOS | A | A | - | B | B | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.1 | 0.2 | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 9 | 0 | 4 | 0 | 0 | 0 | 1 | 164 | 0 | 0 | 201 | 8 |
| Future Vol, veh/h | 9 | 0 | 4 | 0 | 0 | 0 | 1 | 164 | 0 | 0 | 201 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 10 | 0 | 4 | 0 | 0 | 0 | 1 | 178 | 0 | 0 | 218 | 9 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 403 | 403 | 223 | 405 | 407 | 178 | 227 | 0 | 0 | - | - | 0 |
| Stage 1 | 223 | 223 | - | 180 | 180 | - | - | - | - | - | - | - |
| Stage 2 | 180 | 180 | - | 225 | 227 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 558 | 536 | 817 | 556 | 533 | 865 | 1341 | - | - | 0 | - | - |
| Stage 1 | 780 | 719 | - | 822 | 750 | - | - | - | - | 0 | - | - |
| Stage 2 | 822 | 750 | - | 778 | 716 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 557 | 535 | 817 | 553 | 532 | 865 | 1341 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 557 | 535 | - | 553 | 532 | - | - | - | - | - | - | - |
| Stage 1 | 779 | 719 | - | 821 | 749 | - | - | - | - | - | - | - |
| Stage 2 | 821 | 749 | - | 774 | 716 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|----|----|----|----|
| HCM Control Delay, s/v | 11 | 0 | 0 | 0 |
| HCM LOS | B | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---------------------------|-------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1341 | - | - | 617 | - | - | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 0.023 | - | - | - |
| HCM Control Delay (s/veh) | 7.7 | 0 | - | 11 | 0 | - | - |
| HCM Lane LOS | A | A | - | B | A | - | - |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.1 | - | - | - |

HCM 6th TWSC
4: Santa Clara Rd & Bolton Road

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 39 | 66 | 21 | 125 | 196 | 7 |
| Future Vol, veh/h | 39 | 66 | 21 | 125 | 196 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 42 | 72 | 23 | 136 | 213 | 8 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 399 | 217 | 221 | 0 | - | 0 |
| Stage 1 | 217 | - | - | - | - | - |
| Stage 2 | 182 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 607 | 823 | 1348 | - | - | - |
| Stage 1 | 819 | - | - | - | - | - |
| Stage 2 | 849 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 596 | 823 | 1348 | - | - | - |
| Mov Cap-2 Maneuver | 596 | - | - | - | - | - |
| Stage 1 | 804 | - | - | - | - | - |
| Stage 2 | 849 | - | - | - | - | - |

| Approach | EB | NB | SB |
|------------------------|------|-----|----|
| HCM Control Delay, s/v | 10.4 | 1.1 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---------------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1348 | - | 596 | 823 | - | - |
| HCM Lane V/C Ratio | 0.017 | - | 0.071 | 0.087 | - | - |
| HCM Control Delay (s/veh) | 7.7 | 0 | 11.5 | 9.8 | - | - |
| HCM Lane LOS | A | A | B | A | - | - |
| HCM 95th %tile Q (veh) | 0.1 | - | 0.2 | 0.3 | - | - |

HCM 6th TWSC
1: Stolte Road & Schmoekel Rd

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 3.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 5 | 1 | 2 | 5 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 5 | 1 | 2 | 5 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 5 | 1 | 2 | 5 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 16 | 15 | 5 | 15 | 15 | 6 | 5 | 0 | 0 | 6 | 0 | 0 |
| Stage 1 | 9 | 9 | - | 6 | 6 | - | - | - | - | - | - | - |
| Stage 2 | 7 | 6 | - | 9 | 9 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 999 | 879 | 1078 | 1001 | 879 | 1077 | 1616 | - | - | 1615 | - | - |
| Stage 1 | 1012 | 888 | - | 1016 | 891 | - | - | - | - | - | - | - |
| Stage 2 | 1015 | 891 | - | 1012 | 888 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 995 | 878 | 1078 | 1000 | 878 | 1077 | 1616 | - | - | 1615 | - | - |
| Mov Cap-2 Maneuver | 995 | 878 | - | 1000 | 878 | - | - | - | - | - | - | - |
| Stage 1 | 1012 | 887 | - | 1016 | 891 | - | - | - | - | - | - | - |
| Stage 2 | 1012 | 891 | - | 1011 | 887 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|----|-----|----|-----|
| HCM Control Delay, s/v | 0 | 8.5 | 0 | 2.1 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1616 | - | - | - | 1037 | 1615 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.006 | 0.001 | - | - |
| HCM Control Delay (s/veh) | 0 | - | - | 0 | 8.5 | 7.2 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | - | 0 | 0 | - | - |

HCM 6th TWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 23 | 12 | 10 | 31 | 10 | 22 | 15 | 144 | 74 | 14 | 263 | 24 |
| Future Vol, veh/h | 23 | 12 | 10 | 31 | 10 | 22 | 15 | 144 | 74 | 14 | 263 | 24 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 25 | 13 | 11 | 34 | 11 | 24 | 16 | 157 | 80 | 15 | 286 | 26 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 576 | 598 | 299 | 570 | 571 | 197 | 312 | 0 | 0 | 237 | 0 | 0 |
| Stage 1 | 329 | 329 | - | 229 | 229 | - | - | - | - | - | - | - |
| Stage 2 | 247 | 269 | - | 341 | 342 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 428 | 416 | 741 | 432 | 431 | 844 | 1248 | - | - | 1330 | - | - |
| Stage 1 | 684 | 646 | - | 774 | 715 | - | - | - | - | - | - | - |
| Stage 2 | 757 | 687 | - | 674 | 638 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 399 | 404 | 741 | 406 | 419 | 844 | 1248 | - | - | 1330 | - | - |
| Mov Cap-2 Maneuver | 399 | 404 | - | 406 | 419 | - | - | - | - | - | - | - |
| Stage 1 | 674 | 637 | - | 762 | 704 | - | - | - | - | - | - | - |
| Stage 2 | 713 | 677 | - | 641 | 629 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|-----|
| HCM Control Delay, s/v | 14.1 | 13.4 | 0.5 | 0.4 |
| HCM LOS | B | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|---------------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1248 | - | - | 446 | 499 | 1330 | - |
| HCM Lane V/C Ratio | 0.013 | - | - | 0.11 | 0.137 | 0.011 | - |
| HCM Control Delay (s/veh) | 7.9 | 0 | - | 14.1 | 13.4 | 7.7 | 0 |
| HCM Lane LOS | A | A | - | B | B | A | A |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.4 | 0.5 | 0 | - |

HCM 6th TWSC
 3: Santa Clara Rd & Schmoekel Rd/Marion Oaks Access

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 8 | 0 | 0 | 36 | 0 | 0 | 0 | 214 | 13 | 0 | 346 | 4 |
| Future Vol, veh/h | 8 | 0 | 0 | 36 | 0 | 0 | 0 | 214 | 13 | 0 | 346 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 9 | 0 | 0 | 39 | 0 | 0 | 0 | 233 | 14 | 0 | 376 | 4 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 618 | 625 | 378 | 611 | 613 | 233 | 380 | 0 | 0 | - | - | 0 |
| Stage 1 | 378 | 378 | - | 233 | 233 | - | - | - | - | - | - | - |
| Stage 2 | 240 | 247 | - | 378 | 380 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 402 | 401 | 669 | 406 | 408 | 806 | 1178 | - | - | 0 | - | - |
| Stage 1 | 644 | 615 | - | 770 | 712 | - | - | - | - | 0 | - | - |
| Stage 2 | 763 | 702 | - | 644 | 614 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 402 | 401 | 669 | 406 | 408 | 806 | 1178 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 402 | 401 | - | 406 | 408 | - | - | - | - | - | - | - |
| Stage 1 | 644 | 615 | - | 770 | 712 | - | - | - | - | - | - | - |
| Stage 2 | 763 | 702 | - | 644 | 614 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|----|----|
| HCM Control Delay, s/v | 14.2 | 14.8 | 0 | 0 |
| HCM LOS | B | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1178 | - | - | 402 | 406 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.022 | 0.096 | - | - |
| HCM Control Delay (s/veh) | 0 | - | - | 14.2 | 14.8 | - | - |
| HCM Lane LOS | A | - | - | B | B | - | - |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.1 | 0.3 | - | - |

HCM 6th TWSC
4: Santa Clara Rd & Bolton Road

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 16 | 16 | 13 | 220 | 397 | 15 |
| Future Vol, veh/h | 16 | 16 | 13 | 220 | 397 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 17 | 17 | 14 | 239 | 432 | 16 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 707 | 440 | 448 | 0 | - | 0 |
| Stage 1 | 440 | - | - | - | - | - |
| Stage 2 | 267 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 402 | 617 | 1112 | - | - | - |
| Stage 1 | 649 | - | - | - | - | - |
| Stage 2 | 778 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 396 | 617 | 1112 | - | - | - |
| Mov Cap-2 Maneuver | 396 | - | - | - | - | - |
| Stage 1 | 639 | - | - | - | - | - |
| Stage 2 | 778 | - | - | - | - | - |

| Approach | EB | NB | SB |
|------------------------|------|-----|----|
| HCM Control Delay, s/v | 12.8 | 0.5 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---------------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1112 | - | 396 | 617 | - | - |
| HCM Lane V/C Ratio | 0.013 | - | 0.044 | 0.028 | - | - |
| HCM Control Delay (s/veh) | 8.3 | 0 | 14.5 | 11 | - | - |
| HCM Lane LOS | A | A | B | B | - | - |
| HCM 95th %tile Q (veh) | 0 | - | 0.1 | 0.1 | - | - |

HCM 6th TWSC
1: Stolte Road & Schmoekel Rd

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 3.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 3 | 3 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 3 | 3 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 3 | 3 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 13 | 13 | 3 | 12 | 12 | 3 | 3 | 0 | 0 | 4 | 0 | 0 |
| Stage 1 | 9 | 9 | - | 3 | 3 | - | - | - | - | - | - | - |
| Stage 2 | 4 | 4 | - | 9 | 9 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 1004 | 881 | 1081 | 1005 | 883 | 1081 | 1619 | - | - | 1618 | - | - |
| Stage 1 | 1012 | 888 | - | 1020 | 893 | - | - | - | - | - | - | - |
| Stage 2 | 1018 | 892 | - | 1012 | 888 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1001 | 879 | 1081 | 1003 | 881 | 1081 | 1619 | - | - | 1618 | - | - |
| Mov Cap-2 Maneuver | 1001 | 879 | - | 1003 | 881 | - | - | - | - | - | - | - |
| Stage 1 | 1012 | 886 | - | 1020 | 893 | - | - | - | - | - | - | - |
| Stage 2 | 1017 | 892 | - | 1010 | 886 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|----|-----|----|-----|
| HCM Control Delay, s/v | 0 | 8.5 | 0 | 3.6 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1619 | - | - | - | 1041 | 1618 | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.002 | 0.002 | - |
| HCM Control Delay (s/veh) | 0 | - | - | 0 | 8.5 | 7.2 | 0 |
| HCM Lane LOS | A | - | - | A | A | A | A |
| HCM 95th %tile Q (veh) | 0 | - | - | - | 0 | 0 | - |

HCM 6th TWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 28 | 12 | 17 | 31 | 7 | 11 | 11 | 205 | 58 | 25 | 250 | 28 |
| Future Vol, veh/h | 28 | 12 | 17 | 31 | 7 | 11 | 11 | 205 | 58 | 25 | 250 | 28 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 30 | 13 | 18 | 34 | 8 | 12 | 12 | 223 | 63 | 27 | 272 | 30 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 630 | 651 | 287 | 636 | 635 | 255 | 302 | 0 | 0 | 286 | 0 | 0 |
| Stage 1 | 341 | 341 | - | 279 | 279 | - | - | - | - | - | - | - |
| Stage 2 | 289 | 310 | - | 357 | 356 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 394 | 388 | 752 | 391 | 396 | 784 | 1259 | - | - | 1276 | - | - |
| Stage 1 | 674 | 639 | - | 728 | 680 | - | - | - | - | - | - | - |
| Stage 2 | 719 | 659 | - | 661 | 629 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 372 | 374 | 752 | 361 | 381 | 784 | 1259 | - | - | 1276 | - | - |
| Mov Cap-2 Maneuver | 372 | 374 | - | 361 | 381 | - | - | - | - | - | - | - |
| Stage 1 | 667 | 622 | - | 720 | 673 | - | - | - | - | - | - | - |
| Stage 2 | 692 | 652 | - | 615 | 613 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|----|-----|-----|
| HCM Control Delay, s/v | 14.5 | 15 | 0.3 | 0.7 |
| HCM LOS | B | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1259 | - | - | 439 | 414 | 1276 | - | - |
| HCM Lane V/C Ratio | 0.009 | - | - | 0.141 | 0.129 | 0.021 | - | - |
| HCM Control Delay (s/veh) | 7.9 | 0 | - | 14.5 | 15 | 7.9 | 0 | - |
| HCM Lane LOS | A | A | - | B | C | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.5 | 0.4 | 0.1 | - | - |

HCM 6th TWSC
 3: Santa Clara Rd & Schmoekel Rd/Marion Oaks Access

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 10 | 0 | 4 | 24 | 0 | 0 | 1 | 301 | 41 | 0 | 291 | 9 |
| Future Vol, veh/h | 10 | 0 | 4 | 24 | 0 | 0 | 1 | 301 | 41 | 0 | 291 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 11 | 0 | 4 | 26 | 0 | 0 | 1 | 327 | 45 | 0 | 316 | 10 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 673 | 695 | 321 | 652 | 655 | 327 | 326 | 0 | 0 | - | - | 0 |
| Stage 1 | 321 | 321 | - | 329 | 329 | - | - | - | - | - | - | - |
| Stage 2 | 352 | 374 | - | 323 | 326 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 369 | 366 | 720 | 381 | 386 | 714 | 1234 | - | - | 0 | - | - |
| Stage 1 | 691 | 652 | - | 684 | 646 | - | - | - | - | 0 | - | - |
| Stage 2 | 665 | 618 | - | 689 | 648 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 369 | 366 | 720 | 378 | 386 | 714 | 1234 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 369 | 366 | - | 378 | 386 | - | - | - | - | - | - | - |
| Stage 1 | 690 | 652 | - | 683 | 645 | - | - | - | - | - | - | - |
| Stage 2 | 664 | 617 | - | 685 | 648 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | | | | |
|------------------------|------|--|------|--|----|--|----|--|--|--|--|
| HCM Control Delay, s/v | 13.7 | | 15.2 | | 0 | | 0 | | | | |
| HCM LOS | B | | C | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---------------------------|-------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1234 | - | - | 429 | 378 | - | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 0.035 | 0.069 | - | - |
| HCM Control Delay (s/veh) | 7.9 | 0 | - | 13.7 | 15.2 | - | - |
| HCM Lane LOS | A | A | - | B | C | - | - |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.1 | 0.2 | - | - |

HCM 6th TWSC
4: Santa Clara Rd & Bolton Road

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↶ | ↷ | | ↶ | ↷ | |
| Traffic Vol, veh/h | 43 | 72 | 23 | 339 | 334 | 8 |
| Future Vol, veh/h | 43 | 72 | 23 | 339 | 334 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 47 | 78 | 25 | 368 | 363 | 9 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 786 | 368 | 372 | 0 | - | 0 |
| Stage 1 | 368 | - | - | - | - | - |
| Stage 2 | 418 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 361 | 677 | 1186 | - | - | - |
| Stage 1 | 700 | - | - | - | - | - |
| Stage 2 | 664 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 351 | 677 | 1186 | - | - | - |
| Mov Cap-2 Maneuver | 351 | - | - | - | - | - |
| Stage 1 | 681 | - | - | - | - | - |
| Stage 2 | 664 | - | - | - | - | - |

| Approach | EB | NB | SB |
|------------------------|------|-----|----|
| HCM Control Delay, s/v | 13.2 | 0.5 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---------------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1186 | - | 351 | 677 | - | - |
| HCM Lane V/C Ratio | 0.021 | - | 0.133 | 0.116 | - | - |
| HCM Control Delay (s/veh) | 8.1 | 0 | 16.8 | 11 | - | - |
| HCM Lane LOS | A | A | C | B | - | - |
| HCM 95th %tile Q (veh) | 0.1 | - | 0.5 | 0.4 | - | - |

HCM 6th TWSC
1: Stolte Road & Schmoekel Rd

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 3.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 6 | 1 | 3 | 6 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 6 | 1 | 3 | 6 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 7 | 1 | 3 | 7 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 23 | 21 | 7 | 21 | 21 | 8 | 7 | 0 | 0 | 8 | 0 | 0 |
| Stage 1 | 13 | 13 | - | 8 | 8 | - | - | - | - | - | - | - |
| Stage 2 | 10 | 8 | - | 13 | 13 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 989 | 873 | 1075 | 992 | 873 | 1074 | 1614 | - | - | 1612 | - | - |
| Stage 1 | 1007 | 885 | - | 1013 | 889 | - | - | - | - | - | - | - |
| Stage 2 | 1011 | 889 | - | 1007 | 885 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 983 | 871 | 1075 | 990 | 871 | 1074 | 1614 | - | - | 1612 | - | - |
| Mov Cap-2 Maneuver | 983 | 871 | - | 990 | 871 | - | - | - | - | - | - | - |
| Stage 1 | 1007 | 883 | - | 1013 | 889 | - | - | - | - | - | - | - |
| Stage 2 | 1007 | 889 | - | 1005 | 883 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|----|-----|----|-----|
| HCM Control Delay, s/v | 0 | 8.5 | 0 | 2.4 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1614 | - | - | - | 1030 | 1612 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.008 | 0.002 | - | - |
| HCM Control Delay (s/veh) | 0 | - | - | 0 | 8.5 | 7.2 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | - | 0 | 0 | - | - |

HCM 6th TWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 31 | 14 | 16 | 45 | 12 | 35 | 29 | 194 | 107 | 20 | 343 | 38 |
| Future Vol, veh/h | 31 | 14 | 16 | 45 | 12 | 35 | 29 | 194 | 107 | 20 | 343 | 38 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 34 | 15 | 17 | 49 | 13 | 38 | 32 | 211 | 116 | 22 | 373 | 41 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 797 | 829 | 394 | 787 | 791 | 269 | 414 | 0 | 0 | 327 | 0 | 0 |
| Stage 1 | 438 | 438 | - | 333 | 333 | - | - | - | - | - | - | - |
| Stage 2 | 359 | 391 | - | 454 | 458 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 305 | 306 | 655 | 309 | 322 | 770 | 1145 | - | - | 1233 | - | - |
| Stage 1 | 597 | 579 | - | 681 | 644 | - | - | - | - | - | - | - |
| Stage 2 | 659 | 607 | - | 586 | 567 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 268 | 289 | 655 | 276 | 304 | 770 | 1145 | - | - | 1233 | - | - |
| Mov Cap-2 Maneuver | 268 | 289 | - | 276 | 304 | - | - | - | - | - | - | - |
| Stage 1 | 576 | 566 | - | 657 | 621 | - | - | - | - | - | - | - |
| Stage 2 | 592 | 586 | - | 542 | 554 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|-----|
| HCM Control Delay, s/v | 18.9 | 18.2 | 0.7 | 0.4 |
| HCM LOS | C | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|---------------------------|-------|-----|-----|------------|------|-------|-----|
| Capacity (veh/h) | 1145 | - | - | 324 | 371 | 1233 | - |
| HCM Lane V/C Ratio | 0.028 | - | - | 0.205 | 0.27 | 0.018 | - |
| HCM Control Delay (s/veh) | 8.2 | 0 | - | 18.9 | 18.2 | 8 | 0 |
| HCM Lane LOS | A | A | - | C | C | A | A |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 0.8 | 1.1 | 0.1 | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 9 | 0 | 0 | 73 | 0 | 0 | 0 | 293 | 25 | 0 | 518 | 5 |
| Future Vol, veh/h | 9 | 0 | 0 | 73 | 0 | 0 | 0 | 293 | 25 | 0 | 518 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 10 | 0 | 0 | 79 | 0 | 0 | 0 | 318 | 27 | 0 | 563 | 5 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 898 | 911 | 566 | 884 | 886 | 318 | 568 | 0 | 0 | - | - | 0 |
| Stage 1 | 566 | 566 | - | 318 | 318 | - | - | - | - | - | - | - |
| Stage 2 | 332 | 345 | - | 566 | 568 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 260 | 274 | 524 | 266 | 284 | 723 | 1004 | - | - | 0 | - | - |
| Stage 1 | 509 | 507 | - | 693 | 654 | - | - | - | - | 0 | - | - |
| Stage 2 | 681 | 636 | - | 509 | 506 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 260 | 274 | 524 | 266 | 284 | 723 | 1004 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 260 | 274 | - | 266 | 284 | - | - | - | - | - | - | - |
| Stage 1 | 509 | 507 | - | 693 | 654 | - | - | - | - | - | - | - |
| Stage 2 | 681 | 636 | - | 509 | 506 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|----|----|
| HCM Control Delay, s/v | 19.4 | 24.2 | 0 | 0 |
| HCM LOS | C | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1004 | - | - | 260 | 266 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.038 | 0.298 | - | - |
| HCM Control Delay (s/veh) | 0 | - | - | 19.4 | 24.2 | - | - |
| HCM Lane LOS | A | - | - | C | C | - | - |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.1 | 1.2 | - | - |

HCM 6th TWSC
4: Santa Clara Rd & Bolton Road

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 19 | 19 | 16 | 321 | 637 | 18 |
| Future Vol, veh/h | 19 | 19 | 16 | 321 | 637 | 18 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 21 | 21 | 17 | 349 | 692 | 20 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1085 | 702 | 712 | 0 | - | 0 |
| Stage 1 | 702 | - | - | - | - | - |
| Stage 2 | 383 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 240 | 438 | 888 | - | - | - |
| Stage 1 | 491 | - | - | - | - | - |
| Stage 2 | 689 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 234 | 438 | 888 | - | - | - |
| Mov Cap-2 Maneuver | 234 | - | - | - | - | - |
| Stage 1 | 479 | - | - | - | - | - |
| Stage 2 | 689 | - | - | - | - | - |

| Approach | EB | NB | SB |
|------------------------|------|-----|----|
| HCM Control Delay, s/v | 17.8 | 0.4 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---------------------------|------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 888 | - | 234 | 438 | - | - |
| HCM Lane V/C Ratio | 0.02 | - | 0.088 | 0.047 | - | - |
| HCM Control Delay (s/veh) | 9.1 | 0 | 21.9 | 13.6 | - | - |
| HCM Lane LOS | A | A | C | B | - | - |
| HCM 95th %tile Q (veh) | 0.1 | - | 0.3 | 0.1 | - | - |

HCM 6th TWSC
1: Stolte Road & Schmoekel Rd

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 2.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 3 | 4 | 4 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 3 | 4 | 4 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 3 | 4 | 4 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 17 | 18 | 4 | 17 | 17 | 5 | 4 | 0 | 0 | 6 | 0 | 0 |
| Stage 1 | 12 | 12 | - | 5 | 5 | - | - | - | - | - | - | - |
| Stage 2 | 5 | 6 | - | 12 | 12 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 998 | 876 | 1080 | 998 | 877 | 1078 | 1618 | - | - | 1615 | - | - |
| Stage 1 | 1009 | 886 | - | 1017 | 892 | - | - | - | - | - | - | - |
| Stage 2 | 1017 | 891 | - | 1009 | 886 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 995 | 874 | 1080 | 996 | 875 | 1078 | 1618 | - | - | 1615 | - | - |
| Mov Cap-2 Maneuver | 995 | 874 | - | 996 | 875 | - | - | - | - | - | - | - |
| Stage 1 | 1009 | 884 | - | 1017 | 892 | - | - | - | - | - | - | - |
| Stage 2 | 1016 | 891 | - | 1007 | 884 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|----|-----|----|-----|
| HCM Control Delay, s/v | 0 | 8.5 | 0 | 3.6 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1618 | - | - | - | 1035 | 1615 | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.002 | 0.003 | - |
| HCM Control Delay (s/veh) | 0 | - | - | 0 | 8.5 | 7.2 | 0 |
| HCM Lane LOS | A | - | - | A | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | - | 0 | 0 | - |

HCM 6th TWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 44 | 14 | 32 | 59 | 8 | 20 | 21 | 284 | 82 | 41 | 329 | 39 |
| Future Vol, veh/h | 44 | 14 | 32 | 59 | 8 | 20 | 21 | 284 | 82 | 41 | 329 | 39 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 48 | 15 | 35 | 64 | 9 | 22 | 23 | 309 | 89 | 45 | 358 | 42 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 884 | 913 | 379 | 894 | 890 | 354 | 400 | 0 | 0 | 398 | 0 | 0 |
| Stage 1 | 469 | 469 | - | 400 | 400 | - | - | - | - | - | - | - |
| Stage 2 | 415 | 444 | - | 494 | 490 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 266 | 273 | 668 | 262 | 282 | 690 | 1159 | - | - | 1161 | - | - |
| Stage 1 | 575 | 561 | - | 626 | 602 | - | - | - | - | - | - | - |
| Stage 2 | 615 | 575 | - | 557 | 549 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 237 | 253 | 668 | 223 | 261 | 690 | 1159 | - | - | 1161 | - | - |
| Mov Cap-2 Maneuver | 237 | 253 | - | 223 | 261 | - | - | - | - | - | - | - |
| Stage 1 | 560 | 533 | - | 610 | 586 | - | - | - | - | - | - | - |
| Stage 2 | 572 | 560 | - | 487 | 522 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|-----|
| HCM Control Delay, s/v | 21.7 | 25.6 | 0.4 | 0.8 |
| HCM LOS | C | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1159 | - | - | 312 | 268 | 1161 | - | - |
| HCM Lane V/C Ratio | 0.02 | - | - | 0.314 | 0.353 | 0.038 | - | - |
| HCM Control Delay (s/veh) | 8.2 | 0 | - | 21.7 | 25.6 | 8.2 | 0 | - |
| HCM Lane LOS | A | A | - | C | D | A | A | - |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 1.3 | 1.5 | 0.1 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 12 | 0 | 5 | 49 | 0 | 0 | 1 | 483 | 83 | 0 | 419 | 10 |
| Future Vol, veh/h | 12 | 0 | 5 | 49 | 0 | 0 | 1 | 483 | 83 | 0 | 419 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 13 | 0 | 5 | 53 | 0 | 0 | 1 | 525 | 90 | 0 | 455 | 11 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 1033 | 1078 | 461 | 990 | 993 | 525 | 466 | 0 | 0 | - | - | 0 |
| Stage 1 | 461 | 461 | - | 527 | 527 | - | - | - | - | - | - | - |
| Stage 2 | 572 | 617 | - | 463 | 466 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 211 | 219 | 600 | 225 | 245 | 552 | 1095 | - | - | 0 | - | - |
| Stage 1 | 581 | 565 | - | 535 | 528 | - | - | - | - | 0 | - | - |
| Stage 2 | 505 | 481 | - | 579 | 562 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 211 | 219 | 600 | 223 | 245 | 552 | 1095 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 211 | 219 | - | 223 | 245 | - | - | - | - | - | - | - |
| Stage 1 | 580 | 565 | - | 534 | 527 | - | - | - | - | - | - | - |
| Stage 2 | 504 | 481 | - | 574 | 562 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|----|----|
| HCM Control Delay, s/v | 19.8 | 26.1 | 0 | 0 |
| HCM LOS | C | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBT | SBR |
|---------------------------|-------|-----|-----|------------|-------|-----|
| Capacity (veh/h) | 1095 | - | - | 261 | 223 | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 0.071 | 0.239 | - |
| HCM Control Delay (s/veh) | 8.3 | 0 | - | 19.8 | 26.1 | - |
| HCM Lane LOS | A | A | - | C | D | - |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.2 | 0.9 | - |

HCM 6th TWSC
4: Santa Clara Rd & Bolton Road

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.4 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 51 | 85 | 27 | 596 | 509 | 9 |
| Future Vol, veh/h | 51 | 85 | 27 | 596 | 509 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 55 | 92 | 29 | 648 | 553 | 10 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1264 | 558 | 563 | 0 | - | 0 |
| Stage 1 | 558 | - | - | - | - | - |
| Stage 2 | 706 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 187 | 529 | 1008 | - | - | - |
| Stage 1 | 573 | - | - | - | - | - |
| Stage 2 | 489 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 179 | 529 | 1008 | - | - | - |
| Mov Cap-2 Maneuver | 179 | - | - | - | - | - |
| Stage 1 | 547 | - | - | - | - | - |
| Stage 2 | 489 | - | - | - | - | - |

| Approach | EB | NB | SB |
|------------------------|----|-----|----|
| HCM Control Delay, s/v | 21 | 0.4 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---------------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1008 | - | 179 | 529 | - | - |
| HCM Lane V/C Ratio | 0.029 | - | 0.31 | 0.175 | - | - |
| HCM Control Delay (s/veh) | 8.7 | 0 | 33.9 | 13.2 | - | - |
| HCM Lane LOS | A | A | D | B | - | - |
| HCM 95th %tile Q (veh) | 0.1 | - | 1.2 | 0.6 | - | - |

HCM 6th TWSC
1: Stolte Road & Schmoekel Rd

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 4.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 9 | 0 | 3 | 0 | 5 | 3 | 2 | 5 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 9 | 0 | 3 | 0 | 5 | 3 | 2 | 5 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 10 | 0 | 3 | 0 | 5 | 3 | 2 | 5 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 17 | 17 | 5 | 16 | 16 | 7 | 5 | 0 | 0 | 8 | 0 | 0 |
| Stage 1 | 9 | 9 | - | 7 | 7 | - | - | - | - | - | - | - |
| Stage 2 | 8 | 8 | - | 9 | 9 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 998 | 877 | 1078 | 999 | 878 | 1075 | 1616 | - | - | 1612 | - | - |
| Stage 1 | 1012 | 888 | - | 1015 | 890 | - | - | - | - | - | - | - |
| Stage 2 | 1013 | 889 | - | 1012 | 888 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 994 | 876 | 1078 | 998 | 877 | 1075 | 1616 | - | - | 1612 | - | - |
| Mov Cap-2 Maneuver | 994 | 876 | - | 998 | 877 | - | - | - | - | - | - | - |
| Stage 1 | 1012 | 887 | - | 1015 | 890 | - | - | - | - | - | - | - |
| Stage 2 | 1010 | 889 | - | 1011 | 887 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|------------------------|----|--|-----|--|----|--|-----|--|
| HCM Control Delay, s/v | 0 | | 8.6 | | 0 | | 2.1 | |
| HCM LOS | A | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1616 | - | - | - | 1016 | 1612 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.013 | 0.001 | - | - |
| HCM Control Delay (s/veh) | 0 | - | - | 0 | 8.6 | 7.2 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | - | 0 | 0 | - | - |

HCM 6th TWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 23 | 12 | 12 | 35 | 10 | 22 | 22 | 147 | 84 | 14 | 264 | 24 |
| Future Vol, veh/h | 23 | 12 | 12 | 35 | 10 | 22 | 22 | 147 | 84 | 14 | 264 | 24 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 25 | 13 | 13 | 38 | 11 | 24 | 24 | 160 | 91 | 15 | 287 | 26 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 601 | 629 | 300 | 597 | 597 | 206 | 313 | 0 | 0 | 251 | 0 | 0 |
| Stage 1 | 330 | 330 | - | 254 | 254 | - | - | - | - | - | - | - |
| Stage 2 | 271 | 299 | - | 343 | 343 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 412 | 399 | 740 | 415 | 416 | 835 | 1247 | - | - | 1314 | - | - |
| Stage 1 | 683 | 646 | - | 750 | 697 | - | - | - | - | - | - | - |
| Stage 2 | 735 | 666 | - | 672 | 637 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 381 | 384 | 740 | 386 | 401 | 835 | 1247 | - | - | 1314 | - | - |
| Mov Cap-2 Maneuver | 381 | 384 | - | 386 | 401 | - | - | - | - | - | - | - |
| Stage 1 | 667 | 637 | - | 733 | 681 | - | - | - | - | - | - | - |
| Stage 2 | 686 | 651 | - | 638 | 628 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|----|-----|-----|
| HCM Control Delay, s/v | 14.4 | 14 | 0.7 | 0.4 |
| HCM LOS | B | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1247 | - | - | 436 | 472 | 1314 | - | - |
| HCM Lane V/C Ratio | 0.019 | - | - | 0.117 | 0.154 | 0.012 | - | - |
| HCM Control Delay (s/veh) | 7.9 | 0 | - | 14.4 | 14 | 7.8 | 0 | - |
| HCM Lane LOS | A | A | - | B | B | A | A | - |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 0.4 | 0.5 | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 28 | 0 | 39 | 36 | 0 | 0 | 14 | 214 | 13 | 0 | 346 | 11 |
| Future Vol, veh/h | 28 | 0 | 39 | 36 | 0 | 0 | 14 | 214 | 13 | 0 | 346 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 30 | 0 | 42 | 39 | 0 | 0 | 15 | 233 | 14 | 0 | 376 | 12 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 652 | 659 | 382 | 666 | 651 | 233 | 388 | 0 | 0 | - | - | 0 |
| Stage 1 | 382 | 382 | - | 263 | 263 | - | - | - | - | - | - | - |
| Stage 2 | 270 | 277 | - | 403 | 388 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 381 | 384 | 665 | 373 | 388 | 806 | 1170 | - | - | 0 | - | - |
| Stage 1 | 640 | 613 | - | 742 | 691 | - | - | - | - | 0 | - | - |
| Stage 2 | 736 | 681 | - | 624 | 609 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 377 | 378 | 665 | 345 | 382 | 806 | 1170 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 377 | 378 | - | 345 | 382 | - | - | - | - | - | - | - |
| Stage 1 | 630 | 613 | - | 731 | 681 | - | - | - | - | - | - | - |
| Stage 2 | 725 | 671 | - | 584 | 609 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|----|
| HCM Control Delay, s/v | 13.3 | 16.8 | 0.5 | 0 |
| HCM LOS | B | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBT | SBR |
|---------------------------|-------|-----|-----|------------|-------|-----|
| Capacity (veh/h) | 1170 | - | - | 504 | 345 | - |
| HCM Lane V/C Ratio | 0.013 | - | - | 0.144 | 0.113 | - |
| HCM Control Delay (s/veh) | 8.1 | 0 | - | 13.3 | 16.8 | - |
| HCM Lane LOS | A | A | - | B | C | - |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.5 | 0.4 | - |

HCM 6th TWSC
4: Santa Clara Rd & Bolton Road

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 16 | 16 | 13 | 234 | 436 | 15 |
| Future Vol, veh/h | 16 | 16 | 13 | 234 | 436 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 17 | 17 | 14 | 254 | 474 | 16 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 764 | 482 | 490 | 0 | - | 0 |
| Stage 1 | 482 | - | - | - | - | - |
| Stage 2 | 282 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 372 | 584 | 1073 | - | - | - |
| Stage 1 | 621 | - | - | - | - | - |
| Stage 2 | 766 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 366 | 584 | 1073 | - | - | - |
| Mov Cap-2 Maneuver | 366 | - | - | - | - | - |
| Stage 1 | 612 | - | - | - | - | - |
| Stage 2 | 766 | - | - | - | - | - |

| Approach | EB | NB | SB |
|------------------------|------|-----|----|
| HCM Control Delay, s/v | 13.4 | 0.4 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---------------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1073 | - | 366 | 584 | - | - |
| HCM Lane V/C Ratio | 0.013 | - | 0.048 | 0.03 | - | - |
| HCM Control Delay (s/veh) | 8.4 | 0 | 15.3 | 11.4 | - | - |
| HCM Lane LOS | A | A | C | B | - | - |
| HCM 95th %tile Q (veh) | 0 | - | 0.1 | 0.1 | - | - |

HCM 6th TWSC
5: Access #1 & Schmoekel Rd

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.6 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | | | ↑ | ↑ | |
| Traffic Vol, veh/h | 21 | 1 | 16 | 9 | 3 | 46 |
| Future Vol, veh/h | 21 | 1 | 16 | 9 | 3 | 46 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 23 | 1 | 17 | 10 | 3 | 50 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0 | 0 | 24 | 0 | 68 |
| Stage 1 | - | - | - | - | 24 |
| Stage 2 | - | - | - | - | 44 |
| Critical Hdwy | - | - | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | - | - | 1591 | - | 937 |
| Stage 1 | - | - | - | - | 999 |
| Stage 2 | - | - | - | - | 978 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1591 | - | 927 |
| Mov Cap-2 Maneuver | - | - | - | - | 927 |
| Stage 1 | - | - | - | - | 999 |
| Stage 2 | - | - | - | - | 967 |

| Approach | EB | WB | NB |
|------------------------|----|-----|-----|
| HCM Control Delay, s/v | 0 | 4.7 | 8.6 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 1043 | - | - | 1591 | - |
| HCM Lane V/C Ratio | 0.051 | - | - | 0.011 | - |
| HCM Control Delay (s/veh) | 8.6 | - | - | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q (veh) | 0.2 | - | - | 0 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | | | ↑ | ↑ | |
| Traffic Vol, veh/h | 9 | 1 | 5 | 7 | 3 | 13 |
| Future Vol, veh/h | 9 | 1 | 5 | 7 | 3 | 13 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 10 | 1 | 5 | 8 | 3 | 14 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 11 | 0 | 29 |
| Stage 1 | - | - | - | - | 11 |
| Stage 2 | - | - | - | - | 18 |
| Critical Hdwy | - | - | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | - | - | 1608 | - | 986 |
| Stage 1 | - | - | - | - | 1012 |
| Stage 2 | - | - | - | - | 1005 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1608 | - | 983 |
| Mov Cap-2 Maneuver | - | - | - | - | 983 |
| Stage 1 | - | - | - | - | 1012 |
| Stage 2 | - | - | - | - | 1002 |

| Approach | EB | WB | NB |
|------------------------|----|----|-----|
| HCM Control Delay, s/v | 0 | 3 | 8.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 1053 | - | - | 1608 | - |
| HCM Lane V/C Ratio | 0.017 | - | - | 0.003 | - |
| HCM Control Delay (s/veh) | 8.5 | - | - | 7.2 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 0 | - |

HCM 6th TWSC
1: Stolte Road & Schmoekel Rd

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 3.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 2 | 9 | 3 | 3 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 2 | 9 | 3 | 3 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 2 | 10 | 3 | 3 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 17 | 21 | 3 | 16 | 16 | 7 | 3 | 0 | 0 | 12 | 0 | 0 |
| Stage 1 | 9 | 9 | - | 7 | 7 | - | - | - | - | - | - | - |
| Stage 2 | 8 | 12 | - | 9 | 9 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 998 | 873 | 1081 | 999 | 878 | 1075 | 1619 | - | - | 1607 | - | - |
| Stage 1 | 1012 | 888 | - | 1015 | 890 | - | - | - | - | - | - | - |
| Stage 2 | 1013 | 886 | - | 1012 | 888 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 995 | 871 | 1081 | 997 | 876 | 1075 | 1619 | - | - | 1607 | - | - |
| Mov Cap-2 Maneuver | 995 | 871 | - | 997 | 876 | - | - | - | - | - | - | - |
| Stage 1 | 1012 | 886 | - | 1015 | 890 | - | - | - | - | - | - | - |
| Stage 2 | 1012 | 886 | - | 1010 | 886 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|----|-----|----|-----|
| HCM Control Delay, s/v | 0 | 8.6 | 0 | 3.6 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1619 | - | - | - | 1009 | 1607 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.006 | 0.002 | - | - |
| HCM Control Delay (s/veh) | 0 | - | - | 0 | 8.6 | 7.2 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | - | 0 | 0 | - | - |

HCM 6th TWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 28 | 12 | 24 | 43 | 7 | 11 | 15 | 207 | 65 | 25 | 254 | 28 |
| Future Vol, veh/h | 28 | 12 | 24 | 43 | 7 | 11 | 15 | 207 | 65 | 25 | 254 | 28 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 30 | 13 | 26 | 47 | 8 | 12 | 16 | 225 | 71 | 27 | 276 | 30 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 648 | 673 | 291 | 658 | 653 | 261 | 306 | 0 | 0 | 296 | 0 | 0 |
| Stage 1 | 345 | 345 | - | 293 | 293 | - | - | - | - | - | - | - |
| Stage 2 | 303 | 328 | - | 365 | 360 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 383 | 377 | 748 | 378 | 387 | 778 | 1255 | - | - | 1265 | - | - |
| Stage 1 | 671 | 636 | - | 715 | 670 | - | - | - | - | - | - | - |
| Stage 2 | 706 | 647 | - | 654 | 626 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 360 | 362 | 748 | 344 | 371 | 778 | 1255 | - | - | 1265 | - | - |
| Mov Cap-2 Maneuver | 360 | 362 | - | 344 | 371 | - | - | - | - | - | - | - |
| Stage 1 | 661 | 619 | - | 704 | 660 | - | - | - | - | - | - | - |
| Stage 2 | 677 | 637 | - | 602 | 610 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|-----|
| HCM Control Delay, s/v | 14.5 | 16.3 | 0.4 | 0.6 |
| HCM LOS | B | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|---------------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1255 | - | - | 448 | 386 | 1265 | - |
| HCM Lane V/C Ratio | 0.013 | - | - | 0.155 | 0.172 | 0.021 | - |
| HCM Control Delay (s/veh) | 7.9 | 0 | - | 14.5 | 16.3 | 7.9 | 0 |
| HCM Lane LOS | A | A | - | B | C | A | A |
| HCM 95th %tile Q (veh) | 0 | - | - | 0.5 | 0.6 | 0.1 | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 23 | 0 | 30 | 24 | 0 | 0 | 45 | 301 | 41 | 0 | 291 | 32 |
| Future Vol, veh/h | 23 | 0 | 30 | 24 | 0 | 0 | 45 | 301 | 41 | 0 | 291 | 32 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 25 | 0 | 33 | 26 | 0 | 0 | 49 | 327 | 45 | 0 | 316 | 35 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 782 | 804 | 334 | 775 | 776 | 327 | 351 | 0 | 0 | - | - | 0 |
| Stage 1 | 334 | 334 | - | 425 | 425 | - | - | - | - | - | - | - |
| Stage 2 | 448 | 470 | - | 350 | 351 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 312 | 316 | 708 | 315 | 328 | 714 | 1208 | - | - | 0 | - | - |
| Stage 1 | 680 | 643 | - | 607 | 586 | - | - | - | - | 0 | - | - |
| Stage 2 | 590 | 560 | - | 666 | 632 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 300 | 300 | 708 | 289 | 311 | 714 | 1208 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 300 | 300 | - | 289 | 311 | - | - | - | - | - | - | - |
| Stage 1 | 645 | 643 | - | 576 | 556 | - | - | - | - | - | - | - |
| Stage 2 | 560 | 531 | - | 635 | 632 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|----|
| HCM Control Delay, s/v | 14.3 | 18.7 | 0.9 | 0 |
| HCM LOS | B | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBT | SBR |
|---------------------------|------|-----|-----|------------|------|-----|
| Capacity (veh/h) | 1208 | - | - | 445 | 289 | - |
| HCM Lane V/C Ratio | 0.04 | - | - | 0.129 | 0.09 | - |
| HCM Control Delay (s/veh) | 8.1 | 0 | - | 14.3 | 18.7 | - |
| HCM Lane LOS | A | A | - | B | C | - |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 0.4 | 0.3 | - |

HCM 6th TWSC
4: Santa Clara Rd & Bolton Road

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 43 | 72 | 23 | 383 | 360 | 8 |
| Future Vol, veh/h | 43 | 72 | 23 | 383 | 360 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 47 | 78 | 25 | 416 | 391 | 9 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 862 | 396 | 400 | 0 | - | 0 |
| Stage 1 | 396 | - | - | - | - | - |
| Stage 2 | 466 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 325 | 653 | 1159 | - | - | - |
| Stage 1 | 680 | - | - | - | - | - |
| Stage 2 | 632 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 316 | 653 | 1159 | - | - | - |
| Mov Cap-2 Maneuver | 316 | - | - | - | - | - |
| Stage 1 | 661 | - | - | - | - | - |
| Stage 2 | 632 | - | - | - | - | - |

| Approach | EB | NB | SB |
|------------------------|----|-----|----|
| HCM Control Delay, s/v | 14 | 0.5 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---------------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 1159 | - | 316 | 653 | - | - |
| HCM Lane V/C Ratio | 0.022 | - | 0.148 | 0.12 | - | - |
| HCM Control Delay (s/veh) | 8.2 | 0 | 18.4 | 11.3 | - | - |
| HCM Lane LOS | A | A | C | B | - | - |
| HCM 95th %tile Q (veh) | 0.1 | - | 0.5 | 0.4 | - | - |

HCM 6th TWSC
5: Access #1 & Schmoekel Rd

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.9 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | | | ↑ | ↑ | |
| Traffic Vol, veh/h | 23 | 4 | 52 | 25 | 2 | 30 |
| Future Vol, veh/h | 23 | 4 | 52 | 25 | 2 | 30 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 25 | 4 | 57 | 27 | 2 | 33 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0 | 0 | 29 | 0 | 168 |
| Stage 1 | - | - | - | - | 27 |
| Stage 2 | - | - | - | - | 141 |
| Critical Hdwy | - | - | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | - | - | 1584 | - | 822 |
| Stage 1 | - | - | - | - | 996 |
| Stage 2 | - | - | - | - | 886 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1584 | - | 792 |
| Mov Cap-2 Maneuver | - | - | - | - | 792 |
| Stage 1 | - | - | - | - | 996 |
| Stage 2 | - | - | - | - | 853 |

| Approach | EB | WB | NB |
|------------------------|----|----|-----|
| HCM Control Delay, s/v | 0 | 5 | 8.6 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 1027 | - | - | 1584 | - |
| HCM Lane V/C Ratio | 0.034 | - | - | 0.036 | - |
| HCM Control Delay (s/veh) | 8.6 | - | - | 7.4 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 0.1 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.4 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Traffic Vol, veh/h | 18 | 3 | 15 | 12 | 2 | 9 |
| Future Vol, veh/h | 18 | 3 | 15 | 12 | 2 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 20 | 3 | 16 | 13 | 2 | 10 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 23 | 0 | 67 22 |
| Stage 1 | - | - | - | - | 22 - |
| Stage 2 | - | - | - | - | 45 - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | - | - | 1592 | - | 938 1055 |
| Stage 1 | - | - | - | - | 1001 - |
| Stage 2 | - | - | - | - | 977 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1592 | - | 929 1055 |
| Mov Cap-2 Maneuver | - | - | - | - | 929 - |
| Stage 1 | - | - | - | - | 1001 - |
| Stage 2 | - | - | - | - | 967 - |

| Approach | EB | WB | NB |
|------------------------|----|----|-----|
| HCM Control Delay, s/v | 0 | 4 | 8.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---------------------------|-------|-----|-----|------|-----|
| Capacity (veh/h) | 1030 | - | - | 1592 | - |
| HCM Lane V/C Ratio | 0.012 | - | - | 0.01 | - |
| HCM Control Delay (s/veh) | 8.5 | - | - | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q (veh) | 0 | - | - | 0 | - |

HCM 6th TWSC
1: Stolte Road & Schmoekel Rd

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 5.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 22 | 0 | 4 | 0 | 6 | 7 | 3 | 6 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 22 | 0 | 4 | 0 | 6 | 7 | 3 | 6 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 24 | 0 | 4 | 0 | 7 | 8 | 3 | 7 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 26 | 28 | 7 | 24 | 24 | 11 | 7 | 0 | 0 | 15 | 0 | 0 |
| Stage 1 | 13 | 13 | - | 11 | 11 | - | - | - | - | - | - | - |
| Stage 2 | 13 | 15 | - | 13 | 13 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 984 | 865 | 1075 | 987 | 869 | 1070 | 1614 | - | - | 1603 | - | - |
| Stage 1 | 1007 | 885 | - | 1010 | 886 | - | - | - | - | - | - | - |
| Stage 2 | 1007 | 883 | - | 1007 | 885 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 978 | 863 | 1075 | 985 | 867 | 1070 | 1614 | - | - | 1603 | - | - |
| Mov Cap-2 Maneuver | 978 | 863 | - | 985 | 867 | - | - | - | - | - | - | - |
| Stage 1 | 1007 | 883 | - | 1010 | 886 | - | - | - | - | - | - | - |
| Stage 2 | 1003 | 883 | - | 1005 | 883 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|----|-----|----|-----|
| HCM Control Delay, s/v | 0 | 8.7 | 0 | 2.4 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1614 | - | - | - | 997 | 1603 | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.028 | 0.002 | - |
| HCM Control Delay (s/veh) | 0 | - | - | 0 | 8.7 | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | - | 0.1 | 0 | - |

HCM 6th TWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 31 | 14 | 22 | 54 | 12 | 35 | 46 | 202 | 133 | 20 | 347 | 38 |
| Future Vol, veh/h | 31 | 14 | 22 | 54 | 12 | 35 | 46 | 202 | 133 | 20 | 347 | 38 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 34 | 15 | 24 | 59 | 13 | 38 | 50 | 220 | 145 | 22 | 377 | 41 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 860 | 907 | 398 | 854 | 855 | 293 | 418 | 0 | 0 | 365 | 0 | 0 |
| Stage 1 | 442 | 442 | - | 393 | 393 | - | - | - | - | - | - | - |
| Stage 2 | 418 | 465 | - | 461 | 462 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 276 | 276 | 652 | 279 | 296 | 746 | 1141 | - | - | 1194 | - | - |
| Stage 1 | 594 | 576 | - | 632 | 606 | - | - | - | - | - | - | - |
| Stage 2 | 612 | 563 | - | 581 | 565 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 237 | 254 | 652 | 241 | 273 | 746 | 1141 | - | - | 1194 | - | - |
| Mov Cap-2 Maneuver | 237 | 254 | - | 241 | 273 | - | - | - | - | - | - | - |
| Stage 1 | 561 | 562 | - | 597 | 572 | - | - | - | - | - | - | - |
| Stage 2 | 536 | 531 | - | 531 | 551 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|----|-----|
| HCM Control Delay, s/v | 20.5 | 21.9 | 1 | 0.4 |
| HCM LOS | C | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1141 | - | - | 305 | 321 | 1194 | - | - |
| HCM Lane V/C Ratio | 0.044 | - | - | 0.239 | 0.342 | 0.018 | - | - |
| HCM Control Delay (s/veh) | 8.3 | 0 | - | 20.5 | 21.9 | 8.1 | 0 | - |
| HCM Lane LOS | A | A | - | C | C | A | A | - |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 0.9 | 1.5 | 0.1 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 7.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 60 | 0 | 103 | 73 | 0 | 0 | 36 | 293 | 25 | 0 | 518 | 24 |
| Future Vol, veh/h | 60 | 0 | 103 | 73 | 0 | 0 | 36 | 293 | 25 | 0 | 518 | 24 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 65 | 0 | 112 | 79 | 0 | 0 | 39 | 318 | 27 | 0 | 563 | 26 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 986 | 999 | 576 | 1028 | 985 | 318 | 589 | 0 | 0 | - | - | 0 |
| Stage 1 | 576 | 576 | - | 396 | 396 | - | - | - | - | - | - | - |
| Stage 2 | 410 | 423 | - | 632 | 589 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 227 | 243 | 517 | 212 | 248 | 723 | 986 | - | - | 0 | - | - |
| Stage 1 | 503 | 502 | - | 629 | 604 | - | - | - | - | 0 | - | - |
| Stage 2 | 619 | 588 | - | 468 | 495 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 219 | 231 | 517 | 160 | 236 | 723 | 986 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 219 | 231 | - | 160 | 236 | - | - | - | - | - | - | - |
| Stage 1 | 478 | 502 | - | 598 | 574 | - | - | - | - | - | - | - |
| Stage 2 | 589 | 559 | - | 367 | 495 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|----|
| HCM Control Delay, s/v | 26.1 | 47.8 | 0.9 | 0 |
| HCM LOS | D | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBT | SBR |
|---------------------------|------|-----|-----|------------|-------|-----|
| Capacity (veh/h) | 986 | - | - | 344 | 160 | - |
| HCM Lane V/C Ratio | 0.04 | - | - | 0.515 | 0.496 | - |
| HCM Control Delay (s/veh) | 8.8 | 0 | - | 26.1 | 47.8 | - |
| HCM Lane LOS | A | A | - | D | E | - |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 2.8 | 2.4 | - |

HCM 6th TWSC
4: Santa Clara Rd & Bolton Road

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 19 | 19 | 16 | 357 | 740 | 18 |
| Future Vol, veh/h | 19 | 19 | 16 | 357 | 740 | 18 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 21 | 21 | 17 | 388 | 804 | 20 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1236 | 814 | 824 | 0 | - | 0 |
| Stage 1 | 814 | - | - | - | - | - |
| Stage 2 | 422 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 195 | 378 | 806 | - | - | - |
| Stage 1 | 436 | - | - | - | - | - |
| Stage 2 | 662 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 190 | 378 | 806 | - | - | - |
| Mov Cap-2 Maneuver | 190 | - | - | - | - | - |
| Stage 1 | 424 | - | - | - | - | - |
| Stage 2 | 662 | - | - | - | - | - |

| Approach | EB | NB | SB |
|------------------------|------|-----|----|
| HCM Control Delay, s/v | 20.7 | 0.4 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---------------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 806 | - | 190 | 378 | - | - |
| HCM Lane V/C Ratio | 0.022 | - | 0.109 | 0.055 | - | - |
| HCM Control Delay (s/veh) | 9.6 | 0 | 26.2 | 15.1 | - | - |
| HCM Lane LOS | A | A | D | C | - | - |
| HCM 95th %tile Q (veh) | 0.1 | - | 0.4 | 0.2 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 6.4 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 43 | 3 | 43 | 17 | 9 | 120 |
| Future Vol, veh/h | 43 | 3 | 43 | 17 | 9 | 120 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 47 | 3 | 47 | 18 | 10 | 130 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 50 | 0 | 161 49 |
| Stage 1 | - | - | - | - | 49 - |
| Stage 2 | - | - | - | - | 112 - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | - | - | 1557 | - | 830 1020 |
| Stage 1 | - | - | - | - | 973 - |
| Stage 2 | - | - | - | - | 913 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1557 | - | 805 1020 |
| Mov Cap-2 Maneuver | - | - | - | - | 805 - |
| Stage 1 | - | - | - | - | 973 - |
| Stage 2 | - | - | - | - | 886 - |

| Approach | EB | WB | NB |
|------------------------|----|-----|-----|
| HCM Control Delay, s/v | 0 | 5.3 | 9.2 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---------------------------|-------|-----|-----|------|-----|
| Capacity (veh/h) | 1001 | - | - | 1557 | - |
| HCM Lane V/C Ratio | 0.14 | - | - | 0.03 | - |
| HCM Control Delay (s/veh) | 9.2 | - | - | 7.4 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q (veh) | 0.5 | - | - | 0.1 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Traffic Vol, veh/h | 12 | 3 | 12 | 14 | 9 | 34 |
| Future Vol, veh/h | 12 | 3 | 12 | 14 | 9 | 34 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 13 | 3 | 13 | 15 | 10 | 37 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 16 | 0 | 56 15 |
| Stage 1 | - | - | - | - | 15 - |
| Stage 2 | - | - | - | - | 41 - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | - | - | 1602 | - | 952 1065 |
| Stage 1 | - | - | - | - | 1008 - |
| Stage 2 | - | - | - | - | 981 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1602 | - | 944 1065 |
| Mov Cap-2 Maneuver | - | - | - | - | 944 - |
| Stage 1 | - | - | - | - | 1008 - |
| Stage 2 | - | - | - | - | 973 - |

| Approach | EB | WB | NB |
|------------------------|----|-----|-----|
| HCM Control Delay, s/v | 0 | 3.4 | 8.6 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 1037 | - | - | 1602 | - |
| HCM Lane V/C Ratio | 0.045 | - | - | 0.008 | - |
| HCM Control Delay (s/veh) | 8.6 | - | - | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 0 | - |

HCM 6th TWSC
1: Stolte Road & Schmoekel Rd

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Int Delay, s/veh | 3.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 13 | 0 | 1 | 0 | 3 | 23 | 4 | 4 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 13 | 0 | 1 | 0 | 3 | 23 | 4 | 4 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | Yield |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 14 | 0 | 1 | 0 | 3 | 25 | 4 | 4 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 28 | 40 | 4 | 28 | 28 | 16 | 4 | 0 | 0 | 28 | 0 | 0 |
| Stage 1 | 12 | 12 | - | 16 | 16 | - | - | - | - | - | - | - |
| Stage 2 | 16 | 28 | - | 12 | 12 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 981 | 852 | 1080 | 981 | 865 | 1063 | 1618 | - | - | 1585 | - | - |
| Stage 1 | 1009 | 886 | - | 1004 | 882 | - | - | - | - | - | - | - |
| Stage 2 | 1004 | 872 | - | 1009 | 886 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 978 | 849 | 1080 | 979 | 862 | 1063 | 1618 | - | - | 1585 | - | - |
| Mov Cap-2 Maneuver | 978 | 849 | - | 979 | 862 | - | - | - | - | - | - | - |
| Stage 1 | 1009 | 883 | - | 1004 | 882 | - | - | - | - | - | - | - |
| Stage 2 | 1003 | 872 | - | 1006 | 883 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|----|-----|----|-----|
| HCM Control Delay, s/v | 0 | 8.7 | 0 | 3.6 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|---------------------------|------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1618 | - | - | - | 985 | 1585 | - |
| HCM Lane V/C Ratio | - | - | - | - | 0.015 | 0.003 | - |
| HCM Control Delay (s/veh) | 0 | - | - | 0 | 8.7 | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A | A | - |
| HCM 95th %tile Q (veh) | 0 | - | - | - | 0 | 0 | - |

HCM 6th TWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 7.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 44 | 14 | 52 | 89 | 8 | 20 | 33 | 290 | 99 | 41 | 338 | 39 |
| Future Vol, veh/h | 44 | 14 | 52 | 89 | 8 | 20 | 33 | 290 | 99 | 41 | 338 | 39 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 48 | 15 | 57 | 97 | 9 | 22 | 36 | 315 | 108 | 45 | 367 | 42 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 935 | 973 | 388 | 955 | 940 | 369 | 409 | 0 | 0 | 423 | 0 | 0 |
| Stage 1 | 478 | 478 | - | 441 | 441 | - | - | - | - | - | - | - |
| Stage 2 | 457 | 495 | - | 514 | 499 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 246 | 252 | 660 | 238 | 264 | 677 | 1150 | - | - | 1136 | - | - |
| Stage 1 | 568 | 556 | - | 595 | 577 | - | - | - | - | - | - | - |
| Stage 2 | 583 | 546 | - | 543 | 544 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 215 | 229 | 660 | 192 | 240 | 677 | 1150 | - | - | 1136 | - | - |
| Mov Cap-2 Maneuver | 215 | 229 | - | 192 | 240 | - | - | - | - | - | - | - |
| Stage 1 | 544 | 527 | - | 570 | 553 | - | - | - | - | - | - | - |
| Stage 2 | 532 | 523 | - | 457 | 516 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|-----|
| HCM Control Delay, s/v | 22.9 | 40.9 | 0.6 | 0.8 |
| HCM LOS | C | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---------------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1150 | - | - | 319 | 222 | 1136 | - | - |
| HCM Lane V/C Ratio | 0.031 | - | - | 0.375 | 0.573 | 0.039 | - | - |
| HCM Control Delay (s/veh) | 8.2 | 0 | - | 22.9 | 40.9 | 8.3 | 0 | - |
| HCM Lane LOS | A | A | - | C | E | A | A | - |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 1.7 | 3.2 | 0.1 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 7.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 47 | 0 | 74 | 49 | 0 | 0 | 119 | 483 | 83 | 0 | 419 | 69 |
| Future Vol, veh/h | 47 | 0 | 74 | 49 | 0 | 0 | 119 | 483 | 83 | 0 | 419 | 69 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | - | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 51 | 0 | 80 | 53 | 0 | 0 | 129 | 525 | 90 | 0 | 455 | 75 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 1321 | 1366 | 493 | 1316 | 1313 | 525 | 530 | 0 | 0 | - | - | 0 |
| Stage 1 | 493 | 493 | - | 783 | 783 | - | - | - | - | - | - | - |
| Stage 2 | 828 | 873 | - | 533 | 530 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 134 | 147 | 576 | 135 | 158 | 552 | 1037 | - | - | 0 | - | - |
| Stage 1 | 558 | 547 | - | 387 | 404 | - | - | - | - | 0 | - | - |
| Stage 2 | 365 | 368 | - | 531 | 527 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 114 | 119 | 576 | 99 | 128 | 552 | 1037 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 114 | 119 | - | 99 | 128 | - | - | - | - | - | - | - |
| Stage 1 | 451 | 547 | - | 313 | 326 | - | - | - | - | - | - | - |
| Stage 2 | 295 | 297 | - | 457 | 527 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|----|
| HCM Control Delay, s/v | 41.6 | 77.4 | 1.6 | 0 |
| HCM LOS | E | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBT | SBR |
|---------------------------|-------|-----|-----|------------|-------|-----|
| Capacity (veh/h) | 1037 | - | - | 224 | 99 | - |
| HCM Lane V/C Ratio | 0.125 | - | - | 0.587 | 0.538 | - |
| HCM Control Delay (s/veh) | 9 | 0 | - | 41.6 | 77.4 | - |
| HCM Lane LOS | A | A | - | E | F | - |
| HCM 95th %tile Q (veh) | 0.4 | - | - | 3.3 | 2.4 | - |

HCM 6th TWSC
4: Santa Clara Rd & Bolton Road

10/04/2024

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↶ | ↷ | | ↶ | ↷ | |
| Traffic Vol, veh/h | 51 | 85 | 27 | 714 | 578 | 9 |
| Future Vol, veh/h | 51 | 85 | 27 | 714 | 578 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 55 | 92 | 29 | 776 | 628 | 10 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1467 | 633 | 638 | 0 | - | 0 |
| Stage 1 | 633 | - | - | - | - | - |
| Stage 2 | 834 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 141 | 480 | 946 | - | - | - |
| Stage 1 | 529 | - | - | - | - | - |
| Stage 2 | 426 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 133 | 480 | 946 | - | - | - |
| Mov Cap-2 Maneuver | 133 | - | - | - | - | - |
| Stage 1 | 500 | - | - | - | - | - |
| Stage 2 | 426 | - | - | - | - | - |

| Approach | EB | NB | SB |
|------------------------|------|-----|----|
| HCM Control Delay, s/v | 27.8 | 0.3 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---------------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | 946 | - | 133 | 480 | - | - |
| HCM Lane V/C Ratio | 0.031 | - | 0.417 | 0.192 | - | - |
| HCM Control Delay (s/veh) | 8.9 | 0 | 50.2 | 14.3 | - | - |
| HCM Lane LOS | A | A | F | B | - | - |
| HCM 95th %tile Q (veh) | 0.1 | - | 1.8 | 0.7 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.6 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 40 | 10 | 138 | 51 | 6 | 81 |
| Future Vol, veh/h | 40 | 10 | 138 | 51 | 6 | 81 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 43 | 11 | 150 | 55 | 7 | 88 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 54 | 0 | 404 |
| Stage 1 | - | - | - | - | 49 |
| Stage 2 | - | - | - | - | 355 |
| Critical Hdwy | - | - | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | - | - | 1551 | - | 603 |
| Stage 1 | - | - | - | - | 973 |
| Stage 2 | - | - | - | - | 710 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1551 | - | 543 |
| Mov Cap-2 Maneuver | - | - | - | - | 543 |
| Stage 1 | - | - | - | - | 973 |
| Stage 2 | - | - | - | - | 639 |

| Approach | EB | WB | NB |
|------------------------|----|-----|-----|
| HCM Control Delay, s/v | 0 | 5.5 | 9.2 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 962 | - | - | 1551 | - |
| HCM Lane V/C Ratio | 0.098 | - | - | 0.097 | - |
| HCM Control Delay (s/veh) | 9.2 | - | - | 7.6 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q (veh) | 0.3 | - | - | 0.3 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.4 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | | | ↑ | ↑ | |
| Traffic Vol, veh/h | 27 | 10 | 39 | 18 | 6 | 23 |
| Future Vol, veh/h | 27 | 10 | 39 | 18 | 6 | 23 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 11 | 42 | 20 | 7 | 25 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 40 | 0 | 139 35 |
| Stage 1 | - | - | - | - | 35 - |
| Stage 2 | - | - | - | - | 104 - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | - | - | 1570 | - | 854 1038 |
| Stage 1 | - | - | - | - | 987 - |
| Stage 2 | - | - | - | - | 920 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1570 | - | 831 1038 |
| Mov Cap-2 Maneuver | - | - | - | - | 831 - |
| Stage 1 | - | - | - | - | 987 - |
| Stage 2 | - | - | - | - | 895 - |

| Approach | EB | WB | NB |
|------------------------|----|----|-----|
| HCM Control Delay, s/v | 0 | 5 | 8.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 987 | - | - | 1570 | - |
| HCM Lane V/C Ratio | 0.032 | - | - | 0.027 | - |
| HCM Control Delay (s/veh) | 8.8 | - | - | 7.4 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 0.1 | - |

HCM 6th AWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | |
|---------------------------|------|
| Intersection Delay, s/veh | 14.1 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 31 | 14 | 22 | 54 | 12 | 35 | 46 | 202 | 133 | 20 | 347 | 38 |
| Future Vol, veh/h | 31 | 14 | 22 | 54 | 12 | 35 | 46 | 202 | 133 | 20 | 347 | 38 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 34 | 15 | 24 | 59 | 13 | 38 | 50 | 220 | 145 | 22 | 377 | 41 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|------|------|------|------|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay, s/veh | 10.1 | 10.5 | 14.2 | 15.6 |
| HCM LOS | B | B | B | C |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|--------------------------|-------|-------|-------|-------|
| Vol Left, % | 12% | 46% | 53% | 5% |
| Vol Thru, % | 53% | 21% | 12% | 86% |
| Vol Right, % | 35% | 33% | 35% | 9% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 381 | 67 | 101 | 405 |
| LT Vol | 46 | 31 | 54 | 20 |
| Through Vol | 202 | 14 | 12 | 347 |
| RT Vol | 133 | 22 | 35 | 38 |
| Lane Flow Rate | 414 | 73 | 110 | 440 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.565 | 0.124 | 0.185 | 0.612 |
| Departure Headway (Hd) | 4.912 | 6.153 | 6.059 | 5.006 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 733 | 581 | 591 | 722 |
| Service Time | 2.942 | 4.207 | 4.108 | 3.036 |
| HCM Lane V/C Ratio | 0.565 | 0.126 | 0.186 | 0.609 |
| HCM Control Delay, s/veh | 14.2 | 10.1 | 10.5 | 15.6 |
| HCM Lane LOS | B | B | B | C |
| HCM 95th-tile Q | 3.6 | 0.4 | 0.7 | 4.2 |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 6.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↔ | ↗ | | ↔ | | | ↔ | ↗ | | ↘ | |
| Traffic Vol, veh/h | 60 | 0 | 103 | 73 | 0 | 0 | 36 | 293 | 25 | 0 | 518 | 24 |
| Future Vol, veh/h | 60 | 0 | 103 | 73 | 0 | 0 | 36 | 293 | 25 | 0 | 518 | 24 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | 180 | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 65 | 0 | 112 | 79 | 0 | 0 | 39 | 318 | 27 | 0 | 563 | 26 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|---|---|---|
| Conflicting Flow All | 986 | 999 | 576 | 1028 | 985 | 318 | 589 | 0 | 0 | - | - | 0 |
| Stage 1 | 576 | 576 | - | 396 | 396 | - | - | - | - | - | - | - |
| Stage 2 | 410 | 423 | - | 632 | 589 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | - | - | - |
| Pot Cap-1 Maneuver | 227 | 243 | 517 | 212 | 248 | 723 | 986 | - | - | 0 | - | - |
| Stage 1 | 503 | 502 | - | 629 | 604 | - | - | - | - | 0 | - | - |
| Stage 2 | 619 | 588 | - | 468 | 495 | - | - | - | - | 0 | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 219 | 231 | 517 | 160 | 236 | 723 | 986 | - | - | - | - | - |
| Mov Cap-2 Maneuver | 219 | 231 | - | 160 | 236 | - | - | - | - | - | - | - |
| Stage 1 | 478 | 502 | - | 598 | 574 | - | - | - | - | - | - | - |
| Stage 2 | 589 | 559 | - | 367 | 495 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|----|
| HCM Control Delay, s/v | 19.2 | 47.8 | 0.9 | 0 |
| HCM LOS | C | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBT | SBR |
|---------------------------|------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 986 | - | - | 219 | 517 | 160 | - | - | - |
| HCM Lane V/C Ratio | 0.04 | - | - | 0.298 | 0.217 | 0.496 | - | - | - |
| HCM Control Delay (s/veh) | 8.8 | 0 | - | 28.3 | 13.9 | 47.8 | 0 | - | - |
| HCM Lane LOS | A | A | - | D | B | E | A | - | - |
| HCM 95th %tile Q (veh) | 0.1 | - | - | 1.2 | 0.8 | 2.4 | - | - | - |

HCM 6th AWSC
 2: Santa Clara Rd & Lower Seguin Road

10/04/2024

| Intersection | |
|---------------------------|------|
| Intersection Delay, s/veh | 17.5 |
| Intersection LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 44 | 14 | 52 | 89 | 8 | 20 | 33 | 290 | 99 | 41 | 338 | 39 |
| Future Vol, veh/h | 44 | 14 | 52 | 89 | 8 | 20 | 33 | 290 | 99 | 41 | 338 | 39 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 48 | 15 | 57 | 97 | 9 | 22 | 36 | 315 | 108 | 45 | 367 | 42 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|------|------|------|------|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay, s/veh | 11.3 | 11.8 | 18.9 | 19.4 |
| HCM LOS | B | B | C | C |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|--------------------------|-------|-------|-------|-------|
| Vol Left, % | 8% | 40% | 76% | 10% |
| Vol Thru, % | 69% | 13% | 7% | 81% |
| Vol Right, % | 23% | 47% | 17% | 9% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 422 | 110 | 117 | 418 |
| LT Vol | 33 | 44 | 89 | 41 |
| Through Vol | 290 | 14 | 8 | 338 |
| RT Vol | 99 | 52 | 20 | 39 |
| Lane Flow Rate | 459 | 120 | 127 | 454 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.677 | 0.213 | 0.234 | 0.682 |
| Departure Headway (Hd) | 5.317 | 6.41 | 6.631 | 5.403 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 674 | 555 | 537 | 663 |
| Service Time | 3.383 | 4.508 | 4.729 | 3.467 |
| HCM Lane V/C Ratio | 0.681 | 0.216 | 0.236 | 0.685 |
| HCM Control Delay, s/veh | 18.9 | 11.3 | 11.8 | 19.4 |
| HCM Lane LOS | C | B | B | C |
| HCM 95th-tile Q | 5.3 | 0.8 | 0.9 | 5.3 |

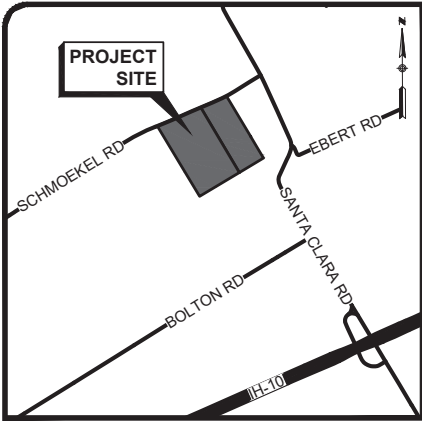
| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 6.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↖ | ↗ | | ↖↗ | | | ↖ | ↗ | | ↔ | |
| Traffic Vol, veh/h | 47 | 0 | 74 | 49 | 0 | 0 | 119 | 483 | 83 | 0 | 419 | 69 |
| Future Vol, veh/h | 47 | 0 | 74 | 49 | 0 | 0 | 119 | 483 | 83 | 0 | 419 | 69 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | 180 | - | - | - | - | - | 295 | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 7 | 2 |
| Mvmt Flow | 51 | 0 | 80 | 53 | 0 | 0 | 129 | 525 | 90 | 0 | 455 | 75 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1321 | 1366 | 493 | 1316 | 1313 | 525 | 530 | 0 | 0 | 615 | 0 | 0 |
| Stage 1 | 493 | 493 | - | 783 | 783 | - | - | - | - | - | - | - |
| Stage 2 | 828 | 873 | - | 533 | 530 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 134 | 147 | 576 | 135 | 158 | 552 | 1037 | - | - | 965 | - | - |
| Stage 1 | 558 | 547 | - | 387 | 404 | - | - | - | - | - | - | - |
| Stage 2 | 365 | 368 | - | 531 | 527 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 114 | 119 | 576 | 99 | 128 | 552 | 1037 | - | - | 965 | - | - |
| Mov Cap-2 Maneuver | 114 | 119 | - | 99 | 128 | - | - | - | - | - | - | - |
| Stage 1 | 451 | 547 | - | 313 | 326 | - | - | - | - | - | - | - |
| Stage 2 | 295 | 297 | - | 457 | 527 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-----|----|
| HCM Control Delay, s/v | 30.8 | 77.4 | 1.6 | 0 |
| HCM LOS | D | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBL | SBT | SBR |
|---------------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h) | 1037 | - | - | 114 | 576 | 99 | - | 965 | - | - |
| HCM Lane V/C Ratio | 0.125 | - | - | 0.448 | 0.14 | 0.538 | - | - | - | - |
| HCM Control Delay (s/veh) | 9 | 0 | - | 60 | 12.3 | 77.4 | 0 | 0 | - | - |
| HCM Lane LOS | A | A | - | F | B | F | A | A | - | - |
| HCM 95th %tile Q (veh) | 0.4 | - | - | 2 | 0.5 | 2.4 | - | 0 | - | - |

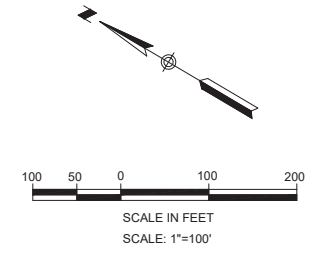
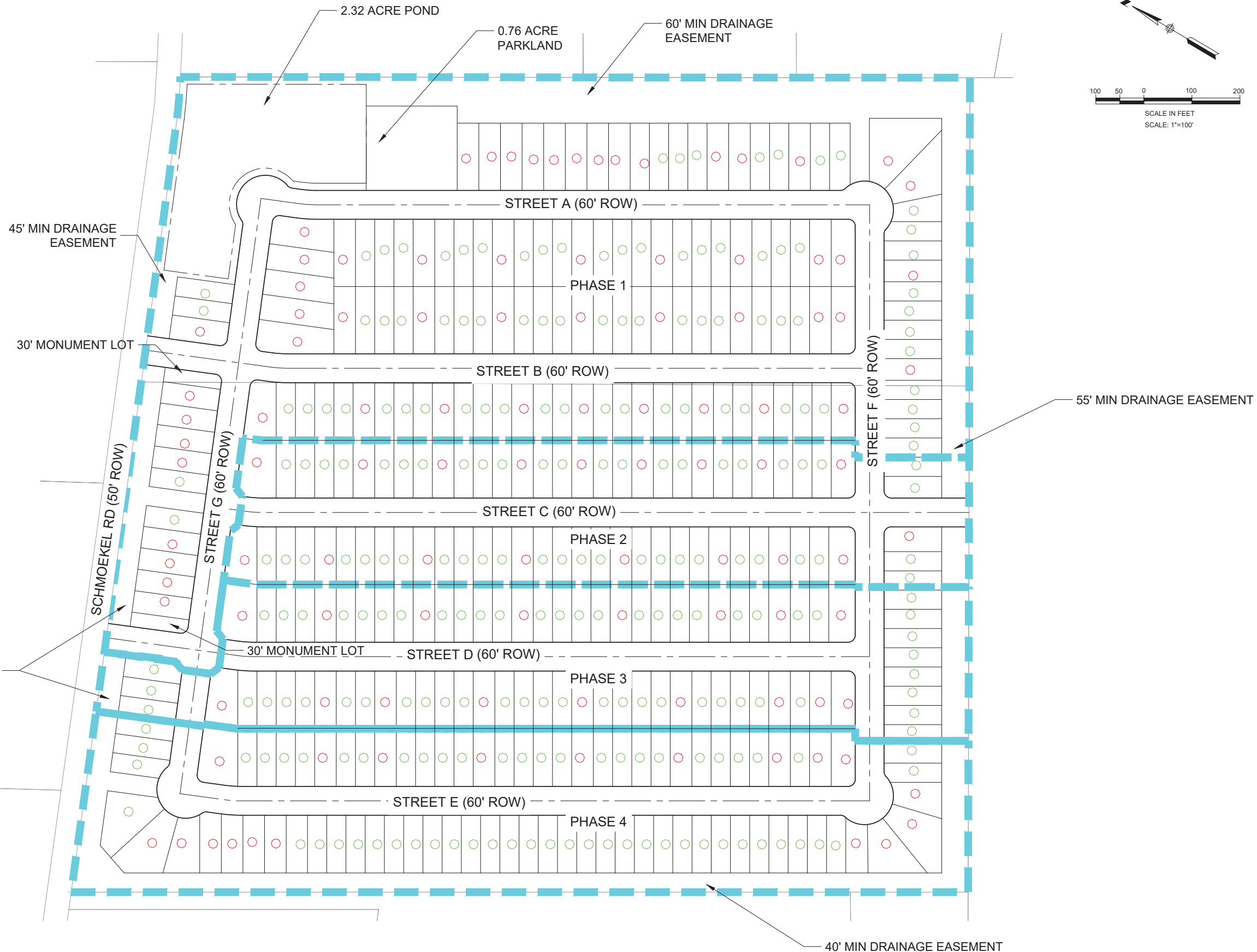
APPENDIX D – SCOPING MEETING DOCUMENTS



LOCATION MAP
1" = 2000'

LOT COUNT

| | 40' LOT TOTAL: | 45' LOT TOTAL: | LOT TOTAL: |
|---------|-------------------|-------------------|---------------|
| PHASE 1 | 79 | 55 | 134 |
| PHASE 2 | 48 | 18 | 66 |
| PHASE 3 | 57 | 17 | 74 |
| PHASE 4 | 58 | 19 | 77 |
| TOTAL: | 242 | 109 | 351 |



K:\S14164_08_HomeVillage_Town\1\200_Site_Development1_Plan\DWG-Civil\Land_Plan.dwg
 User: njgamer
 Plot Date/Time: May, 17, 2011 10:15:31

**SCHMOEKEL 68 AC CIBOLO
PRELIMINARY LAND PLAN**

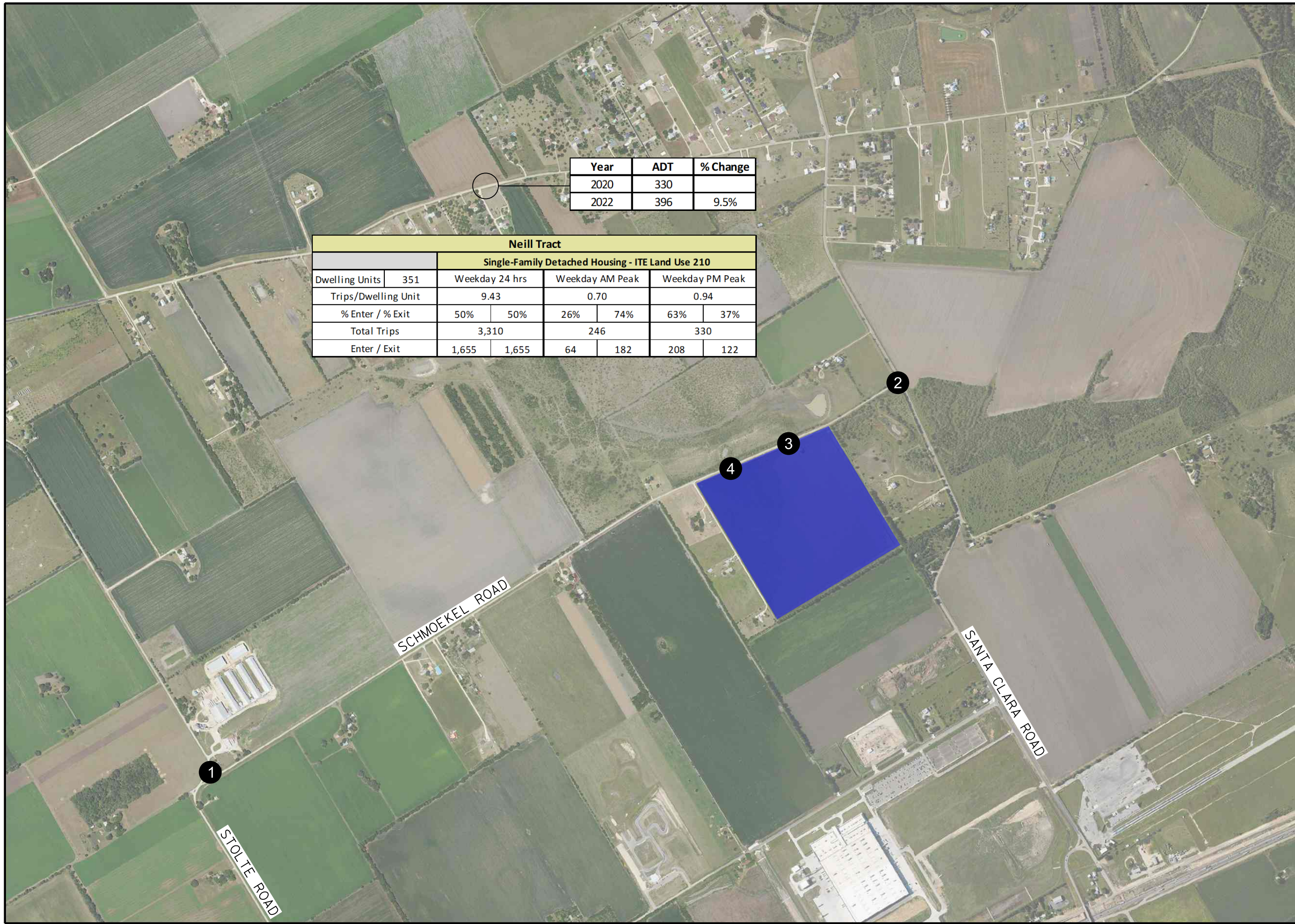
| NO. | REVISIONS DESCRIPTION | BY | DATE |
|-----|--------------------------|----|------|
| | | | |
| | | | |
| | | | |
| | | | |

| | | | | |
|-------|--------------|-----------|-------------|---------------|
| DATE: | DESIGNED BY: | DRAWN BY: | CHECKED BY: | DRAWING NAME: |
| | | | | |

LJA Engineering, Inc.
 9830 Colonnade Blvd.
 Suite 300
 San Antonio, Texas 78230
 Phone 210-503-2700
 Fax 210-503-2749
 TBPE No. F-9386

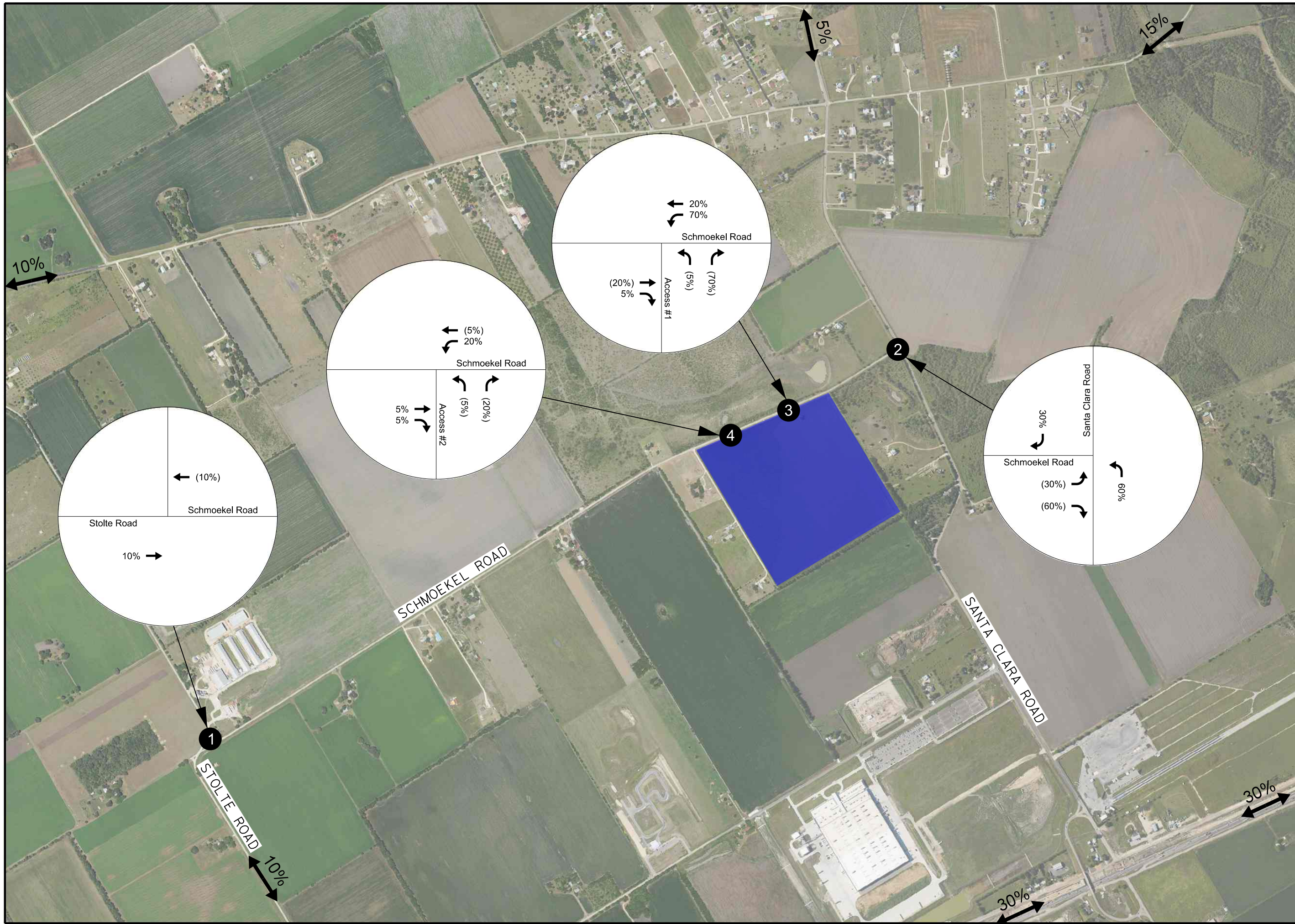
JOB NUMBER:

SHEET NO.
1
 OF 1 SHEETS



| Year | ADT | % Change |
|------|-----|----------|
| 2020 | 330 | |
| 2022 | 396 | 9.5% |

| Neill Tract | | | | | | |
|---|-------|----------------|-----|-----------------|-----|-----------------|
| Single-Family Detached Housing - ITE Land Use 210 | | | | | | |
| Dwelling Units | 351 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Unit | 9.43 | 0.70 | | 0.94 | | |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 3,310 | | 246 | | 330 | |
| Enter / Exit | 1,655 | 1,655 | 64 | 182 | 208 | 122 |

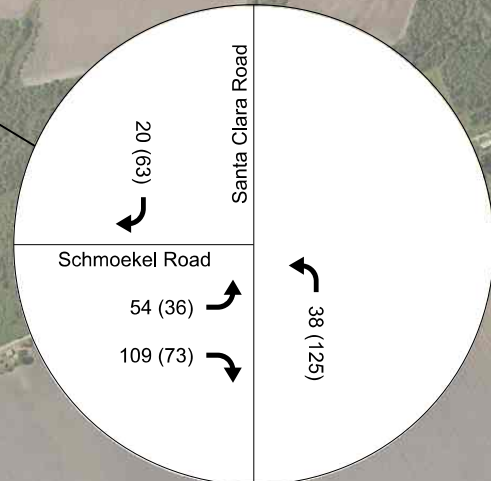
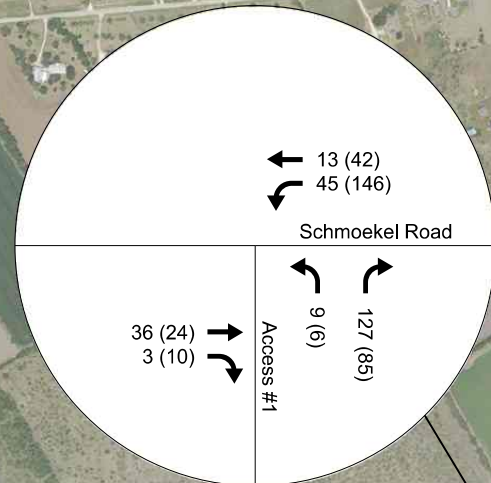
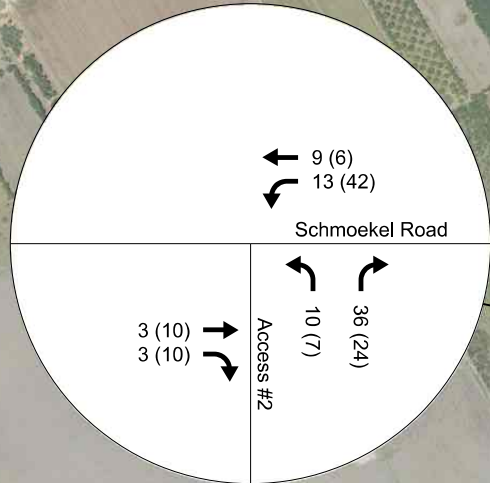
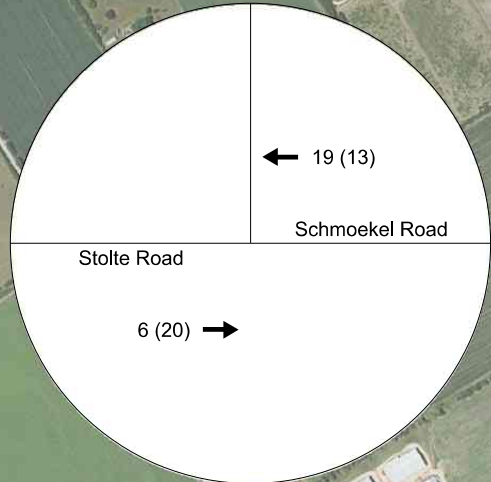
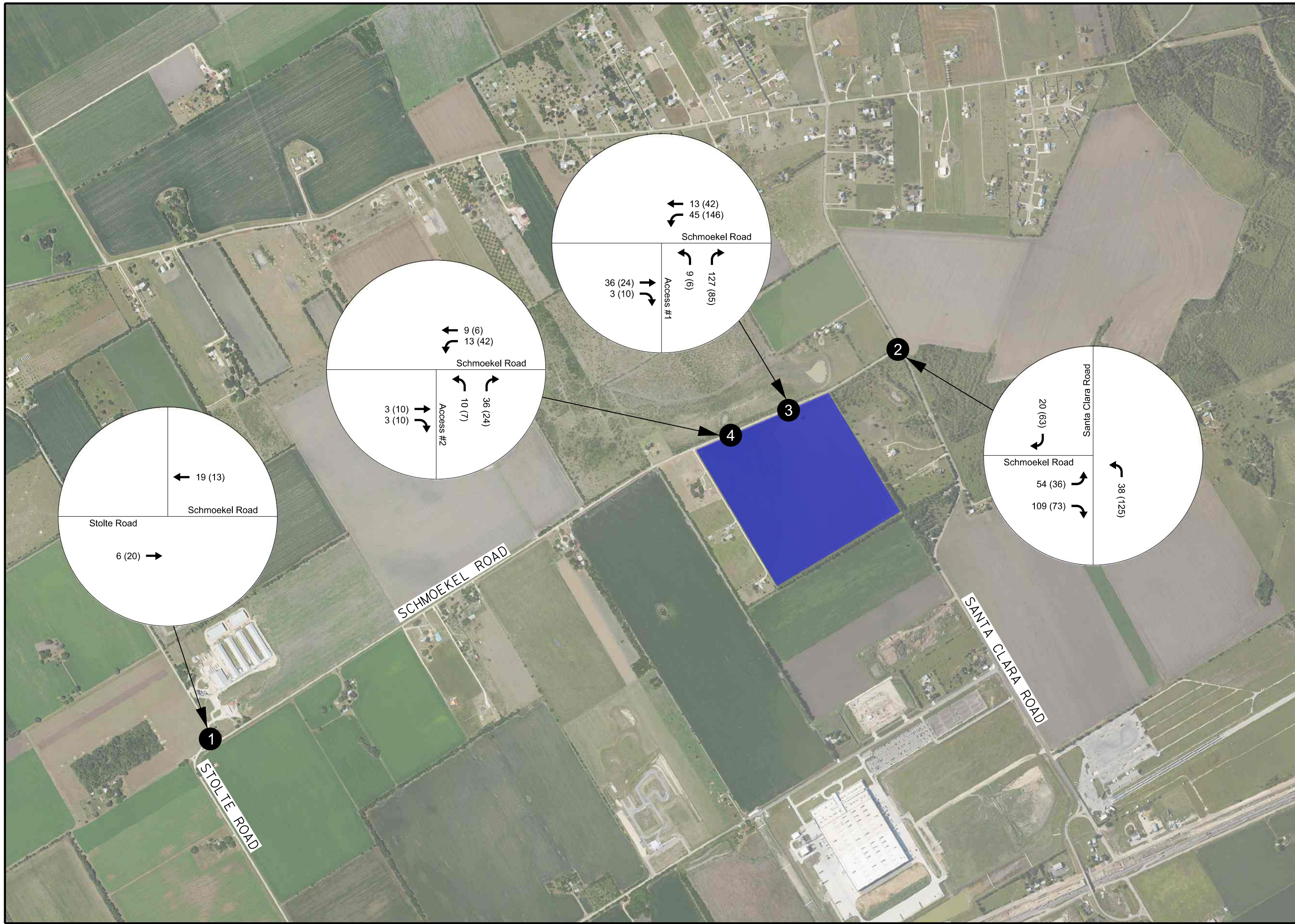


Legend
Enter % / (Exit %)

⊗ Intersection No.
XX%

↔ Global Distribution %

DATE:
6/10/2024
SCALE:
1" = 800'



Legend

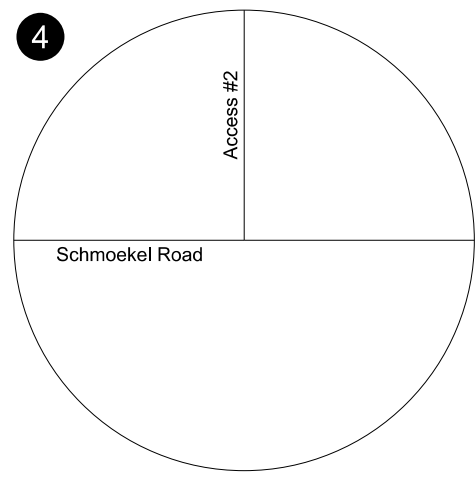
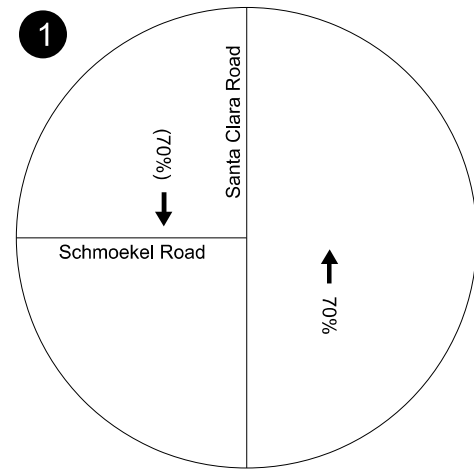
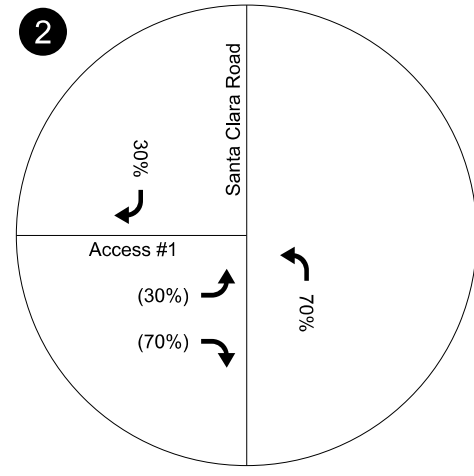
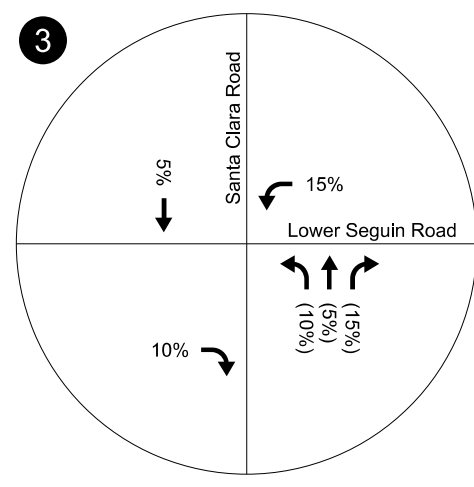
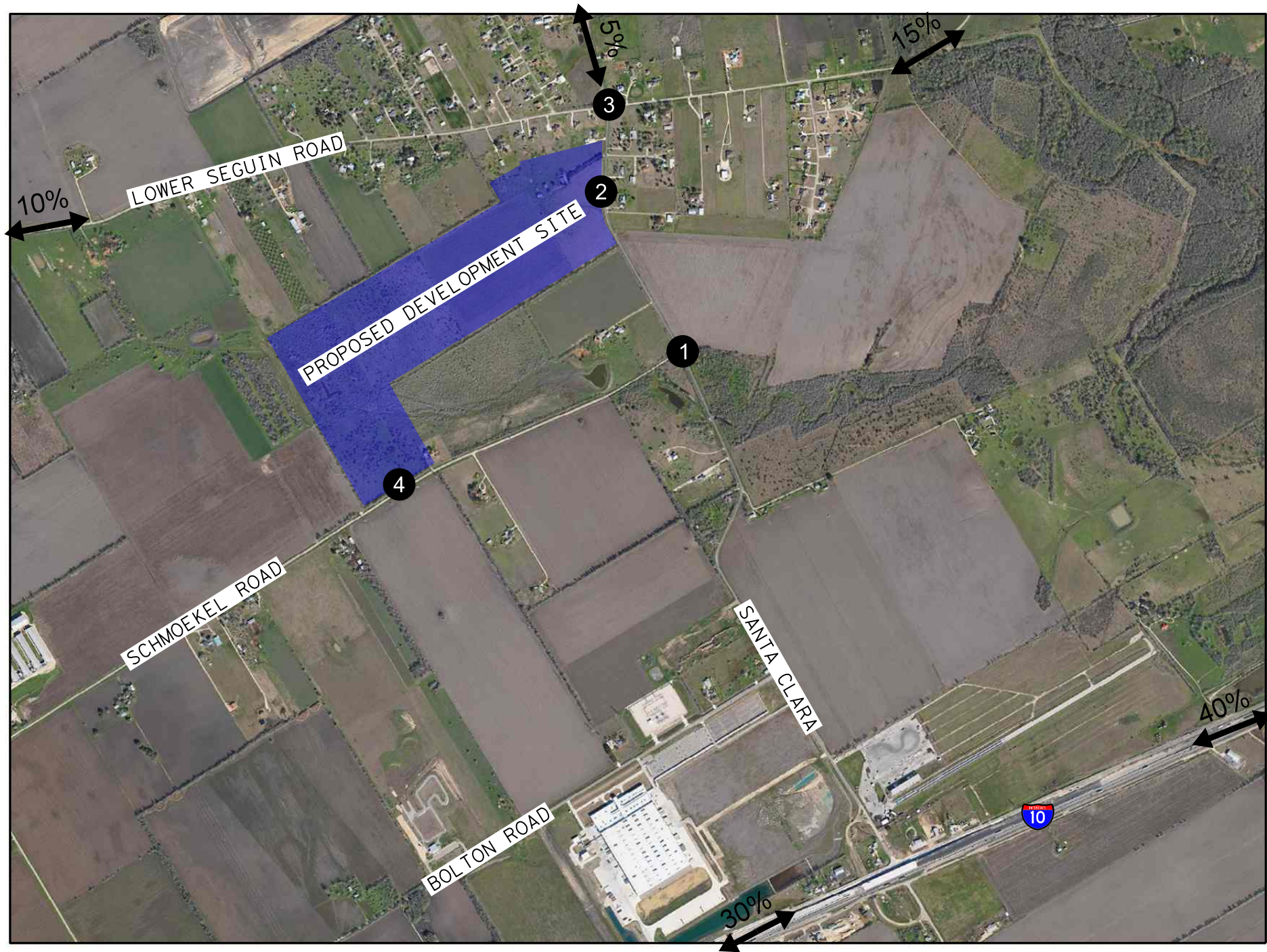
AM / (PM)

⊗ Intersection No.

XX% Global Distribution %

DATE:
6/10/2024
SCALE:
1" = 800'

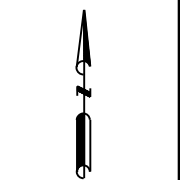
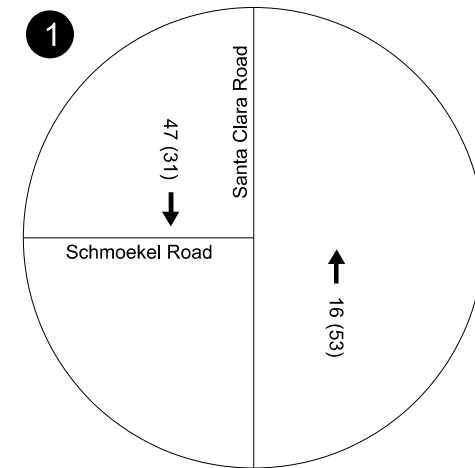
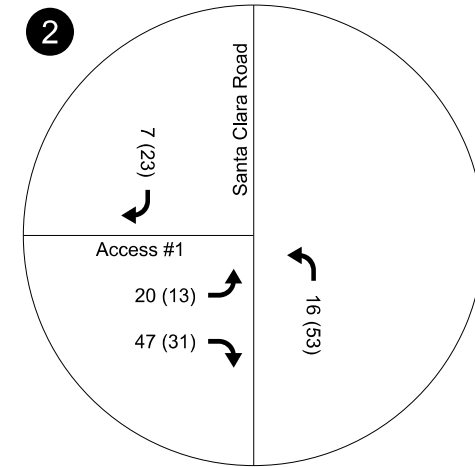
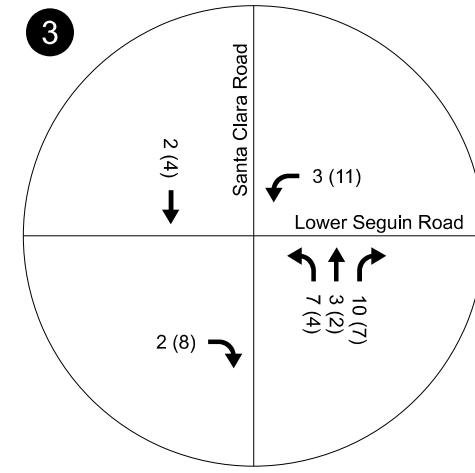
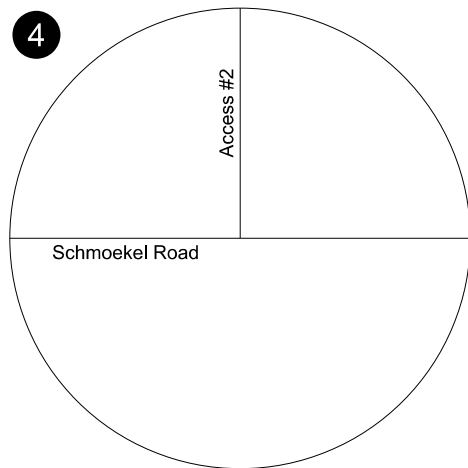
APPENDIX E – PAGES TAKEN FROM KAYDEN SPRINGS TIA REPORT



Legend
Enter % / (Exit %)
XX Intersection No.
XX% Global Distribution %

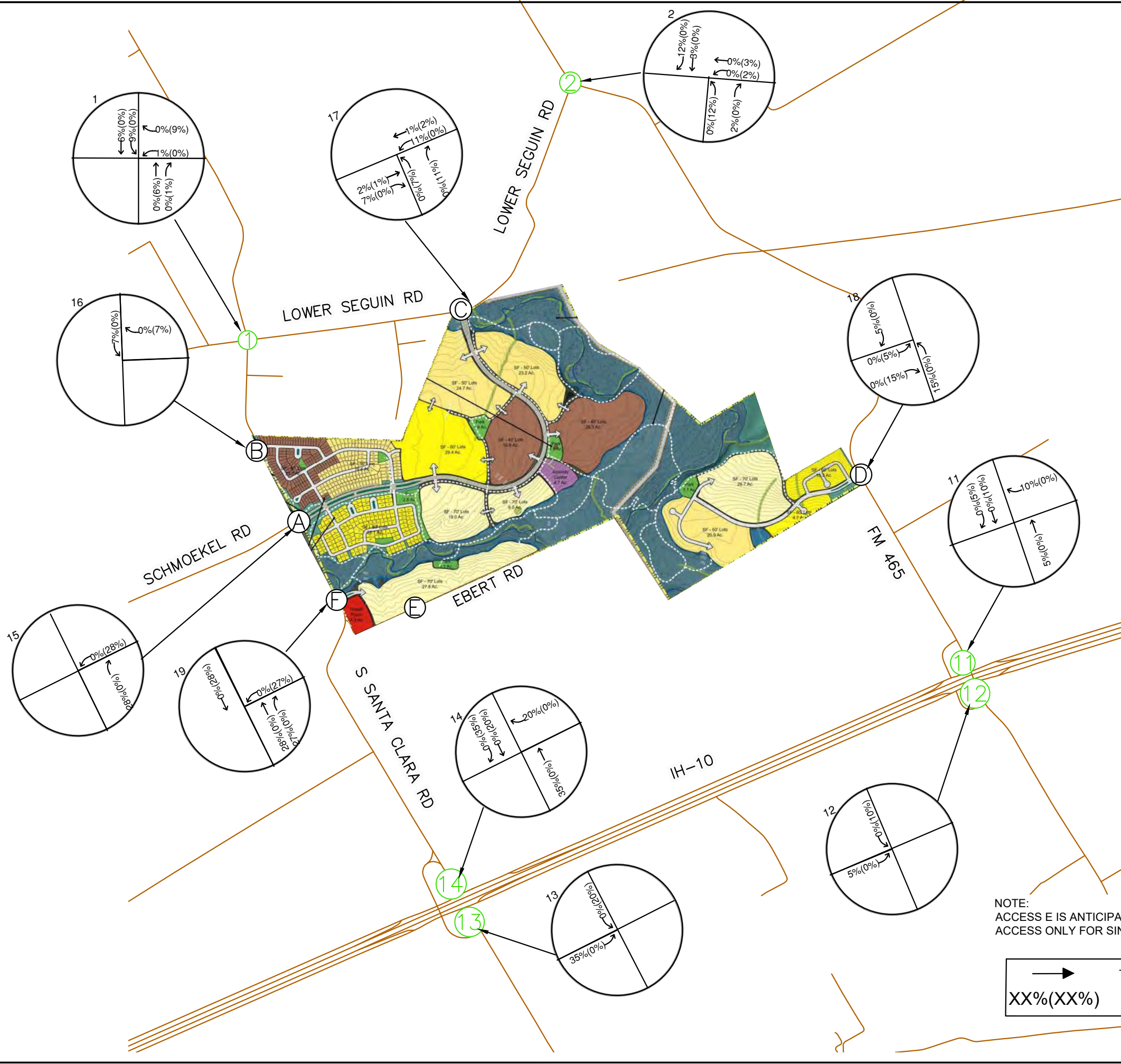


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8/2/2024
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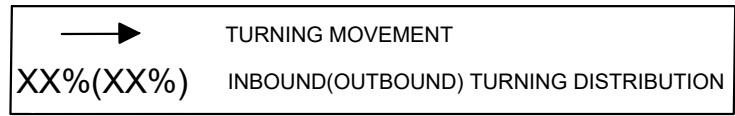


APPENDIX F – PAGES TAKEN FROM MARION OAKS TIA REPORT

Plotted By: Lira, Christopher May 18, 2023 10:54:03am K:\SNA_TPT\068726900 - Marion Oaks\CAD\SHEETS\20230516_MarionOaks_TIA\Sheets.dwg
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NOTE:
 ACCESS E IS ANTICIPATED TO SERVE AS SECONDARY / EMERGENCY
 ACCESS ONLY FOR SINGLE FAMILY LOTS



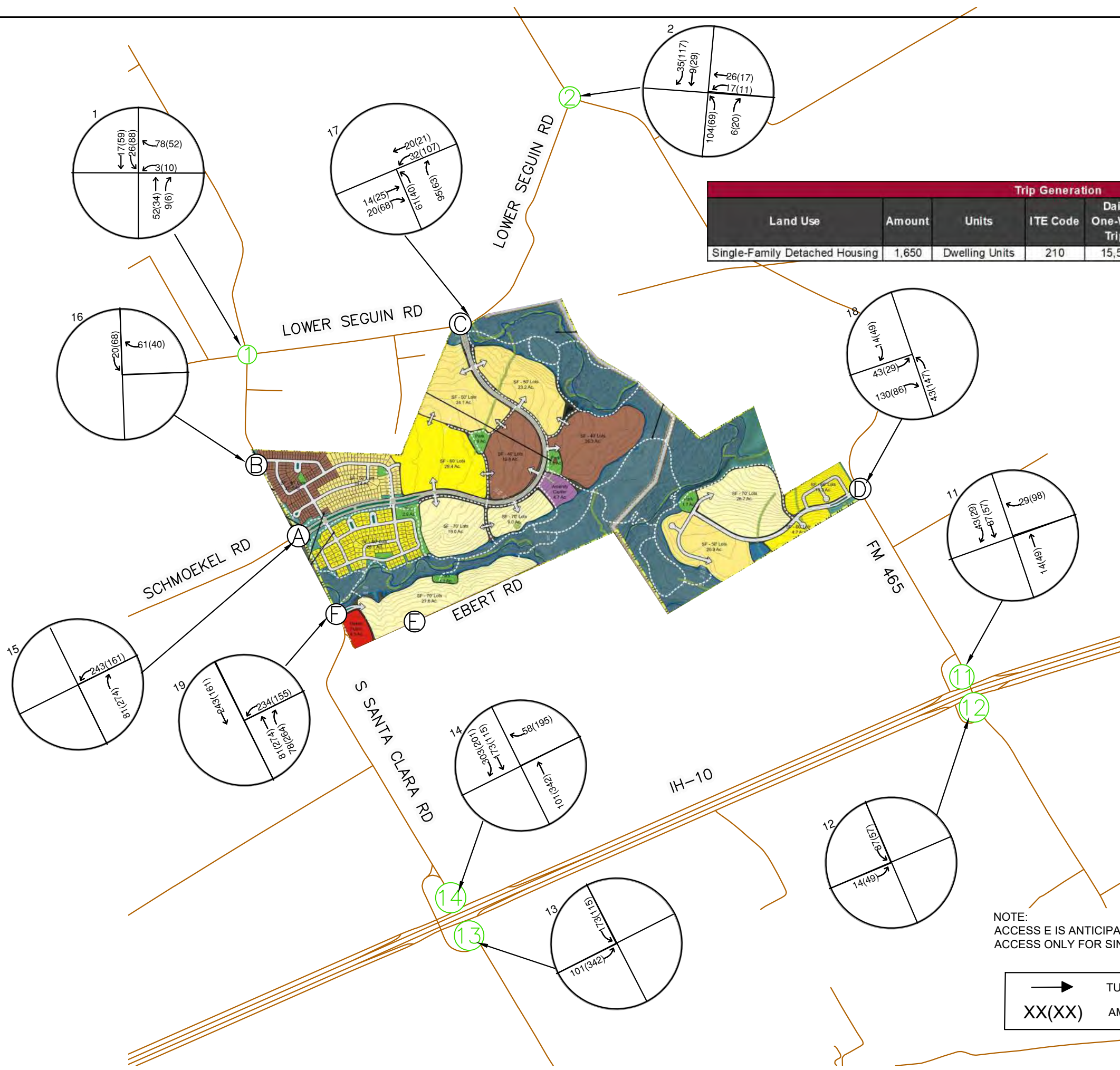
| No. | REVISIONS | DATE | BY |
|-----|-----------|------|----|
| | | | |
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| | | | |

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 10101 REUNION PL, SUITE 400, SAN ANTONIO, TX 78216
 PHONE : 210-541-9166 FAX : 210-541-6699
 WWW.KIMLEY-HORN.COM TBE FIRM NO. 928

NORTH
 N.T.S.
 KHA PROJECT 068726900
 DATE MAY 2023
 SCALE AS SHOWN
 DESIGNED BY CCL
 DRAWN BY CCL
 CHECKED BY BMB

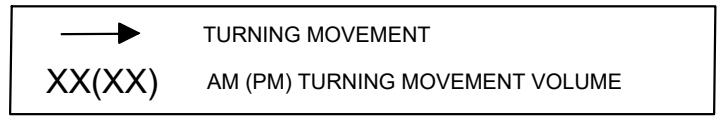
MARION OAKS
 TRIP DISTRIBUTION
 SINGLE FAMILY HOUSES

Plotted By: Lira, Christopher May 18, 2023, 11:05:34am K:\SNA_TPTD\068726900 - Marion Oaks\CAD\SHEETS\20230516_MarionOaks_TASheets.dwg
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| Trip Generation | | | | | | | | | | |
|--------------------------------|--------|----------------|----------|---------------------|----------------------------|-----|-------|----------------------------|-----|-------|
| Land Use | Amount | Units | ITE Code | Daily One-Way Trips | AM Peak Hour One-Way Trips | | | PM Peak Hour One-Way Trips | | |
| | | | | | IN | OUT | TOTAL | IN | OUT | TOTAL |
| Single-Family Detached Housing | 1,650 | Dwelling Units | 210 | 15,560 | 289 | 866 | 1155 | 977 | 574 | 1551 |

NOTE:
 ACCESS E IS ANTICIPATED TO SERVE AS SECONDARY / EMERGENCY ACCESS ONLY FOR SINGLE FAMILY LOTS



| No. | REVISIONS | DATE | BY |
|-----|-----------|------|----|
| | | | |
| | | | |
| | | | |
| | | | |

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 10101 REUNION PL, SUITE 400, SAN ANTONIO, TX 78216
 PHONE : 210-541-9166 FAX : 210-541-6689
 WWW.KIMLEY-HORN.COM TBE FIRM NO. 928



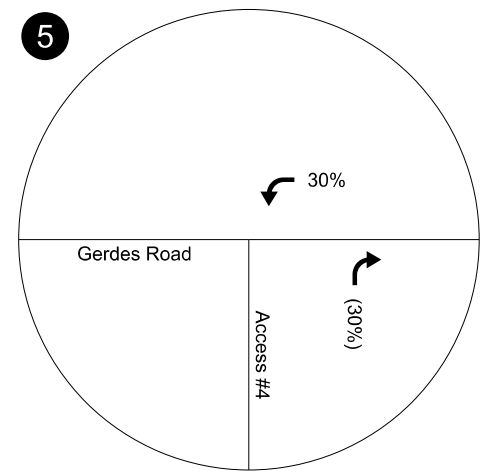
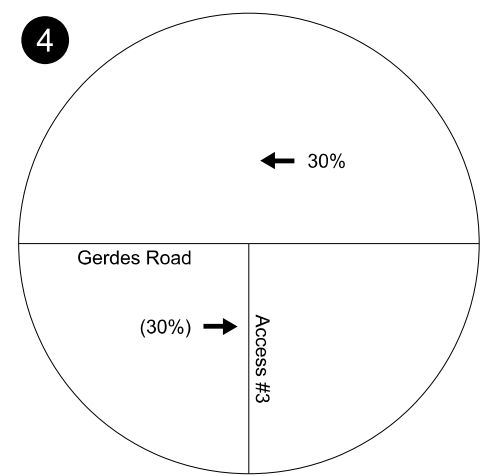
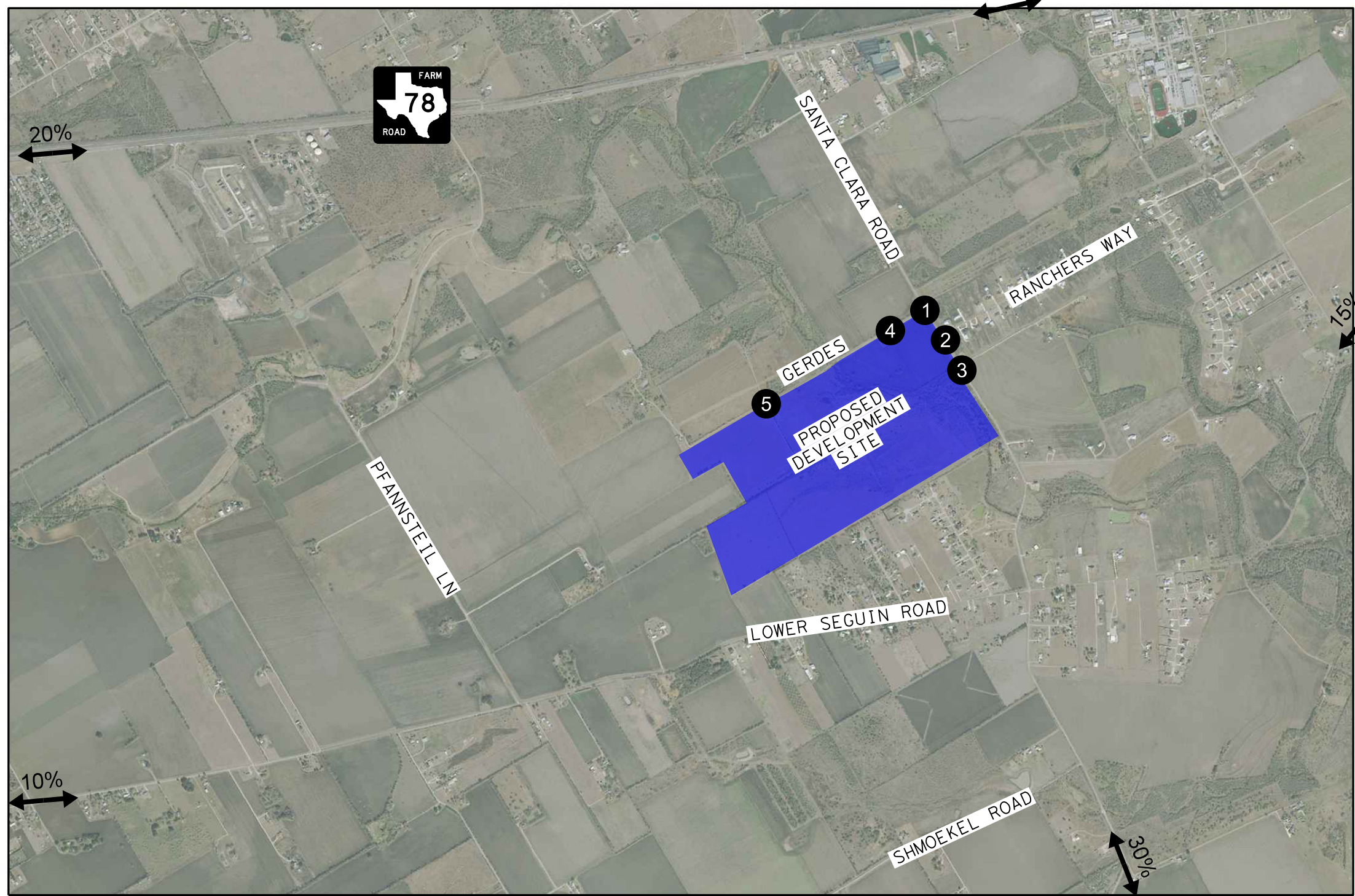
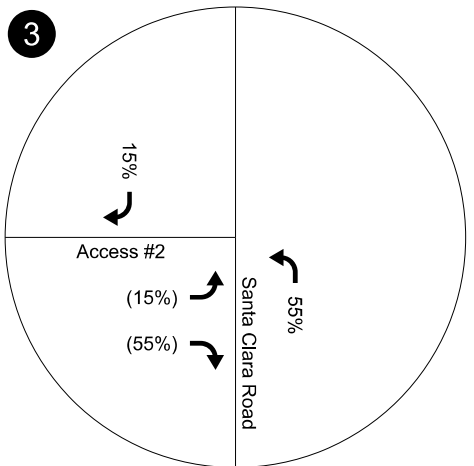
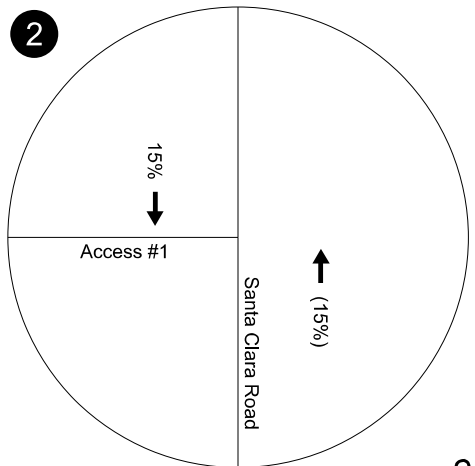
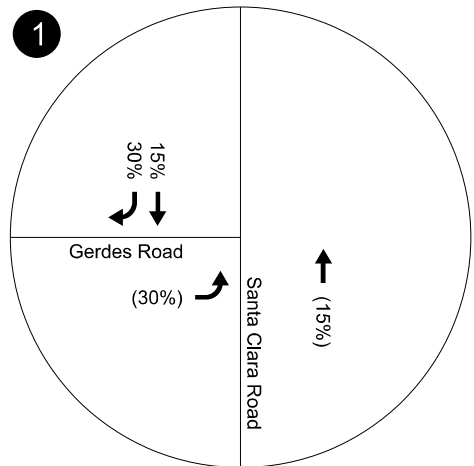
| | |
|-------------|-----------|
| KHA PROJECT | 068726900 |
| DATE | MAY 2023 |
| SCALE | AS SHOWN |
| DESIGNED BY | CGL |
| DRAWN BY | CGL |
| CHECKED BY | BMB |

SITE GENERATED
 TURNING MOVEMENT
 VOLUMES - SINGLE
 FAMILY HOUSES

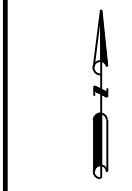
MARION OAKS

SHEET NUMBER
 7

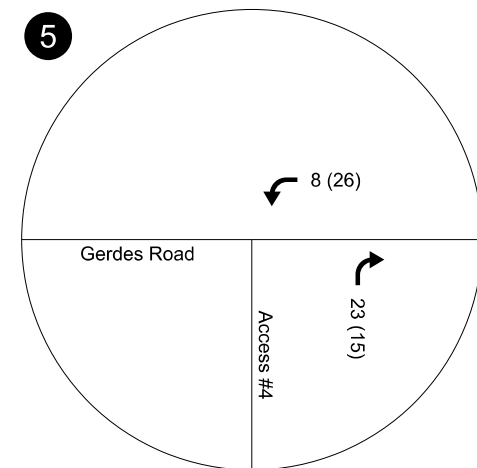
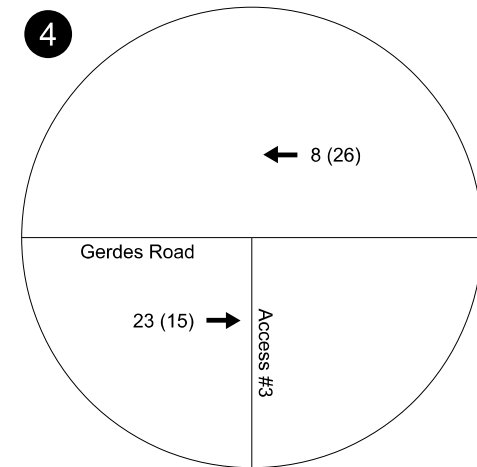
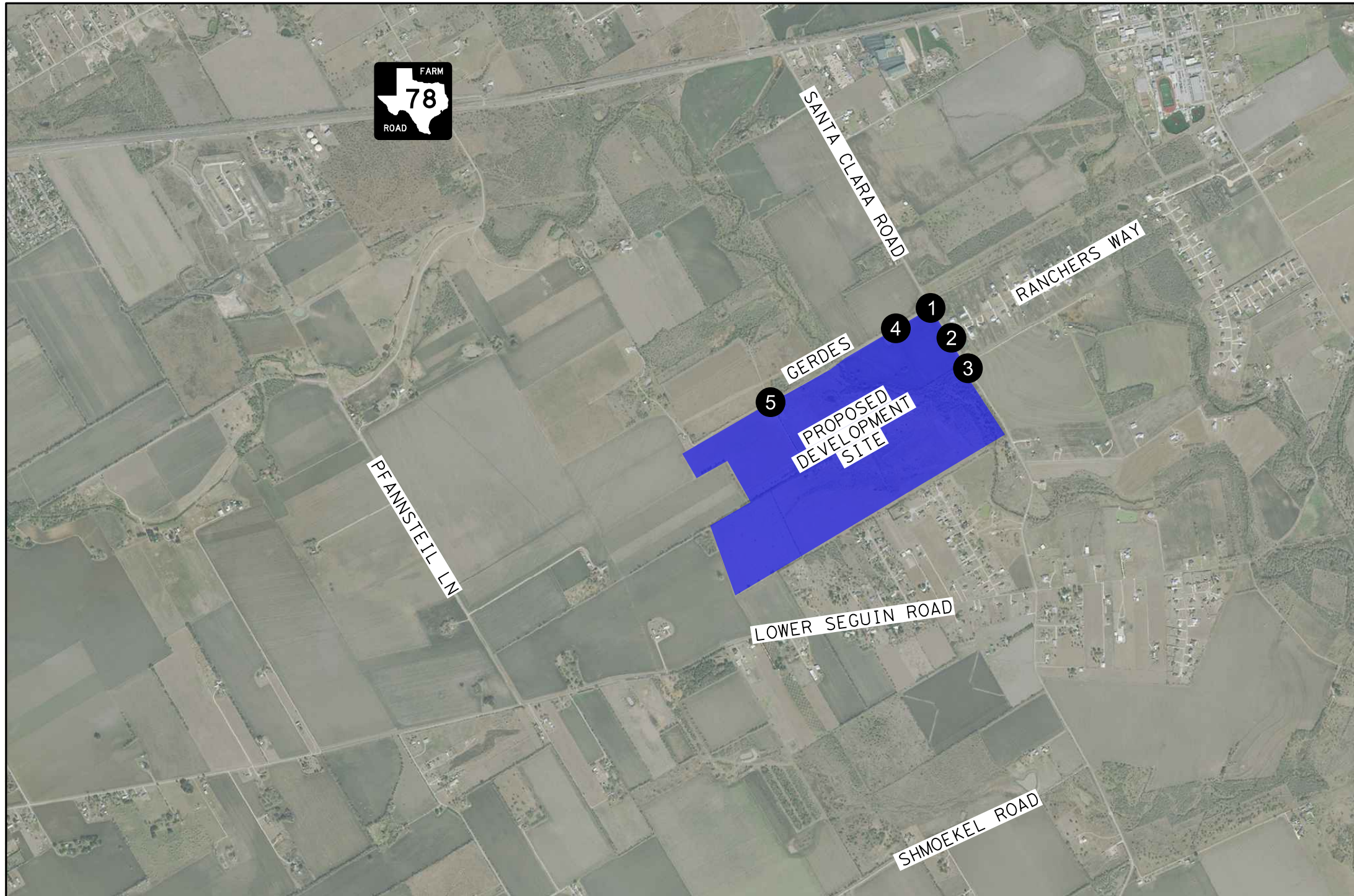
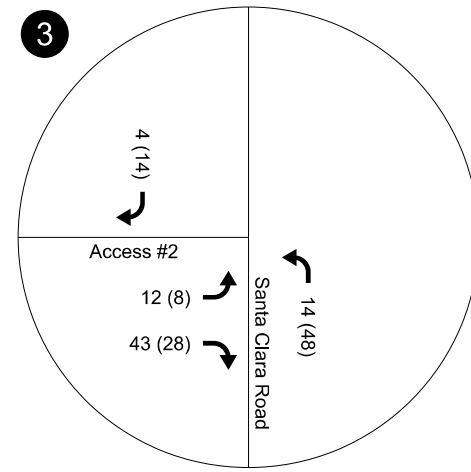
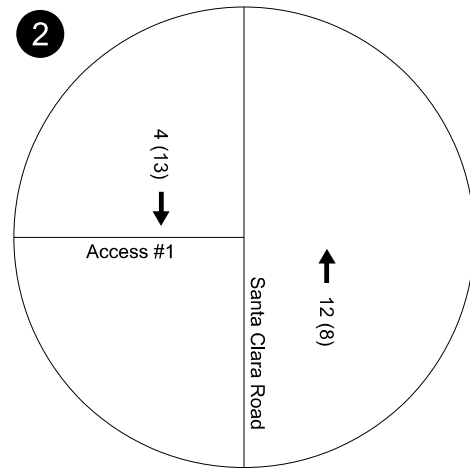
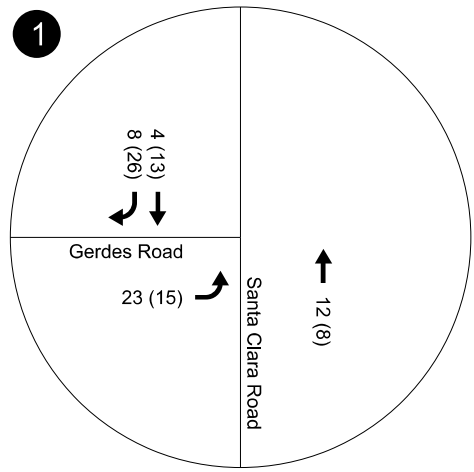
APPENDIX G – PAGES TAKEN FROM DOVE SONG TIA REPORT



Legend
Enter % / (Exit %)
XX
Intersection No.
XX%
Global Distribution %



DATE:
3/7/2022
SCALE:
1" = 1920'



Legend

AM / (PM)



Intersection No.

XX%

Global Distribution %



DATE:

3/7/2022

SCALE:

1" = 1920'

PAGE:

19

APPENDIX H – APPROACH VOLUMES

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Neil Tract | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 333 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 3,140 | | 233 | | 313 | |
| Enter / Exit | 1,570 | 1,570 | 61 | 172 | 197 | 116 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Marion Oaks | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 500 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 4,715 | | 350 | | 470 | |
| Enter / Exit | 2,358 | 2,357 | 91 | 259 | 296 | 174 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Dove Song | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 640 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 6,035 | | 448 | | 602 | |
| Enter / Exit | 3,018 | 3,017 | 116 | 331 | 379 | 223 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Kayden Springs | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 378 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 3,565 | | 265 | | 355 | |
| Enter / Exit | 1,782 | 1,783 | 69 | 196 | 224 | 131 |

| | | |
|------------------|------|----------|
| Growth Factor: | 9.0% | 1.295029 |
| Build Out (Yrs): | 3 | |
| K Factor: | 0.0% | |

| TOD | Existing | Projected |
|---------------------|----------|-----------|
| 2024-08-27 07:00:00 | 179 | 232 |
| 2024-08-27 08:00:00 | 117 | 152 |
| 2024-08-27 16:00:00 | 157 | 203 |
| 2024-08-27 17:00:00 | 165 | 214 |

| TOD Distributions | |
|-------------------|---------|
| Entering | Exiting |
| 1.6% | 5.8% |
| 3.1% | 10.0% |
| 10.5% | 7.4% |
| 10.0% | 7.3% |

| Neil Tract | Marion Oaks | Dove Song | Kayden Springs | NB Approach Volumes |
|------------|-------------|-----------|----------------|---------------------|
| 60% | 28% | 30% | 70% | |
| Entering | Entering | Entering | Entering | |
| 15 | 10 | 14 | 19 | 290 |
| 29 | 20 | 28 | 38 | 267 |
| 99 | 69 | 95 | 131 | 597 |
| 94 | 66 | 91 | 125 | 590 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Neil Tract | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 333 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 3,140 | | 233 | | 313 | |
| Enter / Exit | 1,570 | 1,570 | 61 | 172 | 197 | 116 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Marion Oaks | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 500 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 4,715 | | 350 | | 470 | |
| Enter / Exit | 2,358 | 2,357 | 91 | 259 | 296 | 174 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Dove Song | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 640 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 6,035 | | 448 | | 602 | |
| Enter / Exit | 3,018 | 3,017 | 116 | 331 | 379 | 223 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Kayden Springs | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 378 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 3,565 | | 265 | | 355 | |
| Enter / Exit | 1,782 | 1,783 | 69 | 196 | 224 | 131 |

| | | |
|------------------|------|----------|
| Growth Factor: | 9.0% | 1.295029 |
| Build Out (Yrs): | 3 | |
| K Factor: | 0.0% | |

| TOD | Existing | Projected |
|---------------------|----------|-----------|
| 2024-08-27 07:00:00 | 190 | 246 |
| 2024-08-27 08:00:00 | 144 | 186 |
| 2024-08-27 16:00:00 | 150 | 194 |
| 2024-08-27 17:00:00 | 209 | 271 |

| TOD Distributions | |
|-------------------|---------|
| Entering | Exiting |
| 1.6% | 5.8% |
| 3.1% | 10.0% |
| 10.5% | 7.4% |
| 10.0% | 7.3% |

| Neil Tract | Marion Oaks | Dove Song | Kayden Springs | SB Approach Volumes |
|------------|------------------|-----------|----------------|---------------------|
| 30% | 0% | 30% | 70% | |
| Entering | Entering/Exiting | Exiting | Exiting | |
| 7 | 0 | 14 | 19 | 286 |
| 14 | 0 | 28 | 38 | 266 |
| 50 | 0 | 95 | 131 | 470 |
| 47 | 0 | 91 | 125 | 534 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Neil Tract | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 333 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 3,140 | | 233 | | 313 | |
| Enter / Exit | 1,570 | 1,570 | 61 | 172 | 197 | 116 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Marion Oaks | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 500 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 4,715 | | 350 | | 470 | |
| Enter / Exit | 2,358 | 2,357 | 91 | 259 | 296 | 174 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Dove Song | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 640 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 6,035 | | 448 | | 602 | |
| Enter / Exit | 3,018 | 3,017 | 116 | 331 | 379 | 223 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Kayden Springs | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 378 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | 3,565 | | 265 | | 355 | |
| Enter / Exit | 1,782 | 1,783 | 69 | 196 | 224 | 131 |

| | | |
|------------------|------|----------|
| Growth Factor: | 9.0% | 1.295029 |
| Build Out (Yrs): | 3 | |
| K Factor: | 0.0% | |

| TOD | Existing | Projected |
|---------------------|----------|-----------|
| 2024-08-27 07:00:00 | 6 | 8 |
| 2024-08-27 08:00:00 | 4 | 5 |
| 2024-08-27 16:00:00 | 8 | 10 |
| 2024-08-27 17:00:00 | 9 | 12 |

| TOD Distributions | |
|-------------------|---------|
| Entering | Exiting |
| 1.6% | 5.8% |
| 3.1% | 10.0% |
| 10.5% | 7.4% |
| 10.0% | 7.3% |

| Neil Tract | Marion Oaks | Dove Song | Kayden Springs | EB Approach Volumes |
|------------|------------------|------------------|------------------|---------------------|
| 30% | 0% | 0% | 0% | |
| Exiting | Entering/Exiting | Entering/Exiting | Entering/Exiting | |
| 7 | 0 | 0 | 0 | 15 |
| 14 | 0 | 0 | 0 | 19 |
| 50 | 0 | 0 | 0 | 60 |
| 47 | 0 | 0 | 0 | 59 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Neil Tract | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 333 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | | 3,140 | | 233 | | 313 |
| Enter / Exit | 1,570 | 1,570 | | 61 | 172 | 197 116 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Marion Oaks | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 500 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | | 4,715 | | 350 | | 470 |
| Enter / Exit | 2,358 | 2,357 | | 91 | 259 | 296 174 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Dove Song | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 640 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | | 6,035 | | 448 | | 602 |
| Enter / Exit | 3,018 | 3,017 | | 116 | 331 | 379 223 |

| TRIP GENERATION CALCULATION (11TH EDITION) | | | | | | |
|--|-------|--|-----|-----------------|-----|-----------------|
| Kayden Springs | | Single-Family Residential - ITE Land Use 210 | | | | |
| Dwelling Unit | 378 | Weekday 24 hrs | | Weekday AM Peak | | Weekday PM Peak |
| Trips/Dwelling Units | | 9.43 | | 0.70 | | 0.94 |
| % Enter / % Exit | 50% | 50% | 26% | 74% | 63% | 37% |
| Total Trips | | 3,565 | | 265 | | 355 |
| Enter / Exit | 1,782 | 1,783 | | 69 | 196 | 224 131 |

| | | |
|------------------|------|----------|
| Growth Factor: | 9.0% | 1.295029 |
| Build Out (Yrs): | 3 | |
| K Factor: | 0.0% | |

| TOD | Existing | Projected |
|---------------------|----------|-----------|
| 2024-08-27 07:00:00 | 0 | 0 |
| 2024-08-27 08:00:00 | 0 | 0 |
| 2024-08-27 16:00:00 | 0 | 0 |
| 2024-08-27 17:00:00 | 0 | 0 |

| TOD Distributions | |
|-------------------|---------|
| Entering | Exiting |
| 1.6% | 5.8% |
| 3.1% | 10.0% |
| 10.5% | 7.4% |
| 10.0% | 7.3% |

| Neil Tract | Marion Oaks | Dove Song | Kayden Springs | WB Approach Volumes |
|------------------|-------------|------------------|------------------|---------------------|
| 0% | 28% | 0% | 0% | |
| Entering/Exiting | Exiting | Entering/Exiting | Entering/Exiting | |
| 0 | 10 | 0 | 0 | 10 |
| 0 | 20 | 0 | 0 | 20 |
| 0 | 69 | 0 | 0 | 69 |
| 0 | 66 | 0 | 0 | 66 |

| | Major | Minor |
|------|-------|-------|
| 7:00 | 576 | 10 |
| 8:00 | 533 | 20 |
| 4:00 | 1067 | 69 |
| 5:00 | 1124 | 66 |

APPENDIX I – RECOMMENDED ROADWAY IMPROVEMENTS



APPENDIX 3.9

TITLE REPORT

RPS TITLE, LLC

P.O. Box 1176, Kyle, Texas 78640 Telephone No. 281-419-5954

Date: May 14, 2024

Client: Horizon Environmental Services

Attn: James Pittman

RPS #: 202401351

Client Search #: 202401351

Through Date: May 5, 2024

SUBJECT PROPERTY:

Parcel No. 63974, Being 44 acres of land in the F. GARCIA SURVEY, ABSTRACT 141, Guadalupe County, Texas.

Parcel No. 63975, Being 23.50 acres of land in the F. GARCIA SURVEY, ABSTRACT 141, Guadalupe County, Texas.

Deed of Gift

Grantee(s): Larry Robert Neill

Grantor(s): Berta E. Neill, a Widow

Volume/Page: 1054-0449

File Date: 08/13/1993

Probate

Grantee(s): Mrs. Berta Neill

Grantor(s): The Estate of George G. Schumacher, deceased

Volume/Page: 478-562

File Date: 12/21/1973

Note: Mr. Schumacher died October 18, 1972

Probate

Grantee(s): George G. Schumacher

Grantor(s): The Estate of Emilie Schumacher, deceased

Volume/Page: 478-547

File Date: 12/21/1973

Note: Mrs. Schumacher died August 2, 1970

Warranty Deed (1/2 interest)

Grantee(s): Berta Neill

Grantor(s): George Schumacher

Volume/Page: 456-569

File Date: 08/14/1972

Deed (124 acres)
Grantee(s): George Schumacher
Grantor(s): R.N. Briggs and wife, Frances Briggs
Volume/Page: 257-468
File Date: 04/24/1952

Warranty Deed (124 acres out of 232.1 acres)
Grantee(s): R.N. Briggs and wife, Francis Briggs
Grantor(s): Ben C. Krueger
Volume/Page: 250-428
File Date: 03/12/1951

Warranty Deed (232.1 acres out of 506 acres)
Grantee(s): Ben C. Krueger
Grantor(s): C.A. Krueger and wife, Ida Krueger
Volume/Page: 227-487
File Date: 10/16/1947

Deed (506 acres)
Grantee(s): C.A. Krueger
Grantor(s): Edgar Weyel
Volume/Page: 227-492
File Date: 10/16/1947

EASEMENTS:

No easements of environmental concern noted during research.

LEASES:

None noted during research.

ENVIRONMENTAL LIENS:

None noted during research.

This search is provided to the above client for use in the historical background analysis of the subject property. Its use by third parties for any purpose is strictly prohibited. The information contained herein was obtained from the Deed Records of Guadalupe County, Texas and Real Property Services does not warranty or guaranty the accuracy or content of these records.

APPENDIX 3.10

SPECIAL WARRANTY DEED

APPENDIX 3.11

PRE-DEVELOPMENT MEETING



Project Name: PDM-24-13 – Neill Tract **Meeting Date:** 5/28/2024

Property Information: Address: Parcel 63974, 63975; 68 acres City / ETJ

Platted: Yes / No **Legal Description:** ABS: 141 SUR: F GARCIA 44.0000 AC.; ABS: 141 SUR: F GARCIA 23.5000 AC.

Zoning: ETJ **Overlay:** N/A **Future Land Use:** Rural Residential

MEETING COMMENTS:

1. Fire Department have any specific needs or requirements for this site for approval.
 - IFC Appendix D
 - 2015 IFC, unless 2021 adopted prior to beginning of project.
 - Enough room for two access points
 - Adequate fire flow needed
 - There's 5 foot building setbacks on sides, technically so 10 feet in between the houses, but once you do that you need to start fire blocking all your soffits.
2. Parkland Fees/ Requirements in the ETJ.
 - 8% of total tract, no more than 60% in floodplain
 - Or pay fee in lieu
 - Refer to UDC Section 16.2(2) for Land Dedication Guidelines
 - Refer to 16.3 Criteria for Contributions in Lieu of Parkland
 - Refer to Article 16 in UDC for full Parkland Dedication requirements
3. Access to the Neill tract
 - See fire comments
4. Drainage requirements
 - Drainage must be entirely on site, no drainage in the ROW.
 - 80% discharge pre-project conditions
 - Ordinance 1352, the City of Cibolo adopted Atlas 14.
 - Check draft floodplain viewer from SARA, but may too far east.
 - Contact Chris Otto cotto@cibolotx.gov
5. ROW Dedication needed for Schmoekel Rd?
 - Existing collector - 80'
6. Lot requirements/options of the ETJ.
 - No minimum lot design standards outside City Limits
7. Street Requirements
 - ROW dedication for Schmoekel?
 - 80' collector on MTP
 - 40' from center of the road
 - 15' dedication
8. Submittal Process:

NOTE: This meeting is for informational purpose only. Any preliminary analysis provided by staff during this meeting does not constitute a formal review of the project, imply subsequent approval, nor preclude future comments. It is the responsibility of the applicant to read and comply with all applicable ordinances and requirements in effect on the submittal date.

The notes and comments provided at this meeting may be valid for six (6) months. Because existing site conditions and code requirements may change, you may need to discuss your proposed project with City staff should you submit an application after this 6-month period. Future meetings may be needed for subsequent applications.



1. Land Study: required for phased subdivision development
 - Follows Plat submittal calendar
 - Submit through MyGovernmentOnline portal
2. Preliminary Plat:
 - Follows Plat submittal calendar
 - Submit through MyGovernmentOnline portal
 - Reviewed by Planning, Engineering, Public Works and Fire
 - Considered by Planning and Zoning Commission and City Council
 - City will route to Guadalupe County for review
3. Construction Plans
 - Submit after Preliminary Plat approval
 - Submit anytime through MyGovernmentOnline portal
 - Reviewed by Public Works and Engineering
 - Applicant responsible for submitting directly to Guadalupe County
4. Final Plat
 - Follows Plat submittal calendar
 - Submit through MyGovernmentOnline portal
 - Reviewed by Planning, Engineering, Public Works and Fire
 - Considered by Planning and Zoning Commission and City Council
 - City will route to Guadalupe County for review
 - Construction Plan approval required prior to Final Plat approval

Applicable Development and Zoning Standards:

Overall development standards are outlined in the [UDC](#) sections listed below. However, please note this is not an all-inclusive list and that other sections of the UDC may apply to your project:

*denotes items explicitly discussed during the meeting. Please note that other sections may still apply.

- Lot Design Standards – Sec. 14.1*
- Article 20 Subdivision Regulations*
- Tree Preservation requirements – Sec 17.2
- Parkland Requirements – Sec 16*
- Sidewalk Requirements – Sec. 18.17
 - *Sidewalks shall be required along both sides of all streets throughout the City, except along Interstate Highways 35 and 10. All lots must provide access to a concrete sidewalk.*

Required Applications:

For the proposed project, the following development applications are required and thus must be submitted for review and approval (in the order identified below):

Notice: All applications may be submitted via [MGO Connect!](#)

- [Land Study](#)
- [Preliminary Plat](#)
- [Final Plat](#)

Other Plans or Policies:

- [Development Guide](#)

NOTE: This meeting is for informational purpose only. Any preliminary analysis provided by staff during this meeting does not constitute a formal review of the project, imply subsequent approval, nor preclude future comments. It is the responsibility of the applicant to read and comply with all applicable ordinances and requirements in effect on the submittal date.

The notes and comments provided at this meeting may be valid for six (6) months. Because existing site conditions and code requirements may change, you may need to discuss your proposed project with City staff should you submit an application after this 6-month period. Future meetings may be needed for subsequent applications.



- [Platting Guide](#)
- [Sign Guide](#)

QUESTIONS REQUIRING FOLLOW-UP:

1. [Click here to enter text.](#)
-

NOTES COMPLETED BY:

| | | | | |
|-------------------------------------|----------------|-----------------------------|--------------------------|----------------------|
| <input type="checkbox"/> | Susana Huerta | Assistant Planning Director | (210) 658-9900 x 1041 | shuerta@cibolotx.gov |
| <input checked="" type="checkbox"/> | Grant Fore | Planner | (210) 658-9900 x 1048 | gfore@cibolotx.gov |
| <input type="checkbox"/> | Lindsey Walker | Planner | (210) 658-9900 x 1040 | lwalker@cibolotx.gov |

MEETING ATTENDEES:

City Staff:

- Susana Huerta – Assistant Planning Director
- Grant Fore – Planner II
- Lindsey Walker – Planner I
- Natalie Santos – Planning Tech
- Devon Wilson – Executive Assistant, Planning
- Chris Otto – City Engineer
- Matt Hanson – City Building Official
- Joseph Nevil – Fire Inspector
- Jacob Parsons, Assistant Public Works Director

Applicants:

- Nick Gower-LJA
- Priscilla Flores-LJA
- Eric Bueno-KB Homes
- Jason Townsley-KB Homes
- Daniel Phife-KB Homes
- Jessenia Cavazos-KB Homes
- Ryan Bernhard-KB Homes
- Sean Miller-KB Homes

NOTE: This meeting is for informational purpose only. Any preliminary analysis provided by staff during this meeting does not constitute a formal review of the project, imply subsequent approval, nor preclude future comments. It is the responsibility of the applicant to read and comply with all applicable ordinances and requirements in effect on the submittal date.

The notes and comments provided at this meeting may be valid for six (6) months. Because existing site conditions and code requirements may change, you may need to discuss your proposed project with City staff should you submit an application after this 6-month period. Future meetings may be needed for subsequent applications.

APPENDIX 3.12

SUBMITTAL CHECKLIST

Cibolo Land Study Checklist

- Land Study
 - Existing Use and Conditions Plans
 - Proposed Use and Development Plans
 - Preliminary Engineering Report
 - Traffic Impact Analysis
 - Preliminary Plat
- Preliminary Utility Plans
- Tree Survey
- Application Form
- Easement Agreements if any
- Certificate or Letter of Property Ownership?
- Non-refundable Check
- Certificate of Paid Taxes
- Letters of Certification

“4. A Land Study may be submitted for review concurrently with a preliminary plat application” (pg366)

An approved Land Study shall be valid for a period of **5** years

November 4, 2024

On behalf of the:

City of Cibolo
Attn: Grant Fore
200 S. Main Street
Cibolo, Texas 78108



Re: Land Study Review
Neill Subdivision (LS-24-02)

Mr. Fore,

Colliers Engineering & Design has completed its review of the referenced Land Study and has the following comments:

General Note -

1. Please include as part of your resubmittal a comment response letter addressing all comments.

Sheet 1.1 -

1. Please confirm the number of residential lots, as the application states 337 while 335 is shown in table.
2. Update Incorrect acreage to "0.75 Acres".
3. Please note that a future temporary turn around may be required in these area during the platting / construction plan stage True for any proposed dead end street serving more than one lot per side.
4. Please update city limit line to be black and dashed.
5. An Existing Conditions land use plan sheet must be provided separately from Report. This sheet must show all required items listed in section 20.3.2.b of the Current 2024 UDC.
6. A proposed/existing vehicular and pedestrian circulation plan must be provided separately from the report for the property.
7. Please provide notes listing the required items found within Section 20.3.2.B of the Current 2024 UDC.
8. Additional traffic comments are possible as a result of a TIA scoping meeting that is required.
9. A portion of the property contains flood plain. A floodplain development permit will be required as part of the development process.

Sheet 1.2-

1. Please confirm the number of residential lots, as the application states 337 while 335 is shown in table.
2. Update Incorrect acreage to "0.75 Acres".
3. Please update city limit line to be black and dashed.

Sheet 1.3-

1. Please confirm the number of residential lots, as the application states 337 while 335 is shown in table.
2. Update Incorrect acreage to "0.75 Acres".
3. Please update city limit line to be black and dashed.
4. Trees are stated to not exist within the project limits. Aerial shows a line of trees along the south side of the property along the property line please confirm.

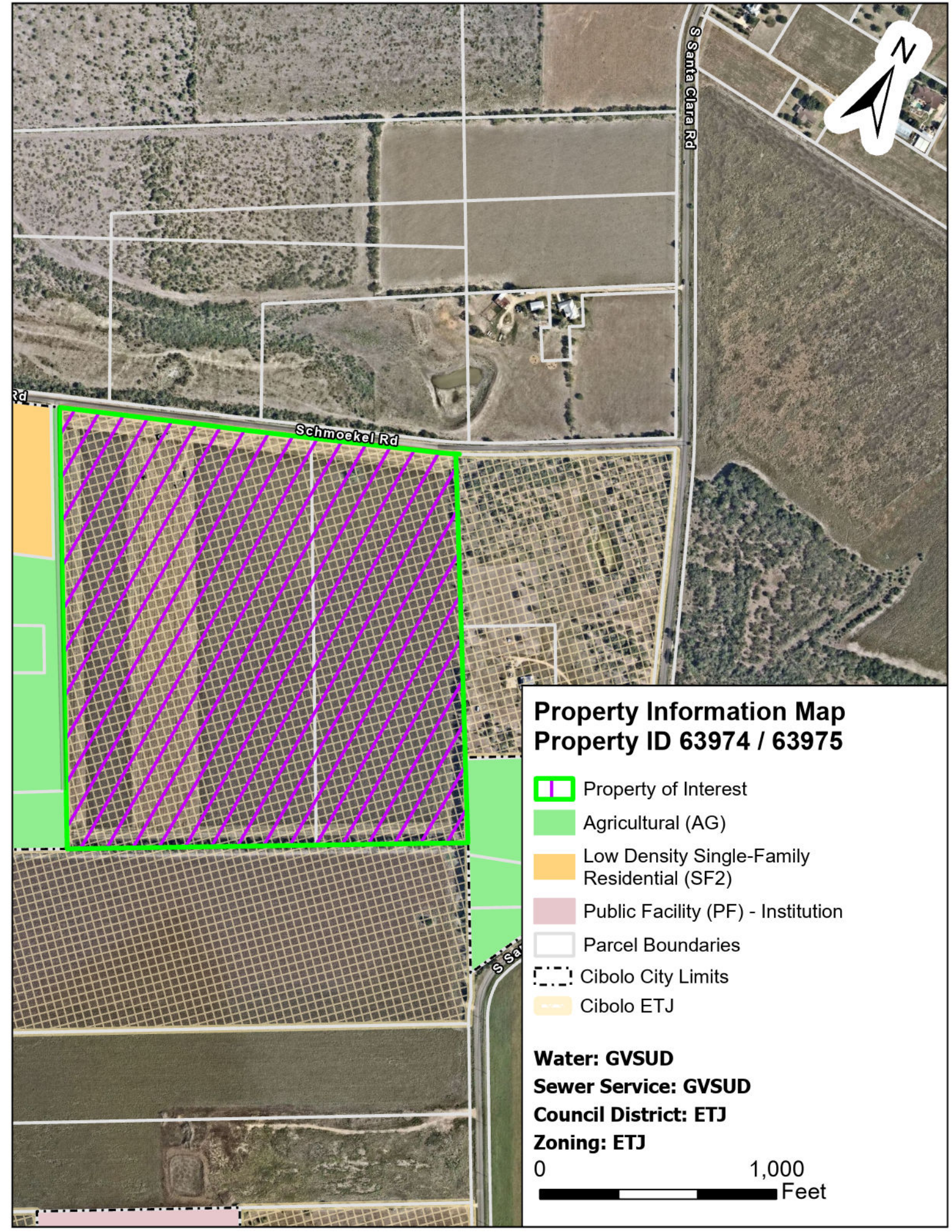
Our review of the project does not relieve or release the Engineer of Record or Surveyor of Record from complying with any and all the requirements of the local, state, and federal rules and regulations or guidelines impacting this project. If you require additional information, please contact our office.

Sincerely,










Andy Carruth, P.E.

Plan Reviewer for the City of Cibolo



**Property Information Map
Property ID 63974 / 63975**

-  Property of Interest
-  Agricultural (AG)
-  Low Density Single-Family Residential (SF2)
-  Public Facility (PF) - Institution
-  Parcel Boundaries
-  Cibolo City Limits
-  Cibolo ETJ

Water: GVSUD
Sewer Service: GVSUD
Council District: ETJ
Zoning: ETJ





Planning and Zoning Commission Staff Report

E. Discussion/Action regarding a proposed amendment to the Land Study of the Steele Creek subdivision.

| Meeting | Agenda Group |
|---------------------------------------|-----------------------------------|
| Wednesday, November 13, 2024, 6:30 PM | Discussion/Action Items Item: 8E. |

| From |
|------------------------|
| Grant Fore, Planner II |

Planning & Zoning Commission Action: Discussion/Action regarding the above referenced petition

PROPERTY INFORMATION:

Project Name: LS-24-03
Owner: Continental Homes of Texas
Representative: DR Horton
Area: 411.584 acres
Location: East of Main Street, South of FM 1103
Council District: 7
Zoning ([map](#)): SF-2, SF-5, and SF-6
Proposed Use: Single-Family Residential

FINDINGS/CURRENT ACTIVITY:

Per Unified Development Code (UDC) Article 20.3.2., 'land Study', The first or introductory plan of a proposed subdivision, in such case where the developer intends to develop and record only an individual portion to such subdivision, and which exhibits the proposed development of the balance of the subdivision. The Master Plan is synonymous with Land Study and General Plan

On June 26, 2018, the City of Cibolo City Council approved the Land Study of the Steele Creek Subdivision According to the applicant's letter included as an attachment to the staff report, the intent of this amendment request is to accommodate the revision to the City's Master Thoroughfare Plan ("MTP") and to provide for larger lot sizes.

The proposed amendments to the approved Land Study are as follows:

- **Revises the land plan, platting order, acreage, and lot count for units 4A, 4B, 6, 7, 9, 10.**

| Unit | Platting Order | Acreage | Lot Count |
|------|----------------|------------------|---------------|
| 4A | 2018: 3 | 2018: 14.74 | 2018: 65 |
| | Amendment: 9 | Amendment: 15.10 | Amendment: 59 |

| | | | |
|----|------------------------------|------------------------------------|------------------------------------|
| 4B | 2018: 9 Amendment: 11 | 2018: 22.70 Amendment: 27.69 | 2018: 110 Amendment: 117 |
| 6 | 2018: 14 Amendment: 7 | 2018: 19.43 Amendment: 30.22 | 2018: 95 Amendment: 111 |
| 7 | 2018: 15 Amendment: 12 | 2018: 30 Amendment: 3 | 2018: 5.78 Amendment: 18.19 |
| 9 | 2018: 11 Amendment: 10 | 2018: 40 Amendment: 41 | 2018: 21.41 Amendment: 70.23 |
| 10 | 2018: 6 Amendment: 13 | 2018: 88 Amendment: 40 | 2018: 7.85 Amendment: 19.73 |

- **Revises the land use and lot size of Unit 10 from 25' townhome lots to 60' mixed density residential lots.**
- **Removes 150' Right-of -Way ("ROW") reservation and proposes parkland dedication for a portion of the removed ROW.**
- **Removes the western 80' ROW proposed collector road and ROW dedication.**
- **Adds the preliminary location of proposed North-South collector road according to the MTP.**
- **Updates the land study exhibit to indicate the development is currently under construction and provided the recording document number for units that are already recorded.**
- **Removes the 12" water connection to the existing 16" water main on Tolle Road.**
- **Revises the Lance Crossing alignment and ROW width.**

STAFF RECOMMENDATION:

Staff and the City Engineer reviewed the proposed amendment to the Land Study. Per the memo attached, there are comments pending. Therefore, Staff recommends DENIAL of the Land Study amendment at this time.

Attachments

[Application and Land Study Submittal](#)

[2018 Approved Land Study](#)

[City Engineer Letter](#)

[City Comments](#)

[Property Map](#)

 KILLEN, GRIFFIN & FARRIMOND
ATTORNEYS AT LAW

October 14, 2024

Kelsee Jordan Lee
Planning & Economic Development Director
201 W Loop 539
Cibolo, TX 78108

RE: Land Use Study Amendment for the Steele Creek Subdivision, Approximately 411 Acres of Property Generally Located between FM 78 and FM 1103 and Tolle Road (“Property”) within the City of Cibolo (“City”), Texas.

Dear Director Jordan Lee,

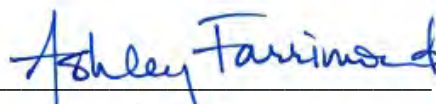
Our firm represents DR Horton, the developer of the Steele Creek Subdivision. On June 26, 2018, the City of Cibolo City Council approved the Land Study of the Steele Creek Subdivision. The intent of this amendment request is to accommodate the revision to the City’s Master Thoroughfare Plan (“MTP”) and to provide for larger lot sizes. In order to allow for the changes to the project, we respectfully submit this application for an amendment to the approved Land Use Study for the Steele Creek Subdivision. The amendment requests the following substantive changes to the approved Land Study for the Steele Creek Subdivision:

- Revises the land plan, platting order, acreage, and lot count for units 4A, 4B, 6, 7, 9, 10.
- Revises the land use and lot size of Unit 10 from 25’ townhome lots to 60’ mixed density residential lots.
- Removes 150’ Right-of -Way (“ROW”) reservation and proposes parkland dedication for a portion of the removed ROW.
- Removes the western 80’ ROW proposed collector road and ROW dedication.
- Adds the preliminary location of proposed North-South collector road according to the MTP.
- Updates the land study exhibit to indicate the development is currently under construction and provided the recording document number for units that are already recorded.
- Removes the 12” water connection to the existing 16” water main on Tolle Road.
- Revises the Lance Crossing alignment and ROW width.

If there is any additional information or documentation that we can provide to assist in your review of this application, please do not hesitate to contact me at (210) 960-2750 or via email at ashley@kgftx.com.

Sincerely,

KILLEN, GRIFFIN & FARRIMOND, PLLC

By: 
Ashley Farrimond



City of Cibolo

Planning Department
201 Loop 539 W/P.O. Box 826
Cibolo, TX 78108
Phone: (210) 658 - 9900

UNIVERSAL APPLICATION LAND STUDY/MIXED USE PLAN

Please fill out this form completely, supplying all necessary information and documentation to support your request. *Please use a separate application for each submittal.* Your application will not be accepted until the application is completed and required information provided.

Project Name: Steele Creek Subdivsion

Total Acres: Approx. 411.584 Survey Name: Jeronimo Leal and David Miller Abstract No.: 226

Project Location (address): east of N. Main Street, south of FM 1103, north of FM 78

Current Zoning: SF-1, SF-2 and SF-3 Overlay: None Old Town FM 78

Proposed Zoning: SF-1, SF-2 and SF-3 # of Lots: _____ # of Units: _____

Please Choose One: Single-Family Multi-Family Commercial Industrial
 Other _____

Current Use: Single Family Total Proposed Square Footage: Approx. 17,928,599.04

Proposed Use: Single Family (Commercial/Industrial only)

Applicant Information:

Property Owner Name: Continental Homes of Texas, L.P.

Address: 10101 Reunion Place, Suite 250 City: San Antonio

State: Texas Zip Code: 78216 Phone: 210-960-2750

Email: ashley@kgftx.com Fax: _____

*Applicant (if different than Owner): DR Horton

* Letter of Authorizaton required

Address: 10101 Reunion Place, Suite 250 City: San Antonio

State: Texas Zip Code: 78216 Phone: 210-960-2750

Email: ashley@kgftx.com Fax: _____

Representative: Killen, Griffin & Farrimond, PLLC (c/o Ashley Farrimond)

Address: 10101 Reunion Place, Suite 250 City: San Antonio

State: Texas Zip Code: 78216 Phone: 210-960-2750

Email: ashley@kgftx.com Fax: _____

Authorization: By signing this application, you hereby grant Staff access to your property to perform work related to your application.

Ashley Farrimond
Owner or Representative's Signature

Ashley Farrimond, Killen, Griffin & Farrimond, PLLC
Typed / Printed Name

State of Texas

County of Bexar

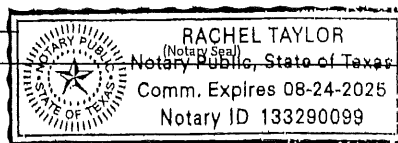
Before me, Rachel Taylor, on this day personally appeared
Name of Notary Public

Ashley Farrimond, to be the person(s) who is/are subscribed to the
Name of signer(s)

foregoing instrument and acknowledge to me that he/she/they executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 14 day of October 2024

Rachel Taylor
Notary Public Signature



| |
|-------------------------|
| City of Cibolo Use Only |
| Total Fees |
| Payment Method |
| Submittal Date |
| Accepted by |
| Case Number |

| Yes | No | N/A | Checklist |
|--|--------------------------|--------------------------|---|
| <i>Form and Contents per UDC Article 20, Sections 20.3.2 - Land Study/Master Plan/Mixed Use Concept Plan</i> | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | One (1) hard copy and one (1) .pdf copy of the Land Study encompassing all land owned by the subdivider. The overall concept shall be in compliance with all applicable provisions of UDC Article 20.3.2. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | One (1) hard copy and one (1) .pdf copy of the preliminary utility plans. Topographic contours with intervals of not more than five (5) feet shall be shown on the Land Study. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | One (1) hard copy and one (1) .pdf copy of a tree survey showing all trees on the site, per the requirements of this UDC. |
| | | | Completed Application Form and Narrative of Application Request |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A certificate or letter from a title guaranty company or from an attorney duly licensed to practice law in the State of Texas certifying the following concerning title to the land. <i>A statement of records examined and date of examination; description of the property in question by metes and bounds; name of the fee owner as of the date of examination and the date, file number, and volume and page of the recording of deed involved; the name of any lien holder together with the date of filing and volume and page of such lien; and a general description of any easements or fee strips granted, along with the file number, date of filing, and volume and page of recording.</i> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A non-refundable check payable to the city in the amount specified within the Fee Schedule of the city, as amended. *Land Study: \$1,250 + \$10/acre+ See <u>Fee Schedule</u> for any other applicable fees Mixed Use Concept Plan: \$1,500.00 Amendment to: Land Study, Master Plan, Mixed Use Concept Plan \$500.00 <i>*Applicant may be responsible to pay additional fees of actual costs for any application associated with review or pre-development conference requiring consultation with City Consultants (such as contracted engineers, planners, attorneys, architects, plan reviews, inspectors, etc.)</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | In cases where public streets, alleys, or easements are proposed to be platted across private easement or fee strips, a copy of the Instrument establishing such private easement or fee strip shall be submitted. Where a private easement has no defined location, agreement on a defined easement must be reached before submission of Final Plat. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Provide a certification showing that all taxes have been paid on the subject property and that no delinquent taxes exist against the property. The applicant shall also file proof of ownership documentation |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Project applicable LOC approvals per Utilities and outside review entities (i.e. TxDot, Guadalupe County) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | As necessary, depending upon the scope and nature of the Land Study, the city will require the filings of a Preliminary Engineering Report that provides a general and broad description of the following issues, as may be pertinent to the project; an assessment of how the Land Study will conform to the Future Land Use Map, Future Thoroughfare Plan, Parks Plan within approved Master Plan and other applicable provisions of this UDC, and identify how the project will tie into existing and/or proposed drainage facilities and utilities |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | The Land Study shall identify which level of Traffic Impact Analysis will be required and a proposed scope of the TIA to be submitted with the Preliminary Plat and indicate how the developer intends to comply with the Parkland Dedication requirements if a residential development is proposed |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | The city Engineer and city Planner may require additional information as necessary to demonstrate compliance with this UDC and city council policies |

By signing below, I do hereby attest that the information contained in this application is true, accurate and complete.


Signature

Ashley Farrimond

Printed Signature

10.14.24

Date

Killen, Griffin & Farrimond, PLLC (Rep.)

Company

Project: _____

Land Study/Mixed Use Plan

City of Cibolo Use Only

Complete Application

Incomplete Application

Accepted By: _____

Date: _____

Land Study

| ADJACENT PROPERTY SUMMARY | | | |
|---------------------------|--|----------------------|---------|
| PROPERTY | OWNER | VOLUME | PAGE |
| 4 | TRAN KHIEM THANH | 2021-99019339 | |
| 5 | TRAN KHIEM THANH | 2021-99019339 | |
| 6 | KEENAN J MOORE | 2633 | 111 |
| 7 | AGUILERA HECTOR | 202099032644 | |
| 8 | OURHONCAE CANNON & MORGAN GRACE LIND SEB | 2617 | 621 |
| 9 | CITY OF CIBOLO | 7 | 209-210 |
| 10 | BRADLEY MCBRIDE JR | 2015008072 | |
| 11 | LEAL MATTHEW VINCENT & AMANDA BRADY LEAL | 202199033005 | |
| 12 | SFR TEXAS ACQUISITION 3 LLC | 202299020039 | |
| 13 | SOKNARA BUN KUCH | 2014017088 | |
| 14 | ALJON RAZON GIANAN | 2596 | 1014 |
| 15 | INDUS MONTAGES TX LLC | 202299019665 | |
| 16 | JAY M LOMHER | 3025 | 400 |
| 17 | JOSEPH & DAWN R COLLINS | 2629 | 429 |
| 18 | ABRAMS CAMILLE | 201999016219 | |
| 19 | KHAPP JARROD REED & KRISTINA ANN | 202299004454 | |
| 20 | VALANTE JANSEN & JACQUELYN CLAZA | 202199014298 | |
| 21 | GABRIEL A AFRI N ROSAS | 4067 | 790 |
| 22 | JAMES E SANCHEZ & GABRIELA JIMENEZ SANCHEZ | 2017017482 | |
| 23 | MIGUEL & KATHIA A FLORES | 2737 | 292 |
| 24 | DEMARCUS JACKSON | 2821 | 917 |
| 25 | RALPH LOGAN & MICHELLE BROWN | 2845 | 569 |
| 26 | ROY SAIZ JR & NGOC-DIEM THI DUONG | 2017020554 | |
| 27 | CADY CHRISTOPHER AND RACHEL M | 201899021588 | |
| 28 | SCOTT A SIMPSON | 2747 | 676 |
| 29 | ANESIM & RHONDA TUUFULI | 2526 | 158 |
| 30 | FLICKINGER LEVI & JESSICA | 202299021973 | |
| 31 | GREEN CARMEN & DAVID CLAY | 202199029919 | |
| 32 | IVORY CHARLES ASHBY | 2689 | 736 |
| 33 | PRITTERS THIRTYN'S RUSSELL PRITTERS III | 202299029281 | |
| 34 | WALTERS SHANE | 202099023515 | |
| 35 | WESTENDORF ALEX THOMAS | 202299035686 | |
| 36 | ANDREW FOX | 2016009439 | |
| 37 | SFR PROPERTY OWNER 3 LLC | 202299015379 | |
| 38 | GREGORY & MONIQUE A MCCLAIN | 19295 | 703 |
| 39 | RICARDO & DELMA SANTA CRUZ | 2286 | 150 |
| 40 | WANDER JUSTIN | 202299000549 | |
| 41 | TESCH JOSHUA & BRITTANY | 202299017554 | |
| 42 | THOMAS M & LISA L HAAG | 2469 | 275 |
| 43 | VERONICA LOPEZ | 2400 | 760 |
| 44 | LIZBETH ANGUIANO | 2427 | 594 |
| 45 | ALVA ALAN | 202199022702 | |
| 46 | DIRKES LAURANCE | 202299028413 | |
| 47 | MULTIPLE OWNERS | | |
| 48 | STEPHEN & DEENA KILPATRICK | 2435 | 451 |
| 49 | DINO & MARIA LAURENTI | 2427 | 971 |
| 50 | JOHN PATRICK & TONYA ROSE MARS | 2018000201 | |
| 51 | JUAN & DANIELLE VILLAREAL | 2637 | 963 |
| 52 | HESTER ANTHONY REY & MELISSA AREND | 202199031293 | |
| 53 | VERTULO LAND ASSET 4 LLC | 2022990193410 | |
| 54 | CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST OF THE LATTER DAY SAINTS | 3175 | 558 |
| 55 | 30 ASSOCIATES LTD | 2015017573 | |
| 57 | LATIMER KATHA RENEE & RICK DOYLE LATIMER | 201999017337 | |
| 62 | TOLLE FAMILY FARM LLC | 202499012878 | |
| 63 | JAMES A & MISTY HESTER | 2129 | 982 |
| 64 | JAMES A HESTER II | 4006 | 225 |
| 65 | MARY J HESTER | 556 | 783 |
| 66 | JAMES A HESTER ESTATE | DEATH CERT - 2170184 | |
| 67 | JAMES A HESTER ESTATE | DEATH CERT - 2170184 | |
| 68 | MALCOLM MACLAUCHLAN | 2619 | 174 |
| 69 | GONZALEZ WALBERTO | 202299025217 | |
| 70 | MALCOLM H MACLAUCHLAN | 2940 | 846 |
| 75 | ESTATE OF CHARLES C TROYER | DEATH CERTIFICATE | |
| 76 | COUNTRY LANE MOBILE ESTATES, LLC | 2015013580 | |
| 78 | MGT PROPERTIES LLC | 201999005215 | |
| 79 | UNVARYING QUALITY | 202099037072 | |
| 80 | DAVID W & LAUREL L CALE | 2626 | 872 |
| 83 | GPM CITX001 LLC | 202199038702 | |
| 84 | CENTI PAUL J & ERIKA | 201899022809 | |
| 85 | CENTI PAUL J & ERIKA | 201899022809 | |
| 86 | CITY OF CIBOLO | 1262 | 712 |

| UNIT | LAND USE TYPE | PLATTING ORDER | MAX. LOT COVERAGE | MAX. DENSITY | LOT COUNT | ACREAGE |
|------|----------------------------------|----------------|-------------------|--------------|------------|---------------|
| 1 | MEDIUM DENSITY RESIDENTIAL (SF2) | 2 | 50% | 4 | 88 | 34.50 |
| 2 | MIXED DENSITY RESIDENTIAL (SF3) | 1 | 60% | 5.5 | 86 | 53.17 |
| 3A | MIXED DENSITY RESIDENTIAL (SF3) | 3 | 60% | 5.5 | 129 | 36.81 |
| 3B | MIXED DENSITY RESIDENTIAL (SF3) | 4 | 60% | 5.5 | 103 | 32.42 |
| 4A | MIXED DENSITY RESIDENTIAL (SF3) | 9 | 60% | 5.5 | 59 | 15.10 |
| 4B | MIXED DENSITY RESIDENTIAL (SF3) | 11 | 60% | 5.5 | 117 | 27.69 |
| 5 | MIXED DENSITY RESIDENTIAL (SF3) | 5 | 60% | 5.5 | 59 | 15.61 |
| 6 | MIXED DENSITY RESIDENTIAL (SF3) | 7 | 60% | 5.5 | 111 | 30.22 |
| 7 | MIXED DENSITY RESIDENTIAL (SF3) | 12 | 60% | 5.5 | 3 | 18.19 |
| 8 | MEDIUM DENSITY RESIDENTIAL (SF2) | 6 | 50% | 4 | 83 | 40.45 |
| 9 | LOW DENSITY RESIDENTIAL (SF1) | 10 | 35% | 2 | 41 | 70.23 |
| 10 | MIXED DENSITY RESIDENTIAL (SF3) | 13 | 60% | 5.5 | 40 | 19.73 |
| | LANCE CROSSING | 8 | N/A | N/A | 0 | 2.43 |
| | TOTAL | | | | 919 | 396.55 |

LEGAL DESCRIPTION
 411.584 ACRES OF LAND BEING OUT OF THE GERONIMO LEAL SURVEY NO. 85, ABSTRACT NO. 210 AND THE DAVID MILLER SURVEY NO. 87, ABSTRACT NO. 226, IN THE CITY OF CIBOLO, GUADALUPE COUNTY, TEXAS, AND BEING A PORTION OF THAT CERTAIN CALLED 310.989 ACRES OF LAND, AS DESCRIBED IN VOLUME 1302, PAGES 593-596, OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS AND A PORTION OF THAT CERTAIN TRACT OF LAND CONVEYED TO JANET SCHUBERT SKINNER, ET AL, AS DESCRIBED IN DOCUMENT NUMBER 2015025575, OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS.

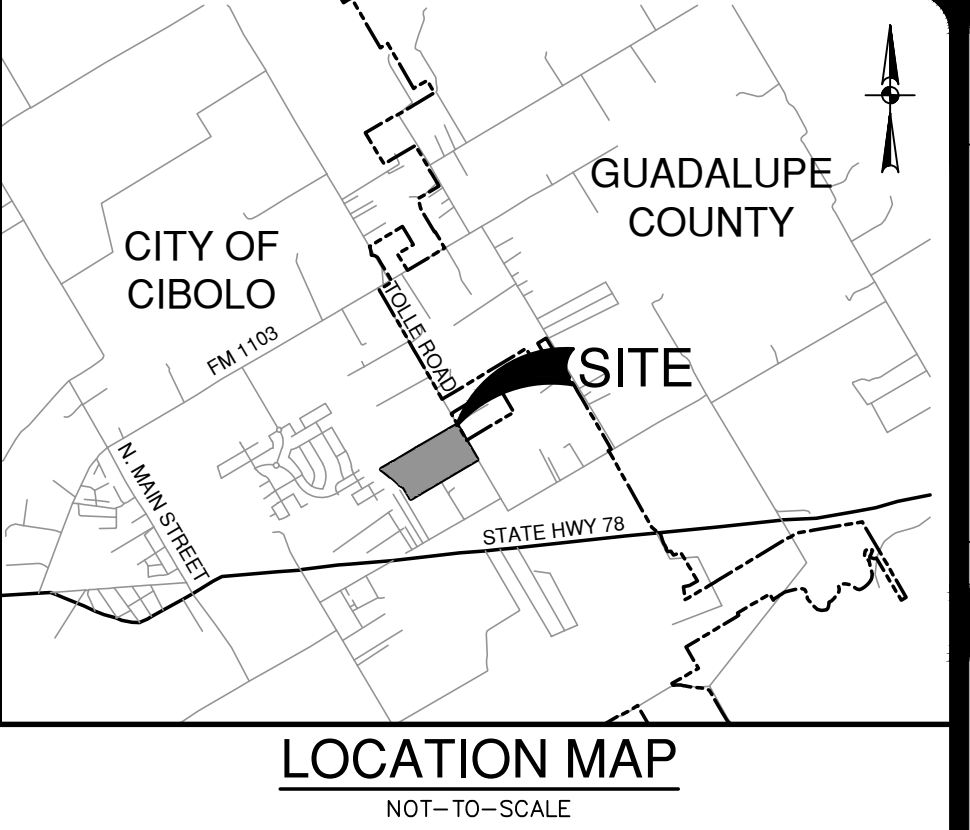
PARKLAND SUMMARY:
PARKLAND SPACE REQUIREMENTS:
 TOTAL PARKLAND DEDICATION FOR THE TRACT SHALL BE A MINIMUM OF 8% OF SINGLE FAMILY AND MULTI-FAMILY USE ACREAGE PER UDC SECTION 16. TOTAL PARKLAND DEDICATION MAY BE MET BY PARKLAND DEDICATION, CASH CONTRIBUTIONS, PARK IMPROVEMENTS, AND/OR OTHER CREDITS AS AGREED TO BY THE DEVELOPER AND THE CITY OF CIBOLO TO BE FURTHER DEFINED IN THE LAND USE STUDY OR DEVELOPMENT AGREEMENT.

REQUIRED PARKLAND SPACE:
 411.584 ACRES X 8% = 32.93 ACRES OF PARKLAND SPACE REQUIRED

PARKLAND SPACE PROVIDED:
 52.05 ACRES

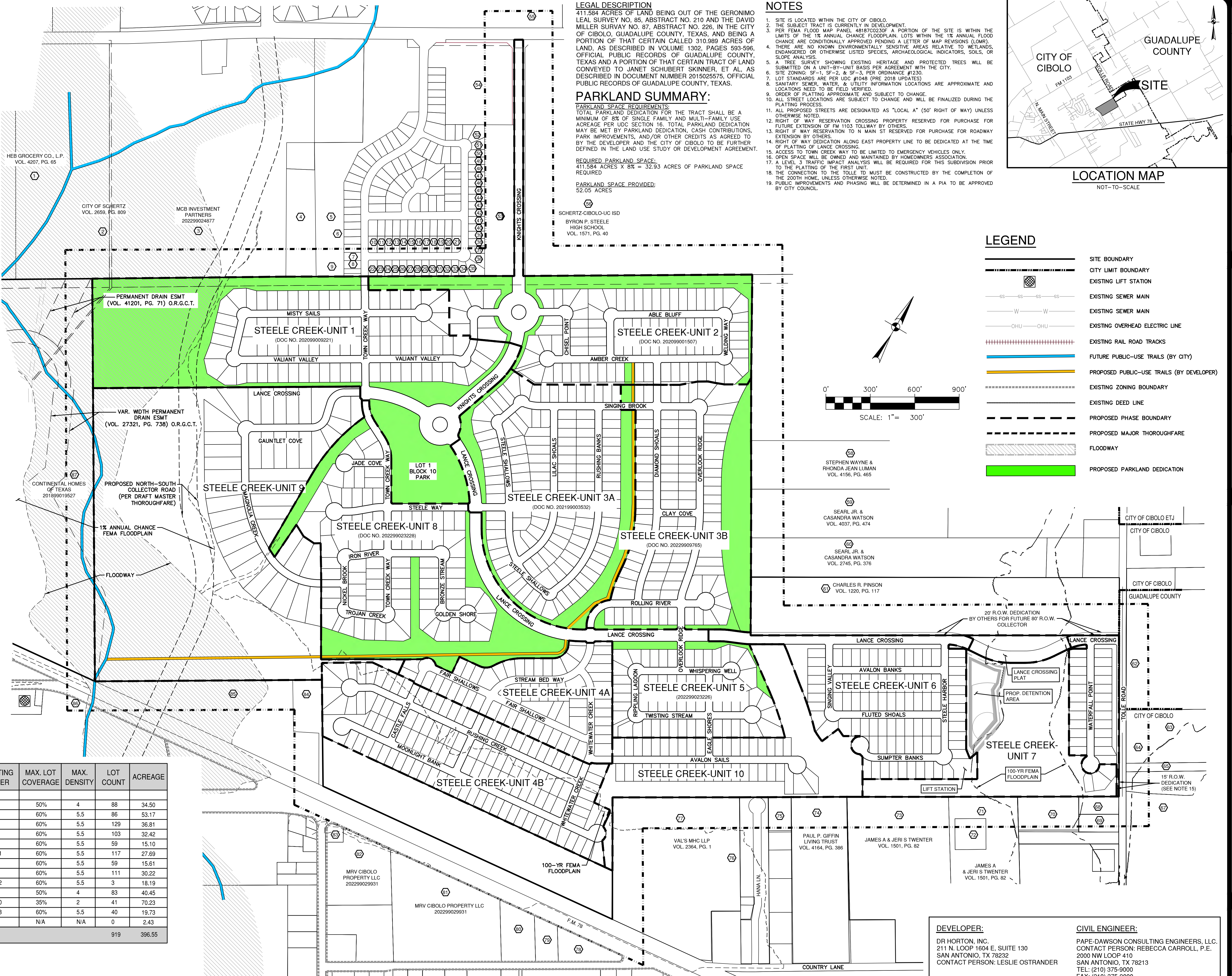
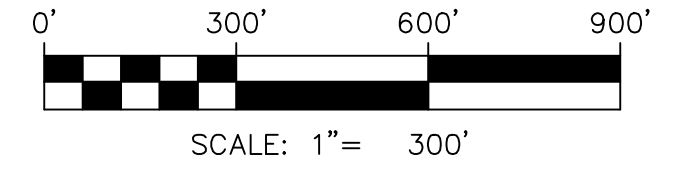
SCHERTZ CIBOLO UC ISD
 BYRON P. STEELE
 HIGH SCHOOL
 VOL. 1571, PG. 40

- NOTES**
- SITE IS LOCATED WITHIN THE CITY OF CIBOLO.
 - THE SUBJECT TRACT IS CURRENTLY IN DEVELOPMENT.
 - PER FEMA FLOOD MAP PANEL 48187C0230F A PORTION OF THE SITE IS WITHIN THE LIMITS OF THE 1% ANNUAL CHANCE FLOODPLAIN. LOTS WITHIN THE 1% ANNUAL FLOOD CHANCE ARE CONDITIONALLY APPROVED PENDING A LETTER OF MAP REVISIONS (LDMR).
 - THERE ARE NO KNOWN ENVIRONMENTALLY SENSITIVE AREAS RELATIVE TO WETLANDS, ENDANGERED OR OTHERWISE LISTED SPECIES, ARCHAEOLOGICAL INDICATORS, SOILS, OR SLOPE ANALYSIS.
 - A TREE SURVEY SHOWING EXISTING HERITAGE AND PROTECTED TREES WILL BE SUBMITTED ON A UNIT-BY-UNIT BASIS PER AGREEMENT WITH THE CITY.
 - SITE ZONING: SF-1, SF-2, & SF-3, PER ORDINANCE #1230.
 - LOT STANDARDS ARE PER UDC #1048 (PRE 2018 UPDATES).
 - SANITARY SEWER, WATER, & UTILITY INFORMATION LOCATIONS ARE APPROXIMATE AND LOCATIONS NEED TO BE FIELD VERIFIED.
 - ORDER OF PLATING APPROXIMATE AND SUBJECT TO CHANGE.
 - ALL STREET LOCATIONS ARE SUBJECT TO CHANGE AND WILL BE FINALIZED DURING THE PLATING PROCESS.
 - ALL PROPOSED STREETS ARE DESIGNATED AS "LOCAL A" (50' RIGHT OF WAY) UNLESS OTHERWISE NOTED.
 - RIGHT OF WAY RESERVATION CROSSING PROPERTY RESERVED FOR PURCHASE FOR FUTURE EXTENSION OF FM 1103 TOLLWAY BY OTHERS.
 - RIGHT IF WAY RESERVATION TO N MAIN ST RESERVED FOR ROADWAY EXTENSION BY OTHERS.
 - RIGHT OF WAY DEDICATION ALONG EAST PROPERTY LINE TO BE DEDICATED AT THE TIME OF PLATING OF LANCE CROSSING.
 - ACCESS TO TOWN CREEK WAY TO BE LIMITED TO EMERGENCY VEHICLES ONLY.
 - OPEN SPACE WILL BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION.
 - A LEVEL 3 TRAFFIC IMPACT ANALYSIS WILL BE REQUIRED FOR THIS SUBDIVISION PRIOR TO THE PLATING OF THE FIRST UNIT.
 - THE CONNECTION TO THE TOLLE MUST BE CONSTRUCTED BY THE COMPLETION OF THE 500TH HOME, UNLESS OTHERWISE NOTED.
 - PUBLIC IMPROVEMENTS AND PHASING WILL BE DETERMINED IN A PIA TO BE APPROVED BY CITY COUNCIL.



LEGEND

| | |
|--|---|
| | SITE BOUNDARY |
| | CITY LIMIT BOUNDARY |
| | EXISTING LIFT STATION |
| | EXISTING SEWER MAIN |
| | EXISTING WATER MAIN |
| | EXISTING OVERHEAD ELECTRIC LINE |
| | EXISTING RAIL ROAD TRACKS |
| | FUTURE PUBLIC-USE TRAILS (BY CITY) |
| | PROPOSED PUBLIC-USE TRAILS (BY DEVELOPER) |
| | EXISTING ZONING BOUNDARY |
| | EXISTING DEED LINE |
| | PROPOSED PHASE BOUNDARY |
| | PROPOSED MAJOR THOROUGHFARE |
| | FLOODWAY |
| | PROPOSED PARKLAND DEDICATION |



DATE

NO. REVISION

PLAT NO.
12629-00

JOB NO.
12629-00

DATE
OCTOBER 2024

DESIGNER
SS

CHECKED
DRAWN SS

SHEET

PAPE-DAWSON ENGINEERS
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1003880

STEELE CREEK
 CIBOLO, TEXAS

LAND STUDY
PROPOSED USE AND DEVELOPMENT

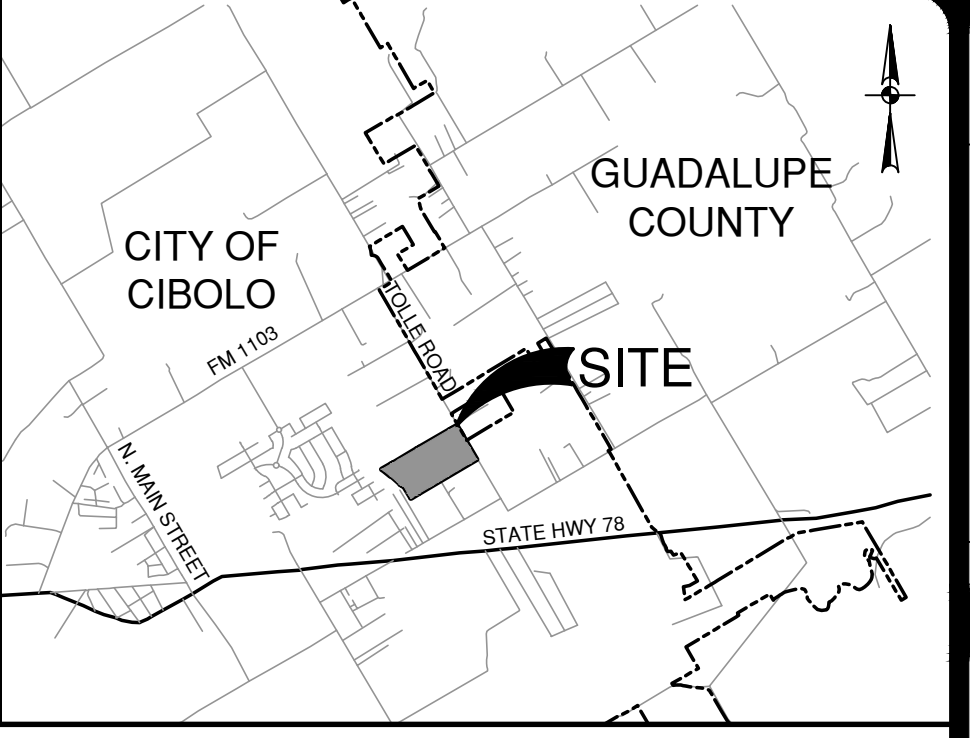
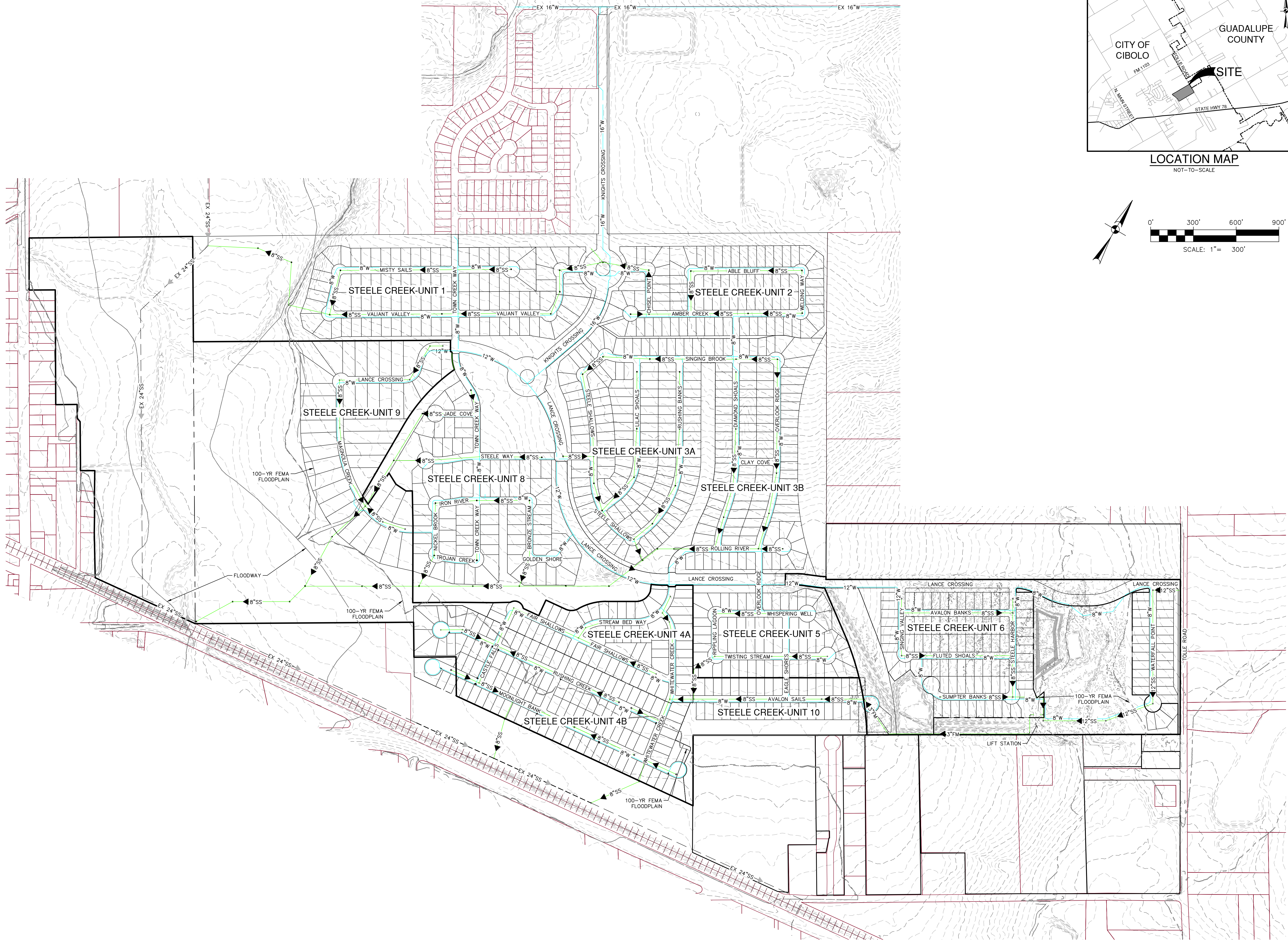
DEVELOPER:
 DR HORTON, INC.
 211 N. LOOP 1604 E, SUITE 130
 SAN ANTONIO, TX 78232
 CONTACT PERSON: LESLIE OSTRANDER

CIVIL ENGINEER:
 PAPE-DAWSON CONSULTING ENGINEERS, L.L.C.
 CONTACT PERSON: REBECCA CARROLL, P.E.
 2000 NW LOOP 410
 SAN ANTONIO, TX 78213
 TEL: (210) 375-9000
 FAX: (210) 375-9000

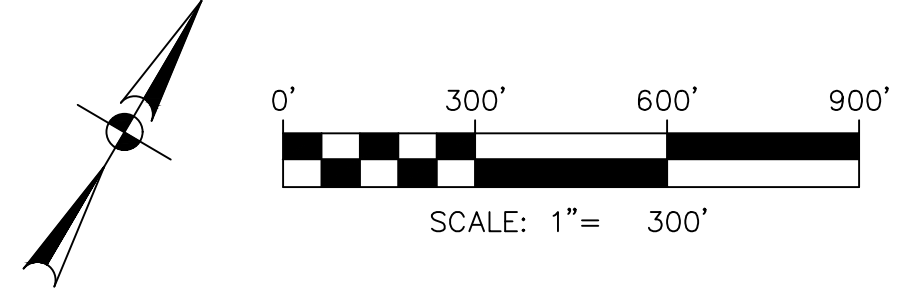
Preliminary Utility Plans

Date: September 28, 2023, 10:55 AM - User ID: esepulveda
 File: P:\26\29\00\Design\Exhibits\2409\001 Utility Plan.dwg

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARD COPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE/UNLESS OTHERWISE NOTED. Imagery © 2016, CAPOCO, Digital Globe, Texas Orthology Program, USDA Farm Service Agency.



LOCATION MAP
NOT-TO-SCALE



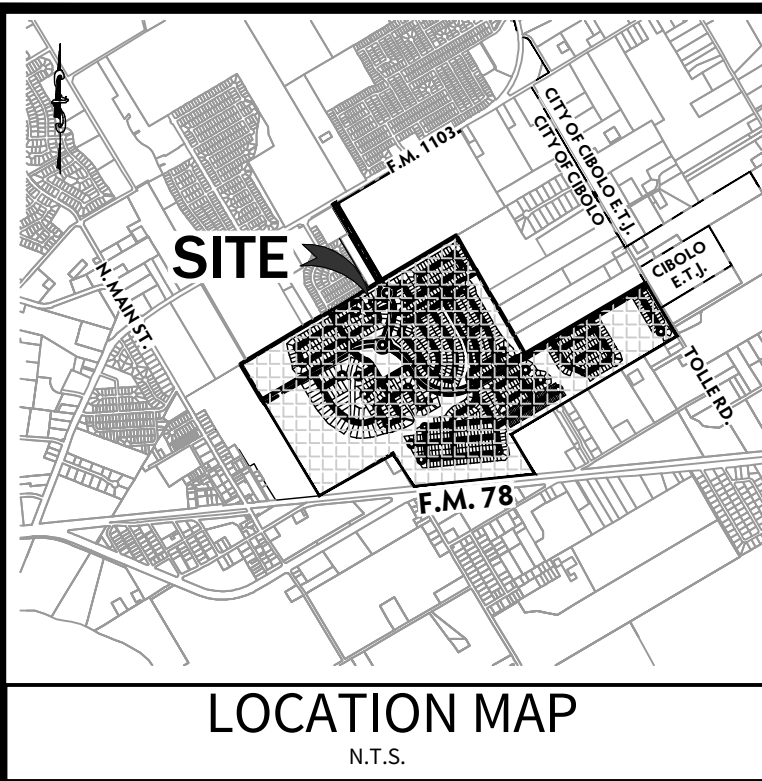
| NO. | REVISION | DATE |
|-----|----------|------|
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PAPE-DAWSON ENGINEERS
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STEELE CREEK
 CIBOLO, TEXAS
 SITE PLAN

| | |
|----------|--------------|
| PLAT NO. | |
| JOB NO. | 12629-00 |
| DATE | OCTOBER 2024 |
| DESIGNER | SS |
| CHECKED | DRAWN SS |
| SHEET | |

Tree Survey



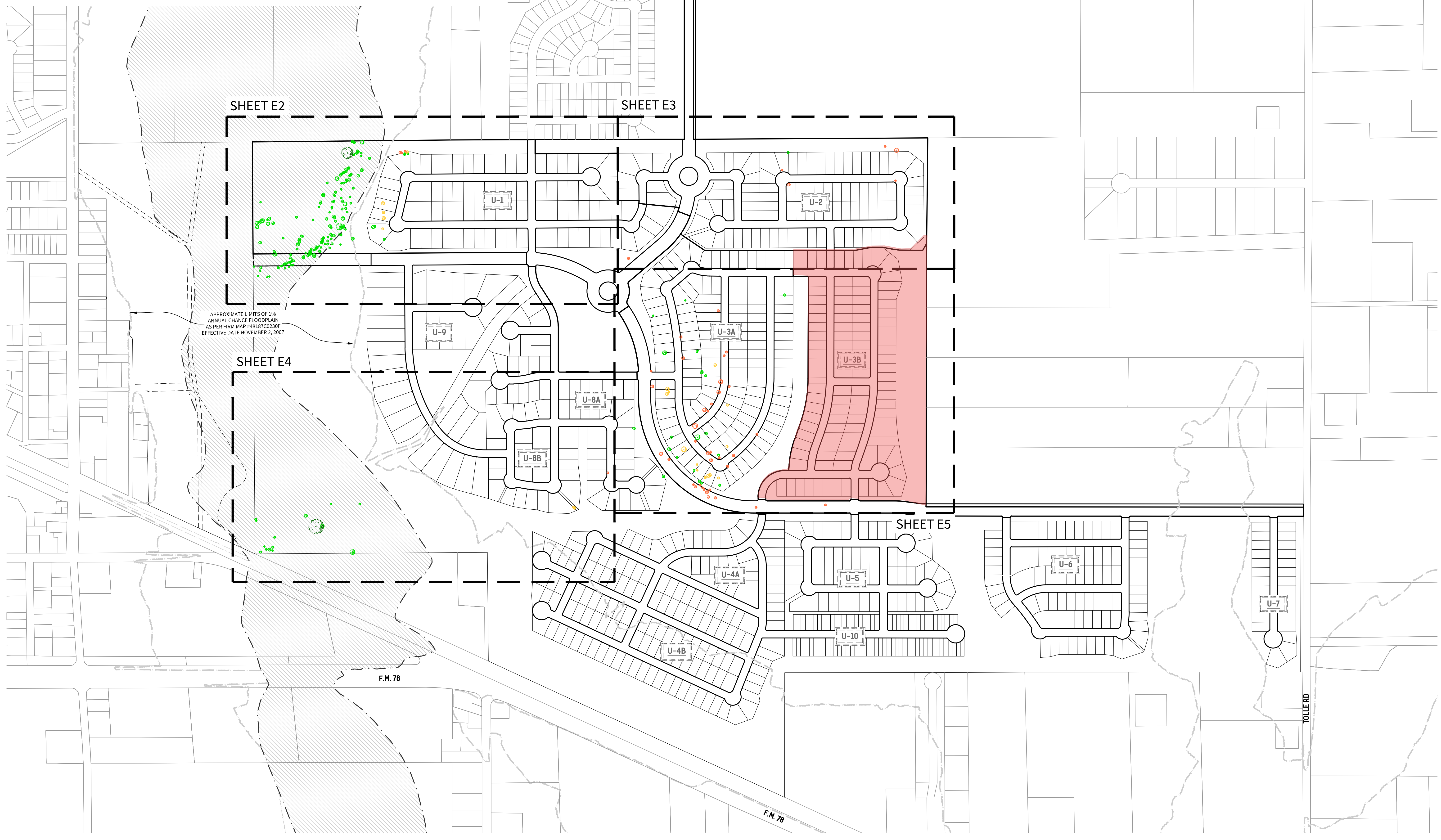
DEVELOPER:
D.R. HORTON, INC.
211 N. LOOP 1604 E, SUITE 130
SAN ANTONIO, TX 78232
CONTACT PERSON: LESLIE OSTRANDER

CIVIL ENGINEER:
CUDE ENGINEERS
CONTACT PERSON: PATRICK MURPHY, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

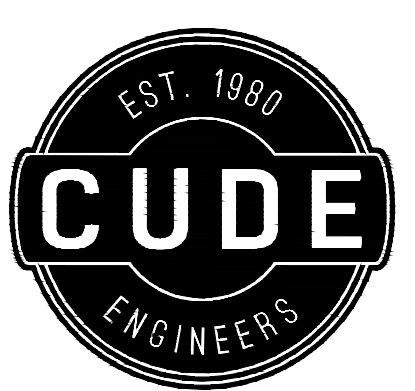
LEGEND

- PROTECTED TREES TO BE PRESERVED
- PROTECTED TREES TO BE REMOVED
- HERITAGE TREE TO BE PRESERVED
- HERITAGE TREE TO BE REMOVED
- EXEMPT TREE

SCALE: 1" = 300'



APPROXIMATE LIMITS OF 1% ANNUAL CHANCE FLOODPLAIN AS PER FIRM MAP #48187C0230F EFFECTIVE DATE NOVEMBER 2, 2007



CUDEENGINEERS.COM
4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112

STEELE CREEK SUBDIVISION
 MASTER TREE PRESERVATION PLAN

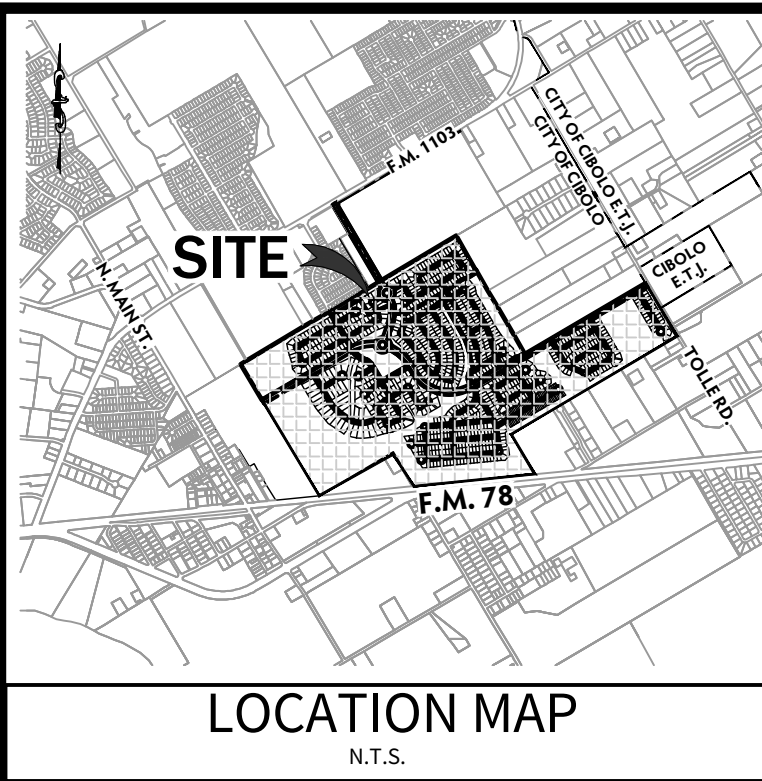
| | |
|-------------|------------|
| DATE | 2018-11-30 |
| PROJECT NO. | 02907.300 |
| DRAWN BY | PMB |
| CHECKED BY | WPM |

| REVISIONS | |
|-----------|--|
| 1. | |
| 2. | |
| 3. | |
| 4. | |
| 5. | |
| 6. | |
| 7. | |
| 8. | |
| 9. | |

CUDE ENGINEERS
TBPE No. 455

E1

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.



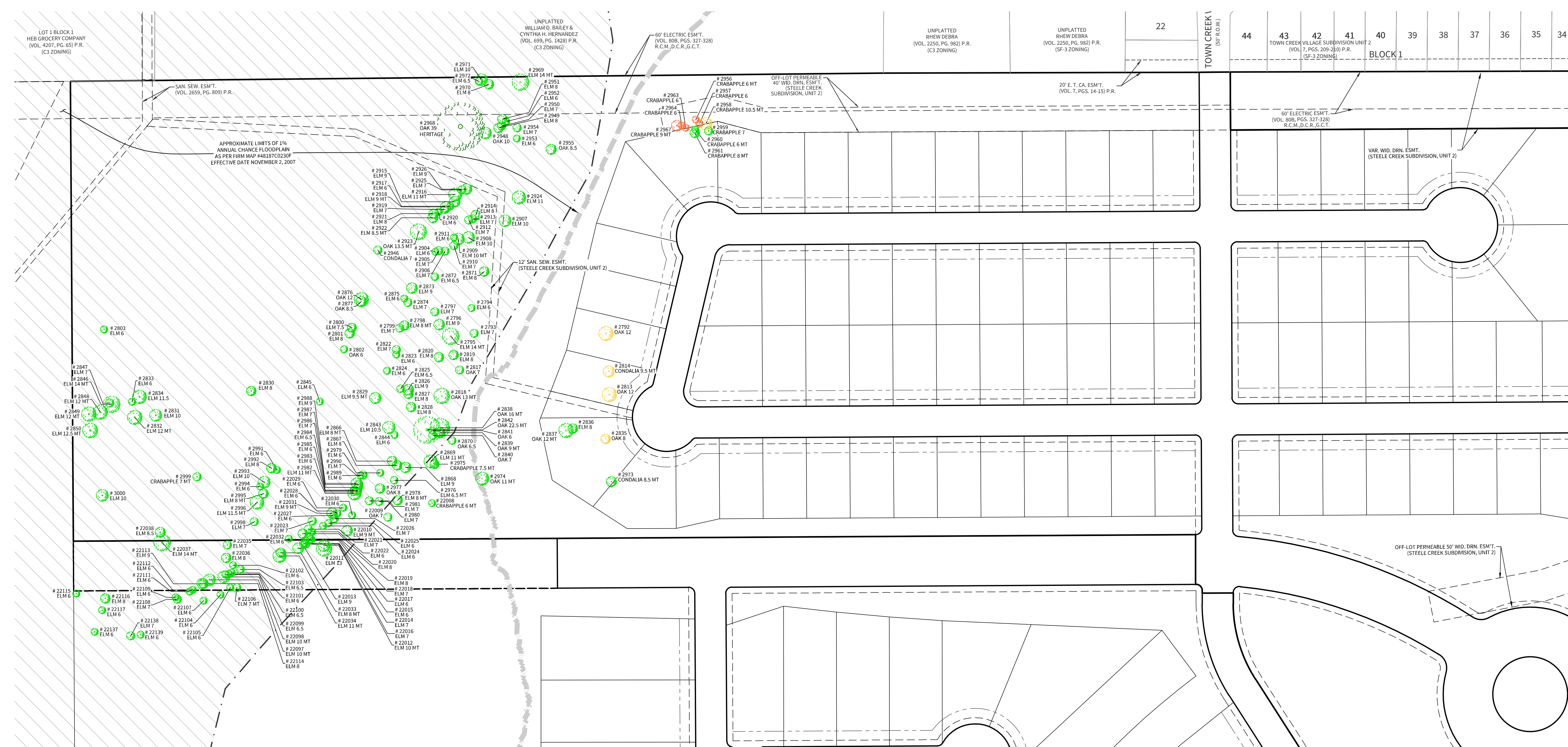
DEVELOPER:
D.R. HORTON, INC.
211 N. LOOP 1604 E, SUITE 130
SAN ANTONIO, TX 78232
CONTACT PERSON: LESLIE OSTRANDER

CIVIL ENGINEER:
CUDE ENGINEERS
CONTACT PERSON: PATRICK MURPHY, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL.: (210) 681-2951
FAX: (210) 523-7112

LEGEND

- PROTECTED TREES TO BE PRESERVED
- PROTECTED TREES TO BE REMOVED
- HERITAGE TREE TO BE PRESERVED
- HERITAGE TREE TO BE REMOVED
- EXEMPT TREE

CUDEENGINEERS.COM
4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681-2951 F: (210) 523-7112



STEEL CREEK SUBDIVISION
TREE PRESERVATION PLAN

DATE
2018-11-30

PROJECT NO.
02907.300

DRAWN BY
PMB

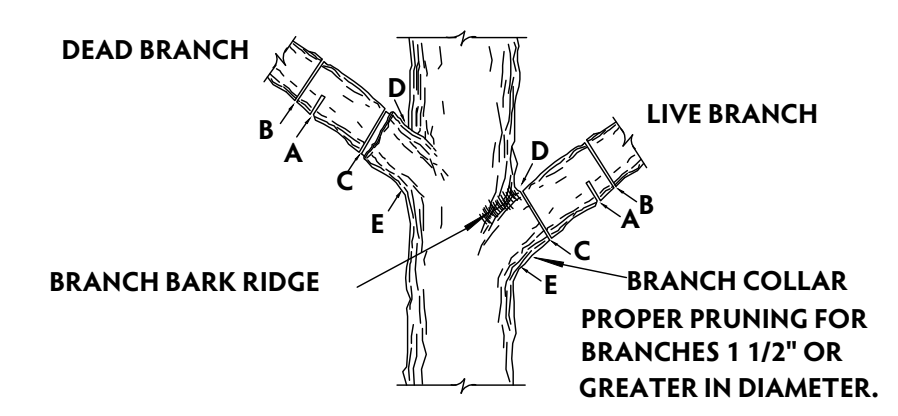
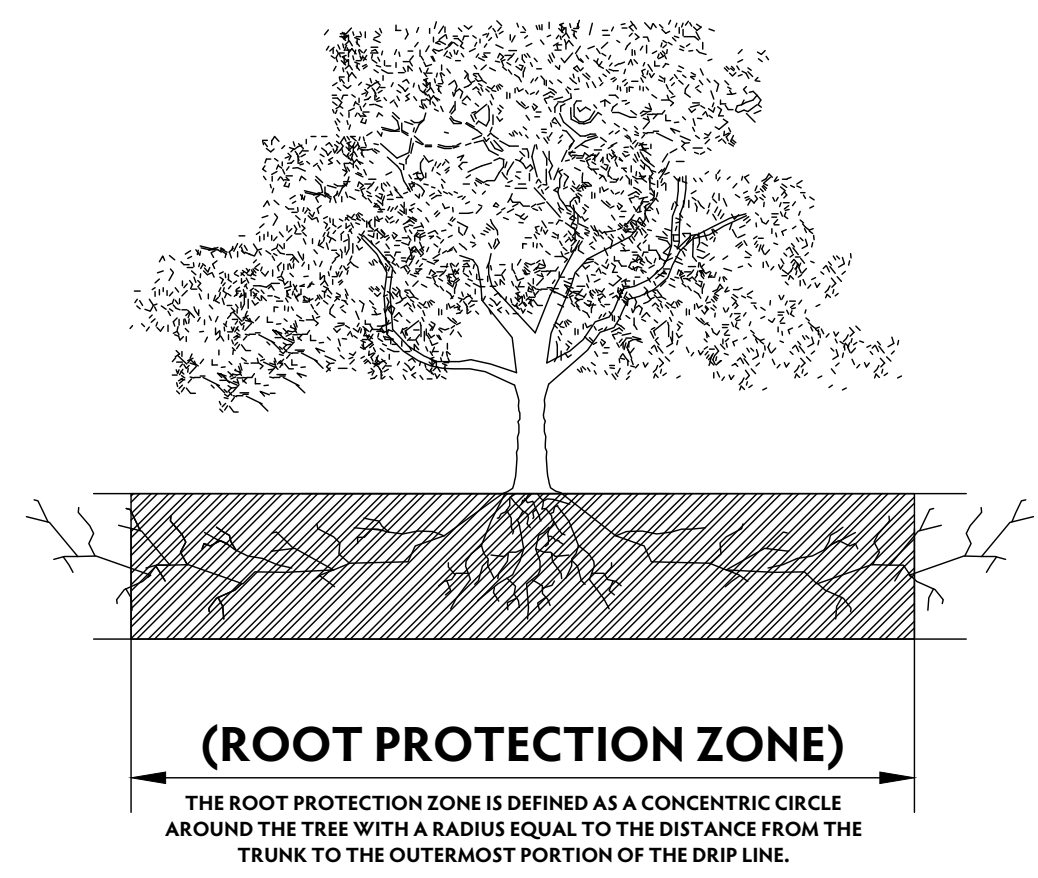
CHECKED BY
WPM

REVISIONS

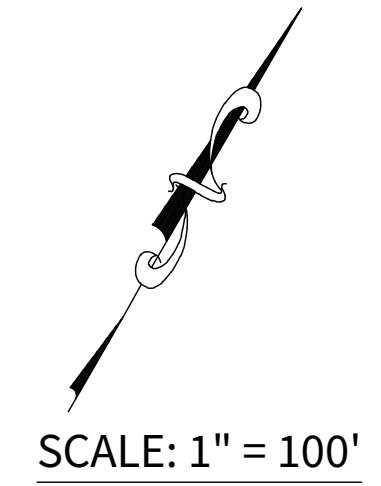
| | |
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| 9. | |

CUDE ENGINEERS
TBPE No. 455

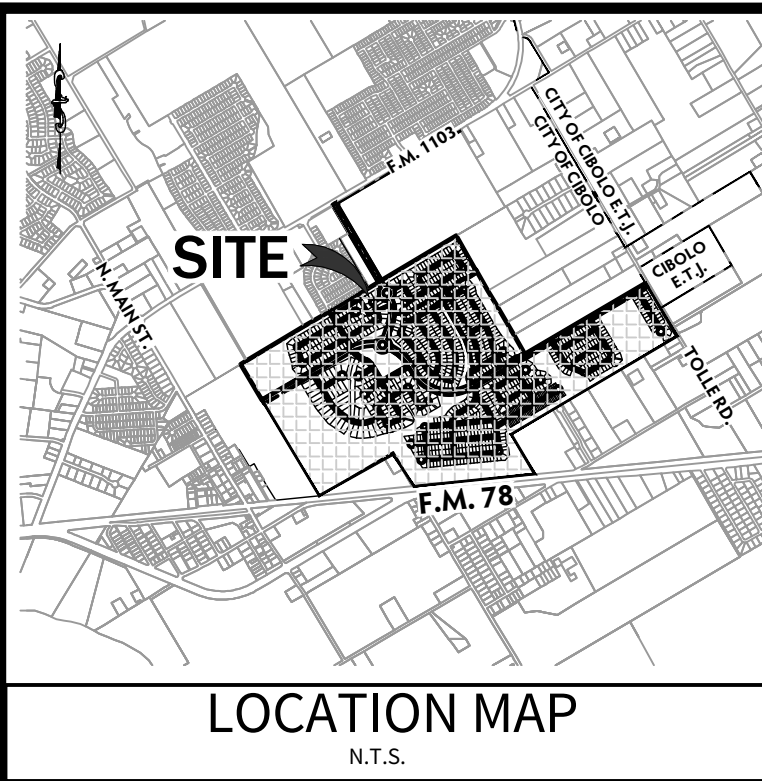
E2



- NOTE: DO NOT CUT FROM D to E.
- A. FIRST CUT - TO PREVENT THE BARK FROM BEING PEELED WHEN THE BRANCH FALLS.
 - B. SECOND CUT - TO REDUCE THE WEIGHT OF BRANCH.
 - C. FINAL CUT - ALLOW FOR HEALING COLLAR BUT NO STUBS
 - D. BRANCH RIDGES - INDENT PROPERLY BRANCH RIDGES WHICH ARE SITE FOR DECAY.
- FOR OAKS ONLY: PAINT ALL WOUNDS OR CUTS WITH PRUNING PAINT WITHIN 60 MIN TO PREVENT THE SPREAD OF OAK WILT.



SCALE: 1" = 100'



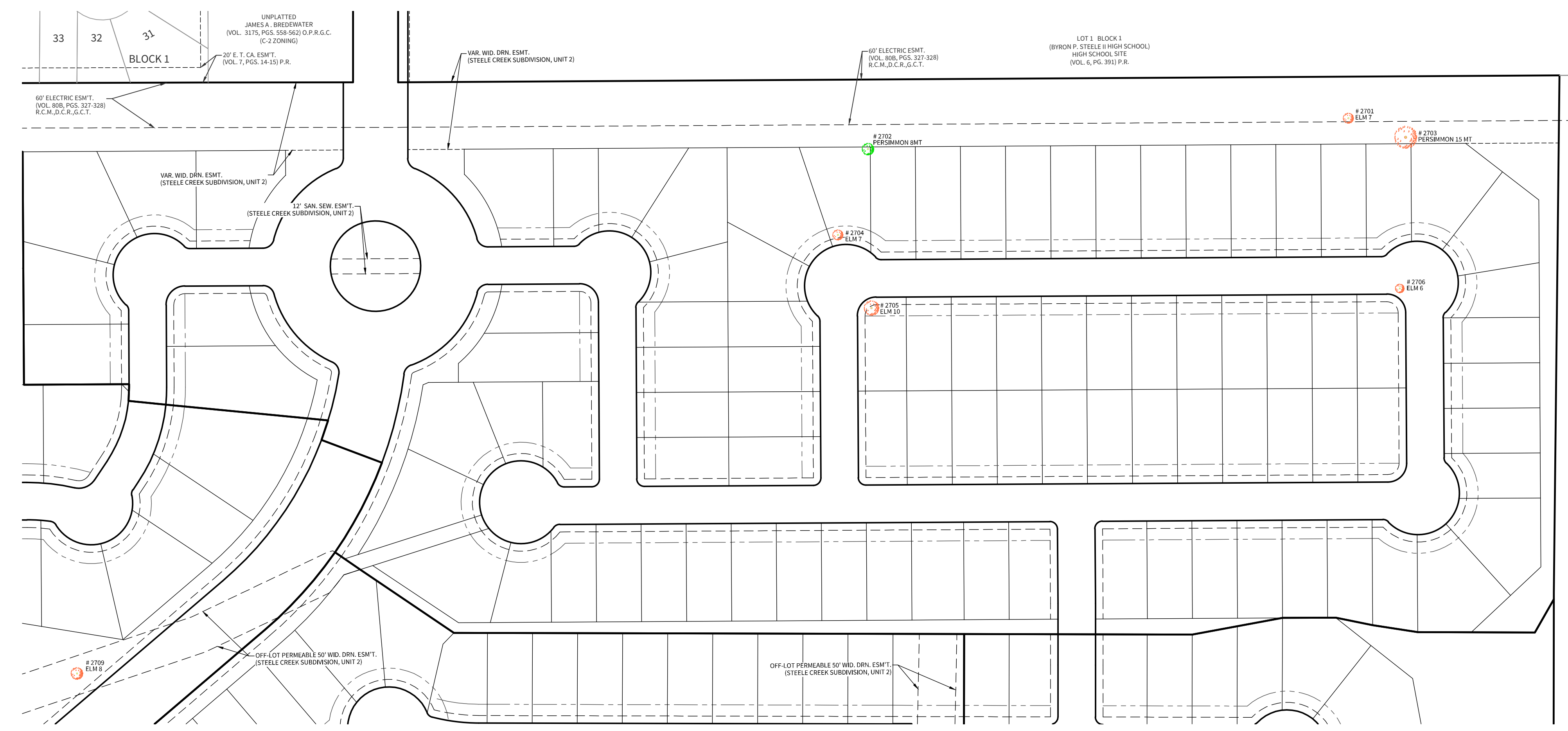
DEVELOPER:
 D.R. HORTON, INC.
 211 N. LOOP 1604 E, SUITE 130
 SAN ANTONIO, TX 78232
 CONTACT PERSON: LESLIE OSTRANDER

CIVIL ENGINEER:
 CUDE ENGINEERS
 CONTACT PERSON: PATRICK MURPHY, P.E.
 4122 POND HILL ROAD, SUITE 101
 SAN ANTONIO, TX 78231
 TEL: (210) 681-2951
 FAX: (210) 523-7112

LEGEND

| | |
|--|-----------------------------------|
| | - PROTECTED TREES TO BE PRESERVED |
| | - PROTECTED TREES TO BE REMOVED |
| | - HERITAGE TREE TO BE PRESERVED |
| | - HERITAGE TREE TO BE REMOVED |
| | - EXEMPT TREE |

CUDEENGINEERS.COM
 4122 Pond Hill Road, Suite 101
 San Antonio, Texas 78231
 P:(210) 681.2951 F: (210) 523.7112



STEELE CREEK SUBDIVISION
 TREE PRESERVATION PLAN

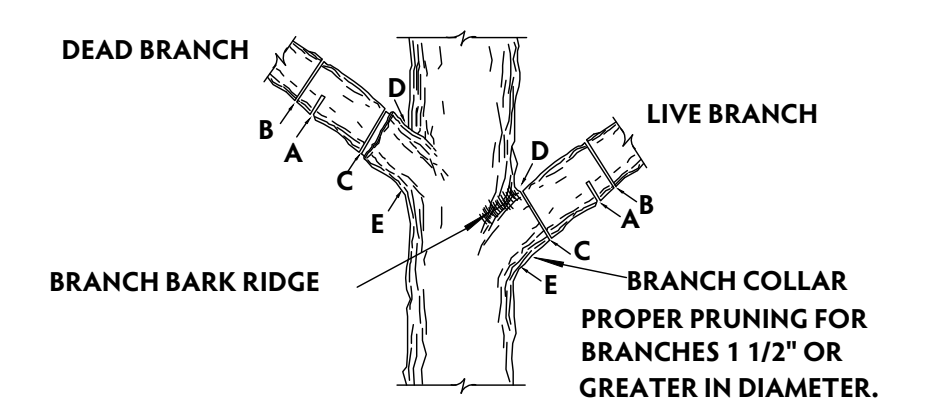
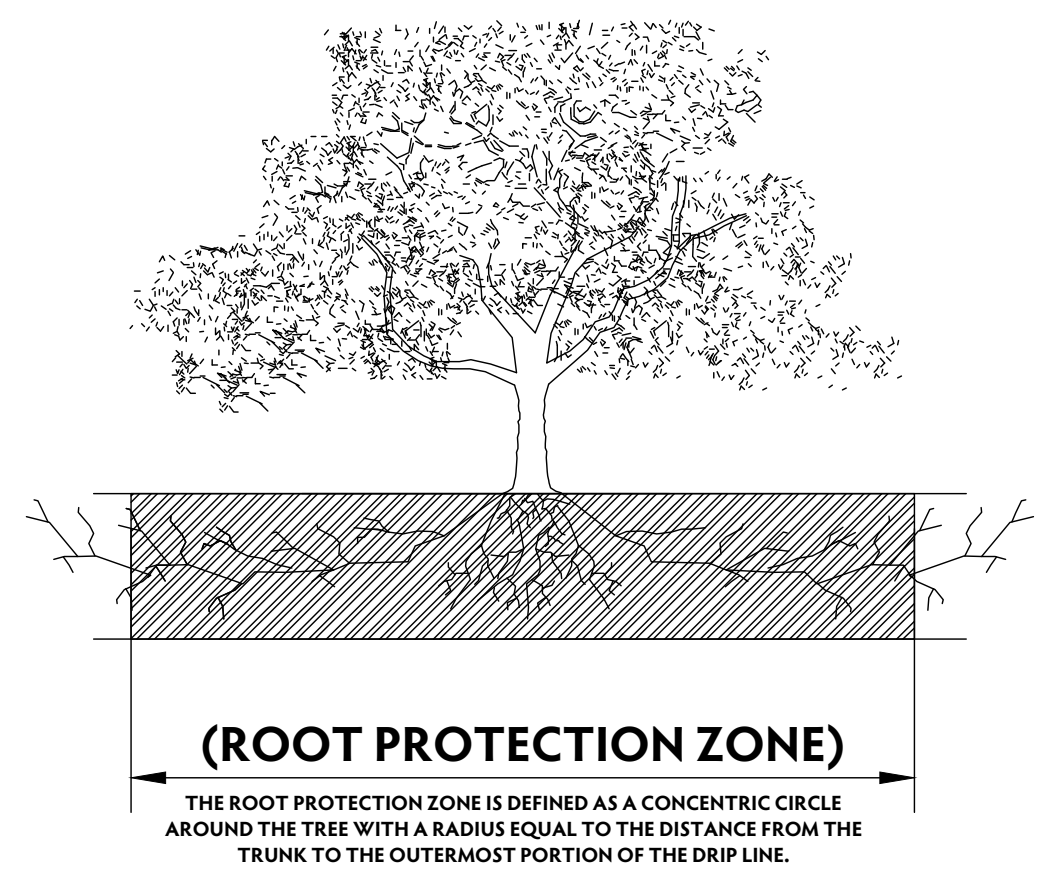
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|--------------------|------------|
| DATE | 2018-11-30 |
| PROJECT NO. | 02907.300 |
| DRAWN BY | PMB |
| CHECKED BY | WPM |

REVISIONS

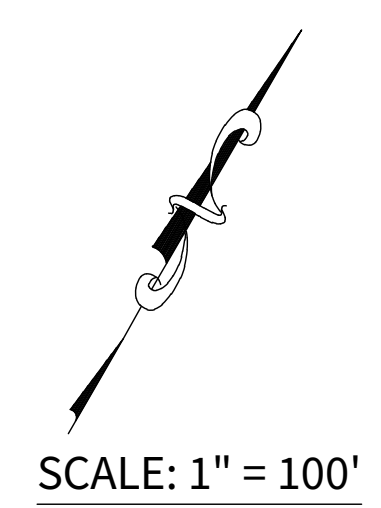
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CUDE ENGINEERS
 TBPE No. 455

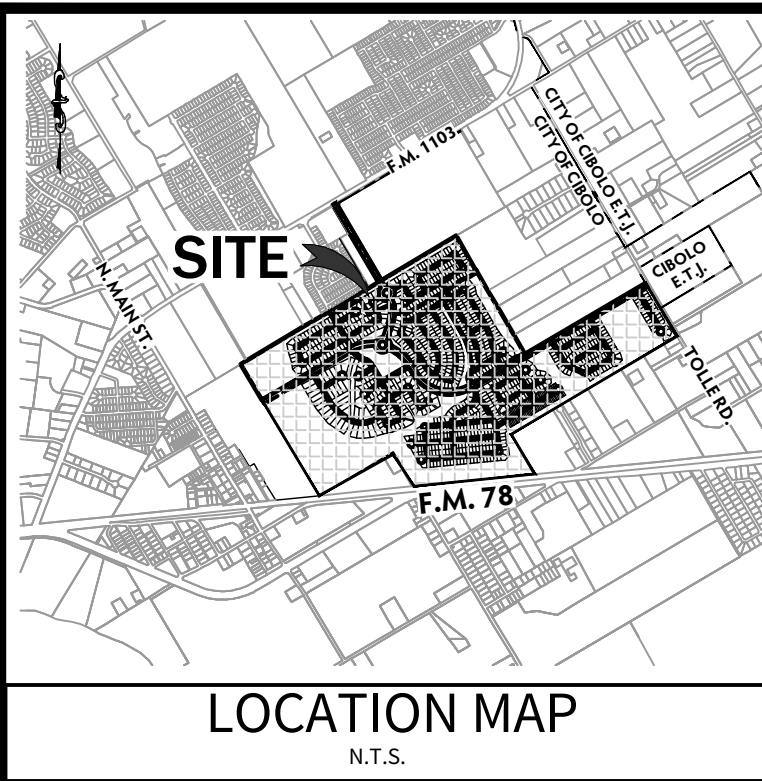
E3



- NOTE: DO NOT CUT FROM D to E.**
- A. FIRST CUT - TO PREVENT THE BARK FROM BEING PEELED WHEN THE BRANCH FALLS.
 - B. SECOND CUT - TO REDUCE THE WEIGHT OF BRANCH.
 - C. FINAL CUT - ALLOW FOR HEALING COLLAR BUT NO STUBS
 - D. BRANCH RIDGES - INDENT PROPERLY BRANCH RIDGES WHICH ARE SITE FOR DECAY.
- FOR OAKS ONLY: PAINT ALL WOUNDS OR CUTS WITH PRUNING PAINT WITHIN 60 MIN TO PREVENT THE SPREAD OF OAK WILT.**



SCALE: 1" = 100'

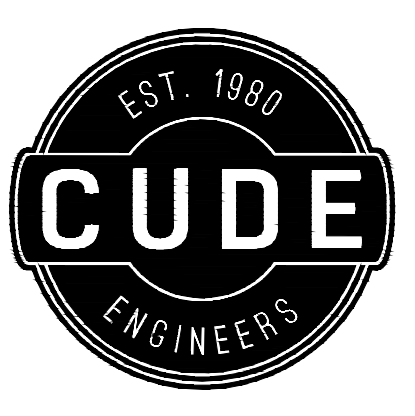


DEVELOPER:
 D.R. HORTON, INC.
 211 N. LOOP 1604 E, SUITE 130
 SAN ANTONIO, TX 78232
 CONTACT PERSON: LESLIE OSTRANDER

CIVIL ENGINEER:
 CUDE ENGINEERS
 CONTACT PERSON: PATRICK MURPHY, P.E.
 4122 POND HILL ROAD, SUITE 101
 SAN ANTONIO, TX 78231
 TEL: (210) 681-2951
 FAX: (210) 523-7112

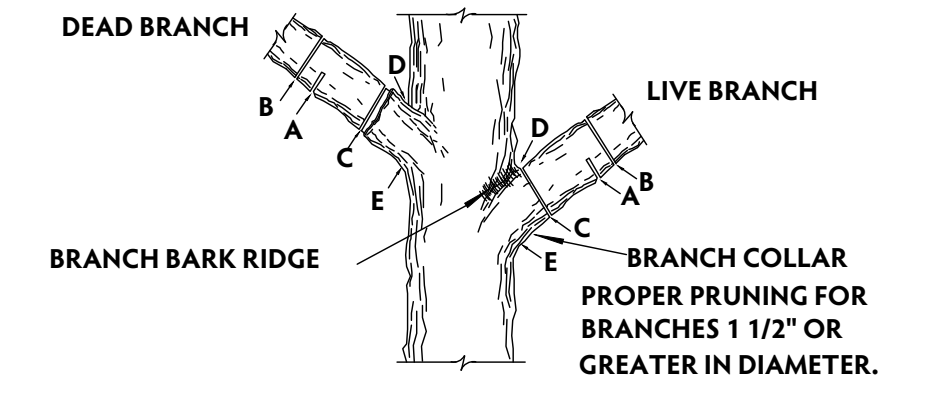
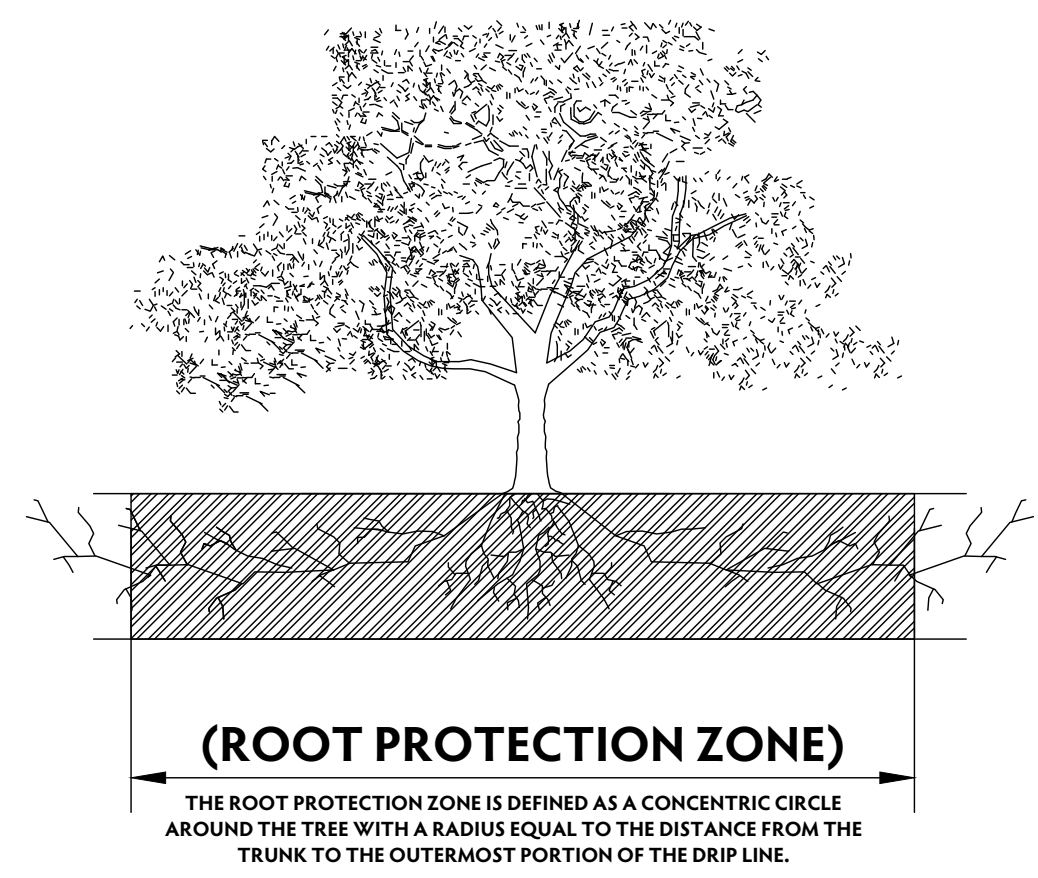
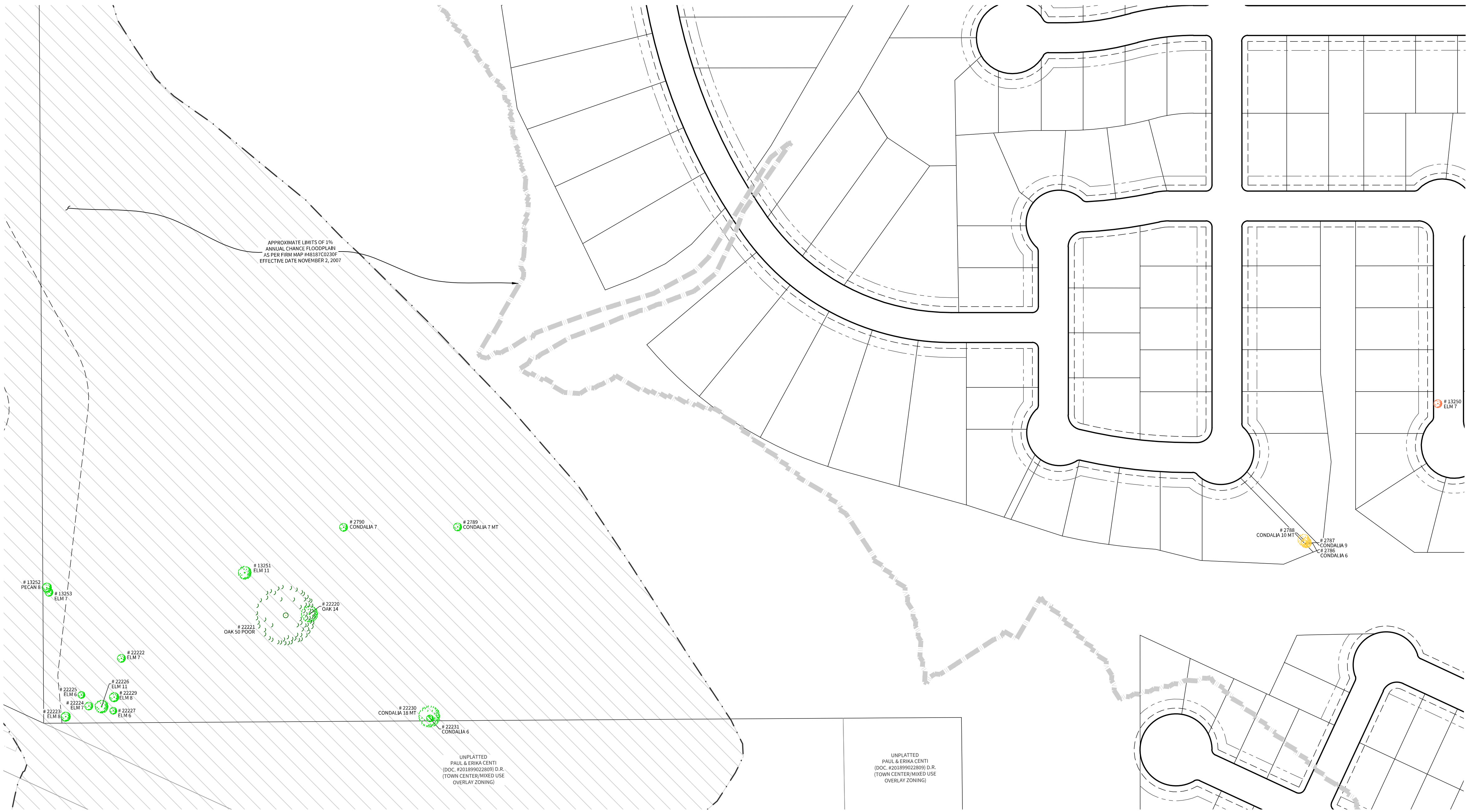
LEGEND

| | |
|--|-----------------------------------|
| | - PROTECTED TREES TO BE PRESERVED |
| | - PROTECTED TREES TO BE REMOVED |
| | - HERITAGE TREE TO BE PRESERVED |
| | - HERITAGE TREE TO BE REMOVED |
| | - EXEMPT TREE |



CUDEENGINEERS.COM
 4122 Pond Hill Road, Suite 101
 San Antonio, Texas 78231
 P:(210) 681.2951 F: (210) 523.7112

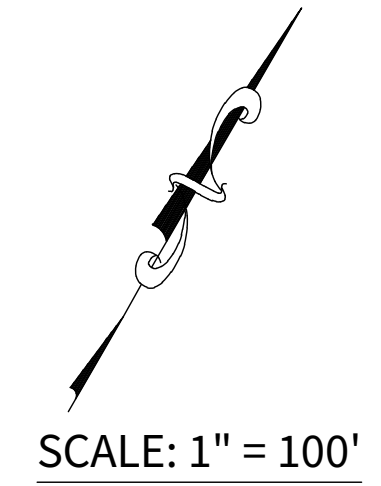
**STEELE CREEK
 SUBDIVISION**
 TREE PRESERVATION PLAN



NOTE: DO NOT CUT FROM D to E.

A. FIRST CUT - TO PREVENT THE BARK FROM BEING PEELED WHEN THE BRANCH FALLS.
 B. SECOND CUT - TO REDUCE THE WEIGHT OF BRANCH.
 C. FINAL CUT - ALLOW FOR HEALING COLLAR BUT NO STUBS
 D. BRANCH RIDGES - INDENT PROPERLY BRANCH RIDGES WHICH ARE SITE FOR DECAY.

FOR OAKS ONLY: PAINT ALL WOUNDS OR CUTS WITH PRUNING PAINT WITHIN 60 MIN TO PREVENT THE SPREAD OF OAK WILT.



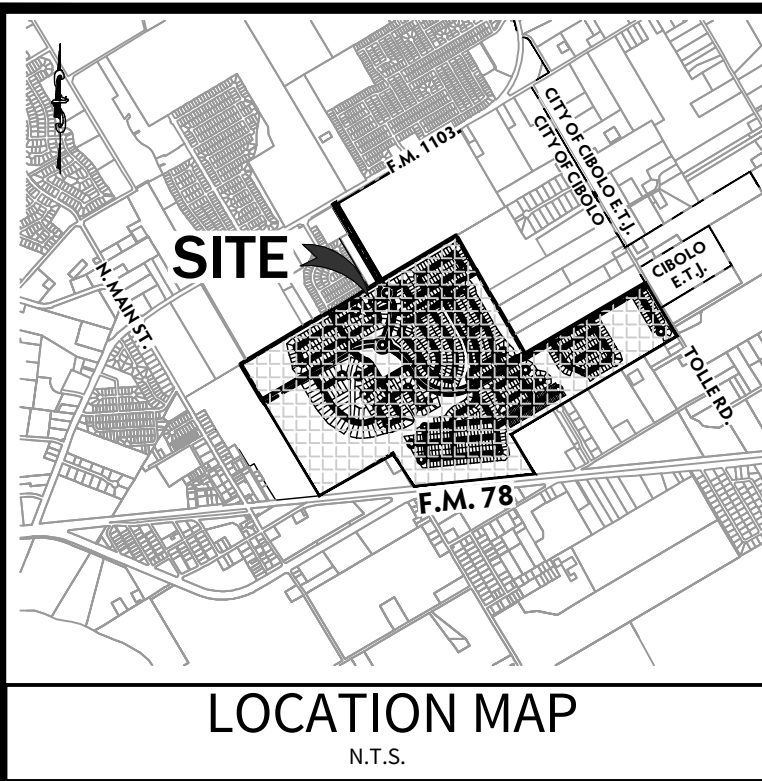
SCALE: 1" = 100'

| | |
|--------------------|------------|
| DATE | 2018-11-30 |
| PROJECT NO. | 02907.300 |
| DRAWN BY | PMB |
| CHECKED BY | WPM |

| REVISIONS | |
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CUDE ENGINEERS
 TBPE No. 455

E4

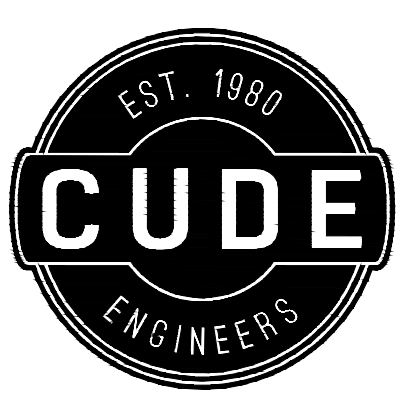


DEVELOPER:
 D.R. HORTON, INC.
 211 N. LOOP 1604 E, SUITE 130
 SAN ANTONIO, TX 78232
 CONTACT PERSON: LESLIE OSTRANDER

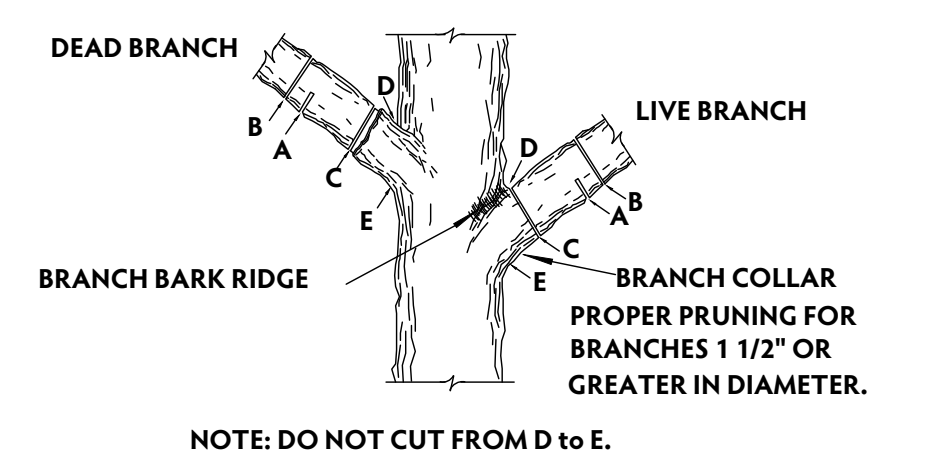
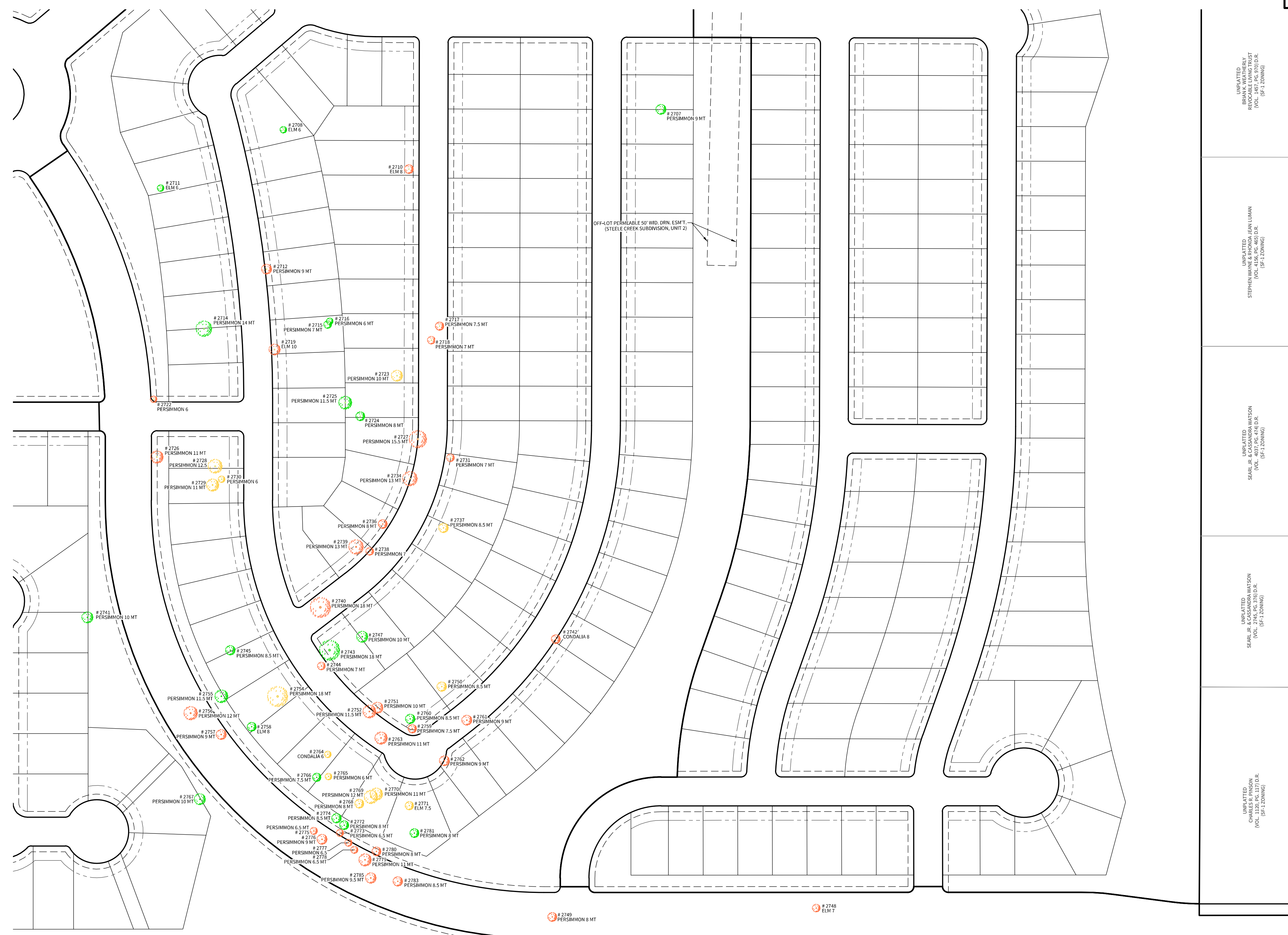
CIVIL ENGINEER:
 CUDE ENGINEERS
 CONTACT PERSON: PATRICK MURPHY, P.E.
 4122 POND HILL ROAD, SUITE 101
 SAN ANTONIO, TX 78231
 TEL.: (210) 681-2951
 FAX: (210) 523-7112

LEGEND

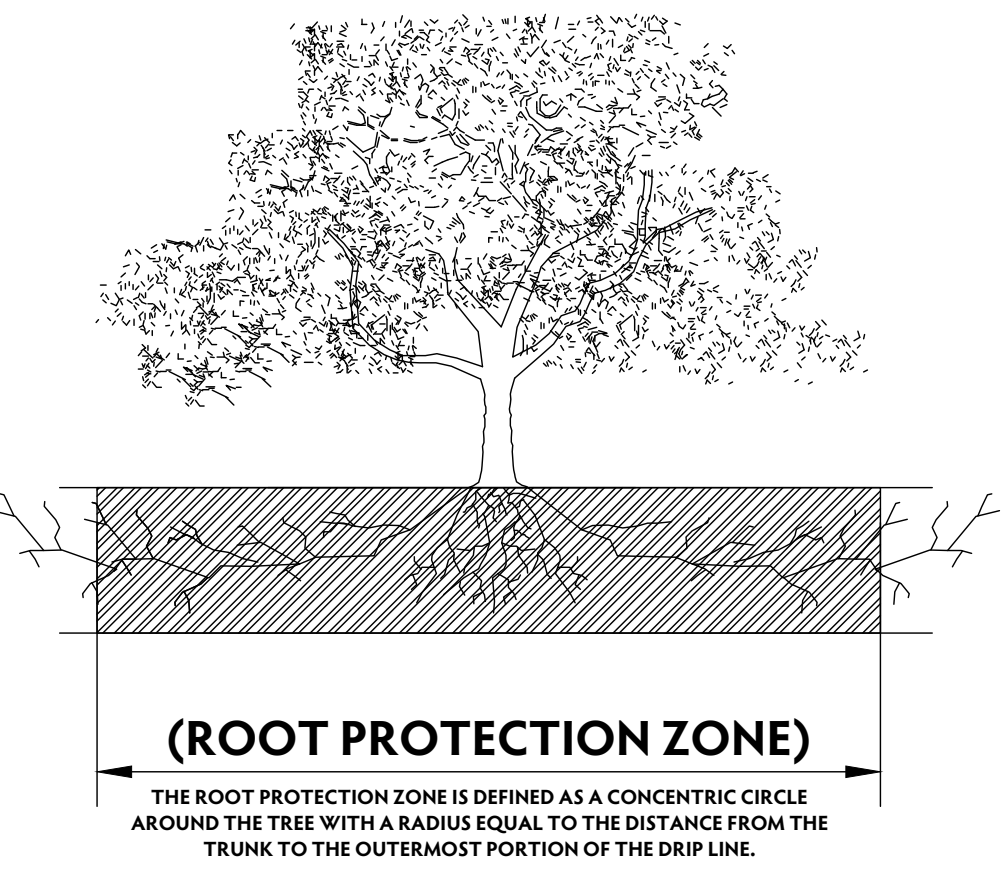
- PROTECTED TREES TO BE PRESERVED
- PROTECTED TREES TO BE REMOVED
- HERITAGE TREE TO BE PRESERVED
- HERITAGE TREE TO BE REMOVED
- EXEMPT TREE



CUDEENGINEERS.COM
 4122 Pond Hill Road, Suite 101
 San Antonio, Texas 78231
 P: (210) 681-2951 F: (210) 523-7112



- A. FIRST CUT - TO PREVENT THE BARK FROM BEING PEELED WHEN THE BRANCH FALLS.
 - B. SECOND CUT - TO REDUCE THE WEIGHT OF BRANCH.
 - C. FINAL CUT - ALLOW FOR HEALING COLLAR BUT NO STUBS
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- FOR OAKS ONLY: PAINT ALL WOUNDS OR CUTS WITH PRUNING PAINT WITHIN 60 MIN TO PREVENT THE SPREAD OF OAK WILT.**



UNPLATTED BRANK WATHERLY BRANK WATHERLY (SPL. ZONING)

UNPLATTED STEPHENSON SUBDIVISION (SPL. ZONING)

UNPLATTED SUBDIVISION (SPL. ZONING)

UNPLATTED SUBDIVISION (SPL. ZONING)

UNPLATTED CHARLES R. PRINSON (SPL. ZONING)

STEELE CREEK SUBDIVISION
 TREE PRESERVATION PLAN

DATE
2018-11-30

PROJECT NO.
02907.300

DRAWN BY
PMB

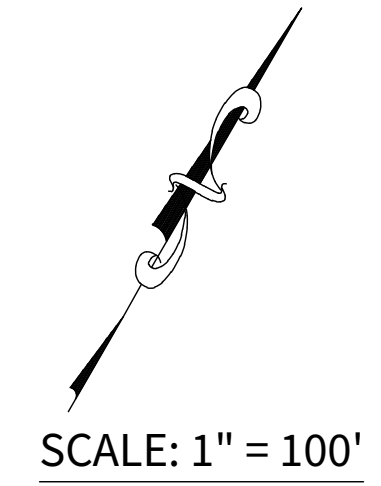
CHECKED BY
WPM

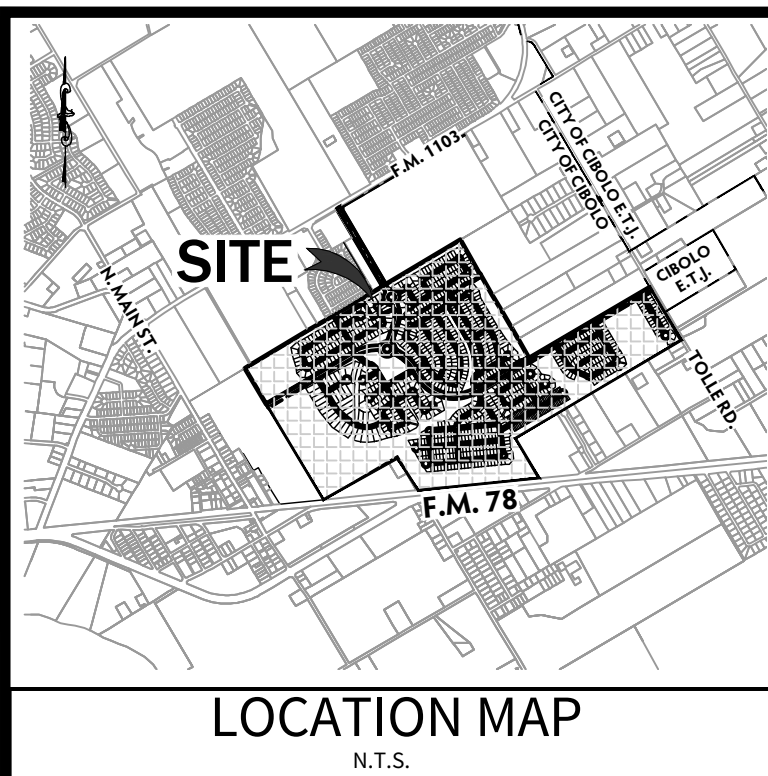
REVISIONS

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| 8. | |
| 9. | |

CUDE ENGINEERS
 TBPE No. 455

E5





DEVELOPER:
D.R. HORTON, INC.
211 N. LOOP 1604 E, SUITE 130
SAN ANTONIO, TX 78232
CONTACT PERSON: LESLIE OSTRANDER

CIVIL ENGINEER:
CUDE ENGINEERS
CONTACT PERSON: PATRICK MURPHY, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

| Number | Species | Protected Tree Inches Preserved | Protected Tree Inches Removed | Heritage Tree Inches Preserved | Heritage Tree Inches Removed | Exempt Tree |
|--------|-----------|---------------------------------|-------------------------------|--------------------------------|------------------------------|-------------|
| 2701 | Elm | | | | | 7 |
| 2702 | Persimmon | 8 | | | | |
| 2703 | Persimmon | | | | | 15 |
| 2704 | Elm | | | | | 7 |
| 2705 | Elm | | | | | 10 |
| 2706 | Elm | | | | | 6 |
| 2707 | Persimmon | 9 | | | | |
| 2708 | Elm | 6 | | | | |
| 2709 | Elm | | | | | 8 |
| 2710 | Elm | | | | | 8 |
| 2711 | Elm | 6 | | | | |
| 2712 | Persimmon | | | | | 9 |
| 2714 | Persimmon | 14 | | | | |
| 2715 | Persimmon | 7 | | | | |
| 2716 | Persimmon | 6 | | | | |
| 2717 | Persimmon | | | | | 7.5 |
| 2718 | Persimmon | | | | | 7 |
| 2719 | Elm | | | | | 10 |
| 2722 | Persimmon | | | | | 6 |
| 2723 | Persimmon | | 10 | | | |
| 2724 | Persimmon | 8 | | | | |
| 2725 | Persimmon | 11.5 | | | | |
| 2726 | Persimmon | | | | | 11 |
| 2727 | Persimmon | | | | | 15.5 |
| 2728 | Persimmon | | 12.5 | | | |
| 2729 | Persimmon | | 11 | | | |
| 2730 | Persimmon | | 6 | | | |
| 2731 | Persimmon | | | | | 7 |
| 2734 | Persimmon | | | | | 13 |
| 2736 | Persimmon | | | | | 8 |
| 2737 | Persimmon | | 8.5 | | | |
| 2738 | Persimmon | | | | | 7 |
| 2739 | Persimmon | | | | | 13 |
| 2740 | Persimmon | | | | | 18 |
| 2741 | Persimmon | 10 | | | | |
| 2742 | Condalia | | | | | 8 |
| 2743 | Persimmon | 18 | | | | |
| 2744 | Persimmon | | | | | 7 |
| 2745 | Persimmon | 8.5 | | | | |
| 2747 | Persimmon | 10 | | | | |
| 2748 | Elm | | | | | 7 |
| 2749 | Persimmon | | | | | 8 |
| 2750 | Persimmon | | 8.5 | | | |
| 2751 | Persimmon | | | | | 10 |
| 2752 | Persimmon | | | | | 11.5 |
| 2754 | Persimmon | | 18 | | | |
| 2755 | Persimmon | 11.5 | | | | |
| 2756 | Persimmon | | | | | 12 |
| 2757 | Persimmon | | | | | 9 |
| 2758 | Elm | 8 | | | | |
| 2759 | Persimmon | | | | | 7.5 |
| 2760 | Persimmon | 8.5 | | | | |
| 2761 | Persimmon | | | | | 9 |
| 2762 | Persimmon | | | | | 9 |
| 2763 | Persimmon | | | | | 11 |
| 2764 | Condalia | | 6 | | | |
| 2765 | Persimmon | | 6 | | | |
| 2766 | Persimmon | 7.5 | | | | |
| 2767 | Persimmon | 10 | | | | |
| 2768 | Persimmon | | 8 | | | |
| 2769 | Persimmon | | 12 | | | |
| 2770 | Persimmon | | 11 | | | |
| 2771 | Elm | | 7.5 | | | |
| 2772 | Persimmon | 8 | | | | |
| 2773 | Persimmon | | | | | 6.5 |
| 2774 | Persimmon | 8.5 | | | | |
| 2775 | Persimmon | | | | | 6.5 |
| 2776 | Persimmon | | | | | 9 |
| 2777 | Persimmon | | | | | 6.5 |
| 2778 | Persimmon | | | | | 6.5 |
| 2779 | Persimmon | | | | | 11 |
| 2780 | Persimmon | 8 | | | | 8 |
| 2781 | Persimmon | 8 | | | | |
| 2783 | Persimmon | | | | | 8.5 |
| 2785 | Persimmon | | | | | 9.5 |
| 2786 | Condalia | | 6 | | | |

| Number | Species | Protected Tree Inches Preserved | Protected Tree Inches Removed | Heritage Tree Inches Preserved | Heritage Tree Inches Removed | Exempt Tree |
|--------|----------|---------------------------------|-------------------------------|--------------------------------|------------------------------|-------------|
| 2787 | Condalia | | 9 | | | |
| 2788 | Condalia | | 10 | | | |
| 2789 | Condalia | 7 | | | | |
| 2790 | Condalia | 7 | | | | |
| 2792 | Oak | | 12 | | | |
| 2793 | Elm | 7 | | | | |
| 2794 | Elm | 6 | | | | |
| 2795 | Elm | 14 | | | | |
| 2796 | Elm | 9 | | | | |
| 2797 | Elm | 7 | | | | |
| 2798 | Elm | 8 | | | | |
| 2799 | Elm | 7 | | | | |
| 2800 | Elm | 7.5 | | | | |
| 2801 | Elm | 8 | | | | |
| 2802 | Oak | 6 | | | | |
| 2803 | Elm | 6 | | | | |
| 2813 | Oak | | 12 | | | |
| 2814 | Condalia | | 9.5 | | | |
| 2817 | Oak | 7 | | | | |
| 2818 | Oak | 13 | | | | |
| 2819 | Elm | 8 | | | | |
| 2820 | Elm | 8 | | | | |
| 2822 | Elm | 7 | | | | |
| 2823 | Elm | 6 | | | | |
| 2824 | Elm | 6 | | | | |
| 2825 | Elm | 6.5 | | | | |
| 2826 | Elm | 9 | | | | |
| 2827 | Elm | 8 | | | | |
| 2828 | Elm | 8 | | | | |
| 2829 | Elm | 9.5 | | | | |
| 2830 | Elm | 8 | | | | |
| 2831 | Elm | 10 | | | | |
| 2832 | Elm | 12 | | | | |
| 2833 | Elm | 6 | | | | |
| 2834 | Elm | 11.5 | | | | |
| 2835 | Oak | | 8 | | | |
| 2836 | Elm | 8 | | | | |
| 2837 | Oak | 12 | | | | |
| 2838 | Oak | 16 | | | | |
| 2839 | Oak | 9 | | | | |
| 2840 | Oak | 7 | | | | |
| 2841 | Oak | 6 | | | | |
| 2842 | Oak | 22.5 | | | | |
| 2843 | Elm | 10.5 | | | | |
| 2844 | Elm | 6 | | | | |
| 2845 | Elm | 6 | | | | |
| 2846 | Elm | 14 | | | | |
| 2847 | Elm | 7 | | | | |
| 2848 | Elm | 12 | | | | |
| 2849 | Elm | 12 | | | | |
| 2850 | Elm | 12.5 | | | | |
| 2866 | Elm | 8 | | | | |
| 2867 | Elm | 8 | | | | |
| 2868 | Elm | 9 | | | | |
| 2869 | Elm | 11 | | | | |
| 2870 | Oak | 6.5 | | | | |
| 2871 | Elm | 8 | | | | |
| 2872 | Elm | 6.5 | | | | |
| 2873 | Elm | 9 | | | | |
| 2874 | Elm | 7 | | | | |
| 2875 | Elm | 6 | | | | |
| 2876 | Oak | 12 | | | | |
| 2877 | Oak | 8.5 | | | | |
| 2904 | Elm | 6 | | | | |
| 2905 | Elm | 7 | | | | |
| 2906 | Elm | 7 | | | | |
| 2907 | Elm | 10 | | | | |
| 2908 | Elm | 10 | | | | |
| 2909 | Elm | 10 | | | | |
| 2910 | Elm | 7 | | | | |
| 2911 | Elm | 6 | | | | |
| 2912 | Elm | 7 | | | | |
| 2913 | Elm | 7 | | | | |
| 2914 | Elm | 8 | | | | |
| 2915 | Elm | 9 | | | | |
| 2916 | Elm | 11 | | | | |

| Number | Species | Protected Tree Inches Preserved | Protected Tree Inches Removed | Heritage Tree Inches Preserved | Heritage Tree Inches Removed | Exempt Tree |
|--------|-----------|---------------------------------|-------------------------------|--------------------------------|------------------------------|-------------|
| 2917 | Elm | 6 | | | | |
| 2918 | Elm | 9 | | | | |
| 2919 | Elm | 7 | | | | |
| 2920 | Elm | 6 | | | | |
| 2921 | Elm | 8 | | | | |
| 2922 | Elm | 8.5 | | | | |
| 2923 | Oak | 13.5 | | | | |
| 2924 | Elm | 11 | | | | |
| 2925 | Elm | 7 | | | | |
| 2926 | Elm | 9 | | | | |
| 2946 | Condalia | 7 | | | | |
| 2948 | Oak | 10 | | | | |
| 2949 | Elm | 8 | | | | |
| 2950 | Elm | 7 | | | | |
| 2951 | Elm | 8 | | | | |
| 2952 | Elm | 6 | | | | |
| 2953 | Elm | 6 | | | | |
| 2954 | Elm | 7 | | | | |
| 2955 | Oak | 8.5 | | | | |
| 2956 | Crabapple | | | | | 6 |
| 2957 | Crabapple | | | | | 6 |
| 2958 | Crabapple | | 10.5 | | | |
| 2959 | Crabapple | 7 | | | | |
| 2960 | Crabapple | 6 | | | | |
| 2961 | Crabapple | 8 | | | | |
| 2963 | Crabapple | | | | | 6 |
| 2964 | Crabapple | | | | | 6 |
| 2967 | Crabapple | | | | | 9 |
| 2968 | Oak | | | 39 | | |
| 2969 | Elm | 14 | | | | |
| 2970 | Elm | 8 | | | | |
| 2971 | Elm | 10 | | | | |
| 2972 | Elm | 6.5 | | | | |
| 2973 | Condalia | 8.5 | | | | |
| 2974 | Oak | 11 | | | | |
| 2975 | Crabapple | | | | | |
| 2976 | Elm | 6.5 | | | | |
| 2977 | Oak | 8 | | | | |
| 2978 | Elm | 8 | | | | |
| 2979 | Elm | 6 | | | | |
| 2980 | Elm | 7 | | | | |
| 2981 | Elm | 7 | | | | |
| 2982 | Elm | 11 | | | | |
| 2983 | Elm | 6 | | | | |
| 2984 | Elm | 6.5 | | | | |
| 2985 | Elm | 6 | | | | |
| 2986 | Elm | 7 | | | | |
| 2987 | Elm | 7 | | | | |
| 2988 | Elm | 9 | | | | |
| 2989 | Elm | 6 | | | | |
| 2990 | Elm | 7 | | | | |
| 2991 | Elm | 6 | | | | |
| 2992 | Elm | 8 | | | | |
| 2993 | Elm | 10 | | | | |
| 2994 | Elm | 6 | | | | |
| 2995 | Elm | 8 | | | | |
| 2996 | Elm | 11.5 | | | | |
| 2998 | Elm | 7 | | | | |
| 2999 | Crabapple | 7 | | | | |
| 3000 | Elm | 10 | | | | 7 |
| 13250 | Elm | | | | | |
| 13251 | Elm | 11 | | | | |
| 13252 | Pecan | 8 | | | | |
| 13253 | Elm | 7 | | | | |
| 22008 | Crabapple | 6 | | | | |
| 22009 | Oak | 7 | | | | |
| 22010 | Elm | 9 | | | | |
| 22011 | Elm | 13 | | | | |
| 22012 | Elm | 10 | | | | |
| 22013 | Elm | 9 | | | | |
| 22014 | Elm | 7 | | | | |
| 22015 | Elm | 6 | | | | |
| 22016 | Elm | 7 | | | | |
| 22017 | Elm | 6 | | | | |
| 22018 | Elm | 7 | | | | |
| 22019 | Elm | 8 | | | | |

| Number | Species | Protected Tree Inches Preserved | Protected Tree Inches Removed | Heritage Tree Inches Preserved | Heritage Tree Inches Removed | Exempt Tree |
|--------|---------|---------------------------------|-------------------------------|--------------------------------|------------------------------|-------------|
| 22020 | Elm | 8 | | | | |
| 22021 | Elm | 7 | | | | |
| 22022 | Elm | 6 | | | | |
| 22023 | Elm | 7 | | | | |
| 22024 | Elm | 6 | | | | |
| 22025 | Elm | 6 | | | | |
| 22026 | Elm | 7 | | | | |
| 22027 | Elm | 6 | | | | |
| 22028 | Elm | 6 | | | | |
| 22029 | Elm | 6 | | | | |
| 22030 | Elm | 6 | | | | |
| 22031 | Elm | 9 | | | | |
| 22032 | Elm | 6 | | | | |
| 22033 | Elm | 8 | | | | |
| 22034 | Elm | 11 | | | | |
| 22035 | Elm | 7 | | | | |
| 22036 | Elm | 8 | | | | |
| 22037 | Elm | 14 | | | | |
| 22038 | Elm | 8.5 | | | | |
| 22097 | Elm | 10 | | | | |
| 22098 | Elm | 10 | | | | |
| 22099 | Elm | 6.5 | | | | |
| 22100 | Elm | 6.5 | | | | |
| 22101 | Elm | 6 | | | | |
| 22102 | Elm | 6 | | | | |
| 22103 | Elm | 6.5 | | | | |
| 22104 | Elm | 6 | | | | |
| 22105 | Elm | 6 | | | | |
| 22106 | Elm | 7 | | | | |
| 22107 | Elm | 6 | | | | |
| 22108 | Elm | 7 | | | | |
| 22109 | Elm | 6 | | | | |
| 22111 | Elm | 6 | | | | |
| 22112 | Elm | 6 | | | | |
| 22113 | Elm | 9 | | | | |
| 22114 | Elm | | | | | |

Title Commitments



Continental Homes of Texas, L.P.
5419 North Loop 1604 East, Suite 100
San Antonio, TX 78247

November 24, 2020

Dear Homebuyer(s):

In connection with your recent DHI Title Of Central Texas transaction, we are pleased to enclose your title policy for your records. The premium for this policy was paid at your closing so no additional funds are due.

It has been our pleasure to handle this transaction for you. If we can be of further service to you in the future, please feel free to call on us.

Thank you,

DHI Title Of Central Texas

DHI Title Of Central Texas
10700 Pecan Park Blvd., Suite 220
Austin, TX 78750
Phone: (512)219-0495 / Fax: (512)249-8919

Letter (OTP Cover)

161-200218086





*First American
Title Guaranty Company*

Owner's Policy of Title Insurance (T-1)

ISSUED BY

First American Title Guaranty Company

Schedule A

POLICY NUMBER

5825548-0037658e

Name and Address of Title Insurance Company:

FIRST AMERICAN TITLE GUARANTY COMPANY, 1500 S. Dairy Ashford, Suite 300, Houston, Texas 77077

File No.: 161-200218086

Date of Policy: November 6, 2020 at 03:00 PM

Address for Reference only: Steele Creek - 115.110 Acres, Cibolo, TX 78108

Amount of Insurance: \$3,568,410.00

Premium: \$16,746.00

1. Name of Insured:

Continental Homes of Texas, L.P., a Texas Limited Partnership

2. The estate or interest in the Land that is insured by this policy is:

Fee Simple

3. Title is insured as vested in:

Continental Homes of Texas, L.P.

4. The Land referred to in this policy is described as follows:

115.110 acres of located in the Jeronimo Leal Survey No. 85, Abstract No. 210 and the David Miller Survey No. 87, Abstract No. 226, in the City of Cibolo, Guadalupe County, Texas, and being a portion of that certain called 311.08 acres of land conveyed to 258 Steele Creek Investments, LLC., as described in Document Number 201899019518, Official Public Records of Guadalupe County, Texas; a portion of that certain called 85.592 acres of land conveyed to 258 Steele Creek Investments, LLC., as described in Document Number 201899019519, Official Public Records of Guadalupe County and a portion of that certain called 65.801 acres of land conveyed to 258 Steele Creek Investments, LLC., as described in Document Number 201899019524, Official Public Records of Guadalupe County, Texas; said 115.110 acres of land being more particularly described as follows:

COMMENCING, at a found 5/8 inch iron rod located in the northerly line of the Union Pacific Railroad and marking the southwesterly corner of the said 65.801 acres;

THENCE, North 31deg 00' 24" West, along the westerly line of the said 65.801 acres, a distance of 472.48 feet, to a set 1/2 inch iron rod with "CUDE" cap, for the **POINT OF BEGINNING** of the herein described 115.110 acres;

THENCE, North 31deg 00' 24" West, continuing along the westerly line of the said 65.801 acres, a distance of 245.65 feet, to a found 1/2 inch iron rod;

THENCE, into the said 65.801 acres and the said 311.08 acres, the following courses:

North 31deg 49' 37" West, a distance of 137.62 feet, to a set 1/2 inch iron rod with "CUDE" cap;
South 59deg 09' 36" West, a distance of 2.66 feet, to a set 1/2 inch iron rod with "CUDE" cap;
North 30deg 16' 47" West, a distance of 221.82 feet, to a set 1/2 inch iron rod with "CUDE" cap;
North 30deg 16' 47" West, a distance of 267.09 feet, to a set 1/2 inch iron rod with "CUDE" cap;



SCHEDULE A

(Continued)

North 30deg 16' 47" West, a distance of 50.00 feet, to a set ½ inch iron rod with "CUDE" cap;
North 31deg 22' 57" West, a distance of 245.66 feet, to a set ½ inch iron rod with "CUDE" cap;
South 58deg 37' 03" West, a distance of 44.38 feet, to a set ½ inch iron rod with "CUDE" cap;
North 86deg 37' 19" West, a distance of 85.04 feet, to a set ½ inch iron rod with "CUDE" cap;
North 62deg 18' 05" West, a distance of 91.98 feet, to a set ½ inch iron rod with "CUDE" cap;
South 03deg 39' 45" West, a distance of 262.36 feet, to a set ½ inch iron rod with "CUDE" cap;
Northwesterly, along the arc of a curve to the left having a radius of 900.30 feet, a central angle of 04deg 30' 00", an arc length of 70.71 feet and a chord bearing: N 63deg 51' 39" W, 70.69 feet, to a set ½ inch iron rod with "CUDE" cap;
North 00deg 11' 40" West, a distance of 573.24 feet, to a set ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the right having a radius of 1,246.06 feet, a central angle of 22deg 54' 43", an arc length of 498.29 feet and a chord bearing: N 11deg 15' 41" E, 494.97 feet, to a set ½ inch iron rod with "CUDE" cap;
South 67deg 16' 55" East, a distance of 1.00 feet, to a set ½ inch iron rod with "CUDE" cap;
North 23deg 29' 57" East, a distance of 33.94 feet, to a set ½ inch iron rod with "CUDE" cap;

Northwesterly, along the arc of a curve to the right having a radius of 272.16 feet, a central angle of 20deg 13' 52", an arc length of 96.10 feet and a chord bearing: N 40deg 58' 58" W, 95.60 feet, to a set ½ inch iron rod with "CUDE" cap;

North 30deg 45' 30" West, a distance of 19.05 feet, to a found ½ inch iron rod with "CUDE" cap marking the most southerly corner of Lance Crossing (80' right of way) as shown on the map or plat of Steele Creek Subdivision, Unit 1, as recorded in Volume 9, Pages 261-263, Plat Records of Guadalupe County, Texas;

THENCE, along the boundary lines of said Steele Creek Subdivision, Unit 1, the following courses:

North 59deg 14' 30" East, a distance of 50.00 feet, to a found ½ inch iron rod with "CUDE" cap;
South 30deg 45' 30" East, a distance of 18.02 feet, to a found ½ inch iron rod with "CUDE" cap;
Southeasterly, along the arc of a curve to the left having a radius of 225.00 feet, a central angle of 32deg 18' 17", an arc length of 126.86 feet and a chord bearing: S 46deg 54' 38" E, 125.19 feet, to a found ½ inch iron rod with "CUDE" cap;
South 63deg 03' 46" East, a distance of 128.30 feet, to a found ½ inch iron rod with "CUDE" cap;
Southeasterly, along the arc of a curve to the right having a radius of 275.00 feet, a central angle of 32deg 37' 28", an arc length of 156.59 feet and a chord bearing: S 46deg 45' 02" E, 154.48 feet, to a found ½ inch iron rod with "CUDE" cap;
South 30deg 26' 18" East, a distance of 292.06 feet, to a found ½ inch iron rod with "CUDE" cap;
Southeasterly, along the arc of a curve to the left having a radius of 10.00 feet, a central angle of 90deg 00' 00", an arc length of 15.71 feet and a chord bearing: S 75deg 26' 18" E, 14.14 feet, to a found ½ inch iron rod with "CUDE" cap;
North 59deg 33' 42" East, a distance of 508.91 feet, to a found ½ inch iron rod with "CUDE" cap located in the southwesterly line of that certain 171.390 acres of land conveyed to Continental Homes of Texas, L.P., as described in Document Number 201899019527;

THENCE, along the boundary lines of the said 171.390 acres, the following courses:

South 30deg 26' 18" East, a distance of 50.00 feet, to a found ½ inch iron rod with "CUDE" cap;
South 59deg 33' 42" West, a distance of 18.91 feet, to a found ½ inch iron rod with "CUDE" cap;
South 30deg 26' 18" East, a distance of 513.88 feet, to a found ½ inch iron rod with "CUDE" cap;
North 61deg 56' 57" East, a distance of 100.69 feet, to a found ½ inch iron rod with "CUDE" cap;
South 74deg 25' 04" East, a distance of 88.60 feet, to a found ½ inch iron rod with "CUDE" cap;
South 60deg 46' 16" East, a distance of 99.81 feet, to a found ½ inch iron rod with "CUDE" cap;
South 16deg 37' 12" East, a distance of 201.50 feet, to a found ½ inch iron rod with "CUDE" cap;
South 59deg 31' 33" West, a distance of 159.91 feet, to a found ½ inch iron rod with "CUDE" cap;
South 34deg 22' 24" East, a distance of 146.19 feet, to a found ½ inch iron rod with "CUDE" cap;
North 84deg 27' 39" East, a distance of 91.23 feet, to a found ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the left having a radius of 100.00 feet, a central angle of 54deg



SCHEDULE A

(Continued)

08' 11", an arc length of 94.49 feet and a chord bearing: N 57deg 23' 33" E, 91.01 feet, to a found ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the right having a radius of 395.00 feet, a central angle of 29deg 12' 05", an arc length of 201.32 feet and a chord bearing: N 44deg 55' 30" E, 199.14 feet, to a found ½ inch iron rod with "CUDE" cap;
North 59deg 31' 33" East, a distance of 212.48 feet, to a found ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the left having a radius of 105.00 feet, a central angle of 71deg 31' 37", an arc length of 131.08 feet and a chord bearing: N 23deg 45' 44" E, 122.73 feet, to a found ½ inch iron rod with "CUDE" cap;
North 23deg 32' 17" West, a distance of 47.95 feet, to a found ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the left having a radius of 760.00 feet, a central angle of 06deg 54' 11", an arc length of 91.57 feet and a chord bearing: N 63deg 00' 38" E, 91.51 feet, to a found ½ inch iron rod with "CUDE" cap;
North 59deg 33' 32" East, a distance of 28.29 feet, to a found ½ inch iron rod with "CUDE" cap;
North 30deg 26' 28" West, a distance of 105.01 feet, to a found ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the right having a radius of 175.00 feet, a central angle of 85deg 12' 35", an arc length of 260.26 feet and a chord bearing: N 12deg 09' 39" E, 236.93 feet, to a found ½ inch iron rod with "CUDE" cap;
Northwesterly, along the arc of a curve to the right having a radius of 835.00 feet, a central angle of 14deg 58' 49", an arc length of 218.32 feet and a chord bearing: N 11deg 05' 31" W, 217.69 feet, to a found ½ inch iron rod with "CUDE" cap;
Northwesterly, along the arc of a curve to the left having a radius of 900.00 feet, a central angle of 25deg 16' 50", an arc length of 397.11 feet and a chord bearing: N 16deg 14' 32" W, 393.89 feet, to a found ½ inch iron rod with "CUDE" cap;
North 61deg 07' 03" East, a distance of 120.00 feet, to a found ½" iron rod with "CUDE" cap;
Southeasterly, along the arc of a curve to the right having a radius of 1,020.05 feet, a central angle of 01deg 14' 23", an arc length of 22.07 feet and a chord bearing: S 28deg 15' 45" E, 22.07 feet, to a found ½ inch iron rod with "CUDE" cap;
North 59deg 42' 42" East, a distance of 171.09 feet, to a found ½" iron rod with "CUDE" cap;
North 30deg 17' 18" West, a distance of 50.00 feet, to a found ½" iron rod with "CUDE" cap;
North 30deg 17' 18" West, a distance of 670.00 feet, to a found ½" iron rod with "CUDE" cap;
North 20deg 24' 59" West, a distance of 50.75 feet, to a found ½" iron rod with "CUDE" cap;
North 30deg 17' 18" West, a distance of 120.00 feet, to a found ½" iron rod with "CUDE" cap located in the southeasterly line of Steele Creek Subdivision, Unit 2, as recorded in Volume 9, pages 209-212, Plat Records of Guadalupe County, Texas;

THENCE, along the southeasterly line of said Steele Creek Subdivision, Unit 2, the following courses:

North 49deg 07' 12" East, a distance of 121.92 feet, to a found ½" iron rod with "CUDE" cap;
North 59deg 15' 42" East, a distance of 70.87 feet, to a found ½" iron rod with "CUDE" cap;

THENCE, along the boundary lines of the said 171.390 acres, the following courses:

South 78deg 04' 29" East, a distance of 142.81 feet, to a found ½" iron rod with "CUDE" cap;
South 40deg 59' 38" East, a distance of 81.44 feet, to a found ½" iron rod with "CUDE" cap;
South 11deg 42' 48" East, a distance of 64.48 feet, to a found ½" iron rod with "CUDE" cap;
South 21deg 02' 25" East, a distance of 60.79 feet, to a found ½" iron rod with "CUDE" cap;
South 30deg 17' 18" East, a distance of 420.00 feet, to a found ½" iron rod with "CUDE" cap;
North 58deg 18' 43" East, a distance of 201.69 feet, to a found ½" iron rod with "CUDE" cap located in the northeasterly line of the said 311.08 acres;

THENCE, Along the northeasterly line of the said 311.08 acres, the following courses:

South 30deg 33' 06" East, a distance of 17.66 feet, to a found ½ inch iron rod;
South 30deg 16' 30" East, a distance of 592.20 feet, to a found ½ inch iron pipe;



SCHEDULE A

(Continued)

South 30deg 03' 34" East, a distance of 370.55 feet, to a set ½ inch iron rod with "CUDE" cap;

THENCE, into the said 311.08 acres, the said 85.592 acres and the said 65.801 acres, the following courses:

Southwesterly, along the arc of a curve to the right having a radius of 360.00 feet, a central angle of 07deg 29' 27", an arc length of 47.07 feet and a chord bearing: S 63deg 18' 34" W, 47.03 feet, to a set ½ inch iron rod with "CUDE" cap;

South 67deg 03' 18" West, a distance of 101.08 feet, to a set ½ inch iron rod with "CUDE" cap;

Southwesterly, along the arc of a curve to the left having a radius of 440.00 feet, a central angle of 07deg 29' 45", an arc length of 57.56 feet and a chord bearing: S 63deg 18' 25" W, 57.52 feet, to a set ½ inch iron rod with "CUDE" cap;

South 59deg 33' 32" West, a distance of 290.29 feet, to a set ½ inch iron rod with "CUDE" cap;

South 30deg 26' 28" East, a distance of 80.00 feet, to a set ½ inch iron rod with "CUDE" cap;

North 59deg 33' 32" East, a distance of 290.29 feet, to a set ½ inch iron rod with "CUDE" cap;

Northeasterly, along the arc of a curve to the right having a radius of 360.00 feet, a central angle of 07deg 29' 45", an arc length of 47.10 feet and a chord bearing: N 63deg 18' 25" E, 47.06 feet, to a found ½ inch iron rod with "CUDE" cap;

North 67deg 03' 18" East, a distance of 101.08 feet, to a set ½ inch iron rod with "CUDE" cap;

Northeasterly, along the arc of a curve to the left having a radius of 440.00 feet, a central angle of 06deg 12' 34", an arc length of 47.69 feet and a chord bearing: N 63deg 57' 00" E, 47.66 feet, to a found ½ inch iron rod with "CUDE" cap;

South 53deg 36' 06" East, a distance of 408.38 feet, to a set ½ inch iron rod with "CUDE" cap;

South 50deg 04' 17" East, a distance of 270.55 feet, to a set ½ inch iron rod with "CUDE" cap;

South 59deg 35' 47" West, a distance of 1,174.35 feet, to a set ½ inch iron rod with "CUDE" cap located in the northeasterly line of the said 65.801 acres;

THENCE, along the northeasterly line of the said 65.801 acres, the following courses:

South 30deg 23' 02" East, a distance of 403.84 feet, to a found ½ inch iron rod;

South 30deg 23' 02" east, a distance of 494.55 feet, to a set ½ inch iron rod with "CUDE" cap;

THENCE, into the said 68.801 acres, the following courses:

South 84deg 27' 39" West, a distance of 1,830.87 feet, to a set ½ inch iron rod with "CUDE" cap;

North 31deg 00' 24" West, a distance of 275.11 feet, to a set ½ inch iron rod with "CUDE" cap;

South 58deg 59' 36" West, a distance of 294.74 feet, to the **POINT OF BEGINNING** and containing 115.110 acres of land, more or less.

Authorized Countersignature
DHI Title Of Central Texas

Authorized Signature

(This Schedule A is valid only when jacket and Schedule B are attached)



| | |
|--|---|
|  First American Title Guaranty Company | Owner's Policy of Title Insurance (T-1) |
| | ISSUED BY First American Title Guaranty Company |
| Schedule A (Continued) | POLICY NUMBER 5825548-0037658e |

File No.: 161-200218086

115.110 acres of located in the Jeronimo Leal Survey No. 85, Abstract No. 210 and the David Miller Survey No. 87, Abstract No. 226, in the City of Cibolo, Guadalupe County, Texas, and being a portion of that certain called 311.08 acres of land conveyed to 258 Steele Creek Investments, LLC., as described in Document Number 201899019518, Official Public Records of Guadalupe County, Texas; a portion of that certain called 85.592 acres of land conveyed to 258 Steele Creek Investments, LLC., as described in Document Number 201899019519, Official Public Records of Guadalupe County and a portion of that certain called 65.801 acres of land conveyed to 258 Steele Creek Investments, LLC., as described in Document Number 201899019524, Official Public Records of Guadalupe County, Texas; said 115.110 acres of land being more particularly described as follows:

COMMENCING, at a found 5/8 inch iron rod located in the northerly line of the Union Pacific Railroad and marking the southwesterly corner of the said 65.801 acres;

THENCE, North 31deg 00' 24" West, along the westerly line of the said 65.801 acres, a distance of 472.48 feet, to a set ½ inch iron rod with "CUDE" cap, for the **POINT OF BEGINNING** of the herein described 115.110 acres;

THENCE, North 31deg 00' 24" West, continuing along the westerly line of the said 65.801 acres, a distance of 245.65 feet, to a found ½ inch iron rod;

THENCE, into the said 65.801 acres and the said 311.08 acres, the following courses:

- North 31deg 49' 37" West, a distance of 137.62 feet, to a set ½ inch iron rod with "CUDE" cap;
- South 59deg 09' 36" West, a distance of 2.66 feet, to a set ½ inch iron rod with "CUDE" cap;
- North 30deg 16' 47" West, a distance of 221.82 feet, to a set ½ inch iron rod with "CUDE" cap;
- North 30deg 16' 47" West, a distance of 267.09 feet, to a set ½ inch iron rod with "CUDE" cap;
- North 30deg 16' 47" West, a distance of 50.00 feet, to a set ½ inch iron rod with "CUDE" cap;
- North 31deg 22' 57" West, a distance of 245.66 feet, to a set ½ inch iron rod with "CUDE" cap;
- South 58deg 37' 03" West, a distance of 44.38 feet, to a set ½ inch iron rod with "CUDE" cap;
- North 86deg 37' 19" West, a distance of 85.04 feet, to a set ½ inch iron rod with "CUDE" cap;
- North 62deg 18' 05" West, a distance of 91.98 feet, to a set ½ inch iron rod with "CUDE" cap;
- South 03deg 39' 45" West, a distance of 262.36 feet, to a set ½ inch iron rod with "CUDE" cap;
- Northwesterly, along the arc of a curve to the left having a radius of 900.30 feet, a central angle of 04deg 30' 00", an arc length of 70.71 feet and a chord bearing: N 63deg 51' 39" W, 70.69 feet, to a set ½ inch iron rod with "CUDE" cap;
- North 00deg 11' 40" West, a distance of 573.24 feet, to a set ½ inch iron rod with "CUDE" cap;
- Northeasterly, along the arc of a curve to the right having a radius of 1,246.06 feet, a central angle of 22deg 54' 43", an arc length of 498.29 feet and a chord bearing: N 11deg 15' 41" E, 494.97 feet, to a set ½ inch iron rod with "CUDE" cap;
- South 67deg 16' 55" East, a distance of 1.00 feet, to a set ½ inch iron rod with "CUDE" cap;
- North 23deg 29' 57" East, a distance of 33.94 feet, to a set ½ inch iron rod with "CUDE" cap;
- Northwesterly, along the arc of a curve to the right having a radius of 272.16 feet, a central angle of 20deg 13' 52", an arc length of 96.10 feet and a chord bearing: N 40deg 58' 58" W, 95.60 feet, to a set ½ inch iron rod with "CUDE" cap;
- North 30deg 45' 30" West, a distance of 19.05 feet, to a found ½ inch iron rod with "CUDE" cap marking the most southerly corner of Lance Crossing (80' right of way) as shown on the map or plat of Steele Creek Subdivision, Unit 1, as recorded in Volume 9, Pages 261-263, Plat Records of Guadalupe County, Texas;



MULTIPURPOSE SCHEDULE A
(Continued)

THENCE, along the boundary lines of said Steele Creek Subdivision, Unit 1, the following courses:

North 59deg 14' 30" East, a distance of 50.00 feet, to a found ½ inch iron rod with "CUDE" cap;
South 30deg 45' 30" East, a distance of 18.02 feet, to a found ½ inch iron rod with "CUDE" cap;
Southeasterly, along the arc of a curve to the left having a radius of 225.00 feet, a central angle of 32deg 18' 17", an arc length of 126.86 feet and a chord bearing: S 46deg 54' 38" E, 125.19 feet, to a found ½ inch iron rod with "CUDE" cap;
South 63deg 03' 46" East, a distance of 128.30 feet, to a found ½ inch iron rod with "CUDE" cap;
Southeasterly, along the arc of a curve to the right having a radius of 275.00 feet, a central angle of 32deg 37' 28", an arc length of 156.59 feet and a chord bearing: S 46deg 45' 02" E, 154.48 feet, to a found ½ inch iron rod with "CUDE" cap;
South 30deg 26' 18" East, a distance of 292.06 feet, to a found ½ inch iron rod with "CUDE" cap;
Southeasterly, along the arc of a curve to the left having a radius of 10.00 feet, a central angle of 90deg 00' 00", an arc length of 15.71 feet and a chord bearing: S 75deg 26' 18" E, 14.14 feet, to a found ½ inch iron rod with "CUDE" cap;
North 59deg 33' 42" East, a distance of 508.91 feet, to a found ½ inch iron rod with "CUDE" cap located in the southwesterly line of that certain 171.390 acres of land conveyed to Continental Homes of Texas, L.P., as described in Document Number 201899019527;

THENCE, along the boundary lines of the said 171.390 acres, the following courses:

South 30deg 26' 18" East, a distance of 50.00 feet, to a found ½ inch iron rod with "CUDE" cap;
South 59deg 33' 42" West, a distance of 18.91 feet, to a found ½ inch iron rod with "CUDE" cap;
South 30deg 26' 18" East, a distance of 513.88 feet, to a found ½ inch iron rod with "CUDE" cap;
North 61deg 56' 57" East, a distance of 100.69 feet, to a found ½ inch iron rod with "CUDE" cap;
South 74deg 25' 04" East, a distance of 88.60 feet, to a found ½ inch iron rod with "CUDE" cap;
South 60deg 46' 16" East, a distance of 99.81 feet, to a found ½ inch iron rod with "CUDE" cap;
South 16deg 37' 12" East, a distance of 201.50 feet, to a found ½ inch iron rod with "CUDE" cap;
South 59deg 31' 33" West, a distance of 159.91 feet, to a found ½ inch iron rod with "CUDE" cap;
South 34deg 22' 24" East, a distance of 146.19 feet, to a found ½ inch iron rod with "CUDE" cap;
North 84deg 27' 39" East, a distance of 91.23 feet, to a found ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the left having a radius of 100.00 feet, a central angle of 54deg 08' 11", an arc length of 94.49 feet and a chord bearing: N 57deg 23' 33" E, 91.01 feet, to a found ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the right having a radius of 395.00 feet, a central angle of 29deg 12' 05", an arc length of 201.32 feet and a chord bearing: N 44deg 55' 30" E, 199.14 feet, to a found ½ inch iron rod with "CUDE" cap;
North 59deg 31' 33" East, a distance of 212.48 feet, to a found ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the left having a radius of 105.00 feet, a central angle of 71deg 31' 37", an arc length of 131.08 feet and a chord bearing: N 23deg 45' 44" E, 122.73 feet, to a found ½ inch iron rod with "CUDE" cap;
North 23deg 32' 17" West, a distance of 47.95 feet, to a found ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the left having a radius of 760.00 feet, a central angle of 06deg 54' 11", an arc length of 91.57 feet and a chord bearing: N 63deg 00' 38" E, 91.51 feet, to a found ½ inch iron rod with "CUDE" cap;
North 59deg 33' 32" East, a distance of 28.29 feet, to a found ½ inch iron rod with "CUDE" cap;
North 30deg 26' 28" West, a distance of 105.01 feet, to a found ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the right having a radius of 175.00 feet, a central angle of 85deg 12' 35", an arc length of 260.26 feet and a chord bearing: N 12deg 09' 39" E, 236.93 feet, to a found ½ inch iron rod with "CUDE" cap;
Northwesterly, along the arc of a curve to the right having a radius of 835.00 feet, a central angle of 14deg 58' 49", an arc length of 218.32 feet and a chord bearing: N 11deg 05' 31" W, 217.69 feet, to a found ½ inch iron rod with "CUDE" cap;
Northwesterly, along the arc of a curve to the left having a radius of 900.00 feet, a central angle of 25deg 16' 50", an arc length of 397.11 feet and a chord bearing: N 16deg 14' 32" W, 393.89 feet, to a found ½ inch iron rod with "CUDE" cap;
North 61deg 07' 03" East, a distance of 120.00 feet, to a found ½ inch iron rod with "CUDE" cap;



MULTIPURPOSE SCHEDULE A
(Continued)

Southeasterly, along the arc of a curve to the right having a radius of 1,020.05 feet, a central angle of 01deg 14' 23", an arc length of 22.07 feet and a chord bearing: S 28deg 15' 45" E, 22.07 feet, to a found ½ inch iron rod with "CUDE" cap;
North 59deg 42' 42" East, a distance of 171.09 feet, to a found ½" iron rod with "CUDE" cap;
North 30deg 17' 18" West, a distance of 50.00 feet, to a found ½" iron rod with "CUDE" cap;
North 30deg 17' 18" West, a distance of 670.00 feet, to a found ½" iron rod with "CUDE" cap;
North 20deg 24' 59" West, a distance of 50.75 feet, to a found ½" iron rod with "CUDE" cap;
North 30deg 17' 18" West, a distance of 120.00 feet, to a found ½" iron rod with "CUDE" cap located in the southeasterly line of Steele Creek Subdivision, Unit 2, as recorded in Volume 9, pages 209-212, Plat Records of Guadalupe County, Texas;

THENCE, along the southeasterly line of said Steele Creek Subdivision, Unit 2, the following courses:

North 49deg 07' 12" East, a distance of 121.92 feet, to a found ½" iron rod with "CUDE" cap;
North 59deg 15' 42" East, a distance of 70.87 feet, to a found ½" iron rod with "CUDE" cap;

THENCE, along the boundary lines of the said 171.390 acres, the following courses:

South 78deg 04' 29" East, a distance of 142.81 feet, to a found ½" iron rod with "CUDE" cap;
South 40deg 59' 38" East, a distance of 81.44 feet, to a found ½" iron rod with "CUDE" cap;
South 11deg 42' 48" East, a distance of 64.48 feet, to a found ½" iron rod with "CUDE" cap;
South 21deg 02' 25" East, a distance of 60.79 feet, to a found ½" iron rod with "CUDE" cap;
South 30deg 17' 18" East, a distance of 420.00 feet, to a found ½" iron rod with "CUDE" cap;
North 58deg 18' 43" East, a distance of 201.69 feet, to a found ½" iron rod with "CUDE" cap located in the northeasterly line of the said 311.08 acres;

THENCE, Along the northeasterly line of the said 311.08 acres, the following courses:

South 30deg 33' 06" East, a distance of 17.66 feet, to a found ½ inch iron rod;
South 30deg 16' 30" East, a distance of 592.20 feet, to a found ½ inch iron pipe;
South 30deg 03' 34" East, a distance of 370.55 feet, to a set ½ inch iron rod with "CUDE" cap;

THENCE, into the said 311.08 acres, the said 85.592 acres and the said 65.801 acres, the following courses:

Southwesterly, along the arc of a curve to the right having a radius of 360.00 feet, a central angle of 07deg 29' 27", an arc length of 47.07 feet and a chord bearing: S 63deg 18' 34" W, 47.03 feet, to a set ½ inch iron rod with "CUDE" cap;
South 67deg 03' 18" West, a distance of 101.08 feet, to a set ½ inch iron rod with "CUDE" cap;
Southwesterly, along the arc of a curve to the left having a radius of 440.00 feet, a central angle of 07deg 29' 45", an arc length of 57.56 feet and a chord bearing: S 63deg 18' 25" W, 57.52 feet, to a set ½ inch iron rod with "CUDE" cap;
South 59deg 33' 32" West, a distance of 290.29 feet, to a set ½ inch iron rod with "CUDE" cap;
South 30deg 26' 28" East, a distance of 80.00 feet, to a set ½ inch iron rod with "CUDE" cap;
North 59deg 33' 32" East, a distance of 290.29 feet, to a set ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the right having a radius of 360.00 feet, a central angle of 07deg 29' 45", an arc length of 47.10 feet and a chord bearing: N 63deg 18' 25" E, 47.06 feet, to a found ½ inch iron rod with "CUDE" cap;
North 67deg 03' 18" East, a distance of 101.08 feet, to a set ½ inch iron rod with "CUDE" cap;
Northeasterly, along the arc of a curve to the left having a radius of 440.00 feet, a central angle of 06deg 12' 34", an arc length of 47.69 feet and a chord bearing: N 63deg 57' 00" E, 47.66 feet, to a found ½ inch iron rod with "CUDE" cap;
South 53deg 36' 06" East, a distance of 408.38 feet, to a set ½ inch iron rod with "CUDE" cap;
South 50deg 04' 17" East, a distance of 270.55 feet, to a set ½ inch iron rod with "CUDE" cap;
South 59deg 35' 47" West, a distance of 1,174.35 feet, to a set ½ inch iron rod with "CUDE" cap located in the northeasterly line of the said 65.801 acres;

THENCE, along the northeasterly line of the said 65.801 acres, the following courses:



MULTIPURPOSE SCHEDULE A
(Continued)

South 30deg 23' 02" East, a distance of 403.84 feet, to a found ½ inch iron rod;
South 30deg 23' 02" east, a distance of 494.55 feet, to a set ½ inch iron rod with "CUDE" cap;

THENCE, into the said 68.801 acres, the following courses:

South 84deg 27' 39" West, a distance of 1,830.87 feet, to a set ½ inch iron rod with "CUDE" cap;
North 31deg 00' 24" West, a distance of 275.11 feet, to a set ½ inch iron rod with "CUDE" cap;
South 58deg 59' 36" West, a distance of 294.74 feet, to the **POINT OF BEGINNING** and containing 115.110 acres of land, more or less.





*First American
Title Guaranty Company*

Owner's Policy of Title Insurance (T-1)

ISSUED BY

First American Title Guaranty Company

Schedule B

POLICY NUMBER

5825548-0037658e

File No.: 161-200218086

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorney's fees or expenses) that arise by reason of the terms and conditions of the leases and easements, if any, shown in Schedule A, and the following matters:

1. The following restrictive covenants of record itemized below (the Company must either insert specific recording data or delete this exception):

See Exception No. 10.a. below

NOTE: This exception omits any covenant, condition or restriction based on race, color, religion, sex, handicap, familial status or national origin, unless and only to the extent that the restriction is not in violation of state or federal law, or relates to a handicap, but does not discriminate against handicapped people.

2. Any discrepancies, conflicts, or shortages in area or boundary lines, or any encroachments or protrusions, or any overlapping of improvements.
3. Homestead or community property or survivorship rights, if any, of any spouse of any Insured.
4. Any titles or rights asserted by anyone, including but not limited to, persons, the public, corporations, governments or other entities,
 - a. to tidelands, or lands comprising the shores or beds of navigable or perennial rivers and streams, lakes, bays, gulfs or oceans, or
 - b. to lands beyond the line of the harbor or bulkhead lines as established or changed by any government, or
 - c. to filled-in lands, or artificial islands, or
 - d. to statutory water rights, including riparian rights, or
 - e. to the area extending from the line of mean low tide to the line of vegetation, or the right of access to that area or easement along and across that area.
5. Standby fees, taxes and assessments by any taxing authority for the year 2020, and subsequent years; and subsequent taxes and assessments by any taxing authority for prior years due to change in land usage or ownership, but not those taxes or assessments for prior years because of an exemption granted to a previous owner of the property under Section 11.13, Texas Tax Code, or because of improvements not assessed for a previous tax year.
6. The following matters and all terms of the documents creating or offering evidence of the matters (The Company must insert matters or delete this exception).
 - a. Those recorded in Volume 446, Page 584 of the Deed Records of Guadalupe County, Texas.

NOTE: This exception omits any covenant, condition or restriction based on race, color, religion, sex, handicap, familial status or national origin, unless and only to the extent that the restriction is not in violation of state or federal law, or relates to a handicap, but does not discriminate against



SCHEDULE B
(Continued)

handicapped people.

- b. Any and all easements, rights of way, encroachments, protrusions, boundary conflicts or other matters of a similar nature, the existence of which would be reflected by a current and accurate survey of the subject property.
- c. The Company is prohibited from insuring the area or quantity of the land described herein. Any statement in the legal description contained in Schedule "A" as to area or quantity of land is not a representation that such area or quantity is correct, but is made only for informal identification purposes and does not override Item 2 of Schedule "B" hereof.
- d. Easement conveyed to the State of Texas, together with all rights granted therein, as described in document recorded in Volume 241, Page 334 of the Deed Records of Guadalupe County, Texas.
- e. Easement reserved by the Grantor therein, together with all rights retained therein, as described in document recorded in Volume 393, Page 545 of the Deed Records of Guadalupe County, Texas.
- f. Easement conveyed to Green Valley Water Supply Corporation, together with all rights granted therein, as described in document recorded in Volume 365, Page 263 of the Deed Records of Guadalupe County, Texas.
- g. Easement conveyed to Green Valley Water Supply Corporation, together with all rights granted therein, as described in document recorded in Volume 365, Page 269 of the Deed Records of Guadalupe County, Texas.
- h. Easement conveyed to Green Valley Water Supply Corporation, together with all rights granted therein, as described in document recorded in Volume 422, Page 52 of the Deed Records of Guadalupe County, Texas.
- i. Sewer Line Easement conveyed to Cibolo Creek Municipal Authority, together with all rights granted therein, as described in document recorded in Volume 496, Page 311 of the Deed Records of Guadalupe County, Texas.
- j. Sewer Line Easement conveyed to Cibolo Creek Municipal Authority, together with all rights granted therein, as described in document recorded in Volume 498, Page 737 of the Deed Records of Guadalupe County, Texas.
- k. Sewer Line Easement conveyed to the City of Cibolo, together with all rights granted therein, as described in document recorded in Volume 644, Page 583 of the Deed Records of Guadalupe County, Texas.
- l. Drainage Easement conveyed to the City of Cibolo, together with all rights granted therein, as described in document recorded in Volume 649, Page 854 of the Deed Records of Guadalupe County, Texas.
- m. Easement to the Guadalupe Valley Electric Coop, Inc. established by condemnation, in Cause No. 79-516 in the Judicial District Court of Guadalupe County, Texas, recorded in Volume 80B, Pages 327-328, Recorded Civil Minutes of the District Clerk Records of Guadalupe County, Texas.
- n. Sanitary Sewer Easement Agreement conveyed to the City of Schertz, together with all rights granted therein, as described in document recorded in Volume 2585, Page 865 of the Official Public Records of Guadalupe County, Texas.
- o. Easement awarded to the City of Schertz established by condemnation judgment in Cause No.



SCHEDULE B
(Continued)

08-16247 in the 25th Judicial District Court of Guadalupe County, Texas, a certified copy thereof recorded in Volume 2659, Page 809 of the Official Public Records of Guadalupe County, Texas.

- p. Drainage Easement Grant and Use Agreement conveyed to the City of Cibolo, together with all rights granted therein, as described in document recorded in Volume 2732, Page 738 of the Official Public Records of Guadalupe County, Texas.
- q. Drainage Easement Agreement conveyed to HEB Grocery Company, LP, a Texas limited partnership, together with all rights granted therein, as described in document recorded in Volume 4201, Page 71 of the Official Public Records of Guadalupe County, Texas.
- r. Easement Deed by Court Order in Settlement of Landowner Action, granted to Sprint Communications Company L.P., et al, together with all rights granted therein, recorded in Document No. 2015012533 of the Official Public Records of Guadalupe County, Texas.
- s. Right of Way Easement conveyed to Guadalupe Valley Electric Cooperative, Inc., together with all rights granted therein, as described in document recorded in Document No. 2017018661 of the Official Public Records of Guadalupe County, Texas.

(Said instrument fails to contain Exhibit "A" mentioned therein, nor any legal description of the affected property.)
- t. Terms and conditions contained in that certain Temporary Easement Agreement, recorded in Document No. 201899019528 of the Official Public Records of Guadalupe County, Texas.
- u. Terms and conditions contained in that certain Temporary Easement Agreement, recorded in Document No. 201899019538 of the Official Public Records of Guadalupe County, Texas.
- v. Item intentionally deleted.
- w. Item intentionally deleted.
- x. All leases, grants, exceptions or reservations of coal, lignite, oil, gas and other minerals, together with all rights, privileges, and immunities relating thereto, appearing in the Public Records whether listed in Schedule B or not. There may be leases, grants, exceptions or reservations of mineral interest that are not listed.
- y. Section 14 of the conditions and stipulations of this Policy is hereby deleted.
- z. All easements, building setback lines, restrictions and dedications as set out on the plat recorded in Volume 9, Pages 209-212 of the Map & Plat Records of Guadalupe County, Texas.
- aa. All easements, building setback lines, restrictions and dedications as set out on the plat recorded in Volume 9, Pages 261-263 of the Map & Plat Records of Guadalupe County, Texas.



| Office File No. | Policy Jacket No. | Date of Endorsement | Amount of Insurance | Type | Premium | Code | Rule |
|--------------------|-----------------------|-----------------------|---------------------|---------|--------------|-----------|--------|
| 1 161-200218086 | 2 5825548-0037658e | 3 November 6, 2020 | 4 \$3,568,410.00 | 5 EN | 6 \$50.00 | 9 0803 | R-29 1 |

**MINERALS AND SURFACE DAMAGE ENDORSEMENT
T-19.3**

Attached to Policy No. 5825548-0037658e

Issued by

FIRST AMERICAN TITLE GUARANTY COMPANY

The Company insures the insured against loss which the insured shall sustain by reason of damage to permanent buildings located on the Land on or after Date of Policy resulting from the future exercise of any right existing at Date of Policy to use the surface of the Land for the extraction or development of coal, lignite, oil, gas or other minerals excepted or excluded on Schedule A, Item 2 or excepted in Schedule B. This endorsement does not insure against loss resulting from subsidence.

This endorsement is issued as part of the policy. Except as it expressly states, it does not (i) modify any of the terms and provisions of the policy, (ii) modify any prior endorsements, (iii) extend the Date of Policy, or (iv) increase the Amount of Insurance. To the extent a provision of the policy or a previous endorsement is inconsistent with an express provision of this endorsement, this endorsement controls. Otherwise, this endorsement is subject to all of the terms and provisions of the policy and of any prior endorsements.

Authorized Countersignature

DHI Title Of Central Texas

Authorized Signature





**First American
Title Guaranty Company**

Owner's Policy of Title Insurance (T-1)

ISSUED BY

First American Title Guaranty Company

POLICY NUMBER

5825548-0037658e

Owner's Policy

Any notice of claim and any other notice or statement in writing required to be given the Company under this Policy must be given to the Company at the address shown in Section 18 of the Conditions.

COVERED RISKS

SUBJECT TO THE EXCLUSIONS FROM COVERAGE, THE EXCEPTIONS FROM COVERAGE CONTAINED IN SCHEDULE B AND THE CONDITIONS, **FIRST AMERICAN TITLE GUARANTY COMPANY**, a Texas corporation (the "Company") insures, as of Date of Policy and, to the extent stated in Covered Risks 9 and 10, after Date of Policy, against loss or damage, not exceeding the Amount of Insurance, sustained or incurred by the Insured by reason of:

1. Title being vested other than as stated in Schedule A.
2. Any defect in or lien or encumbrance on the Title. This Covered Risk includes but is not limited to insurance against loss from:
 - (a) A defect in the Title caused by:
 - (i) forgery, fraud, undue influence, duress, incompetency, incapacity or impersonation;
 - (ii) failure of any person or Entity to have authorized a transfer or conveyance;
 - (iii) a document affecting Title not properly created, executed, witnessed, sealed, acknowledged, notarized or delivered;
 - (iv) failure to perform those acts necessary to create a document by electronic means authorized by law;
 - (v) a document executed under a falsified, expired or otherwise invalid power of attorney;
 - (vi) a document not properly filed, recorded or indexed in the Public Records including failure to perform those acts by electronic means authorized by law; or
 - (vii) a defective judicial or administrative proceeding.
 - (b) The lien of real estate taxes or assessments imposed on the Title by a governmental authority due or payable, but unpaid.
 - (c) Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
 - (d) Any statutory or constitutional mechanic's, contractor's, or materialman's lien for labor or materials having its inception on or before Date of Policy.
3. Lack of good and indefeasible Title.
4. No right of access to and from the Land.

(Covered Risks Continued on Page 2)

In Witness Whereof, First American Title Guaranty Company has caused its corporate name to be hereunto affixed by its authorized officers as of Date of Policy shown in Schedule A.

First American Title Guaranty Company



Christopher M. Leavell
President

Jeffrey S. Robinson
Secretary

For Reference:

File No.: 161-200218086

Issued By:

DHI Title Of Central Texas
5419 North Loop 1604 East, Suite 200
San Antonio, TX 78247

Authorized Countersignature
DHI Title Of Central Texas

Authorized Signature

(This Policy is valid only when Schedules A and B are attached)

If this jacket was created electronically, it constitutes an original document.



5. The violation or enforcement of any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting or relating to:-
 - (a) the occupancy, use or enjoyment of the Land;
 - (b) the character, dimensions or location of any improvement erected on the Land;
 - (c) subdivision of land; or
 - (d) environmental protection
 if a notice, describing any part of the Land, is recorded in the Public Records setting forth the violation or intention to enforce, but only to the extent of the violation or enforcement referred to in that notice.
6. An enforcement action based on the exercise of a governmental police power not covered by Covered Risk 5 if a notice of the enforcement action, describing any part of the Land, is recorded in the Public Records, but only to the extent of the enforcement referred to in that notice.
7. The exercise of the rights of eminent domain if a notice of the exercise, describing any part of the Land, is recorded in the Public Records.
8. Any taking by a governmental body that has occurred and is binding on the rights of a purchaser for value without Knowledge.
9. Title being vested other than as stated in Schedule A or being defective:
 - (a) as a result of the avoidance in whole or in part, or from a court order providing an alternative remedy, of a transfer of all or any part of the title to or any interest in the Land occurring prior to the transaction vesting Title as shown in Schedule A because that prior transfer constituted a fraudulent or preferential transfer under federal bankruptcy, state insolvency or similar creditors' rights laws; or
 - (b) because the instrument of transfer vesting Title as shown in Schedule A constitutes a preferential transfer under federal bankruptcy, state insolvency or similar creditors' rights laws by reason of the failure of its recording in the Public Records:
 - (i) to be timely, or
 - (ii) to impart notice of its existence to a purchaser for value or a judgment or lien creditor.
10. Any defect in or lien or encumbrance on the Title or other matter included in Covered Risks 1 through 9 that has been created or attached or has been filed or recorded in the Public Records subsequent to Date of Policy and prior to the recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The Company will also pay the costs, attorneys' fees and expenses incurred in defense of any matter insured against by this Policy, but only to the extent provided in the Conditions.

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting or relating to:
 - (i) the occupancy, use, or enjoyment of the Land;
 - (ii) the character, dimensions or location of any improvement erected on the Land;
 - (iii) subdivision of land; or
 - (iv) environmental protection;
 or the effect of any violation of these laws, ordinances or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
 - (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims or other matters:
 - (a) created, suffered, assumed or agreed to by the Insured Claimant;
 - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is:
 - (a) a fraudulent conveyance or fraudulent transfer; or
 - (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.
6. The refusal of any person to purchase, lease or lend money on the estate or interest covered hereby in the land described in Schedule A because of Unmarketable Title.





**First American
Title Guaranty Company**

Important Notice

ISSUED BY

First American Title Guaranty Company

IMPORTANT NOTICE

To obtain information or make a complaint:

You may call First American Title Guaranty Company's toll-free telephone number for information or to make a complaint at:

1-888-632-1642

You may also write to First American Title Guaranty Company at:

**1 First American Way
Santa Ana, California 92707**

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at:

1-800-252-3439

You may write the Texas Department of Insurance:

P.O. Box 149104
Austin, TX 78714-9104
Fax: (512) 475-1771
Web: <http://www.tdi.state.tx.us>
E-mail: ConsumerProtection@tdi.state.tx.us

PREMIUM OR CLAIM DISPUTES:

Should you have a dispute concerning your premium or about a claim you should contact First American Title Guaranty Company first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

ATTACH THIS NOTICE TO YOUR POLICY:

This notice is for information only and does not become a part or condition of the attached document.

AVISO IMPORTANTE

Para obtener informacion o para someter una queja:

Usted puede llamar al numero de telefono gratis de First American Title Guaranty Company's para informacion o para someter una queja al:

1-888-632-1642

Usted tambien puede escribir a First American Title Guaranty Company:

**1 First American Way
Santa Ana, California 92707**

Puede comunicarse con el Departamento de Seguros de Texas para obtener informacion acerca de companias, coberturas, derechos o quejas al:

1-800-252-3439

Puede escribir al Departamento de Seguros de Texas:

P.O. Box 149104
Austin, TX 78714-9104
Fax: (512) 475-1771
Web: <http://www.tdi.state.tx.us>
E-mail: ConsumerProtection@tdi.state.tx.us

DISPUTAS SOBRE PRIMAS O RECLAMOS:

Si tiene una disputa concerniente a su prima o a un reclamo, debe comunicarse con el First American Title Guaranty Company primero. Si no se resuelve la disputa, puede entonces comunicarse con el departamento (TDI).

UNA ESTE AVISO A SU POLIZA:

Este aviso es solo para proposito de informacion y no se convierte en parte o condicion del documento adjunto.



CONDITIONS

1. DEFINITION OF TERMS.

The following terms when used in this policy mean:

- (a) "Amount of Insurance": the amount stated in Schedule A, as may be increased or decreased by endorsement to this policy, increased by Section 8(b), or decreased by Sections 10 and 11 of these Conditions.
- (b) "Date of Policy": The date designated as "Date of Policy" in Schedule A.
- (c) "Entity": A corporation, partnership, trust, limited liability company or other similar legal entity.
- (d) "Insured": the Insured named in Schedule A.
- (i) The term "Insured" also includes:
- (A) successors to the Title of the Insured by operation of law as distinguished from purchase, including heirs, devisees, survivors, personal representatives or next of kin;
- (B) successors to an Insured by dissolution, merger, consolidation, distribution or reorganization;
- (C) successors to an Insured by its conversion to another kind of Entity;
- (D) a grantee of an Insured under a deed delivered without payment of actual valuable consideration conveying the Title;
- (1) If the stock, shares, memberships, or other equity interests of the grantee are wholly-owned by the named Insured,
- (2) If the grantee wholly owns the named Insured,
- (3) If the grantee is wholly-owned by an affiliated Entity of the named Insured, provided the affiliated Entity and the named Insured are both wholly-owned by the same person or Entity, or
- (4) If the grantee is a trustee or beneficiary of a trust created by a written instrument established by the Insured named in Schedule A for estate planning purposes.
- (ii) With regard to (A), (B), (C) and (D) reserving, however, all rights and defenses as to any successor that the Company would have had against any predecessor Insured.
- (e) "Insured Claimant": an Insured claiming loss or damage.
- (f) "Knowledge" or "Known": actual knowledge, not constructive knowledge or notice that may be imputed to an Insured by reason of the Public Records or any other records that impart constructive notice of matters affecting the Title.
- (g) "Land": the land described in Schedule A, and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate or easement in abutting streets, roads, avenues, alleys, lanes, ways or waterways, but this does not modify or limit the extent that a right of access to and from the Land is insured by this policy.
- (h) "Mortgage": mortgage, deed of trust, trust deed, or other security instrument, including one evidenced by electronic means authorized by law.
- (i) "Public Records": records established under state statutes at Date of Policy for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge. With respect to Covered Risk 5(d), "Public Records" shall also include environmental protection liens filed in the records of the clerk of the United States District Court for the district where the Land is located.
- (j) "Title": the estate or interest described in Schedule A.
- (k) "Unmarketable Title": Title affected by an alleged or apparent matter that would permit a prospective purchaser or lessee of the Title or lender on the Title to be released from the

obligation to purchase, lease or lend if there is a contractual condition requiring the delivery of marketable title.

2. CONTINUATION OF INSURANCE.

The coverage of this policy shall continue in force as of Date of Policy in favor of an Insured, but only so long as the Insured retains an estate or interest in the Land, or holds an obligation secured by a purchase money Mortgage given by a purchaser from the Insured, or only so long as the Insured shall have liability by reason of warranties in any transfer or conveyance of the Title. This policy shall not continue in force in favor of any purchaser from the Insured of either (i) an estate or interest in the Land, or (ii) an obligation secured by a purchase money Mortgage given to the Insured.

3. NOTICE OF CLAIM TO BE GIVEN BY INSURED CLAIMANT.

The Insured shall notify the Company promptly in writing (i) in case of any litigation as set forth in Section 5(a) below, or (ii) in case Knowledge shall come to an Insured hereunder of any claim of title or interest that is adverse to the Title, as insured, and that might cause loss or damage for which the Company may be liable by virtue of this policy. If the Company is prejudiced by the failure of the Insured Claimant to provide prompt notice, the Company's liability to the Insured Claimant under the policy shall be reduced to the extent of the prejudice.

When, after the Date of the Policy, the Insured notifies the Company as required herein of a lien, encumbrance, adverse claim or other defect in Title insured by this policy that is not excluded or excepted from the coverage of this policy, the Company shall promptly investigate the charge to determine whether the lien, encumbrance, adverse claim or defect or other matter is valid and not barred by law or statute. The Company shall notify the Insured in writing, within a reasonable time, of its determination as to the validity or invalidity of the Insured's claim or charge under the policy. If the Company concludes that the lien, encumbrance, adverse claim or defect is not covered by this policy, or was otherwise addressed in the closing of the transaction in connection with which this policy was issued, the Company shall specifically advise the Insured of the reasons for its determination. If the Company concludes that the lien, encumbrance, adverse claim or defect is valid, the Company shall take one of the following actions: (i) institute the necessary proceedings to clear the lien, encumbrance, adverse claim or defect from the Title as insured; (ii) indemnify the Insured as provided in this policy; (iii) upon payment of appropriate premium and charges therefore, issue to the Insured Claimant or to a subsequent owner, mortgagee or holder of the estate or interest in the Land insured by this policy, a policy of title insurance without exception for the lien, encumbrance, adverse claim or defect, said policy to be in an amount equal to the current value of the Land or, if a loan policy, the amount of the loan; (iv) indemnify another title insurance company in connection with its issuance of a policy(ies) of title insurance without exception for the lien, encumbrance, adverse claim or defect; (v) secure a release or other document discharging the lien, encumbrance, adverse claim or defect; or (vi) undertake a combination of (i) through (v) herein.

4. PROOF OF LOSS.

In the event the Company is unable to determine the amount of loss or damage, the Company may, at its option, require as a condition of payment that the Insured Claimant furnish a signed proof of loss. The proof of loss must describe the defect, lien, encumbrance or other matter insured against by this policy that constitutes the basis of loss or damage and shall state, to the extent possible, the basis of calculating the amount of the loss or damage.

5. DEFENSE AND PROSECUTION OF ACTIONS.

(a) Upon written request by the Insured, and subject to the options contained in Sections 3 and 7 of these Conditions, the Company, at its own cost and without unreasonable delay,



CONDITIONS (Continued)

options contained in Sections 3 and 7 of these Conditions, the Company, at its own cost and without unreasonable delay, shall provide for the defense of an Insured in litigation in which any third party asserts a claim covered by this policy adverse to the Insured. This obligation is limited to only those stated causes of action alleging matters insured against by this policy. The Company shall have the right to select counsel of its choice (subject to the right of the Insured to object for reasonable cause) to represent the Insured as to those stated causes of action. It shall not be liable for and will not pay the fees of any other counsel. The Company will not pay any fees, costs or expenses incurred by the Insured in the defense of those causes of action that allege matters not insured against by this policy.

- (b) The Company shall have the right, in addition to the options contained in Sections 3 and 7, at its own cost, to institute and prosecute any action or proceeding or to do any other act that in its opinion may be necessary or desirable to establish the Title, as insured, or to prevent or reduce loss or damage to the Insured. The Company may take any appropriate action under the terms of this policy, whether or not it shall be liable to the Insured. The exercise of these rights shall not be an admission of liability or waiver of any provision of this policy. If the Company exercises its rights under this subsection, it must do so diligently.
- (c) Whenever the Company brings an action or asserts a defense as required or permitted by this policy, the Company may pursue the litigation to a final determination by a court of competent jurisdiction and it expressly reserves the right, in its sole discretion, to appeal from any adverse judgment or order.

6. DUTY OF INSURED CLAIMANT TO COOPERATE.

- (a) In all cases where this policy permits or requires the Company to prosecute or provide for the defense of any action or proceeding and any appeals, the Insured shall secure to the Company the right to so prosecute or provide defense in the action or proceeding, including the right to use, at its option, the name of the Insured for this purpose. Whenever requested by the Company, the Insured, at the Company's expense, shall give the Company all reasonable aid (i) in securing evidence, obtaining witnesses, prosecuting or defending the action or proceeding, or effecting settlement, and (ii) in any other lawful act that in the opinion of the Company may be necessary or desirable to establish the Title or any other matter as insured. If the Company is prejudiced by the failure of the Insured to furnish the required cooperation, the Company's obligations to the Insured under the policy shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation, with regard to the matter or matters requiring such cooperation.
- (b) The Company may reasonably require the Insured Claimant to submit to examination under oath by any authorized representative of the Company and to produce for examination, inspection and copying, at such reasonable times and places as may be designated by the authorized representative of the Company, all records, in whatever medium maintained, including books, ledgers, checks, memoranda, correspondence, reports, e-mails, disks, tapes, and videos whether bearing a date before or after Date of Policy, that reasonably pertain to the loss or damage. Further, if requested by any authorized representative of the Company, the Insured Claimant shall grant its permission, in writing, for any authorized representative of the Company to examine, inspect and copy all of these records in the custody or control of a third party that reasonably pertain to the loss or damage. All information designated as confidential by the Insured Claimant provided to the Company pursuant to this Section shall not be disclosed to others unless, in the reasonable judgment of the Company, it is necessary in the

administration of the claim. Failure of the Insured Claimant to submit for examination under oath, produce any reasonably requested information or grant permission to secure reasonably necessary information from third parties as required in this subsection, unless prohibited by law or governmental regulation, shall terminate any liability of the Company under this policy as to that claim.

7. OPTIONS TO PAY OR OTHERWISE SETTLE CLAIMS; TERMINATION OF LIABILITY.

In case of a claim under this policy, the Company shall have the following additional options:

- (a) ~~to~~ Pay or Tender Payment of the Amount of Insurance.
To pay or tender payment of the Amount of Insurance under this policy together with any costs, attorneys' fees and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment or tender of payment and that the Company is obligated to pay. Upon the exercise by the Company of this option, all liability and obligations of the Company to the Insured under this policy, other than to make the payment required in this subsection, shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation.
- (b) ~~to~~ Pay or Otherwise Settle With Parties Other than the Insured or With the Insured Claimant.
- (i) To pay or otherwise settle with other parties for or in the name of an Insured Claimant any claim insured against under this policy. In addition, the Company will pay any costs, attorneys' fees and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay; or
- (ii) To pay or otherwise settle with the Insured Claimant the loss or damage provided for under this policy, together with any costs, attorneys' fees and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay. Upon the exercise by the Company of either of the options provided for in subsections (b)(i) or (ii), the Company's obligations to the Insured under this policy for the claimed loss or damage, other than the payments required to be made, shall terminate, including any liability or obligation to defend, prosecute or continue any litigation.

8. DETERMINATION AND EXTENT OF LIABILITY.

This policy is a contract of indemnity against actual monetary loss or damage sustained or incurred by the Insured Claimant who has suffered loss or damage by reason of matters insured against by this policy.

- (a) The extent of liability of the Company for loss or damage under this policy shall not exceed the lesser of:
- (i) the Amount of Insurance; or
- (ii) the difference between the value of the Title as insured and the value of the Title subject to the risk insured against by this policy.
- (b) If the Company pursues its rights under Section 3 or 5 and is unsuccessful in establishing the Title, as insured,
- (i) the Amount of Insurance shall be increased by 10%, and
- (ii) the Insured Claimant shall have the right to have the loss or damage determined either as of the date the claim was made by the Insured Claimant or as of the date it is settled and paid.
- (c) In addition to the extent of liability under (a) and (b), the Company will also pay those costs, attorneys' fees and expenses incurred in accordance with Sections 5 and 7 of these Conditions.

9. LIMITATION OF LIABILITY.

- (a) If the Company establishes the Title, or removes the alleged



CONDITIONS (Continued)

defect, lien or encumbrance, or cures the lack of a right of access to or from the Land, all as insured, or takes action in accordance with Section 3 or 7, in a reasonably diligent manner by any method, including litigation and the completion of any appeals, it shall have fully performed its obligations with respect to that matter and shall not be liable for any loss or damage caused to the Insured.

- (b) In the event of any litigation, including litigation by the Company or with the Company's consent, the Company shall have no liability for loss or damage until there has been a final determination by a court of competent jurisdiction, and disposition of all appeals, adverse to the Title, as insured.
- (c) The Company shall not be liable for loss or damage to the Insured for liability voluntarily assumed by the Insured in settling any claim or suit without the prior written consent of the Company.

10. REDUCTION OF INSURANCE; REDUCTION OR TERMINATION OF LIABILITY.

All payments under this policy, except payments made for costs, attorneys' fees and expenses, shall reduce the Amount of Insurance by the amount of the payment.

11. LIABILITY NONCUMULATIVE.

The Amount of Insurance shall be reduced by any amount the Company pays under any policy insuring a Mortgage to which exception is taken in Schedule B or to which the Insured has agreed, assumed, or taken subject or which is executed by an Insured after Date of Policy and which is a charge or lien on the Title, and the amount so paid shall be deemed a payment to the Insured under this policy.

12. PAYMENT OF LOSS.

When liability and the extent of loss or damage have been definitely fixed in accordance with these Conditions, the payment shall be made within 30 days.

13. RIGHTS OF RECOVERY UPON PAYMENT OR SETTLEMENT.

(a) Whenever the Company shall have settled and paid a claim under this policy, it shall be subrogated and entitled to the rights of the Insured Claimant in the Title and all other rights and remedies in respect to the claim that the Insured Claimant has against any person or property, to the extent of the amount of any loss, costs, attorneys' fees and expenses paid by the Company. If requested by the Company, the Insured Claimant shall execute documents to evidence the transfer to the Company of these rights and remedies. The Insured Claimant shall permit the Company to sue, compromise or settle in the name of the Insured Claimant and to use the name of the Insured Claimant in any transaction or litigation involving these rights and remedies.

If a payment on account of a claim does not fully cover the loss of the Insured Claimant, the Company shall defer the exercise of its right to recover until after the Insured Claimant shall have recovered its loss.

(b) The Company's right of subrogation includes the rights of the Insured to indemnities, guaranties, other policies of insurance or bonds, notwithstanding any terms or conditions contained in those instruments that address subrogation rights.

14. ARBITRATION.

Either the Company or the Insured may demand that the claim or controversy shall be submitted to arbitration pursuant to the Title Insurance Arbitration Rules of the American Land Title Association ("Rules"). Except as provided in the Rules, there shall be no joinder or consolidation with claims or controversies of other persons. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the Insured arising out of or relating to this policy, any service in connection with its issuance or the breach of a policy provision, or to any other controversy or claim arising out of the transaction giving rise to this

policy. All arbitrable matters when the Amount of Insurance is \$2,000,000 or less shall be arbitrated at the option of either the Company or the Insured, unless the Insured is an individual person (as distinguished from an Entity). All arbitrable matters when the Amount of Insurance is in excess of \$2,000,000 shall be arbitrated only when agreed to by both the Company and the Insured. Arbitration pursuant to this policy and under the Rules shall be binding upon the parties. Judgment upon the award rendered by the Arbitrator(s) may be entered in any court of competent jurisdiction.

15. LIABILITY LIMITED TO THIS POLICY; POLICY ENTIRE CONTRACT.

(a) This policy together with all endorsements, if any, attached to it by the Company is the entire policy and contract between the Insured and the Company. In interpreting any provision of this policy, this policy shall be construed as a whole.

(b) Any claim of loss or damage that arises out of the status of the Title or by any action asserting such claim, shall be restricted to this policy.

(c) Any amendment or endorsement to this policy must be in writing and authenticated by an authorized person, or expressly incorporated by Schedule A of this policy.

(d) Each endorsement to this policy issued at anytime is made a part of this policy and is subject to all of its terms and provisions. Except as the endorsement expressly states, it does not (i) modify any of the terms and provisions of the policy, (ii) modify any prior endorsement, (iii) extend the Date of Policy or (iv) increase the Amount of Insurance. Each Commitment, endorsement or other form, or provision in the Schedules to this policy that refers to a term defined in Section 1 of the Conditions shall be deemed to refer to the term regardless of whether the term is capitalized in the Commitment, endorsement or other form, or Schedule. Each Commitment, endorsement or other form, or provision in the Schedules that refers to the Conditions and Stipulations shall be deemed to refer to the Conditions of this policy.

16. SEVERABILITY.

In the event any provision of this policy, in whole or in part, is held invalid or unenforceable under applicable law, the policy shall be deemed not to include that provision or such part held to be invalid and all other provisions shall remain in full force and effect.

17. CHOICE OF LAW; FORUM.

(a) Choice of Law: The Insured acknowledges the Company has underwritten the risks covered by this policy and determined the premium charged therefore in reliance upon the law affecting interests in real property and applicable to the interpretation, rights, remedies or enforcement of policies of title insurance of the jurisdiction where the Land is located. Therefore, the court or an arbitrator shall apply the law of the jurisdiction where the Land is located to determine the validity of claims against the Title that are adverse to the Insured, and in interpreting and enforcing the terms of this policy. In neither case shall the court or arbitrator apply its conflicts of laws principles to determine the applicable law.

(b) Choice of Forum: Any litigation or other proceeding brought by the Insured against the Company must be filed only in a state or federal court within the United States of America or its territories having appropriate jurisdiction.

18. NOTICES, WHERE SENT.

Any notice of claim and any other notice or statement in writing required to be given to the Company under this Policy must be given to the Company at First American Title Guaranty Company, Attn: Claims National Intake Center, 1 First American Way, Santa Ana, California 92707. Phone: 888-632-1642.





Continental Homes of Texas, L.P.
5419 North Loop 1604 East, Suite 100
San Antonio, TX 78247

May 10, 2023

Dear Homebuyer(s):

In connection with your recent DHI Title Agency transaction, we are pleased to enclose your title policy for your records. The premium for this policy was paid at your closing so no additional funds are due.

It has been our pleasure to handle this transaction for you. If we can be of further service to you in the future, please feel free to call on us.

Thank you,

DHI Title Agency

DHI Title Agency
10700 Pecan Park Blvd., Suite 220
Austin, TX 78750
Phone: (512)219-0495 / Fax: (512)249-8919

Letter (OTP Cover)

161-220224005





OWNER'S POLICY OF TITLE INSURANCE (FORM T-1)
Issued by
TITLE RESOURCES GUARANTY COMPANY

SCHEDULE A

Name and Address of Title Insurance Company: Title Resources Guaranty Company, 8111 LBJ Freeway, Suite 1200, Dallas, TX 75251

File No.: 161-220224005

Policy No.: 2692-O-161-220224005

Address for Reference only: Steele Creek 175.5 Acres, Cibolo, TX 78108

Amount of Insurance: \$3,858,300.00

Premium: \$18,001.00

Date of Policy: April 17, 2023 at 12:30 PM

- 1. Name of Insured: Continental Homes of Texas, L.P.
2. The estate or interest in the Land that is insured by this policy is: Fee Simple
3. Title is insured as vested in: Continental Homes of Texas, L.P.
4. The land referred to in this policy is described as follows:

TRACT 1 -

89.60 ACRES OF LAND LOCATED IN THE DAVID MILLER SURVEY 87, ABSTRACT 226, JERONIMO LEAL SURVEY 85, ABSTRACT 210, BOTH OF GUADALUPE COUNTY, TEXAS AND BEING OUT OF A CALLED 311.08 ACRES OF LAND AS DESCRIBED IN DOCUMENT 201899019518 OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS; SAID 89.60 ACRES BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING, AT A SET 1/2" IRON ROD WITH "CUDE" CAP, ON THE EAST LINE OF LOT 5 OF NORTHSIDE ADDITION RECORDED IN VOLUME 2, PAGE 20 OF THE PLAT RECORDS OF GUADALUPE COUNTY, TEXAS, THE SOUTHWEST CORNER OF A 171.390 ACRE TRACT AS DESCRIBED IN DOCUMENT 201899019527 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, DEPARTING THE EAST LINE OF SAID LOT 5, ALONG AND WITH THE SOUTH LINE OF SAID 171.390 ACRE TRACT, THE FOLLOWING BEARINGS AND DISTANCES, TO A SET 1/2" IRON ROD WITH "CUDE" CAP:

- N 59°24'16" E, A DISTANCE OF 968.29 FEET;
S 30°47'17" E, A DISTANCE OF 577.48 FEET;
N 59°12'43" E, A DISTANCE OF 748.68 FEET;
N 30°28'27" W, A DISTANCE OF 450.11 FEET;
N 60°43'41" E, A DISTANCE OF 247.61 FEET;
S 30°45'32" E, A DISTANCE OF 10.43 FEET;
N 59°14'28" E, A DISTANCE OF 50.00 FEET;



SCHEDULE A

(Continued)

N 41°11'28" E, A DISTANCE OF 97.34 FEET;

N 65°55'44" E, A DISTANCE OF 85.53 FEET;

N 64°46'59" E, A DISTANCE OF 85.36 FEET;

N 63°38'22" E, A DISTANCE OF 85.22 FEET;

N 62°06'30" E, A DISTANCE OF 143.09 FEET;

N 62°06'30" E, A DISTANCE OF 210.70 FEET;

S 67°16'55" E, A DISTANCE OF 90.42 FEET, ON THE COMMON BOUNDARY LINE OF STEEL CREEK SUBDIVISION, UNIT 8, RECORDED IN VOLUME 9, PAGE 687 OF THE MAP AND PLAT RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, ALONG AND WITH THE WEST AND SOUTH LINES OF SAID STEELE CREEK SUBDIVISION, UNIT 8, THE FOLLOWING BEARINGS AND DISTANCES:

SOUTHWESTERLY, ALONG A NON-TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIAL BEARING OF S 67°16'57" E, WITH A RADIUS OF 1246.06 FEET, A CENTRAL ANGLE OF 22°54'43", AN ARC LENGTH OF 498.28 FEET, AND A CHORD BEARING AND DISTANCE OF S 11°15'41" W, 494.97 FEET, TO A SET 1/2" IRON ROD WITH "CUDE" CAP;

S 00°11'40" E, A DISTANCE OF 573.24 FEET TO A SET 1/2" IRON ROD WITH "CUDE" CAP;

SOUTHEASTERLY, ALONG A NON-TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIAL BEARING OF N 28°23'20" E, WITH A RADIUS OF 900.30 FEET, A CENTRAL ANGLE OF 04°30'00", AN ARC LENGTH OF 70.71 FEET, AND A CHORD BEARING AND DISTANCE OF S 63°51'39" E, 70.69 FEET, TO A SET 1/2" IRON ROD WITH "CUDE" CAP;

N 03°39'45" E, A DISTANCE OF 262.36 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 62°18'05" E, A DISTANCE OF 91.98 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 86°37'19" E, A DISTANCE OF 85.04 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

N 58°37'03" E, A DISTANCE OF 44.38 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 31°22'57" E, A DISTANCE OF 245.66 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 30°16'47" E, A DISTANCE OF 50.00 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 30°16'47" E, A DISTANCE OF 267.09 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 30°16'47" E, A DISTANCE OF 221.82 FEET TO A SET 1/2" IRON ROD WITH "CUDE" CAP;

N 59°09'36" E, A DISTANCE OF 2.66 FEET TO A SET 1/2" IRON ROD WITH "CUDE" CAP, ON THE COMMON BOUNDARY LINE OF SAID STEELE CREEK SUBDIVISION, UNIT 8 AND AN 115.110 ACRE TRACT AS DESCRIBED IN DOCUMENT 202099031952 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 31°49'37" E, ALONG AND WITH THE WEST LINE OF SAID 115.110 ACRE TRACT, A DISTANCE OF 137.62 FEET TO A FOUND 1/2" IRON ROD, FOR THE NORTH CORNER OF A 1.79 ACRE TRACT AS DESCRIBED IN DOCUMENT 201899022809 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 59°12'43" W, ALONG AND WITH THE COMMON BOUNDARY LINE OF SAID 311.08 ACRE TRACT, SAID 1.79 ACRE TRACT AND A 10.79 ACRE TRACT AS DESCRIBED IN SAID DOCUMENT 201899022809, A DISTANCE OF 1532.67 FEET TO A FOUND 1/2" IRON ROD WITH "KSC RPLS" CAP, ON THE NORTH RIGHT-OF-WAY LINE OF FM 78 (SEGUIN ROAD);

THENCE, S 84°15'38" W, ALONG AND WITH THE COMMON BOUNDARY LINE OF FM 78 (SEGUIN ROAD) AND SAID 311.08 ACRE TRACT, A DISTANCE OF 772.78 FEET TO A FOUND 1/2" IRON ROD WITH "KSC RPLS" CAP;

THENCE, DEPARTING THE NORTH RIGHT-OF-WAY LINE OF FM 78 (SEGUIN ROAD), ALONG AND WITH THE WEST LINE OF SAID 311.08 ACRE TRACT, THE FOLLOWING BEARINGS AND DISTANCES:

N 31°35'34" W, A DISTANCE OF 315.99 FEET TO A FOUND 1/2" IRON ROD;

N 29°26'41" W, A DISTANCE OF 110.00 FEET TO A FOUND 1/2" IRON ROD;

N 30°28'55" W, A DISTANCE OF 178.52 FEET TO A FOUND 3/4" IRON ROD;



SCHEDULE A

(Continued)

N 29°35'16" W, A DISTANCE OF 147.57 FEET TO A FOUND 1/2" IRON ROD;
S 59°26'29" W, A DISTANCE OF 100.00 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;
N 30°55'55" W, A DISTANCE OF 343.54 FEET TO A FOUND 1/2" IRON ROD;
N 69°50'31" W, A DISTANCE OF 31.29 FEET TO A SET 1/2" IRON ROD WITH "CUDE" CAP;
N 31°10'22" W, A DISTANCE OF 96.48 FEET TO A FOUND 1/2" IRON ROD;
S 59°12'21" W, A DISTANCE OF 150.23 FEET TO A FOUND 1/2" IRON ROD;
N 30°40'24" W, A DISTANCE OF 304.56 FEET TO A FOUND 1/2" IRON ROD;
N 30°35'44" W, A DISTANCE OF 136.25 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 89.60 ACRES OF LAND, MORE OR LESS.

BASIS OF BEARINGS IS THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (2011).

TRACT 2 -

16.30 ACRES OF LAND LOCATED IN THE JERONIMO LEAL SURVEY 85, ABSTRACT 210, GUADALUPE COUNTY, TEXAS AND BEING OUT OF A CALLED 65.801 ACRES OF LAND AS DESCRIBED IN DOCUMENT 201899019524 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS; SAID 16.30 ACRES BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING, AT A FOUND 1/2" IRON ROD, ON THE NORTH-RIGHT-OF-WAY LINE OF FM 78 (SEGUIN ROAD), THE SOUTHEAST CORNER OF SAID 65.801 ACRE TRACT AND THE SOUTHWEST CORNER OF AN 18.400 ACRE TRACT AS DESCRIBED IN VOLUME 2690, PAGE 80 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS.

THENCE, S 84°16'28" W, ALONG AND WITH THE COMMON BOUNDARY LINE OF SAID 65.801 ACRE TRACT AND THE NORTH RIGHT-OF-WAY LINE OF FM 78 (SEGUIN ROAD), A DISTANCE OF 2150.05 FEET TO A FOUND FENCE POST, FOR THE SOUTHEAST CORNER OF A 10.79 ACRE TRACT AS DESCRIBED IN DOCUMENT 201899022809 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY TEXAS AND THE SOUTHWEST CORNER OF SAID 65.801 ACRE TRACT;

THENCE, N 31°00'24" W, DEPARTING THE NORTH RIGHT-OF-WAY LINE OF FM 78 (SEGUIN ROAD), ALONG AND WITH THE COMMON BOUNDARY LINE OF SAID 65.801 ACRE TRACT AND SAID 10.79 ACRE TRACT, A 1.79 ACRE TRACT AS DESCRIBED IN SAID DOCUMENT 201899022809, A DISTANCE OF 472.48 FEET TO A SET 1/2" IRON ROD WITH "CUDE" CAP, A SOUTHWEST CORNER OF AN 115.110 ACRE TRACT;

THENCE, DEPARTING THE SAID COMMON BOUNDARY LINE AND THE SOUTH LINE OF SAID 115.110 ACRE TRACT, THE FOLLOWING BEARINGS AND DISTANCES, TO A SET 1/2" IRON ROD WITH "CUDE" CAP:

N 58°59'36" E, A DISTANCE OF 294.74 FEET;

S 31°00'24" E, A DISTANCE OF 275.11 FEET;

N 84°27'39" E, A DISTANCE OF 1830.87 FEET, ON THE COMMON BOUNDARY LINE OF SAID 18.400 ACRE TRACT AND SAID 65.801 ACRE TRACT;

THENCE, S 30°23'02" E, ALONG AND WITH THE COMMON BOUNDARY LINE OF 18.400 ACRE TRACT AND SAID 65.801 ACRE TRACT, A DISTANCE OF 328.32 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 16.30 ACRES OF LAND, MORE OR LESS.

BASIS OF BEARINGS IS THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (2011).



SCHEDULE A

(Continued)

TRACT 3 -

BEING 69.60 ACRES OF LAND LOCATED IN THE JERONIMO LEAL SURVEY 85, ABSTRACT 210, GUADALUPE COUNTY, TEXAS AND A PORTION OF A CALLED 85.592 ACRE TRACT RECORDED IN DOCUMENT 201899019519 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS; SAID 69.60 ACRES BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING, AT A FOUND 1/2" IRON ROD WITH "CUDE" CAP AT THE SOUTH CORNER OF STEELE CREEK SUBDIVISION, UNIT 5 RECORDED IN VOLUME 9, PAGE 684 OF THE MAP AND PLAT RECORDS OF GUADALUPE COUNTY, TEXAS, THE EAST LINE OF A CALLED 115.110 ACRE TRACT RECORDED IN DOCUMENT 202099031952 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS AND THE WEST LINE OF SAID 85.592 ACRE TRACT;

THENCE, ALONG AND WITH THE SOUTH AND EAST LINES OF SAID STEELE CREEK SUBDIVISION, UNIT 5, THE FOLLOWING BEARINGS AND DISTANCES, TO A SET 1/2" IRON ROD WITH "CUDE" CAP:

N 59°35'47" E, A DISTANCE OF 1174.35 FEET;

N 50°04'17" W, A DISTANCE OF 136.88 FEET;

NORTHWESTERLY, ALONG A NON-TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIAL BEARING OF S 41°52'52" W, WITH A RADIUS OF 1961.71 FEET, A CENTRAL ANGLE OF 05°35'04", AN ARC LENGTH OF 191.20 FEET, AND A CHORD BEARING AND DISTANCE OF N 50°54'40" W, 191.12 FEET;

N 53°42'11" W, A DISTANCE OF 350.83 FEET;

SOUTHWESTERLY, ALONG A NON-TANGENT CURVE TO THE RIGHT, SAID CURVE HAVING A RADIAL BEARING OF N 29°09'46" W, WITH A RADIUS OF 441.20 FEET, A CENTRAL ANGLE OF 06°12'34", AN ARC LENGTH OF 47.82 FEET, AND A CHORD BEARING AND DISTANCE OF S 63°56'31" W, 47.79 FEET;

S 67°03'18" W, A DISTANCE OF 101.08 FEET;

SOUTHWESTERLY, ALONG A TANGENT CURVE TO THE LEFT, WITH A RADIUS OF 360.00 FEET, A CENTRAL ANGLE OF 07°29'45", AN ARC LENGTH OF 47.10 FEET, AND A CHORD BEARING AND DISTANCE OF S 63°18'25" W, 47.06 FEET;

S 59°33'32" W, A DISTANCE OF 290.29 FEET;

N 30°26'28" W, A DISTANCE OF 38.30 FEET, A NORTH CORNER OF SAID STEELE CREEK SUBDIVISION, UNIT 5;

THENCE, N 59°21'53" E, ALONG AND WITH THE NORTH LINE OF SAID 85.592 ACRE TRACT, A DISTANCE OF 494.80 FEET TO A FOUND 1/2" IRON ROD AT THE SOUTH CORNER OF A CALLED 22.30 ACRE TRACT RECORDED IN VOLUME 461, PAGE 382 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 22.30 ACRE TRACT, THE FOLLOWING BEARINGS AND DISTANCES:



SCHEDULE A

(Continued)

N 59°32'35" E, A DISTANCE OF 571.05 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

N 59°37'36" E, A DISTANCE OF 1917.62 FEET TO A FOUND 1/2" IRON ROD AT THE NORTH CORNER OF SAID 85.592 ACRE TRACT, THE EAST CORNER OF SAID 22.30 ACRE TRACT AND THE WEST RIGHT-OF-WAY LINE OF TOLLE ROAD;

THENCE, 30°16'38" E, ALONG AND WITH THE WEST RIGHT-OF-WAY LINE OF TOLLE ROAD AND THE EAST LINE OF SAID 85.592 ACRE TRACT, A DISTANCE OF 1087.20 FEET TO A FOUND 1/2" IRON ROD AT THE EAST CORNER OF SAID 85.592 ACRE TRACT AND THE NORTH CORNER OF A CALLED 5.00 ACRE TRACT RECORDED IN VOLUME 1023, PAGE 510 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, ALONG AND WITH THE COMMON LINES OF SAID 85.592 ACRE TRACT, SAID 5.00 ACRE TRACT AND A CALLED 27.609 ACRE TRACT RECORDED IN VOLUME 1501, PAGE 82 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS, THE FOLLOWING BEARINGS AND DISTANCES:

S 59°29'07" W, A DISTANCE OF 1151.46 FEET TO A FOUND CEDAR POST;

S 59°36'07" W, A DISTANCE OF 686.04 FEET TO A FOUND 1/2" IRON ROD WITH "HUTT ZOLARS" CAP AT THE WEST CORNER OF SAID 27.609 ACRE TRACT AND THE NORTH CORNER OF A CALLED 9.80 ACRE TRACT RECORDED IN VOLUME 4164, PAGE 386 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 59°19'16" W, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 9.80 ACRE TRACT, A DISTANCE OF 375.50 FEET TO A FOUND 1" IRON PIPE AT THE WEST CORNER OF SAID 9.80 ACRE TRACT AND THE NORTH CORNER OF A CALLED 0.84 ACRE TRACT RECORDED IN VOLUME 924, PAGE 153 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 59°15'52" W, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 0.84 ACRE TRACT, A DISTANCE OF 155.31 FEET TO A FOUND 1/2" IRON ROD AT THE WEST CORNER OF SAID 0.84 ACRE TRACT AND THE NORTH CORNER OF A CALLED 4.700 ACRE TRACT RECORDED IN DOCUMENT 2015013580 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 59°29'02" W, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 4.700 ACRE TRACT, A DISTANCE OF 193.94 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP AT THE WEST CORNER OF SAID 4.700 ACRE TRACT AND THE NORTH CORNER OF A CALLED 18.400 ACRE TRACT RECORDED IN VOLUME 2960, PAGE 80 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 59°32'02" W, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 18.400 ACRE TRACT, A DISTANCE OF 856.37 FEET TO A FOUND 1/2" IRON ROD AT THE WEST CORNER OF SAID 18.400 ACRE TRACT, THE SOUTH CORNER OF SAID 85.592 ACRE TRACT AND THE EAST LINE OF SAID 115.110 ACRE TRACT;

THENCE, N 30°23'02" W, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 115.110 ACRE TRACT, A DISTANCE OF 403.84 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 69.60 ACRES OF LAND, MORE OR LESS.

BASIS OF BEARINGS IS THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (2011).



SCHEDULE A
(Continued)

Authorized Countersignature
DHI Title Agency

A handwritten signature in black ink, appearing to be a stylized name, possibly "H. DeWitt", written over a horizontal line.

Authorized Signature





IMPORTANT NOTICE

To obtain information or make a complaint:

You may call Title Resources Guaranty Company's toll-free telephone number for information or to make a complaint at:

1-800-526-8018

You may also write to Title Resources Guaranty Company at:

Attention: Claims Department
8111 LBJ Freeway, Suite 1200
Dallas, TX 75251

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights, or complaints at:

1-800-252-3439

You may write the Texas Department of Insurance:

P. O. Box 149104
Austin, TX 78714-9104
Fax: (512) 490-1007
Web: www.tdi.texas.gov
E-mail: ConsumerProtection@tdi.texas.gov

PREMIUM OR CLAIM DISPUTES:

Should you have a dispute concerning your premium or about a claim, you should contact the company first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

ATTACH THIS NOTICE TO YOUR POLICY:

This notice is for information only and does not become a part or condition of the attached document.

AVISO IMPORTANTE

Para obtener información o para presentar una queja:

Usted puede llamar al número de teléfono gratuito de Title Resources Guaranty Company's para obtener información o para presentar una queja al:

1-800-526-8018

Usted también puede escribir a Title Resources Guaranty Company:

Attention: Claims Department
8111 LBJ Freeway, Suite 1200
Dallas, TX 75251

Usted puede comunicarse con el Departamento de Seguros de Texas para obtener información sobre compañías, coberturas, derechos, o quejas al:

1-800-252-3439

Usted puede escribir al Departamento de Seguros de Texas a:

P. O. Box 149104
Austin, TX 78714-9104
Fax: (512) 490-1007
Web: www.tdi.texas.gov
E-mail: ConsumerProtection@tdi.texas.gov

DISPUTAS POR PRIMAS DE SEGUROS O RECLAMACIONES:

Si tiene una disputa relacionada con su prima de seguro o con una reclamación, usted debe comunicarse con la compañía primero. Si la disputa no es resuelta, usted puede comunicarse con el Departamento de Seguros de Texas.

ADJUNTE ESTE AVISO A SU PÓLIZA:

Este aviso es solamente para propósitos informativos y no se convierte en parte o en condición del documento adjunto.





OWNER'S POLICY OF TITLE INSURANCE (FORM T-1)

Issued by
TITLE RESOURCES GUARANTY COMPANY

SCHEDULE B

File No.: 161-220224005

Policy No.: 2692-O-161-220224005

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) that arise by reason of the terms and conditions of the leases and easements, if any, shown in Schedule A, and the following matters:

1. The following restrictive covenants of record itemized below (the Company must either insert specific recording data or delete this exception):

See Schedule B 10 a. below.

NOTE: This exception omits any covenant, condition or restriction based on race, color, religion, sex, handicap, familial status or national origin, unless and only to the extent that the restriction is not in violation of state or federal law, or relates to a handicap, but does not discriminate against handicapped people.

2. Any discrepancies, conflicts, or shortages in area or boundary lines, or any encroachments or protrusions, or any overlapping of improvements.
3. Homestead or community property or survivorship rights, if any, of any spouse of any Insured.
4. Any titles or rights asserted by anyone, including but not limited to, persons, the public, corporations, governments or other entities,
 - (a) to tidelands, or lands comprising the shores or beds of navigable or perennial rivers and streams, lakes, bays, gulfs or oceans, or
 - (b) to lands beyond the line of the harbor or bulkhead lines as established or changed by any government, or
 - (c) to filled-in lands, or artificial islands, or
 - (d) to statutory water rights, including riparian rights, or
 - (e) to the area extending from the line of mean low tide to the line of vegetation, or the right of access to that area or easement along and across that area.
5. Standby fees, taxes and assessments by any taxing authority for the year 2023, and subsequent years; and subsequent taxes and assessments by any taxing authority for prior years due to change in land usage or ownership, but not those taxes or assessments for prior years because of an exemption granted to a previous owner of the property under Section 11.13, Texas Tax Code, or because of improvements not assessed for a previous tax year.
6. The following matters and all terms of the documents creating or offering evidence of the matters (The Company must insert matters or delete this exception).



SCHEDULE B

(Continued)

- a. Those recorded in Volume 446, Page 584 of the Deed Records of Guadalupe County, Texas, but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, familial status or or national origin unless and only to the extent that said covenant (a) is exempt under Chapter 42, Section 3607 of The United States Code or (b) relates to handicap but does not discriminate against handicapped persons.
- b. Item intentionally deleted.
- c. Item number 2 of Schedule B will be amended to read "shortages in area" upon payment of the required premium to DHI Title.
- d. Sewer Line Easement conveyed to Cibolo Creek Municipal Authority, together with all rights granted therein, as described in document recorded in Volume 496, Page 311 of the Deed Records of Guadalupe County, Texas, and shown on Survey dated Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815. (Tract 1)
- e. Sewer Line Easement conveyed to Cibolo Creek Municipal Authority, together with all rights granted therein, as described in document recorded in Volume 498, Page 737 of the Deed Records of Guadalupe County, Texas, and shown on Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815. (Tract 1)
- f. Sewer Line Easement conveyed to the City of Cibolo, together with all rights granted therein, as described in document recorded in Volume 644, Page 583 of the Deed Records of Guadalupe County, Texas, and shown on Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815. (Tract 1)
- g. Drainage Easement conveyed to the City of Cibolo, together with all rights granted therein, as described in document recorded in Volume 649, Page 854 of the Deed Records of Guadalupe County, Texas, and shown on Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815. (Tract 1)
- h. Drainage Easement Grant and Use Agreement conveyed to the City of Cibolo, together with all rights granted therein, as described in document recorded in Volume 2732, Page 738 of the Official Public Records of Guadalupe County, Texas, and shown on Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815. (Tract 1)
- i. Easement Deed by Court Order in Settlement of Landowner Action, granted to Sprint Communications Company L.P., et al, together with all rights granted therein, recorded in Document No. 2015012533 of the Official Public Records of Guadalupe County, Texas, and shown on Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815. (Tracts 1 and 2)
- j. Right of Way Easement conveyed to Guadalupe Valley Electric Cooperative, Inc., together with all rights granted therein, as described in document recorded in Document No. 2017018661 of the Official Public Records of Guadalupe County, Texas, and shown on Survey dated December 20, 2017, last revised August 22, 2018, prepared by James W. Russell, Registered Professional Land Surveyor No. 4230 of Cude Engineers. (Tracts 1, 2 and 3) Blanket.



SCHEDULE B

(Continued)

- k. Variable Width Drainage Easement created by the plat of Steele Creek Subdivision, Unit 1, recorded in Volume 9, Page 261, Plat Records of Guadalupe County, Texas, and shown on Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815. (Tract 1)
- l. 12' foot Sanitary Sewer Easement, created by the plat of Steele Creek Subdivision, Unit 3A, recorded in Volume 9, Page 405, Plat Records of Guadalupe County, Texas and shown on Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815. (Tract 1).
- m. Variable Width Drainage Easements and Sanitary Sewer Easement created by the plat of Steele Creek Subdivision, Unit 5, recorded in Volume 9, Page 684, Plat Records of Guadalupe County, Texas and shown on Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815. (Tracts 2 and 3)
- n. 12' Sanitary Sewer Easement and Variable Width Drainage Easement, created by the plat of Steele Creek Subdivision, Unit 8, recorded in Volume 9, Page 687, Plat Records of Guadalupe County, Texas and shown on Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815. (Tract 1)
- o. All leases, grants, exceptions or reservations of coal, lignite, oil, gas and other minerals, together with all rights, privileges, and immunities relating thereto, appearing in the Public Records whether listed in Schedule B or not. There may be leases, grants, exceptions or reservations of mineral interest that are not listed.
- p. Section 14 of the conditions and stipulations of this Policy is hereby deleted.
- q. Survey dated September 22, 2022, last revised April 11, 2023, prepared by Cude Engineers, Yuri V. Balmaceda Wheelock, Registered Professional Land Surveyor No. 6815, shows the following matters, the existence of which are not insured against loss by this policy:

Tract 1

None shown

Tract 2

None shown

Tract 3

Concrete pipe/drain shown near West and South property lines.

Bollards, sidewalk, signs and area between inset fence along West and North property lines.

Numerous cedar posts near North property line.

Power poles and overhead utility line shown along East property line apparently not within record easement.

Signs along West property line.





OWNER'S POLICY OF TITLE INSURANCE (FORM T-1)

Issued by
TITLE RESOURCES GUARANTY COMPANY

LEGAL DESCRIPTION

File No.: 161-220224005

Policy No.: 2692-O-161-220224005

Legal description of the land:

TRACT 1 -

89.60 ACRES OF LAND LOCATED IN THE DAVID MILLER SURVEY 87, ABSTRACT 226, JERONIMO LEAL SURVEY 85, ABSTRACT 210, BOTH OF GUADALUPE COUNTY, TEXAS AND BEING OUT OF A CALLED 311.08 ACRES OF LAND AS DESCRIBED IN DOCUMENT 201899019518 OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS; SAID 89.60 ACRES BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING, AT A SET 1/2" IRON ROD WITH "CUDE" CAP, ON THE EAST LINE OF LOT 5 OF NORTHSIDE ADDITION RECORDED IN VOLUME 2, PAGE 20 OF THE PLAT RECORDS OF GUADALUPE COUNTY, TEXAS, THE SOUTHWEST CORNER OF A 171.390 ACRE TRACT AS DESCRIBED IN DOCUMENT 201899019527 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, DEPARTING THE EAST LINE OF SAID LOT 5, ALONG AND WITH THE SOUTH LINE OF SAID 171.390 ACRE TRACT, THE FOLLOWING BEARINGS AND DISTANCES, TO A SET 1/2" IRON ROD WITH "CUDE" CAP:

- N 59°24'16" E, A DISTANCE OF 968.29 FEET;
- S 30°47'17" E, A DISTANCE OF 577.48 FEET;
- N 59°12'43" E, A DISTANCE OF 748.68 FEET;
- N 30°28'27" W, A DISTANCE OF 450.11 FEET;
- N 60°43'41" E, A DISTANCE OF 247.61 FEET;
- S 30°45'32" E, A DISTANCE OF 10.43 FEET;
- N 59°14'28" E, A DISTANCE OF 50.00 FEET;
- N 41°11'28" E, A DISTANCE OF 97.34 FEET;
- N 65°55'44" E, A DISTANCE OF 85.53 FEET;
- N 64°46'59" E, A DISTANCE OF 85.36 FEET;
- N 63°38'22" E, A DISTANCE OF 85.22 FEET;
- N 62°06'30" E, A DISTANCE OF 143.09 FEET;
- N 62°06'30" E, A DISTANCE OF 210.70 FEET;

S 67°16'55" E, A DISTANCE OF 90.42 FEET, ON THE COMMON BOUNDARY LINE OF STEEL CREEK SUBDIVISION, UNIT 8, RECORDED IN VOLUME 9, PAGE 687 OF THE MAP AND PLAT RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, ALONG AND WITH THE WEST AND SOUTH LINES OF SAID STEELE CREEK SUBDIVISION, UNIT 8, THE FOLLOWING BEARINGS AND DISTANCES:

SOUTHWESTERLY, ALONG A NON-TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIAL BEARING OF S 67°16'57" E, WITH A RADIUS OF 1246.06 FEET, A CENTRAL ANGLE OF 22°54'43", AN ARC LENGTH OF 498.28 FEET, AND A CHORD BEARING AND DISTANCE OF S 11°15'41" W, 494.97 FEET, TO A SET 1/2" IRON ROD WITH "CUDE" CAP;

S 00°11'40" E, A DISTANCE OF 573.24 FEET TO A SET 1/2" IRON ROD WITH "CUDE" CAP;

SOUTHEASTERLY, ALONG A NON-TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIAL BEARING OF N 28°23'20" E, WITH A RADIUS OF 900.30 FEET, A CENTRAL ANGLE OF 04°30'00", AN ARC



LEGAL DESCRIPTION

(Continued)

LENGTH OF 70.71 FEET, AND A CHORD BEARING AND DISTANCE OF S 63°51'39" E, 70.69 FEET, TO A SET 1/2" IRON ROD WITH "CUDE" CAP;

N 03°39'45" E, A DISTANCE OF 262.36 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 62°18'05" E, A DISTANCE OF 91.98 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 86°37'19" E, A DISTANCE OF 85.04 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

N 58°37'03" E, A DISTANCE OF 44.38 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 31°22'57" E, A DISTANCE OF 245.66 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 30°16'47" E, A DISTANCE OF 50.00 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 30°16'47" E, A DISTANCE OF 267.09 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

S 30°16'47" E, A DISTANCE OF 221.82 FEET TO A SET 1/2" IRON ROD WITH "CUDE" CAP;

N 59°09'36" E, A DISTANCE OF 2.66 FEET TO A SET 1/2" IRON ROD WITH "CUDE" CAP, ON THE COMMON BOUNDARY LINE OF SAID STEELE CREEK SUBDIVISION, UNIT 8 AND AN 115.110 ACRE TRACT AS DESCRIBED IN DOCUMENT 202099031952 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 31°49'37" E, ALONG AND WITH THE WEST LINE OF SAID 115.110 ACRE TRACT, A DISTANCE OF 137.62 FEET TO A FOUND 1/2" IRON ROD, FOR THE NORTH CORNER OF A 1.79 ACRE TRACT AS DESCRIBED IN DOCUMENT 201899022809 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 59°12'43" W, ALONG AND WITH THE COMMON BOUNDARY LINE OF SAID 311.08 ACRE TRACT, SAID 1.79 ACRE TRACT AND A 10.79 ACRE TRACT AS DESCRIBED IN SAID DOCUMENT 201899022809, A DISTANCE OF 1532.67 FEET TO A FOUND 1/2" IRON ROD WITH "KSC RPLS" CAP, ON THE NORTH RIGHT-OF-WAY LINE OF FM 78 (SEGUIN ROAD);

THENCE, S 84°15'38" W, ALONG AND WITH THE COMMON BOUNDARY LINE OF FM 78 (SEGUIN ROAD) AND SAID 311.08 ACRE TRACT, A DISTANCE OF 772.78 FEET TO A FOUND 1/2" IRON ROD WITH "KSC RPLS" CAP;

THENCE, DEPARTING THE NORTH RIGHT-OF-WAY LINE OF FM 78 (SEGUIN ROAD), ALONG AND WITH THE WEST LINE OF SAID 311.08 ACRE TRACT, THE FOLLOWING BEARINGS AND DISTANCES:

N 31°35'34" W, A DISTANCE OF 315.99 FEET TO A FOUND 1/2" IRON ROD;

N 29°26'41" W, A DISTANCE OF 110.00 FEET TO A FOUND 1/2" IRON ROD;

N 30°28'55" W, A DISTANCE OF 178.52 FEET TO A FOUND 3/4" IRON ROD;

N 29°35'16" W, A DISTANCE OF 147.57 FEET TO A FOUND 1/2" IRON ROD;

S 59°26'29" W, A DISTANCE OF 100.00 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

N 30°55'55" W, A DISTANCE OF 343.54 FEET TO A FOUND 1/2" IRON ROD;

N 69°50'31" W, A DISTANCE OF 31.29 FEET TO A SET 1/2" IRON ROD WITH "CUDE" CAP;

N 31°10'22" W, A DISTANCE OF 96.48 FEET TO A FOUND 1/2" IRON ROD;

S 59°12'21" W, A DISTANCE OF 150.23 FEET TO A FOUND 1/2" IRON ROD;

N 30°40'24" W, A DISTANCE OF 304.56 FEET TO A FOUND 1/2" IRON ROD;

N 30°35'44" W, A DISTANCE OF 136.25 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 89.60 ACRES OF LAND, MORE OR LESS.

BASIS OF BEARINGS IS THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (2011).

TRACT 2 -

16.30 ACRES OF LAND LOCATED IN THE JERONIMO LEAL SURVEY 85, ABSTRACT 210, GUADALUPE COUNTY, TEXAS AND BEING OUT OF A CALLED 65.801 ACRES OF LAND AS DESCRIBED IN DOCUMENT



LEGAL DESCRIPTION

(Continued)

201899019524 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS; SAID 16.30 ACRES BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING, AT A FOUND 1/2" IRON ROD, ON THE NORTH-RIGHT-OF-WAY LINE OF FM 78 (SEGUIN ROAD), THE SOUTHEAST CORNER OF SAID 65.801 ACRE TRACT AND THE SOUTHWEST CORNER OF AN 18.400 ACRE TRACT AS DESCRIBED IN VOLUME 2690, PAGE 80 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS.

THENCE, S 84°16'28" W, ALONG AND WITH THE COMMON BOUNDARY LINE OF SAID 65.801 ACRE TRACT AND THE NORTH RIGHT-OF-WAY LINE OF FM 78 (SEGUIN ROAD), A DISTANCE OF 2150.05 FEET TO A FOUND FENCE POST, FOR THE SOUTHEAST CORNER OF A 10.79 ACRE TRACT AS DESCRIBED IN DOCUMENT 201899022809 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY TEXAS AND THE SOUTHWEST CORNER OF SAID 65.801 ACRE TRACT;

THENCE, N 31°00'24" W, DEPARTING THE NORTH RIGHT-OF-WAY LINE OF FM 78 (SEGUIN ROAD), ALONG AND WITH THE COMMON BOUNDARY LINE OF SAID 65.801 ACRE TRACT AND SAID 10.79 ACRE TRACT, A 1.79 ACRE TRACT AS DESCRIBED IN SAID DOCUMENT 201899022809, A DISTANCE OF 472.48 FEET TO A SET 1/2" IRON ROD WITH "CUDE" CAP, A SOUTHWEST CORNER OF AN 115.110 ACRE TRACT;

THENCE, DEPARTING THE SAID COMMON BOUNDARY LINE AND THE SOUTH LINE OF SAID 115.110 ACRE TRACT, THE FOLLOWING BEARINGS AND DISTANCES, TO A SET 1/2" IRON ROD WITH "CUDE" CAP:

N 58°59'36" E, A DISTANCE OF 294.74 FEET;

S 31°00'24" E, A DISTANCE OF 275.11 FEET;

N 84°27'39" E, A DISTANCE OF 1830.87 FEET, ON THE COMMON BOUNDARY LINE OF SAID 18.400 ACRE TRACT AND SAID 65.801 ACRE TRACT;

THENCE, S 30°23'02" E, ALONG AND WITH THE COMMON BOUNDARY LINE OF 18.400 ACRE TRACT AND SAID 65.801 ACRE TRACT, A DISTANCE OF 328.32 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 16.30 ACRES OF LAND, MORE OR LESS.

BASIS OF BEARINGS IS THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (2011).

TRACT 3 -

BEING 69.60 ACRES OF LAND LOCATED IN THE JERONIMO LEAL SURVEY 85, ABSTRACT 210, GUADALUPE COUNTY, TEXAS AND A PORTION OF A CALLED 85.592 ACRE TRACT RECORDED IN DOCUMENT 201899019519 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS; SAID 69.60 ACRES BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING, AT A FOUND 1/2" IRON ROD WITH "CUDE" CAP AT THE SOUTH CORNER OF STEELE CREEK SUBDIVISION, UNIT 5 RECORDED IN VOLUME 9, PAGE 684 OF THE MAP AND PLAT RECORDS OF GUADALUPE COUNTY, TEXAS, THE EAST LINE OF A CALLED 115.110 ACRE TRACT RECORDED IN DOCUMENT 202099031952 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS AND THE WEST LINE OF SAID 85.592 ACRE TRACT;

THENCE, ALONG AND WITH THE SOUTH AND EAST LINES OF SAID STEELE CREEK SUBDIVISION, UNIT 5, THE FOLLOWING BEARINGS AND DISTANCES, TO A SET 1/2" IRON ROD WITH "CUDE" CAP:

N 59°35'47" E, A DISTANCE OF 1174.35 FEET;



LEGAL DESCRIPTION

(Continued)

N 50°04'17" W, A DISTANCE OF 136.88 FEET;

NORTHWESTERLY, ALONG A NON-TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIAL BEARING OF S 41°52'52" W, WITH A RADIUS OF 1961.71 FEET, A CENTRAL ANGLE OF 05°35'04", AN ARC LENGTH OF 191.20 FEET, AND A CHORD BEARING AND DISTANCE OF N 50°54'40" W, 191.12 FEET;

N 53°42'11" W, A DISTANCE OF 350.83 FEET;

SOUTHWESTERLY, ALONG A NON-TANGENT CURVE TO THE RIGHT, SAID CURVE HAVING A RADIAL BEARING OF N 29°09'46" W, WITH A RADIUS OF 441.20 FEET, A CENTRAL ANGLE OF 06°12'34", AN ARC LENGTH OF 47.82 FEET, AND A CHORD BEARING AND DISTANCE OF S 63°56'31" W, 47.79 FEET;

S 67°03'18" W, A DISTANCE OF 101.08 FEET;

SOUTHWESTERLY, ALONG A TANGENT CURVE TO THE LEFT, WITH A RADIUS OF 360.00 FEET, A CENTRAL ANGLE OF 07°29'45", AN ARC LENGTH OF 47.10 FEET, AND A CHORD BEARING AND DISTANCE OF S 63°18'25" W, 47.06 FEET;

S 59°33'32" W, A DISTANCE OF 290.29 FEET;

N 30°26'28" W, A DISTANCE OF 38.30 FEET, A NORTH CORNER OF SAID STEELE CREEK SUBDIVISION, UNIT 5;

THENCE, N 59°21'53" E, ALONG AND WITH THE NORTH LINE OF SAID 85.592 ACRE TRACT, A DISTANCE OF 494.80 FEET TO A FOUND 1/2" IRON ROD AT THE SOUTH CORNER OF A CALLED 22.30 ACRE TRACT RECORDED IN VOLUME 461, PAGE 382 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 22.30 ACRE TRACT, THE FOLLOWING BEARINGS AND DISTANCES:

N 59°32'35" E, A DISTANCE OF 571.05 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP;

N 59°37'36" E, A DISTANCE OF 1917.62 FEET TO A FOUND 1/2" IRON ROD AT THE NORTH CORNER OF SAID 85.592 ACRE TRACT, THE EAST CORNER OF SAID 22.30 ACRE TRACT AND THE WEST RIGHT-OF-WAY LINE OF TOLLE ROAD;

THENCE, 30°16'38" E, ALONG AND WITH THE WEST RIGHT-OF-WAY LINE OF TOLLE ROAD AND THE EAST LINE OF SAID 85.592 ACRE TRACT, A DISTANCE OF 1087.20 FEET TO A FOUND 1/2" IRON ROD AT THE EAST CORNER OF SAID 85.592 ACRE TRACT AND THE NORTH CORNER OF A CALLED 5.00 ACRE TRACT RECORDED IN VOLUME 1023, PAGE 510 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, ALONG AND WITH THE COMMON LINES OF SAID 85.592 ACRE TRACT, SAID 5.00 ACRE TRACT AND A CALLED 27.609 ACRE TRACT RECORDED IN VOLUME 1501, PAGE 82 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS, THE FOLLOWING BEARINGS AND DISTANCES:

S 59°29'07" W, A DISTANCE OF 1151.46 FEET TO A FOUND CEDAR POST;

S 59°36'07" W, A DISTANCE OF 686.04 FEET TO A FOUND 1/2" IRON ROD WITH "HUTT ZOLARS" CAP AT THE WEST CORNER OF SAID 27.609 ACRE TRACT AND THE NORTH CORNER OF A CALLED 9.80 ACRE TRACT RECORDED IN VOLUME 4164, PAGE 386 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;



LEGAL DESCRIPTION

(Continued)

THENCE, S 59°19'16" W, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 9.80 ACRE TRACT, A DISTANCE OF 375.50 FEET TO A FOUND 1" IRON PIPE AT THE WEST CORNER OF SAID 9.80 ACRE TRACT AND THE NORTH CORNER OF A CALLED 0.84 ACRE TRACT RECORDED IN VOLUME 924, PAGE 153 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 59°15'52" W, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 0.84 ACRE TRACT, A DISTANCE OF 155.31 FEET TO A FOUND 1/2" IRON ROD AT THE WEST CORNER OF SAID 0.84 ACRE TRACT AND THE NORTH CORNER OF A CALLED 4.700 ACRE TRACT RECORDED IN DOCUMENT 2015013580 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 59°29'02" W, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 4.700 ACRE TRACT, A DISTANCE OF 193.94 FEET TO A FOUND 1/2" IRON ROD WITH "CUDE" CAP AT THE WEST CORNER OF SAID 4.700 ACRE TRACT AND THE NORTH CORNER OF A CALLED 18.400 ACRE TRACT RECORDED IN VOLUME 2960, PAGE 80 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS;

THENCE, S 59°32'02" W, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 18.400 ACRE TRACT, A DISTANCE OF 856.37 FEET TO A FOUND 1/2" IRON ROD AT THE WEST CORNER OF SAID 18.400 ACRE TRACT, THE SOUTH CORNER OF SAID 85.592 ACRE TRACT AND THE EAST LINE OF SAID 115.110 ACRE TRACT;

THENCE, N 30°23'02" W, ALONG AND WITH THE COMMON LINE OF SAID 85.592 ACRE TRACT AND SAID 115.110 ACRE TRACT, A DISTANCE OF 403.84 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 69.60 ACRES OF LAND, MORE OR LESS.

BASIS OF BEARINGS IS THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (2011).



| Office File No. | Policy Jacket No. | Date of Endorsement | Amount of Insurance | Type | Premium | Code | Rule |
|--------------------|---------------------------|---------------------|---------------------|---------|--------------|-----------|--------|
| 1 161-220224005 | 2 2692-O-161-220224005 | 3 April 17, 2023 | 4 \$3,859,300.00 | 5 EN | 6 \$50.00 | 9 0803 | R-29.1 |

**MINERALS AND SURFACE DAMAGE ENDORSEMENT
T-19.3**

Attached to Policy No. 2692-O-161-220224005

Issued by

TITLE RESOURCES GUARANTY COMPANY

The Company insures the insured against loss which the insured shall sustain by reason of damage to permanent buildings located on the Land on or after Date of Policy resulting from the future exercise of any right existing at Date of Policy to use the surface of the Land for the extraction or development of coal, lignite, oil, gas or other minerals excepted or excluded on Schedule A, Item 2 or excepted in Schedule B. This endorsement does not insure against loss resulting from subsidence.

This endorsement is issued as part of the policy. Except as it expressly states, it does not (i) modify any of the terms and provisions of the policy, (ii) modify any prior endorsements, (iii) extend the Date of Policy, or (iv) increase the Amount of Insurance. To the extent a provision of the policy or a previous endorsement is inconsistent with an express provision of this endorsement, this endorsement controls. Otherwise, this endorsement is subject to all of the terms and provisions of the policy and of any prior endorsements.

Authorized Countersignature
DHI Title Agency



Authorized Signature



Title Resources Guaranty Company

By _____
President/CEO

Michael Boyden
Secretary



OWNER'S POLICY OF TITLE INSURANCE (Form T-1)

Issued by
Title Resources Guaranty Company

Any notice of claim and any other notice or statement in writing required to be given the Company under this Policy must be given to the Company at the address shown in Section 18 of the Conditions.

COVERED RISKS

SUBJECT TO THE EXCLUSIONS FROM COVERAGE, THE EXCEPTIONS FROM COVERAGE CONTAINED IN SCHEDULE B AND THE CONDITIONS, TITLE RESOURCES GUARANTY COMPANY, a Texas corporation (the "Company") insures, as of Date of Policy and, to the extent stated in Covered Risks 9 and 10, after Date of Policy, against loss or damage, not exceeding the Amount of Insurance, sustained or incurred by the Insured by reason of:

1. Title being vested other than as stated in Schedule A.
2. Any defect in or lien or encumbrance on the Title. This Covered Risk includes but is not limited to insurance against loss from:
 - (a) A defect in the Title caused by:
 - (i) forgery, fraud, undue influence, duress, incompetency, incapacity or impersonation;
 - (ii) failure of any person or Entity to have authorized a transfer or conveyance;
 - (iii) a document affecting Title not properly created, executed, witnessed, sealed, acknowledged, notarized or delivered;
 - (iv) failure to perform those acts necessary to create a document by electronic means authorized by law;
 - (v) a document executed under a falsified, expired or otherwise invalid power of attorney;
 - (vi) a document not properly filed, recorded or indexed in the Public Records including failure to perform those acts by electronic means authorized by law; or
 - (vii) a defective judicial or administrative proceeding.
 - (b) The lien of real estate taxes or assessments imposed on the Title by a governmental authority due or payable, but unpaid.
 - (c) Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land.
The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
 - (d) Any statutory or constitutional mechanic's, contractor's, or materialman's lien for labor or materials having its inception on or before Date of Policy.
3. Lack of good and indefeasible Title.
4. No right of access to and from the Land.
5. The violation or enforcement of any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting or relating to:
 - (a) the occupancy, use or enjoyment of the Land;
 - (b) the character, dimensions or location of any improvement erected on the Land;
 - (c) subdivision of land; or
 - (d) environmental protection
 if a notice, describing any part of the Land, is recorded in the Public Records setting forth the violation or intention to enforce, but only to the extent of the violation or enforcement referred to in that notice.
6. An enforcement action based on the exercise of a governmental police power not covered by Covered Risk 5 if a notice of the enforcement action, describing any part of the Land, is recorded in the Public Records, but only to the extent of the enforcement referred to in that notice.
7. The exercise of the rights of eminent domain if a notice of the exercise, describing any part of the Land, is recorded in the Public Records.
8. Any taking by a governmental body that has occurred and is binding on the rights of a purchaser for value without Knowledge.
9. Title being vested other than as stated in Schedule A or being defective:
 - (a) as a result of the avoidance in whole or in part, or from a court order providing an alternative remedy, of a transfer of all or any part of the title to or any interest in the Land occurring prior to the transaction vesting Title as shown in Schedule A because that prior transfer constituted a fraudulent or preferential transfer under federal bankruptcy, state insolvency or similar creditors' rights laws; or
 - (b) because the instrument of transfer vesting Title as shown in Schedule A constitutes a preferential transfer under federal bankruptcy, state insolvency or similar creditors' rights laws by reason of the failure of its recording in the Public Records:
 - (i) to be timely, or
 - (ii) to impart notice of its existence to a purchaser for value or a judgment or lien creditor.
10. Any defect in or lien or encumbrance on the Title or other matter included in Covered Risks 1 through 9 that has been created or attached or has been filed or recorded in the Public Records subsequent to Date of Policy and prior to the recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The Company will also pay the costs, attorneys' fees and expenses incurred in defense of any matter insured against by this Policy, but only to the extent provided in the Conditions.

Authorized Countersignature
 DHI Title Agency

Authorized Signature



Title Resources Guaranty Company

By: Paul M. Munday
 Executive Vice President
Michael P. Hazdon
 Secretary



EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting or relating to:
 - (i) the occupancy, use, or enjoyment of the Land;
 - (ii) the character, dimensions or location of any improvement erected on the Land;
 - (iii) subdivision of land; or
 - (iv) environmental protection;or the effect of any violation of these laws, ordinances or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
 - (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
 3. Defects, liens, encumbrances, adverse claims or other matters:
 - (a) created, suffered, assumed or agreed to by the Insured Claimant;
 - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - (c) resulting in no loss or damage to the Insured Claimant;
 - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
 - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
 4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is:
 - (a) a fraudulent conveyance or fraudulent transfer; or
 - (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
 5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.
 6. The refusal of any person to purchase, lease or lend money on the estate or interest covered hereby in the land described in Schedule A because of Unmarketable Title.

CONDITIONS

1. DEFINITION OF TERMS.

The following terms when used in this policy mean:

- (a) "Amount of Insurance": the amount stated in Schedule A, as may be increased or decreased by endorsement to this policy, increased by Section 8(b), or decreased by Sections 10 and 11 of these Conditions.
- (b) "Date of Policy": The date designated as "Date of Policy" in Schedule A.
- (c) "Entity": A corporation, partnership, trust, limited liability company or other similar legal entity.
- (d) "Insured": the Insured named in Schedule A.
 - (i) The term "Insured" also includes:
 - (A) successors to the Title of the Insured by operation of law as distinguished from purchase, including heirs, devisees, survivors, personal representatives or next of kin;
 - (B) successors to an Insured by dissolution, merger, consolidation, distribution or reorganization;
 - (C) successors to an Insured by its conversion to another kind of Entity;
 - (D) a grantee of an Insured under a deed delivered without payment of actual valuable consideration conveying the Title;
 - (1) If the stock, shares, memberships, or other equity interests of the grantee are wholly-owned by the named Insured,
 - (2) If the grantee wholly owns the named Insured,
 - (3) If the grantee is wholly-owned by an affiliated Entity of the named Insured, provided the affiliated Entity and the named Insured are both wholly-owned by the same person or Entity, or
 - (4) If the grantee is a trustee or beneficiary of a trust created by a written instrument established by the Insured named in Schedule A for estate planning purposes.
 - (ii) With regard to (A), (B), (C) and (D) reserving, however, all rights and defenses as to any successor that the Company would have had against any predecessor Insured.
- (e) "Insured Claimant": an Insured claiming loss or damage.
- (f) "Knowledge" or "Known": actual knowledge, not constructive knowledge or notice that may be imputed to an Insured by reason of the Public Records or any other records that impart constructive notice of matters affecting the Title.
- (g) "Land": the land described in Schedule A, and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate or easement in abutting streets, roads, avenues, alleys, lanes, ways or waterways, but this does not modify or limit the extent that a right of access to and from the Land is insured by this policy.
- (h) "Mortgage": mortgage, deed of trust, trust deed, or other security instrument, including one evidenced by electronic means authorized by law.
- (i) "Public Records": records established under state statutes at Date of Policy for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge. With respect to Covered Risk 5(d), "Public Records" shall also include environmental protection liens filed in the records of the clerk of the United States District Court for the district where the Land is located.
- (j) "Title": the estate or interest described in Schedule A.
- (k) "Unmarketable Title": Title affected by an alleged or apparent matter that would permit a prospective purchaser or lessee of the Title or lender on the Title to be released from the obligation to purchase, lease or lend if there is a contractual condition requiring the delivery of marketable title.



2. CONTINUATION OF INSURANCE

The coverage of this policy shall continue in force as of Date of Policy in favor of an Insured, but only so long as the Insured retains an estate or interest in the Land, or holds an obligation secured by a purchase money Mortgage given by a purchaser from the Insured, or only so long as the Insured shall have liability by reason of warranties in any transfer or conveyance of the Title. This policy shall not continue in force in favor of any purchaser from the Insured of either (i) an estate or interest in the Land, or (ii) an obligation secured by a purchase money Mortgage given to the Insured.

3. NOTICE OF CLAIM TO BE GIVEN BY INSURED CLAIMANT.

The Insured shall notify the Company promptly in writing (i) in case of any litigation as set forth in Section 5(a) below, or (ii) in case Knowledge shall come to an Insured hereunder of any claim of title or interest that is adverse to the Title, as insured, and that might cause loss or damage for which the Company may be liable by virtue of this policy. If the Company is prejudiced by the failure of the Insured Claimant to provide prompt notice, the Company's liability to the Insured Claimant under the policy shall be reduced to the extent of the prejudice. When, after the Date of the Policy, the Insured notifies the Company as required herein of a lien, encumbrance, adverse claim or other defect in Title insured by this policy that is not excluded or excepted from the coverage of this policy, the Company shall promptly investigate the charge to determine whether the lien, encumbrance, adverse claim or defect or other matter is valid and not barred by law or statute. The Company shall notify the Insured in writing, within a reasonable time, of its determination as to the validity or invalidity of the Insured's claim or charge under the policy. If the Company concludes that the lien, encumbrance, adverse claim or defect is not covered by this policy, or was otherwise addressed in the closing of the transaction in connection with which this policy was issued, the Company shall specifically advise the Insured of the reasons for its determination. If the Company concludes that the lien, encumbrance, adverse claim or defect is valid, the Company shall take one of the following actions: (i) institute the necessary proceedings to clear the lien, encumbrance, adverse claim or defect from the Title as insured; (ii) indemnify the Insured as provided in this policy; (iii) upon payment of appropriate premium and charges therefore, issue to the Insured Claimant or to a subsequent owner, loan or holder of the estate or interest in the Land insured by this policy, a policy of title insurance without exception for the lien, encumbrance, adverse claim or defect, said policy to be in an amount equal to the current value of the Land or, if a loan policy, the amount of the loan; (iv) indemnify another title insurance company in connection with its issuance of a policy(ies) of title insurance without exception for the lien, encumbrance, adverse claim or defect; (v) secure a release or other document discharging the lien, encumbrance, adverse claim or defect; or (vi) undertake a combination of (i) through (v) herein.

4. PROOF OF LOSS.

In the event the Company is unable to determine the amount of loss or damage, the Company may, at its option, require as a condition of payment that the Insured Claimant furnish a signed proof of loss. The proof of loss must describe the defect, lien, encumbrance or other matter insured against by this policy that constitutes the basis of loss or damage and shall state, to the extent possible, the basis of calculating the amount of the loss or damage.

5. DEFENSE AND PROSECUTION OF ACTIONS.

- (a) Upon written request by the Insured, and subject to the options contained in Sections 3 and 7 of these Conditions, the Company, at its own cost and without unreasonable delay, shall provide for the defense of an Insured in litigation in which any third party asserts a claim covered by this policy adverse to the Insured. This obligation is limited to only those stated causes of action alleging matters insured against by this policy. The Company shall have the right to select counsel of its choice (subject to the right of the Insured to object for reasonable cause) to represent the Insured as to those stated causes of action. It shall not be liable for and will not pay the fees of any other counsel. The Company will not pay any fees, costs or expenses incurred by the Insured in the defense of those causes of action that allege matters not insured against by this policy.
- (b) The Company may reasonably require the Insured Claimant to submit to examination under oath by any authorized representative of the Company and to produce for examination, inspection and copying, at such reasonable times and places as may be designated by the authorized representative of the Company, all records, in whatever medium maintained, including books, ledgers, checks, memoranda, correspondence, reports, e-mails, disks, tapes, and videos whether bearing a date before or after Date of Policy, that reasonably pertain to the loss or damage. Further, if requested by any authorized representative of the Company, the Insured Claimant shall grant its permission, in writing, for any authorized representative of the Company to examine, inspect and copy all of these records in the custody or control of a third party that reasonably pertain to the loss or damage. All information designated as confidential by the Insured Claimant provided to the Company pursuant to this Section shall not be disclosed to others unless, in the reasonable judgment of the Company, it is necessary in the administration of the claim. Failure of the Insured Claimant to submit for examination under oath, produce any reasonably requested information or grant permission to secure reasonably necessary information from third parties as required in this subsection, unless prohibited by law or governmental regulation, shall terminate any liability of the Company under this policy as to that claim.
- (c) If the Insured demands that the Company accept a settlement offer that is not greater than the Amount of Insurance or if the Insured expressly agrees that a settlement offer should be accepted, the Company has a right to be reimbursed if it has timely asserted its reservation of rights and notified the Insured that it intends to seek reimbursement if it pays to settle or defend a claim that is not covered by the policy.

6. DUTY OF INSURED CLAIMANT TO COOPERATE.

- (a) In all cases where this policy permits or requires the Company to prosecute or provide for the defense of any action or proceeding and any appeals, the Insured shall secure to the Company the right to so prosecute or provide defense in the action or proceeding, including the right to use, at its option, the name of the Insured for this purpose. Whenever requested by the Company, the Insured, at the Company's expense, shall give the Company all reasonable aid (i) in securing evidence, obtaining witnesses, prosecuting or defending the action or proceeding, or effecting settlement, and (ii) in any other lawful act that in the opinion of the Company may be necessary or desirable to establish the Title or any other matter as insured. If the Company is prejudiced by the failure of the Insured to furnish the required cooperation, the Company's obligations to the Insured under the policy shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation, with regard to the matter or matters requiring such cooperation.
- (b) The Company may reasonably require the Insured Claimant to submit to examination under oath by any authorized representative of the Company and to produce for examination, inspection and copying, at such reasonable times and places as may be designated by the authorized representative of the Company, all records, in whatever medium maintained, including books, ledgers, checks, memoranda, correspondence, reports, e-mails, disks, tapes, and videos whether bearing a date before or after Date of Policy, that reasonably pertain to the loss or damage. Further, if requested by any authorized representative of the Company, the Insured Claimant shall grant its permission, in writing, for any authorized representative of the Company to examine, inspect and copy all of these records in the custody or control of a third party that reasonably pertain to the loss or damage. All information designated as confidential by the Insured Claimant provided to the Company pursuant to this Section shall not be disclosed to others unless, in the reasonable judgment of the Company, it is necessary in the administration of the claim. Failure of the Insured Claimant to submit for examination under oath, produce any reasonably requested information or grant permission to secure reasonably necessary information from third parties as required in this subsection, unless prohibited by law or governmental regulation, shall terminate any liability of the Company under this policy as to that claim.



7. OPTIONS TO PAY OR OTHERWISE SETTLE CLAIMS; TERMINATION OF LIABILITY.

In case of a claim under this policy, the Company shall have the following additional options:

(a) To Pay or Tender Payment of the Amount of Insurance.

To pay or tender payment of the Amount of Insurance under this policy together with any costs, attorneys' fees and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment or tender of payment and that the Company is obligated to pay. Upon the exercise by the Company of this option, all liability and obligations of the Company to the Insured under this policy, other than to make the payment required in this subsection, shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation.

(b) To Pay or Otherwise Settle With Parties Other than the Insured or With the Insured Claimant.

(i) to pay or otherwise settle with other parties for or in the name of an Insured Claimant any claim insured against under this policy. In addition, the Company will pay any costs, attorneys' fees and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay; or (ii) to pay or otherwise settle with the Insured Claimant the loss or damage provided for under this policy, together with any costs, attorneys' fees and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay. Upon the exercise by the Company of either of the options provided for in subsections (b)(i) or (ii), the Company's obligations to the Insured under this policy for the claimed loss or damage, other than the payments required to be made, shall terminate, including any liability or obligation to defend, prosecute or continue any litigation.

8. DETERMINATION AND EXTENT OF LIABILITY.

This policy is a contract of indemnity against actual monetary loss or damage sustained or incurred by the Insured Claimant who has suffered loss or damage by reason of matters insured against by this policy.

(a) The extent of liability of the Company for loss or damage under this policy shall not exceed the lesser of:

(i) the Amount of Insurance; or

(ii) the difference between the value of the Title as insured and the value of the Title subject to the risk insured against by this policy.

(b) If the Company pursues its rights under Section 3 or 5 and is unsuccessful in establishing the Title, as insured,

(i) the Amount of Insurance shall be increased by 10%, and

(ii) the Insured Claimant shall have the right to have the loss or damage determined either as of the date the claim was made by the Insured Claimant or as of the date it is settled and paid.

(c) In addition to the extent of liability under (a) and (b), the Company will also pay those costs, attorneys' fees and expenses incurred in accordance with Sections 5 and 7 of these Conditions.

9. LIMITATION OF LIABILITY.

(a) If the Company establishes the Title, or removes the alleged defect, lien or encumbrance, or cures the lack of a right of access to or from the Land, all as insured, or takes action in accordance with Section 3 or 7, in a reasonably diligent manner by any method, including litigation and the completion of any appeals, it shall have fully performed its obligations with respect to that matter and shall not be liable for any loss or damage caused to the Insured.

(b) In the event of any litigation, including litigation by the Company or with the Company's consent, the Company shall have no liability for loss or damage until there has been a final determination by a court of competent jurisdiction, and disposition of all appeals, adverse to the Title, as insured.

(c) The Company shall not be liable for loss or damage to the Insured for liability voluntarily assumed by the Insured in settling any claim or suit without the prior written consent of the Company.

10. REDUCTION OF INSURANCE; REDUCTION OR TERMINATION OF LIABILITY.

All payments under this policy, except payments made for costs, attorneys' fees and expenses, shall reduce the Amount of Insurance by the amount of the payment.

11. LIABILITY NONCUMULATIVE.

The Amount of Insurance shall be reduced by any amount the Company pays under any policy insuring a Mortgage to which exception is taken in Schedule B or to which the Insured has agreed, assumed, or taken subject or which is executed by an Insured after Date of Policy and which is a charge or lien on the Title, and the amount so paid shall be deemed a payment to the Insured under this policy.

12. PAYMENT OF LOSS.

When liability and the extent of loss or damage have been definitely fixed in accordance with these Conditions, the payment shall be made within 30 days.

13. RIGHTS OF RECOVERY UPON PAYMENT OR SETTLEMENT.

(a) Whenever the Company shall have settled and paid a claim under this policy, it shall be subrogated and entitled to the rights of the Insured Claimant in the Title and all other rights and remedies in respect to the claim that the Insured Claimant has against any person or property, to the extent of the amount of any loss, costs, attorneys' fees and expenses paid by the Company. If requested by the Company, the Insured Claimant shall execute documents to evidence the transfer to the Company of these rights and remedies. The Insured Claimant shall permit the Company to sue, compromise or settle in the name of the Insured Claimant and to use the name of the Insured Claimant in any transaction or litigation involving these rights and remedies. If a payment on account of a claim does not fully cover the loss of the Insured Claimant, the Company shall defer the exercise of its right to recover until after the Insured Claimant shall have recovered its loss.

(b) The Company's right of subrogation includes the rights of the Insured to indemnities, guaranties, other policies of insurance or bonds, notwithstanding any terms or conditions contained in those instruments that address subrogation rights.

14. ARBITRATION.

Either the Company or the Insured may demand that the claim or controversy shall be submitted to arbitration pursuant to the Title Insurance Arbitration Rules of the American Land Title Association ("Rules"). Except as provided in the Rules, there shall be no joinder or consolidation with claims or controversies of other persons. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the Insured arising out of or relating to this policy, any service in connection with its issuance or the breach of a policy provision, or to any other controversy or claim arising out of the transaction giving rise to this policy. All arbitrable matters when the Amount of Insurance is \$2,000,000 or less shall be arbitrated at the option of either the Company or the Insured, unless the Insured is an individual person (as distinguished from an Entity). All arbitrable matters when the Amount of Insurance is in excess of \$2,000,000 shall be arbitrated only when agreed to by both the Company and the Insured. Arbitration pursuant to this policy and under the Rules shall be binding upon the parties. Judgment upon the award rendered by the Arbitrator(s) may be entered in any court of competent jurisdiction.



15. LIABILITY LIMITED TO THIS POLICY; POLICY ENTIRE CONTRACT.

- (a) This policy together with all endorsements, if any, attached to it by the Company is the entire policy and contract between the Insured and the Company. In interpreting any provision of this policy, this policy shall be construed as a whole.
- (b) Any claim of loss or damage that arises out of the status of the Title or by any action asserting such claim, shall be restricted to this policy.
- (c) Any amendment of or endorsement to this policy must be in writing and authenticated by an authorized person, or expressly incorporated by Schedule A of this policy.
- (d) Each endorsement to this policy issued at any time is made a part of this policy and is subject to all of its terms and provisions. Except as the endorsement expressly states, it does not (i) modify any of the terms and provisions of the policy, (ii) modify any prior endorsement, (iii) extend the Date of Policy or (iv) increase the Amount of Insurance. Each Commitment, endorsement or other form, or provision in the Schedules to this policy that refers to a term defined in Section 1 of the Conditions shall be deemed to refer to the term regardless of whether the term is capitalized in the Commitment, endorsement or other form, or Schedule. Each Commitment, endorsement or other form, or provision in the Schedules that refers to the Conditions and Stipulations shall be deemed to refer to the Conditions of this policy.

16. SEVERABILITY.

In the event any provision of this policy, in whole or in part, is held invalid or unenforceable under applicable law, the policy shall be deemed not to include that provision or such part held to be invalid and all other provisions shall remain in full force and effect.

17. CHOICE OF LAW; FORUM.

- (a) Choice of Law: The Insured acknowledges the Company has underwritten the risks covered by this policy and determined the premium charged therefor in reliance upon the law affecting interests in real property and applicable to the interpretation, rights, remedies or enforcement of policies of title insurance of the jurisdiction where the Land is located. Therefore, the court or an arbitrator shall apply the law of the jurisdiction where the Land is located to determine the validity of claims against the Title that are adverse to the Insured, and in interpreting and enforcing the terms of this policy. In neither case shall the court or arbitrator apply its conflicts of laws principles to determine the applicable law.
- (b) Choice of Forum: Any litigation or other proceeding brought by the Insured against the Company must be filed only in a state or federal court within the United States of America or its territories having appropriate jurisdiction.

18. NOTICES, WHERE SENT.

Any notice of claim and any other notice or statement in writing required to be given the Company under this Policy must be given to the Company at Attn: Claims Department, 8111 LBJ Freeway, Suite 1200, Dallas, TX 75251.



Tax Certificate(s)

TAX CERTIFICATE



ALBERT URESTI, MPA, PCAC
BEXAR COUNTY TAX ASSESSOR-COLLECTOR
P O BOX 839950
SAN ANTONIO, TX 78283-3950

Issued To:

PAPE-DAWSON ENGINEERS
2000 NW LOOP 410
SAN ANTONIO, TX 78213

Legal Description

CB 4917 P-9A (18,3442 AC P-4Q (13.925
AC) CB 4918 P-1T (.0537 AC) P-1S (.0871
AC)

Fiduciary Number: 1239415

Parcel Address: EVANS RD

Legal Acres: 32.4100

Account Number: 04917-000-0091

Print Date: 10/01/2024 01:19:43 PM

Certificate No: 11654902

Paid Date:

Certificate Fee: \$10.00

Issue Date: 10/01/2024

Operator ID: JGAR

TAX CERTIFICATES ARE ISSUED WITH THE MOST CURRENT INFORMATION AVAILABLE. ALL ACCOUNTS ARE SUBJECT TO CHANGE PER SECTION 26.15 AND 11.43(i) OF THE TEXAS PROPERTY TAX CODE. THIS IS TO CERTIFY THAT ALL TAXES DUE ON THE ABOVE DESCRIBED PROPERTY HAVE BEEN EXAMINED, UP TO AND INCLUDING THE YEAR 2023, AND THERE ARE NO TAXES DUE ON THIS PROPERTY.

Exemptions:

Certified Owner:

CONTINENTAL HOMES OF TEXAS LP
5419 N LOOP 1604 E
SAN ANTONIO, TX 78247-4703
United State

Table with 2 columns: Description and Amount. Rows include 2023 Value (1,653,000), 2023 Levy (\$30,118.36), 2023 Levy Balance (\$0.00), Prior Year Levy Balance (\$0.00), Total Levy Due (\$0.00), P&I + Attorney Fee (\$0.00), and Total Amount Due (\$0.00).

Certified Tax Unit(s):

- 8 ROAD AND FLOOD
9 ALAMO COMM COLLEGE
10 HOSPITAL DISTRICT
11 BEXAR COUNTY
19 SA RIVER AUTHORITY
55 NORTH EAST ISD
78 EMERG.SERV.DIST.#3

DUE TO ITS ASSIGNED USAGE, THE ABOVE LEGAL PROPERTY MAY HAVE RECEIVED SPECIAL VALUATION, AND ADDITIONAL ROLLBACK TAXES MAY BECOME DUE BASED ON THE PROVISIONS OF THE SPECIAL VALUATION.

Handwritten signature of Melonie J. Uresti

ALBERT URESTI, MPA, PCAC
BEXAR COUNTY TAX ASSESSOR-COLLECTOR

Reference (GF) No: N/A



TAX CERTIFICATE



ALBERT URESTI, MPA, PCAC
BEXAR COUNTY TAX ASSESSOR-COLLECTOR
P O BOX 839950
SAN ANTONIO, TX 78283-3950

Account Number: 04917-000-0091

Certificate No: 11654902

| Account Number | Year(s) | Amount Due | Cause Number |
|----------------|----------|------------|--------------|
| 04917-000-0046 | No Years | 0.00 | |
| 04917-000-0047 | No Years | 0.00 | |
| 04917-000-0090 | No Years | 0.00 | |

TAX CERTIFICATE



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BEXAR COUNTY TAX ASSESSOR-COLLECTOR
P O BOX 839950
SAN ANTONIO, TX 78283-3950

Issued To:

PAPE-DAWSON ENGINEERS
2000 NW LOOP 410
SAN ANTONIO, TX 78213

Legal Description

CB 4917 P-9A (18.3442 AC P-4Q (13.925
AC) CB 4918 P-1T (.0537 AC) P-1S (.0871
AC)

Fiduciary Number: 1239415

Parcel Address: EVANS RD

Legal Acres: 32.4100

Account Number: 04917-000-0091

Print Date: 10/01/2024 01:18:45 PM

Certificate No: 11654901

Paid Date:

Certificate Fee: \$10.00

Issue Date: 10/01/2024

Operator ID: JGAR

TAX CERTIFICATES ARE ISSUED WITH THE MOST CURRENT INFORMATION AVAILABLE. ALL ACCOUNTS ARE SUBJECT TO CHANGE PER SECTION 26.15 AND 11.43(i) OF THE TEXAS PROPERTY TAX CODE. THIS IS TO CERTIFY THAT ALL TAXES DUE ON THE ABOVE DESCRIBED PROPERTY HAVE BEEN EXAMINED, UP TO AND INCLUDING THE YEAR 2023, AND THERE ARE NO TAXES DUE ON THIS PROPERTY.

Exemptions:

Certified Owner:

CONTINENTAL HOMES OF TEXAS LP
5419 N LOOP 1604 E
SAN ANTONIO, TX 78247-4703
United State

Certified Tax Unit(s):

- 8 ROAD AND FLOOD
9 ALAMO COMM COLLEGE
10 HOSPITAL DISTRICT
11 BEXAR COUNTY
19 SA RIVER AUTHORITY
55 NORTH EAST ISD
78 EMERG.SERV.DIST.#3

Table with 2 columns: Description and Amount. Rows include 2023 Value (1,653,000), 2023 Levy (\$30,118.36), 2023 Levy Balance (\$0.00), Prior Year Levy Balance (\$0.00), Total Levy Due (\$0.00), P&I + Attorney Fee (\$0.00), and Total Amount Due (\$0.00).

DUE TO ITS ASSIGNED USAGE, THE ABOVE LEGAL PROPERTY MAY HAVE RECEIVED SPECIAL VALUATION, AND ADDITIONAL ROLLBACK TAXES MAY BECOME DUE BASED ON THE PROVISIONS OF THE SPECIAL VALUATION.

Handwritten signature of Albert Uresti

ALBERT URESTI, MPA, PCAC
BEXAR COUNTY TAX ASSESSOR-COLLECTOR

Reference (GF) No: N/A



TAX CERTIFICATE



ALBERT URESTI, MPA, PCAC
BEXAR COUNTY TAX ASSESSOR-COLLECTOR
P O BOX 839950
SAN ANTONIO, TX 78283-3950

Account Number: 04917-000-0091

Certificate No: 11654901

| Account Number | Year(s) | Amount Due | Cause Number |
|----------------|----------|------------|--------------|
| 04917-000-0046 | No Years | 0.00 | |
| 04917-000-0047 | No Years | 0.00 | |
| 04917-000-0090 | No Years | 0.00 | |

TAX CERTIFICATE



ALBERT URESTI, MPA, PCAC
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Legal Description

CB 4917 P-9A (18,3442 AC P-4Q (13.925
AC) CB 4918 P-1T (.0537 AC) P-1S (.0871
AC)

Fiduciary Number: 1239415

Parcel Address: EVANS RD

Legal Acres: 32.4100

Account Number: 04917-000-0091

Print Date: 10/01/2024 01:09:29 PM

Certificate No: 11654900

Paid Date:

Certificate Fee: \$10.00

Issue Date: 10/01/2024

Operator ID: JGAR

TAX CERTIFICATES ARE ISSUED WITH THE MOST CURRENT INFORMATION AVAILABLE. ALL ACCOUNTS ARE SUBJECT TO CHANGE PER SECTION 26.15 AND 11.43(i) OF THE TEXAS PROPERTY TAX CODE. THIS IS TO CERTIFY THAT ALL TAXES DUE ON THE ABOVE DESCRIBED PROPERTY HAVE BEEN EXAMINED, UP TO AND INCLUDING THE YEAR 2023, AND THERE ARE NO TAXES DUE ON THIS PROPERTY.

Exemptions:

Certified Owner:

CONTINENTAL HOMES OF TEXAS LP
5419 N LOOP 1604 E
SAN ANTONIO, TX 78247-4703
United State

Certified Tax Unit(s):

- 8 ROAD AND FLOOD
9 ALAMO COMM COLLEGE
10 HOSPITAL DISTRICT
11 BEXAR COUNTY
19 SA RIVER AUTHORITY
55 NORTH EAST ISD
78 EMERG.SERV.DIST.#3

Table with 2 columns: Description and Amount. Rows include 2023 Value (1,653,000), 2023 Levy (\$30,118.36), 2023 Levy Balance (\$0.00), Prior Year Levy Balance (\$0.00), Total Levy Due (\$0.00), P&I + Attorney Fee (\$0.00), and Total Amount Due (\$0.00).

DUE TO ITS ASSIGNED USAGE, THE ABOVE LEGAL PROPERTY MAY HAVE RECEIVED SPECIAL VALUATION, AND ADDITIONAL ROLLBACK TAXES MAY BECOME DUE BASED ON THE PROVISIONS OF THE SPECIAL VALUATION.

Handwritten signature of Albert Uresti

ALBERT URESTI, MPA, PCAC
BEXAR COUNTY TAX ASSESSOR-COLLECTOR



Reference (GF) No: N/A

TAX CERTIFICATE



ALBERT URESTI, MPA, PCAC
BEXAR COUNTY TAX ASSESSOR-COLLECTOR
P O BOX 839950
SAN ANTONIO, TX 78283-3950

Account Number: 04917-000-0091

Certificate No: 11654900

| Account Number | Year(s) | Amount Due | Cause Number |
|----------------|----------|------------|--------------|
| 04917-000-0046 | No Years | 0.00 | |
| 04917-000-0047 | No Years | 0.00 | |
| 04917-000-0090 | No Years | 0.00 | |

Letters of Certification per Utilities and
outside review entities



City of Cibolo
 Planning and Engineering Department
 200 S. Main Street, Cibolo, TX 78108
 P: 210.658.9900, F: 210.658.8065
 E: planning@cibolotx.gov

Application for
 Letter of Certification

A Letter of Certification is used to facilitate the City's plat application, site plan review, or other construction document review processes. Department reviewers may include: Planning, Engineering, Public Works, Parks and Fire Marshal. Utility reviewers may include, Guadalupe Valley Electric Cooperative (GVEC), Cibolo Creek Municipal Authority (CCMA), CPS Energy, and Green Valley Special Utility District (GVSUD). Other reviewers may include: Texas Department of Transportation, Guadalupe County, or a third party consultant.

APPLICANT INFORMATION

Applicant: Pape-Dawson Engineers Point of Contact: Becky Carroll, P.E.
 Email: bcarroll@pape-dawson.com Phone: (210) 375-9000

Project For Review: Steele Creek PIA Amendment

- Minor Plat Preliminary Plat Final Plat Preliminary/Final Plat Replat
 Site Plan Other: Public Improvement Agreement

REVIEWER INFORMATION AND RECOMMENDATION

Organization / Department: GVEC- Project Planning Department Person Reviewing: Casie Boos
 Email: cboos@gvec.org Phone: 830-857-5127

I recommend approval of the following Project: _____

I recommend approval with the following conditions: _____

Pending additional easements needed based on approved electric designs for individual units and infrastructure upgrades needed to serve the development.

Signature: Casie Boos

Date: 10/10/2024

RETURN TO APPLICANT DATE

It is the applicant's responsibility to submit a completed Letter of Certification in person, by fax, or email to the Planning and Engineering Department (contact information provided above). The applicant should assign a return date with the following in mind:

A Letter of Certification for preliminary plats, final plats and replats, or any other type of plat where the Planning and Zoning Commission and/or the City Council is the approving authority, the Letter of Certification must be received in accordance with the Plat Review Checklist. A completed application may be submitted within the plat timeline. The plats review cycle is documented by the "Plats and Land Study Calendar," available online at: <https://cms2.revize.com/revize/cibolo/Document%20Center/Business/Development%20Process/Development%20Tools/Plat%20Application%20Calendar.pdf>.

A Letter of Certification of minor plats, site plans or any construction documents where the City Manager or his/her designee (City Engineer or City Planner) is the approving authority is not subject to any calendar cycle.

Return By (date):



City of Cibolo
 Planning and Engineering Department
 200 S. Main Street, Cibolo, TX 78108
 P: 210.658.9900, F: 210.658.8065
 E: planning@cibolotx.gov

Application for
 Letter of Certification

A Letter of Certification is used to facilitate the City's plat application, site plan review, or other construction document review processes. Department reviewers may include: Planning, Engineering, Public Works, Parks and Fire Marshal. Utility reviewers may include, Guadalupe Valley Electric Cooperative (GVEC), Cibolo Creek Municipal Authority (CCMA), CPS Energy, and Green Valley Special Utility District (GVSUD). Other reviewers may include: Texas Department of Transportation, Guadalupe County, or a third party consultant.

APPLICANT INFORMATION

Applicant: [Pape-Dawson Engineers](#) Point of Contact: [Becky Carroll, P.E.](#)
 Email: bcarroll@pape-dawson.com Phone: (210) 375-9000

Project For Review: Steele Creek PIA Amendment

- Minor Plat Preliminary Plat Final Plat Preliminary/Final Plat Replat
 Site Plan Other: Public Improvement Agreement

REVIEWER INFORMATION AND RECOMMENDATION

Organization / Department: CCMA Person Reviewing: Brandon Bradley
 Email: bbradley@ccmatx.org Phone: (210) 658-6241

- I recommend approval of the following Project: Steele Creek
 I recommend approval with the following conditions: _____

Signature: *Brandon Bradley* Date: 10/11/2024

RETURN TO APPLICANT DATE

It is the applicant's responsibility to submit a completed Letter of Certification in person, by fax, or email to the Planning and Engineering Department (contact information provided above). The applicant should assign a return date with the following in mind:

A Letter of Certification for preliminary plats, final plats and replats, or any other type of plat where the Planning and Zoning Commission and/or the City Council is the approving authority, the Letter of Certification must be received in accordance with the Plat Review Checklist. A completed application may be submitted within the plat timeline. The plats review cycle is documented by the "Plats and Land Study Calendar," available online at: <https://cms2.revize.com/revize/cibolo/Document%20Center/Business/Development%20Process/Development%20Tools/Plat%20Application%20Calendar.pdf>.

A Letter of Certification of minor plats, site plans or any construction documents where the City Manager or his/her designee (City Engineer or City Planner) is the approving authority is not subject to any calendar cycle.
 Return By (date):

Traffic Impact Analysis

Prepared For:

DR Horton
211 N. Loop 1604 E., Suite 130
San Antonio, Texas



TRAFFIC IMPACT STUDY



Steele Creek Planned Unit Development 411.584 Acres, FM 1103 Cibolo, Texas



*Intelligent
Engineering.
Nature of Design.*

TRANSPORTATION

PUBLIC WORKS

DEVELOPMENT

SURVEYING

TRAFFIC IMPACT ANALYSIS

Steele Creek Planned Unit Development 411.584 Acres, FM 1103 Cibolo, Texas

Prepared for:

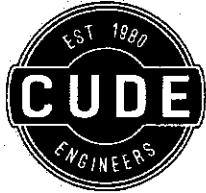
D R Horton, Inc.
211 N. Loop 1604 E., Suite 130
San Antonio, Texas

Prepared by:



Civil Engineering Consultants
11550 IH 10 West, Suite 395
San Antonio, Texas

Prepared In Cooperation With:



Cude Engineers
4122 Pond Hill Road, Suite 101
San Antonio, Texas

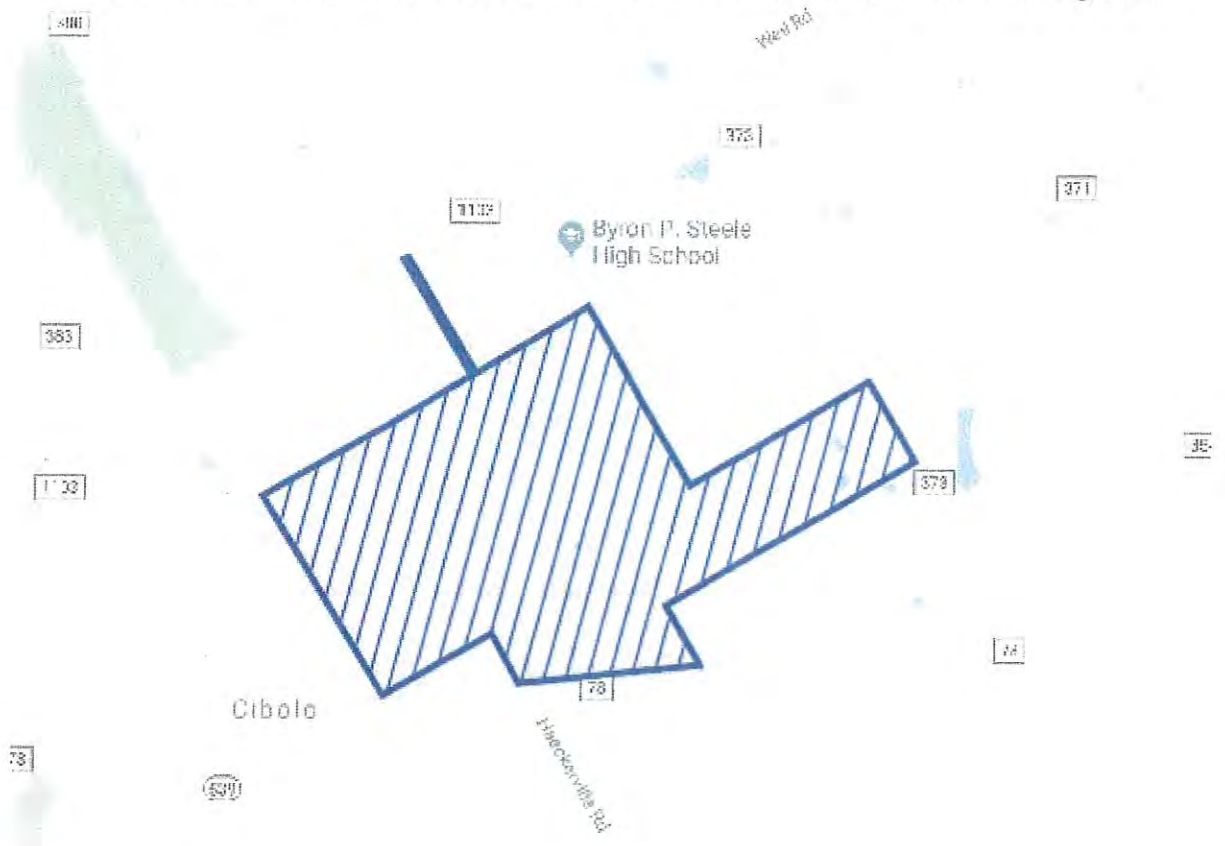
May 2018
E0597600

EXECUTIVE SUMMARY

TRAFFIC IMPACT ANALYSIS Steele Creek Planned Unit Development 411.584 Acres, FM 1103 Cibolo, Texas

A. SITE LOCATION

The location of the Steele Creek Planned Unit Development is between FM 1103 and the Union Pacific Railroad and between Town Creek and Tolle Road, as shown in Figure i.



Source: Google Map

Figure i. Steele Creek Planned Unit Development Location

B. DEVELOPMENT DESCRIPTION

The Steele Creek Planned Unit Development is to consist of as many as 947 single family homes and 94 townhouses. The development is proposed to be built out in five years. The 412 acres are proposed to be developed in ten phases (units). The development will be served by two streets: an arterial street to access FM 1103 and a collector street to access Tolle Road. A collector street will be stubbed out at the eastern flood plain of Town Creek, right-of-way will be dedicated to the western border of the 412 acres to provide for the potential of a future extension of Schlather Street by others. The development layout is shown in Figure ii.

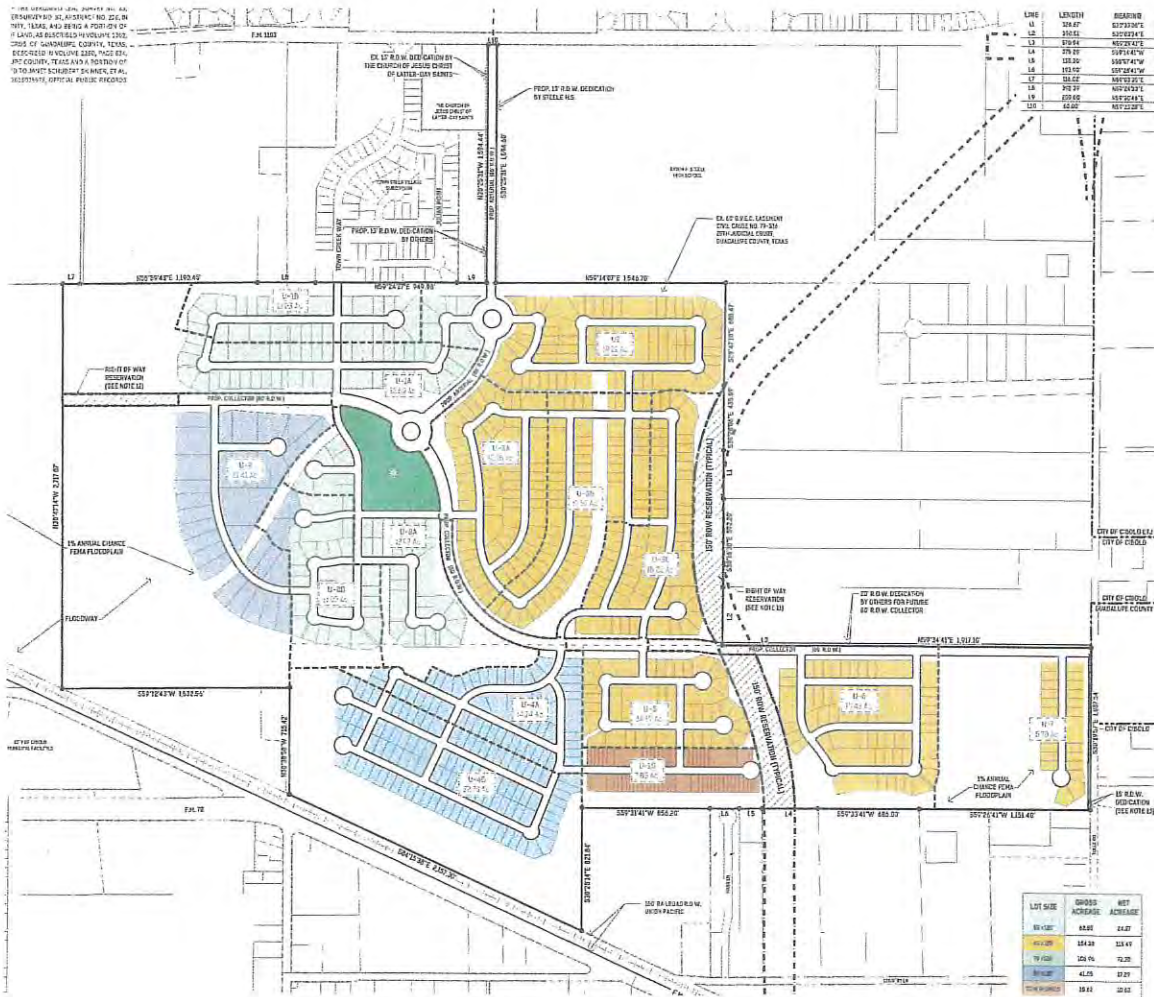


Figure ii Steele Creek Planned Unit Development

C. PRINCIPAL FINDINGS

Trip Generation. Using the Ninth Edition of the ITE *TRIP GENERATION MANUAL* reference, the proposed development is expected to generate trips based the number of residential units. Table i shows the anticipated trip generation for the proposed development.

Table i. Trip Generation for Steele Creek Planned Unit Development

| TRIP GENERATION | | | | | | | | | | |
|------------------------|---|-------|----------------------------|-----|----------------------------|-----|-----------------------------|-------|--------------------------|-----|
| ITE Code | Weekday 24 Hour | | Weekday AM Peak | | Weekday PM Peak | | Saturday 24 Hour | | Saturday Peak | |
| 210 | Single Family Residential – 947 Lots | | | | | | | | | |
| Rate / Unit | 9.52 | | 0.75 | | 1.00 | | 9.91 | | 0.93 | |
| Trips | 9,015 | | 710 | | 947 | | 9,385 | | 881 | |
| % Enter/Exit | 50% | 50% | 25% | 75% | 63% | 37% | 50% | 50% | 54% | 46% |
| # Enter/Exit | 4,507 | 4,508 | 178 | 532 | 597 | 350 | 4,693 | 4,692 | 476 | 405 |
| 230 | Residential Townhouse - 94 | | | | | | | | | |
| Rate / Unit | 5.81 | | 0.44 | | 0.52 | | 5.67 | | 0.47 | |
| Trips | 546 | | 41 | | 49 | | 533 | | 44 | |
| % Enter/Exit | 50% | 50% | 17% | 83% | 67% | 33% | 50% | 50% | 54% | 46% |
| # Enter/Exit | 273 | 273 | 7 | 34 | 33 | 16 | 266 | 267 | 24 | 20 |
| Total | Total | | | | | | | | | |
| Trips | 9,561 | | 751 | | 996 | | 9,918 | | 925 | |
| # Enter/Exit | 4,780 | 4,781 | 185 | 566 | 630 | 366 | 4,959 | 4,959 | 500 | 425 |

Source: ITE Trip Generation Manual, Ninth Edition

Pass-By and/or Internal Trip Calculations and Reductions. For the purpose of this report, no adjustment is made for pass-by or internal trip calculations.

Identification of Impacts and Mitigation Improvements.

The traffic models, optimizing the traffic signal operations on FM 1103 at Main Street and at Rodeo Way, indicate that during the current morning peak period, the roadway system operates with a level-of-service (LOS) C or better. The westbound Weil Road approach experiences an average delay resulting in a LOS D. The southbound Country Lane approach to FM 78 experiences an average delay resulting in a LOS E.

During the current weekday evening peak, the intersection of FM 1103 and Main Street experiences average delays on the eastbound FM 103 approach and the southbound Cibolo Parkway approach the result in LOS F, also resulting in a LOS F for the overall intersection.

The traffic models for the projected volumes for the year 2023, taking into account the proposed improvements to FM 1103 as far south and west to Rodeo Way, indicate the average delays at the intersection of FM 1103 and Main Street would have more delays. The approaches of Weil Road and Brite Road to FM 1103 would have average delays resulting in LOS F and E, respectively during the evening peak. The Country Lane approach to FM 78 would have average delays resulting in LOS F during both peak periods.

The addition of the Steele Creek traffic would result in increasing the delays on all approaches. The approaches with LOS D, E, and F would have LOS F.

The delays on the Weil Road and Brite Road approaches could be reduced significantly by adding a short right turn lane on these two approaches to FM 1103. These improvements could be accomplished at minimal cost with the FM 1103 improvements (Tables 9 and 10).

The new toll road, proposed to extend south from FM 1103 between Weil Road and Rodeo Way, would be expected to reduce the through traffic on FM 1103 west of the toll road and reduce the traffic on County Lane at FM 78. Tables 11 and 12 indicate the impact of 50% of the through traffic using the toll road on the intersections west of the toll road and south of FM 1103. The intersection of FM 1103 and Main Street would still have average delays resulting on LOS F but with significantly reduced delays. Future improvements to FM 1103 between Main Street and Rodeo Way to provide two through lanes in each direction would significantly improve the level-of-service of the intersection.

New arterial street at FM 1103. The new arterial street at FM 1103 would be expected to have as many as 499 vehicles an hour entering and exiting during the evening period. As a minor arterial street (typically a four-lane divided roadway or a five-lane roadway with a center left turn lane), the roadway would have a capacity of as many as 34,000 vehicles an hour. Initially constructed as a minor collector street (40-foot pavement width with one through lane in each direction and a third lane for turning movements), the roadway would have a capacity of 800 vehicles an hour. The new arterial street at FM 1103 would be constructed as a minor collector from the northwest property line of the development to FM 1103 due to having only 60 feet of right-of-way width, anticipating that adjacent properties would dedicate the additional right-of-way to make the street a minor arterial street. Within the development, the roadway will be constructed as minor arterial street to a round-about, connecting with two major collector streets, although based on anticipated volumes being less than 500 vehicles an hour, minor collector streets would suffice.

The new arterial street at FM 1103 would have a LOS C during both the morning and evening peak periods. The number of anticipated eastbound right turns would warrant a right turn lane; however, the length of the right turn lane would be limited by the spacing between the new street and the church driveway to the west. In addition, due to an existing bar ditch near the edge of pavement on the south side of FM 1103 and an existing sidewalk along the church property, a right turn lane cannot be constructed on FM 1103 within the existing right-of-way. The existing center two-way left turn lane along FM 1103 would accommodate the anticipated left turn demand. The construction of the new arterial street would be expected to include providing a driveway for the adjacent high school and perhaps closing the existing west drive from the school onto FM 1103. The traffic anticipated to be generated by the Steele Creek development would not be sufficient to warrant a traffic signal. However, with the inclusion of the school traffic, a traffic signal may be warranted.

New collector at Tolle Road. The new collector street at Tolle Road would be expected to have as many as 497 vehicles an hour entering and exiting during the evening period. As a major collector street (44-foot pavement width with two lanes in each direction), the roadway would have a capacity of 1,000 vehicles an hour. As a minor collector street (40-foot pavement width with one through lane in each direction and a third lane for turning movements), the roadway would have a capacity of 800 vehicles an hour. The new collector street at Tolle Road would be constructed as a major collector street. Between the proposed 1103 Toll Road and Tolle Road, a

40-foot right-of-way dedication is expected from the adjacent property (as indicated on the master plan). Within the development the collector streets will be constructed as major collectors, although based on anticipated volumes being less than 500 vehicles an hour, minor collector streets would suffice.

The new collector street at Tolle Road would also have a LOS C during the morning and evening peak periods. The anticipated number of right turns from Tolle Road during the evening peak onto the new collector street would warrant a right turn lane. The number of anticipated left turns from Tolle Road onto the collector street during the evening peak would indicate the need for a left turn lane.

C. CONCLUSIONS & RECOMMENDATIONS

The traffic anticipated to be generated by the Steele Creek development can be accommodated by the adjacent roadway system. The proposed improvements to FM 1103 will relieve much of the congestion west of Rodeo Way. The proposed toll road could have significant improvements to the traffic congestion on FM 1103 and Main Street. Right turn lanes on the Weil Road and Brite Road approaches to FM 1103 would reduce delays on these streets at FM 1103 and should be included in the FM 1103 improvements.

The number of anticipated right turns onto the new collector street at FM 1103 would warrant a right turn lane on FM 1103; however, due to an existing bar ditch near the edge of pavement on the south side of FM 1103 and an existing sidewalk along the church property, a right turn lane cannot be constructed on FM 1103 within the existing right-of-way.

A traffic signal at the intersection of the new collector street and FM 1103 is not warranted based on the Steele Creek development generated traffic. However, if the high school connects to the new street, a traffic signal will be needed at the new intersection.

The new collector street at Tolle Road should include both a right turn lane and a left turn lane on Tolle Road approaching the new intersection.

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TRAFFIC IMPACT ANALYSIS

Steele Creek Planned Unit Development

411.584 Acres, FM 1103 Cibolo, Texas

◆ INTRODUCTION

A. Project Description

The Steele Creek Planned Unit Development is to consist of as many as 947 single family homes and 94 townhouses. The development is proposed to be built out in five years. The 412 acres are proposed to be developed in ten phases (units). The development will be served by two streets: an arterial street to access FM 1103 and a collector street to access Tolle Road. A collector street will be stubbed out at the eastern flood plain of Town Creek, right-of-way will be dedicated to the western border of the 412 acres to provide for the potential of a future extension of Schlather Street by others. The development layout is shown in Figure 1.

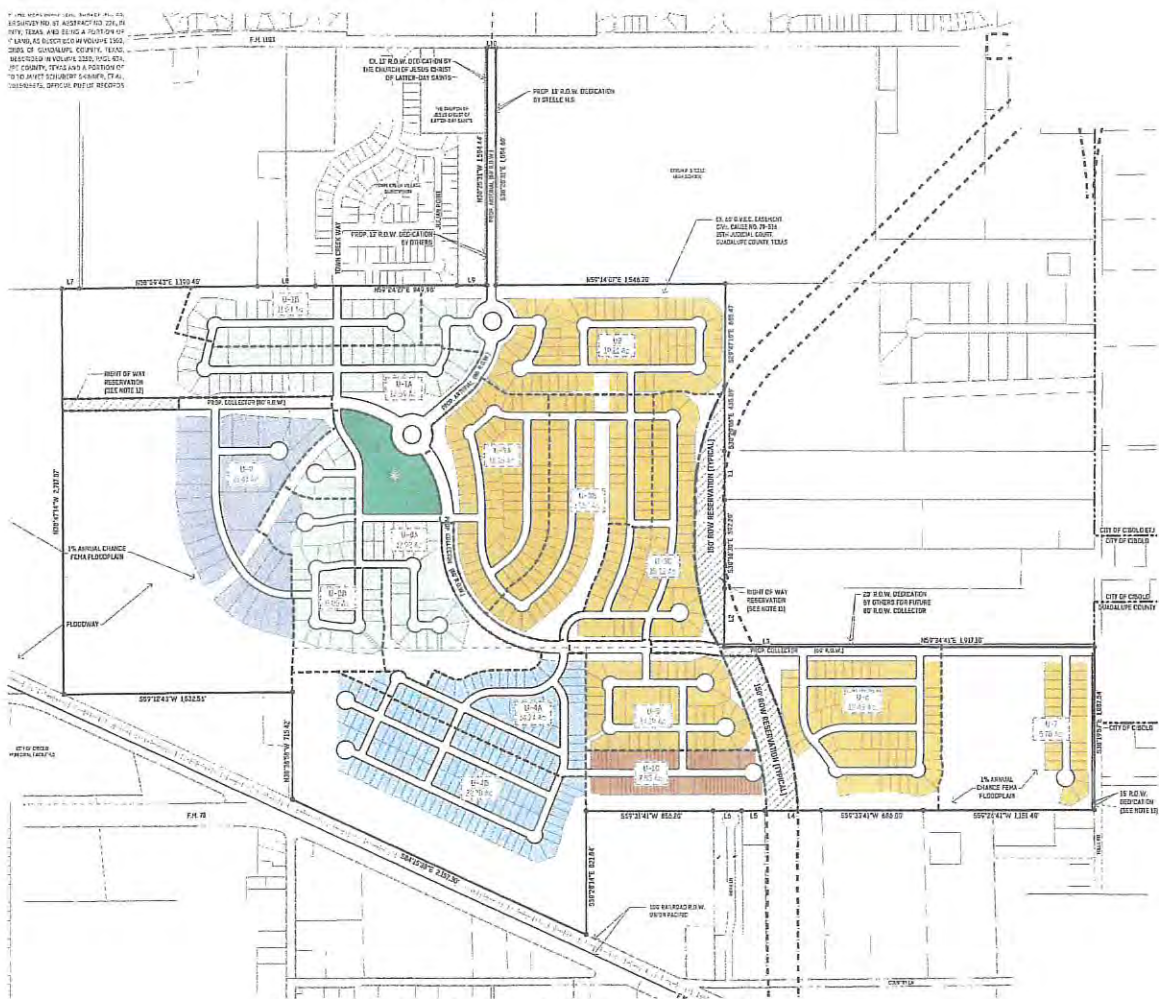
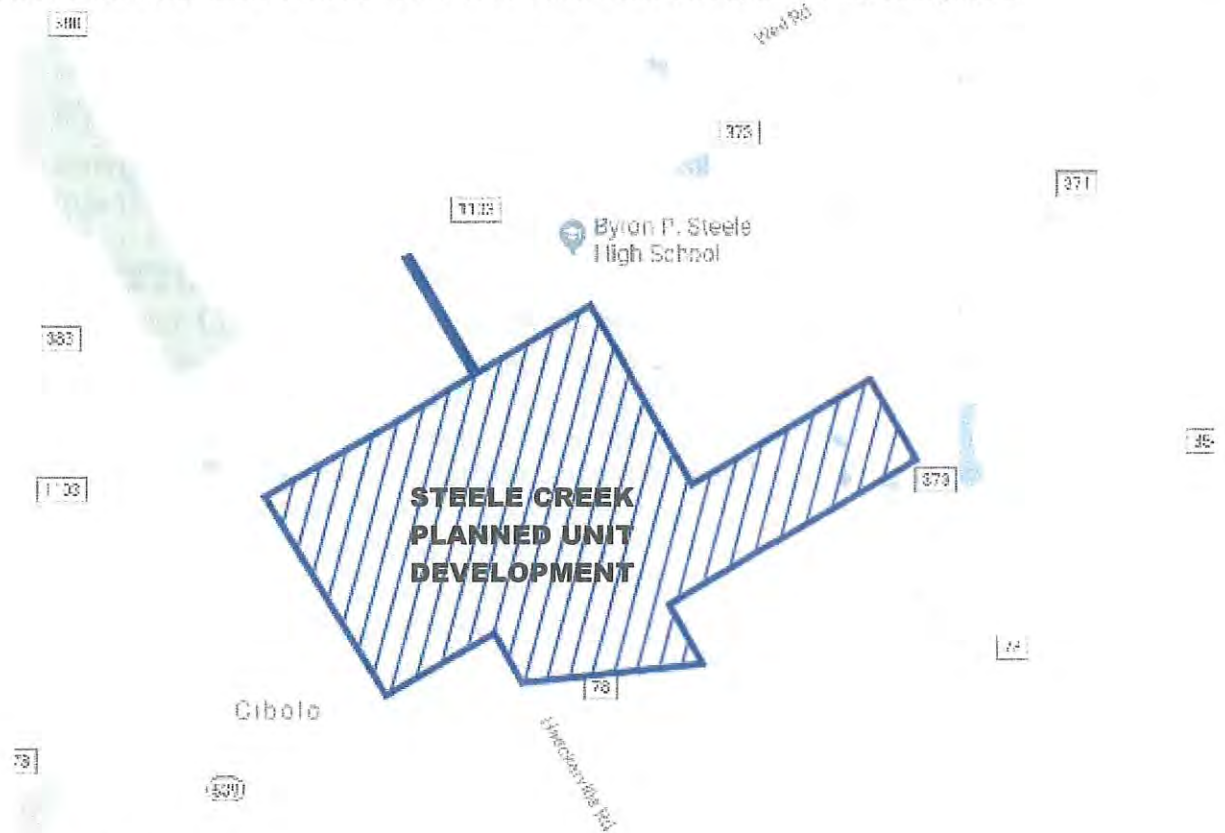


Figure 1. Steele Creek Planned Unit Development

◆ PROJECT LOCATION

The location of the Steele Creek Planned Unit Development is between FM 1103 and the Union Pacific Railroad and between Town Creek and Tolle Road, as shown in Figure 2.



Source: Google Map

Figure 2. Steele Creek Planned Unit Development Location

◆ PURPOSE OF PROJECT

The purpose of this project is to provide as many as 947 single family residential homes and 94 townhouse homes.

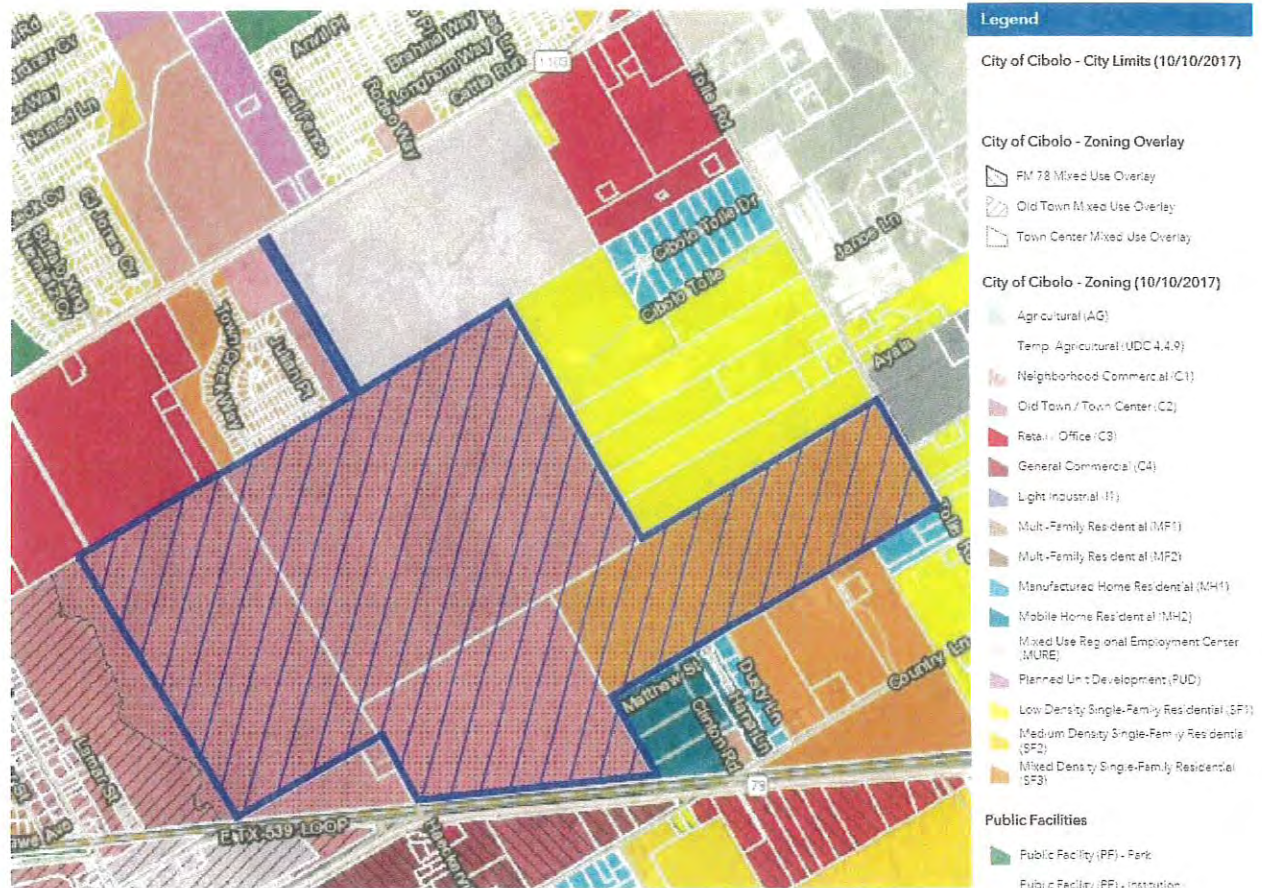
◆ STUDY PROCEDURE

The study procedure to determine the impact of the traffic generated by the proposed residential developments would normally include:

- determine the anticipated trips to be generated by the proposed development,
- determine a reasonable trip distribution of the trips during the peak periods of the development (7:00-8:00 AM weekdays and 5:00-6:00 PM weekdays).
- determine the current levels of service of those intersections to be impacted by the trips generated by the proposed developments,

C. Land Use and Zoning

The property is zoned for residential uses with Town Center Mixed Use Overlay, as indicated in Figure 3



Source: City of Cibolo Zoning Map

Figure 3. Steele Creek Planned Unit Development Zoning

◆ “NO-BUILD” CONDITION

A. Future Roadway/Intersection Improvement Projects

As mentioned, a toll road is planned to extend from FM 1103 to south of FM 78 and would pass through the 412 acres west of Tolle Road.

B. Other Project Traffic

There would not be other project traffic.

◆ TOTAL TRAFFIC CONDITION

A. Phasing Plan

The development of the single family residential development and town house development are anticipated to be completed in five years, by 2023. The subdivision is proposed to be developed in ten phases (units).

B. Project Traffic

i. Trip Generation. Using the Ninth Edition of the ITE *TRIP GENERATION MANUAL* reference, the proposed development is expected to generate trips based the number of residential units. Table 1 shows the anticipated trip generation for the proposed development.

Table 1. Trip Generation for Steele Creek Planned Unit Development

| TRIP GENERATION | | | | | | | | | | |
|------------------------|---|-------|----------------------------|-----|----------------------------|-----|-----------------------------|-------|--------------------------|-----|
| ITE Code | Weekday 24 Hour | | Weekday AM Peak | | Weekday PM Peak | | Saturday 24 Hour | | Saturday Peak | |
| 210 | Single Family Residential – 947 Lots | | | | | | | | | |
| Rate / Unit | 9.52 | | 0.75 | | 1.00 | | 9.91 | | 0.93 | |
| Trips | 9,015 | | 710 | | 947 | | 9,385 | | 881 | |
| % Enter/Exit | 50% | 50% | 25% | 75% | 63% | 37% | 50% | 50% | 54% | 46% |
| # Enter/Exit | 4,507 | 4,508 | 178 | 532 | 597 | 350 | 4,693 | 4,692 | 476 | 405 |
| 230 | Residential Townhouse - 94 | | | | | | | | | |
| Rate / Unit | 5.81 | | 0.44 | | 0.52 | | 5.67 | | 0.47 | |
| Trips | 546 | | 41 | | 49 | | 533 | | 44 | |
| % Enter/Exit | 50% | 50% | 17% | 83% | 67% | 33% | 50% | 50% | 54% | 46% |
| # Enter/Exit | 273 | 273 | 7 | 34 | 33 | 16 | 266 | 267 | 24 | 20 |
| Total | Total | | | | | | | | | |
| Trips | 9,561 | | 751 | | 996 | | 9,918 | | 925 | |
| # Enter/Exit | 4,780 | 4,781 | 185 | 566 | 630 | 366 | 4,959 | 4,959 | 500 | 425 |

Source: *ITE Trip Generation Manual, Ninth Edition*

ii. Pass-By and/or Internal Trip Calculations and Reductions. To this report, no adjustment is made for pass-by or internal trip calculations.

iii. Modal Trip Adjustments. To this report, no adjustment is made for modal trip adjustments during the peak hours of operation.

iv. Trip Distribution by Intersection. The trip distributions, by percentage and by volume, at the intersection of the new streets with FM 1103 and with Tolle Road are shown in Exhibits D1 and E1. Exhibits D2 and E2 indicate the trip distribution of the trips at the intersections of FM 1103 with Main Street, Rodeo Way, Weil Road, and Brite Road and the intersection of FM 78 and Country Lane. The directional trip distributions to and from the development on FM 1103 and on Country Lane are based on the directional distribution of the traffic movements observed in recent traffic counts on FM 1103 and on Country Lane [traffic data in Appendix B].

v. Trip Distribution Figure by Land Use. The trip distribution figures by land use are shown in Exhibits D1, D2, E1 and E2.

vi. Trip Assignment by Intersection. The trip assignments by street by percentage and by volume are shown in Exhibits D1, D2, E1, and E2.

vii. Site Generated Peak Hour Entering and Exiting Volume Figure. The development generated peak hour entering and exiting percentage and volume figures are shown in Exhibits D1, D2, E1, and E2, showing the anticipated traffic volumes, by movements of the development generated volumes at the street intersections.

viii. Future Roadway Network ADT and Classification. There are no other future public roadways associated with this project. The proposed toll road is to be constructed by others.

◆ CAPACITY ANALYSIS

TRAFFIC IMPACT ASSESSMENT

In determining the anticipated traffic impact to the surrounding roadway system resulting from the trips to be generated by the proposed development, a microscopic traffic simulation software package is used to evaluate capacity and levels-of-service for each intersection within the study area. The traffic simulation software is used to compare three scenarios:

- existing 2017 volumes
- projected 2023 volumes with 5.75% average annual increase; and
- proposed 2023 volumes with full development.

TRAFFIC SIMULATION ANALYSIS

SYNCHRO microscopic traffic simulation model application was utilized for comparison of the alternative scenarios. The analysis process involved the development of a base model (network with existing conditions), calibration of the base model (validation of traffic conditions), and alternative comparisons to the base model (traffic impact assessment).

Development of the base model involves the creation of a system network, also referred to as the link-node network. The network development inputs include: link-node assignment, traffic control, traffic signalization, roadway geometry, lane assignment, traffic volumes, and turning movements. The calibration of the base model requires the iterative adjustment of the network inputs to simulate existing roadway and traffic conditions. The analysis focused on the weekday morning and evening peak periods of the residential activities on the adjacent roadways.

As a method of assessing the operational impacts along the study roadways associated with the proposed development, two scenarios were considered for evaluation as listed below.

- Existing 2017 Traffic Volumes
- Projected 2023 Traffic Volumes
- Proposed 2023 Traffic Volumes with full development

Table 2. Level-of-Service Criteria for Signalized and Unsignalized Intersections

| Level-of-Service (LOS) | Control Delay (seconds/vehicle) | | Description |
|------------------------|---------------------------------|----------------------------|---|
| | Signalized Intersections | Unsignalized Intersections | |
| A | ≤10.0 | ≤10.0 | Very low vehicle delay, free traffic flow, good signal progression |
| B | 10.1 to 20.0 | 10.1 to 15.0 | Good signal progression, more vehicle stops and higher delay than LOS A |
| C | 20.1 to 35.0 | 15.1 to 25.0 | Stable traffic flow, fair signal progression, significant number of vehicle stops |
| D | 35.1 to 55.0 | 25.1 to 35.0 | Noticeable traffic congestion, longer delays and unfavorable signal progression |
| E | 55.1 to 80.0 | 35.1 to 50.0 | Limit of acceptable vehicle delay, unstable traffic flow, poor signal progression |
| F | > 80.0 | > 50.0 | Unacceptable delay, extremely unstable flow, heavy congestion, traffic exceeds capacity |

Source: Highway Capacity Manual, Transportation Research Board, 2000.

TRAFFIC SIMULATION RESULTS AND OBSERVATIONS

The study intersection and driveways were analyzed for the existing weekday morning and evening peak periods (7:00-8:00 AM weekdays and 5:00-6:00 PM weekdays). The individual Level of Service for each approach for each intersection is shown on the Intersection Level of Service Calculation Tables in Appendix C. Table 3 and 4 summarize the level-of-service results by approach with the existing traffic volumes. Tables 5 and 6 summarize the level-of-service results by approach projected for the 2023 projected traffic volumes. Tables 7 and 8 summarize the level-of-service results by approach for the 2023 proposed traffic volumes with the full development.

Table 3. Levels of Service Summary for the Study Area – Weekday Morning Peak Period – Existing (2017)

| Intersection | Intersection Approaches | | | | | | | | | | | |
|---|-------------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|-----------------------------|-------------|
| | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Average Control Delay (Sec) | Average LOS |
| FM 1103 & Main Street (signalized) | EB FM 1103 | D | WB FM 1103 | C | NB Main Street | B | SB Cibolo Pkwy | C | | | 33.9 | C |
| | 48.3 | | 34.9 | | 18.9 | | 28.5 | | | | | |
| FM 1103 & Rodeo Way (signalized) | EB FM 1103 | B | WB FM 1103 | C | NB school drive | A | SB Rodeo Way | B | | | 12.6 | B |
| | 18.1 | | 20.1 | | 6.9 | | 10.9 | | | | | |
| FM 1103 & Weil Road (Weil Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Weil Road | D | | | | | 2.6 | A |
| | 0.3 | | 0.0 | | 32.8 | | | | | | | |
| FM 1103 & Brite Road (Brite Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Brite Road | C | | | | | 1.0 | A |
| | 0.5 | | 0.0 | | 16.4 | | | | | | | |
| FM 78 & Country Lane (Country Lane stops) | EB FM 78 | A | WB FM 78 | A | | | SB Country Ln | E | | | 11.6 | B |
| | 0.8 | | 0.0 | | | | 42.0 | | | | | |

Table 4. Levels of Service Summary for the Study Area – Weekday Evening Peak Period – Existing (2017)

| Intersection | Intersection Approaches | | | | | | | | | | | |
|---|-------------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|-----------------------------|-------------|
| | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Average Control Delay (Sec) | Average LOS |
| FM 1103 & Main Street (signalized) | EB FM 1103 | F | WB FM 1103 | C | NB Main Street | C | SB Cibolo Pkwy | F | | | 137.4 | F |
| | 140.3 | | 32.5 | | 21.9 | | 248.9 | | | | | |
| FM 1103 & Rodeo Way (signalized) | EB FM 1103 | C | WB FM 1103 | C | NB school drive | A | SB Rodeo Way | A | | | 9.2 | A |
| | 20.4 | | 20.3 | | 7.1 | | 5.9 | | | | | |
| FM 1103 & Weil Road (Weil Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Weil Road | D | | | | | 2.8 | A |
| | 0.6 | | 0.0 | | 32.3 | | | | | | | |
| FM 1103 & Brite Road (Brite Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Brite Road | C | | | | | 1.6 | F |
| | 0.8 | | 0.0 | | 20.8 | | | | | | | |
| FM 78 & Country Lane (Country Lane stops) | EB FM 78 | A | WB FM 78 | A | | | SB Country Ln | C | | | 2.4 | A |
| | 1.7 | | 0.0 | | | | 23.6 | | | | | |

Table 5. Levels of Service Summary for the Study Area – Weekday Morning Peak Period – Projected (2023)

| Intersection | Intersection Approaches | | | | | | | | | | Average | |
|--|-------------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|
| | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS |
| FM 1103 & Main Street (signalized) | EB FM 1103 | F | WB FM 1103 | E | NB Main Street | C | SB Cibolo Pkwy | F | | | 72.9 | E |
| | 101.3 | | 56.3 | | 31.6 | | 85.5 | | | | | |
| FM 1103 & Rodeo Way (signalized) | EB FM 1103 | C | WB FM 1103 | D | NB school drive | A | SB Rodeo Way | B | | | 22.3 | C |
| | 32.6 | | 43.4 | | 7.9 | | 18.4 | | | | | |
| FM 1103 & Weil Road (Weil Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Weil Road | E | | | | | 3.1 | A |
| | 0.3 | | 0.0 | | 39.1 | | | | | | | |
| FM 1103 & Brite Road (Brite Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Brite Road | C | | | | | 1.0 | A |
| | 0.6 | | 0.0 | | 16.0 | | | | | | | |
| FM 78 & Country Lane (Country Lane stops) | EB FM 78 | A | WB FM 78 | A | | | SB Country Ln | F | | | 15.3 | C |
| | 1.1 | | 0.0 | | | | 55.7 | | | | | |

Table 6. Levels of Service Summary for the Study Area – Weekday Evening Peak Period – Projected (2023)

| Intersection | Intersection Approaches | | | | | | | | | | Average | |
|--|-------------------------|-----|---------------------|---------|---------------------|----------------|---------------------|-----|---------------------|-----|---------------------|-----|
| | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS |
| FM 1103 & Main Street (signalized) | EB FM 1103 | F | WB FM 1103 | FM 1103 | NB Main Street | SB Cibolo Pkwy | | | | | 290.9 | F |
| | 433.9 | | 97.0 | F | 31.2 | C | 314.2 | F | | | | |
| FM 1103 & Rodeo Way (signalized) | EB FM 1103 | C | WB FM 1103 | FM 1103 | NB school drive | SB Rodeo Way | | | | | 13.4 | B |
| | 25.6 | | 25.1 | C | 11.9 | B | 8.9 | A | | | | |
| FM 1103 & Weil Road (Weil Road stops) | SB FM 1103 | A | NB FM 1103 | FM 1103 | WB Weil Road | | | | | | 7.5 | A |
| | 0.6 | | 0.0 | A | 92.6 | F | | | | | | |
| FM 1103 & Brite Road (Brite Road stops) | SB FM 1103 | A | NB FM 1103 | FM 1103 | WB Brite Road | | | | | | 2.5 | A |
| | 1.3 | | 0.0 | A | 41.5 | E | | | | | | |
| FM 78 & Country Lane (Country Lane stops) | EB FM 78 | A | WB FM 78 | FM 78 | | | | | | | 5.1 | A |
| | 2.5 | | 0.0 | A | | | SB Country Ln | | | | | |
| | | | | | | | 62.1 | F | | | | |

Table 7. Levels of Service Summary for the Study Area – Weekday Morning Peak Period – Proposed 2023

| Intersection | Intersection Approaches | | | | | | | | | | Average | |
|---|-------------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|------|---------------------|-----|
| | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS |
| FM 1103 & Main Street (signalized) | EB FM 1103 | F | WB FM 1103 | F | NB Main Street | D | SB Cibolo Pkwy | F | | | 107.5 | F |
| | 134.2 | | 84.8 | | 35.1 | | 137.6 | | | | | |
| | EB FM 1103 | C | WB FM 1103 | D | NB school drive | A | SB Rodeo Way | C | | | 24.3 | C |
| FM 1103 & Rodeo Way (signalized) | 27.0 | | 40.1 | | 9.0 | | 22.7 | | | | | |
| | SB FM 1103 | A | NB FM 1103 | A | WB Weil Road | F | | | | | | |
| | 0.4 | | 0.0 | | 190.5 | | | | | 19.3 | | C |
| FM 1103 & Weil Road (Weil Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Brite Road | D | | | | | | |
| | 0.8 | | 0.0 | | 29.8 | | | | | 2.0 | | A |
| | SB FM 1103 | A | NB FM 1103 | A | | | | | | | | |
| FM 78 & Country Lane (Country Lane stops) | EB FM 78 | A | WB FM 78 | A | | | SB Country Ln | F | | | 73.6 | F |
| | 1.6 | | 0.0 | | | | 212.5 | | | | | |
| | EB FM 1103 | A | WB FM 1103 | A | NB arterial | C | | | | 6.5 | | A |
| FM 1103 & new arterial (arterial stops) | 0.0 | | 2.0 | | 19.1 | | | | | | | |
| | EB FM 1103 | A | NB Tolle Road | A | | | | | | | | |
| | 0.0 | | 2.8 | | | | EB collector | C | | | 6.8 | A |
| Tolle Road & new collector (collector stops) | 0.0 | | 2.8 | | | | 18.4 | | | | | |
| | 0.0 | | 2.8 | | | | | | | | | |
| | 0.0 | | 2.8 | | | | | | | | | |

Table 8. Levels of Service Summary for the Study Area – Weekday Evening Peak Period – Proposed 2023

| Intersection | Intersection Approaches | | | | | | | | | | Average | |
|--|-------------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|
| | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS |
| FM 1103 & Main Street (signalized) | EB FM 1103 | F | WB FM 1103 | F | NB Main Street | C | SB Cibolo Pkwy | F | | | 387.9 | F |
| | 520.8 | | 109.5 | | 34.3 | | 501.8 | | | | | |
| | | | | | | | | | | | | |
| FM 1103 & Rodeo Way (signalized) | EB FM 1103 | B | WB FM 1103 | B | NB school drive | E | SB Rodeo Way | C | | | 33.0 | C |
| | 10.8 | | 11.6 | | 58.2 | | 20.1 | | | | | |
| | | | | | | | | | | | | |
| FM 1103 & Weil Road (Weil Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Weil Road | F | | | | | 76.0 | F |
| | 1.0 | | 0.0 | | 837.9 | | | | | | | |
| | | | | | | | | | | | | |
| FM 1103 & Brite Road (Brite Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Brite Road | F | | | | | 22.6 | C |
| | 2.4 | | 0.0 | | 339.8 | | | | | | | |
| | | | | | | | | | | | | |
| FM 78 & Country Lane (Country Lane stops) | EB FM 78 | A | WB FM 78 | A | | | SB Country Ln | F | | | 41.2 | E |
| | 4.1 | | 0.0 | | | | 469.9 | | | | | |
| | | | | | | | | | | | | |
| FM 1103 & new arterial (arterial stops) | EB FM 1103 | A | WB FM 1103 | A | NB arterial | C | | | | | 3.8 | A |
| | 0.0 | | 2.4 | | 17.1 | | | | | | | |
| | | | | | | | | | | | | |
| Tolle Road & new collector (collector stops) | SB Tolle Road | A | NB Tolle Road | A | | | EB collector | C | | | 6.8 | A |
| | 0.0 | | 3.5 | | | | 23.6 | | | | | |
| | | | | | | | | | | | | |

Table 9. Levels of Service Summary for the Study Area – Weekday Morning Peak Period – Proposed 2023 with right turn lanes at Weil Road and Brite Road

| Intersection | Intersection Approaches | | | | | | | | Average | |
|--|-------------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|
| | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS |
| FM 1103 & Weil Road (Weil Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Weil Road | | | | 13.0 | C |
| | 0.4 | A | 0.0 | A | 127.9 | F | | | | |
| | SB FM 1103 | A | NB FM 1103 | A | WB Brite Road | | | | | |
| FM 1103 & Brite Road (Brite Road stops) | 0.8 | A | 0.0 | A | 19.5 | C | | | 1.5 | A |

Table 10. Levels of Service Summary for the Study Area – Weekday Evening Peak Period – Proposed 2023 with right turn lanes at Weil Road and Brite Road

| Intersection | Intersection Approaches | | | | | | | | Average | |
|--|-------------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|
| | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS |
| FM 1103 & Weil Road (Weil Road stops) | SB FM 1103 | A | NB FM 1103 | A | WB Weil Road | | | | 24.6 | C |
| | 1.0 | A | 0.0 | A | 267.6 | F | | | | |
| | SB FM 1103 | A | NB FM 1103 | A | WB Brite Road | | | | | |
| FM 1103 & Brite Road (Brite Road stops) | 2.4 | A | 0.0 | A | 90.6 | F | | | 6.8 | A |

Table 11. Levels of Service Summary for the Study Area – Weekday Morning Peak Period – Proposed 2023 with 50% toll road impact

| Intersection | Intersection Approaches | | | | | | Average | |
|--|-------------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|
| | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS |
| FM 1103 & Main Street (signalized) | EB FM 1103 | | WB FM 1103 | | NB Main Street | | SB Cibolo Pkwy | |
| | 63.2 | E | 45.4 | D | 18.2 | B | 38.6 | D |
| FM 1103 & Rodeo Way (signalized) | EB FM 1103 | | WB FM 1103 | | NB school drive | | SB Rodeo Way | |
| | 27.0 | C | 40.1 | D | 9.0 | A | 22.7 | C |
| FM 78 & Country Lane (Country Lane stops) | EB FM 78 | | WB FM 78 | | | | SB Country Ln | |
| | 1.6 | A | 0.0 | A | | | 58.3 | F |
| FM 1103 & new arterial (arterial stops) | EB FM 1103 | | WB FM 1103 | | NB arterial | | | |
| | 0.0 | A | 2.0 | A | 19.1 | C | | |
| Tolle Road & new collector (collector stops) | SB Tolle Road | | NB Tolle Road | | | | EB collector | |
| | 0.0 | A | 2.8 | A | | | 19.9 | C |

Table 12. Levels of Service Summary for the Study Area – Weekday Evening Peak Period – Proposed 2023 with 50% toll road impact

| Intersection | Intersection Approaches | | | | | | | | | | Average | |
|--|-------------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|
| | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS | Control Delay (Sec) | LOS |
| FM 1103 & Main Street (signalized) | EB FM 1103 | | WB FM 1103 | | NB Main Street | | SB Cibolo Pkwy | | | | | |
| | 185.8 | F | 57.1 | E | 13.5 | B | 157.5 | F | | | 141.5 | F |
| | EB FM 1103 | | WB FM 1103 | | NB school drive | | SB Rodeo Way | | | | 33.0 | C |
| FM 1103 & Rodeo Way (signalized) | 10.8 | B | 11.6 | B | 58.2 | E | 20.1 | C | | | | |
| | EB FM 78 | | WB FM 78 | | | | SB Country Ln | | | | 7.5 | A |
| | 2.8 | A | 0.0 | A | | | 98.7 | F | | | 3.8 | A |
| FM 78 & Country Lane (Country Lane stops) | EB FM 1103 | | WB FM 1103 | | NB arterial | | | | | | | |
| | 0.0 | A | 2.4 | A | 17.1 | C | | | | | | |
| | SB Tolle Road | | NB Tolle Road | | | | EB collector | | | | 6.8 | A |
| Tolle Road & new collector (collector stops) | 0.0 | A | 3.5 | A | | | 23.6 | C | | | | |

◆ IDENTIFICATION OF IMPACTS & MITIGATION IMPROVEMENTS

The traffic models, optimizing the traffic signal operations on FM 1103 at Main Street and at Rodeo Way, indicate that during the current morning peak period, the roadway system operates with a level-of-service (LOS) C or better. The westbound Weil Road approach experiences an average delay resulting in a LOS D. The southbound Country Lane approach to FM 78 experiences an average delay resulting in a LOS E.

During the current weekday evening peak, the intersection of FM 1103 and Main Street experiences average delays on the eastbound FM 103 approach and the southbound Cibolo Parkway approach the result in LOS F, also resulting in a LOS F for the overall intersection.

The traffic models for the projected volumes for the year 2023, taking into account the proposed improvements to FM 1103 as far south and west to Rodeo Way, indicate the average delays at the intersection of FM 1103 and Main Street would have more delays. The approaches of Weil Road and Brite Road to FM 1103 would have average delays resulting in LOS F and E, respectively during the evening peak. The Country Lane approach to FM 78 would have average delays resulting in LOS F during both peak periods.

The addition of the Steele Creek traffic would result in increasing the delays on all approaches. The approaches with LOS D, E, and F would have LOS F.

The delays on the Weil Road and Brite Road approaches could be reduced significantly by adding a short right turn lane on these two approaches to FM 1103. These improvements could be accomplished at minimal cost with the FM 1103 improvements (Tables 9 and 10).

The new toll road, proposed to extend south from FM 1103 between Weil Road and Rodeo Way, would be expected to reduce the through traffic on FM 1103 west of the toll road and reduce the traffic on County Lane at FM 78. Tables 11 and 12 indicate the impact of 50% of the through traffic using the toll road on the intersections west of the toll road and south of FM 1103. The intersection of FM 1103 and Main Street would still have average delays resulting on LOS F but with significantly reduced delays. Future improvements to FM 1103 between Main Street and Rodeo Way to provide two through lanes in each direction would significantly improve the level-of-service of the intersection.

New arterial street at FM 1103. The new arterial street at FM 1103 would be expected to have as many as 499 vehicles an hour entering and exiting during the evening period. As a minor arterial street (typically a four-lane divided roadway or a five-lane roadway with a center left turn lane), the roadway would have a capacity of as many as 34,000 vehicles an hour. Initially constructed as a minor collector street (40-foot pavement width with one through lane in each direction and a third lane for turning movements), the roadway would have a capacity of 800 vehicles an hour. The new arterial street at FM 1103 would be constructed as a minor collector from the northwest property line of the development to FM 1103 due to having only 60 feet of right-of-way width, anticipating that adjacent properties would dedicate the additional right-of-way to make the street a minor arterial street. Within the development, the roadway will be constructed as minor arterial street to a round-about, connecting with two major collector streets, although based on anticipated volumes being less than 500 vehicles an hour, minor collector streets would suffice.

The new arterial street at FM 1103 would have a LOS C during both the morning and evening peak periods. The number of anticipated eastbound right turns would warrant a right turn lane; however, the length of the right turn lane would be limited by the spacing between the new street and the church driveway to the west. In addition, due to an existing bar ditch near the edge of pavement on the south side of FM 1103 and an existing sidewalk along the church property, a right turn lane cannot be constructed on FM 1103 within the existing right-of-way. The existing center two-way left turn lane along FM 1103 would accommodate the anticipated left turn demand. The construction of the new arterial street would be expected to include providing a driveway for the adjacent high school and perhaps closing the existing west drive from the school onto FM 1103. The traffic anticipated to be generated by the Steele Creek development would not be sufficient to warrant a traffic signal. However, with the inclusion of the school traffic, a traffic signal may be warranted.

New collector at Tolle Road. The new collector street at Tolle Road would be expected to have as many as 497 vehicles an hour entering and exiting during the evening period. As a major collector street (44-foot pavement width with two lanes in each direction), the roadway would have a capacity of 1,000 vehicles an hour. As a minor collector street (40-foot pavement width with one through lane in each direction and a third lane for turning movements), the roadway would have a capacity of 800 vehicles an hour. The new collector street at Tolle Road would be constructed as a major collector street. Between the proposed 1103 Toll Road and Tolle Road, a 40-foot right-of-way dedication is expected from the adjacent property (as indicated on the master plan). Within the development the collector streets will be constructed as major collectors, although based on anticipated volumes being less than 500 vehicles an hour, minor collector streets would suffice.

The new collector street at Tolle Road would also have a LOS C during the morning and evening peak periods. The anticipated number of right turns from Tolle Road during the evening peak onto the new collector street would warrant a right turn lane. The number of anticipated left turns from Tolle Road onto the collector street during the evening peak would indicate the need for a left turn lane.

◆ CONCLUSIONS & RECOMMENDATIONS

The traffic anticipated to be generated by the Steele Creek development can be accommodated by the adjacent roadway system. The proposed improvements to FM 1103 will relieve much of the congestion west of Rodeo Way. The proposed toll road could have significant improvements to the traffic congestion on FM 1103 and Main Street. Right turn lanes on the Weil Road and Brite Road approaches to FM 1103 would reduce delays on these streets at FM 1103 and should be included in the FM 1103 improvements.

The number of anticipated right turns onto the new collector street at FM 1103 would warrant a right turn lane on FM 1103; however, due to an existing bar ditch near the edge of pavement on the south side of FM 1103 and an existing sidewalk along the church property, a right turn lane cannot be constructed on FM 1103 within the existing right-of-way.

A traffic signal at the intersection of the new collector street and FM 1103 is not warranted based on the Steele Creek development generated traffic. However, if the high school connects to the new street, a traffic signal will be needed at the new intersection.

The new collector street at Tolle Road should include both a right turn lane and a left turn lane on Tolle Road approaching the new intersection.



Prepared by:

A handwritten signature in blue ink that reads "Joe F. Nix".

Joe F. Nix, P.E., P.T.O.E.
CEC Tex Firm No. F-2274

APPENDIX INDEX

- Appendix A** **Land Use**
- Appendix B** **Traffic Survey**
- Appendix C** **Capacity Analysis Worksheets**
- Appendix D** **Street Photos**

APPENDIX A

LAND USE

- TIA Threshold Worksheet
- Steele Creek Planned Unit Development MDP – Exhibit E24.2
- Aerial Photo – Exhibit B
- Guadalupe Appraisal Map – Exhibit C
- Weekday Peak Trip Distribution, Site Percentages – Exhibit D1
- Weekday Peak Trip Distribution, Area Percentages – Exhibit D2
- Weekday Peak Trip Distribution, Site Volumes – Exhibit E1
- Weekday Peak Trip Distribution, Area Volumes – Exhibit E2
- Existing 2017 Volumes – Exhibit F
- Projected 2023 Traffic Volumes – Exhibit G
- Proposed 2023 Traffic Volumes – Exhibit H

Traffic Impact Analysis (TIA) Threshold Worksheet

Complete this form as an aid to determine if your project requires a Traffic Impact Analysis Study.

| | | | |
|--|------------|---|---|
| Project Name: Steele Creek Planned Unit Development | | Threshold Worksheet Prepared by: Joe Nix, PE, PTOE | |
| Project Location: 412 Acres, FM 1103 | | Company: Civil Engineering Consultants | <input type="checkbox"/> Owner or <input checked="" type="checkbox"/> Owner's Agent |
| Date: 15 May 2018 | | Address: 11550 IH 10 West, Suite 395, San Antonio 78230 | |
| Permit Type or Reason for TIA Study/Worksheet (Check one and indicate the number if known) | | Email: jnix@cectexas.com | Phone: 210-641-9999 |
| Zoning #: | Site Plan: | Plat: | Mixed Use: |
| | | | Other: |

Proposed Type of Development (Multi building development or multi-occupancies may require additional tabulation sheets to determine total peak hour trips)

| Anticipated Land/Building Use/Zoning | Project Size | | Critical Peak Hour | Peak Hour Trip Rate (PHT) Rate | Peak Hour Trips (PHT) | Trip Rate Source |
|--------------------------------------|--------------|------------|--------------------|--------------------------------|-----------------------|------------------|
| | Acres | # of Units | | | | |
| Single Family Residential | | 947 | Weekday PM | 1.00 | 947 | ITE Code: 210 |
| Residential Townhouse | | 94 | Weekday PM | 0.52 | 49 | ITE Code: 230 |

Previous Development on Site (Required for land with previous/current buildings occupied within 1 year of submittal or if Re-zoning property)

| Previous Land/Building Use/Zoning | Size (Acres) | # of Units | Critical Peak Hour | Peak Hour Trip Rate (PHT) Rate | Peak Hour Trips (PHT) | Trip Rate Source |
|-----------------------------------|--------------|------------|--------------------|--------------------------------|-----------------------|------------------|
| | | | | | | ITE Code: |

Previous TIA Report (If property has a TIA on file) _____

Peak Hour Trips Projected in Updated Development Plan _____

Difference in PHT (Proposed PHT – Previous Development PHT or TIA PHT) _____

Increase in Peak Hour Trips

(if an increase of 76 PHT or an increase of 10% of the total PHT, a new TIA is required)

Turn Lane Requirements for Developments with Less Than 76 PHT (for developments with 76 or more PHT, this analysis will be included in the TIA)

| Requirement | Right-turn lanes required at: (identify street/driveway name) | Left-turn lanes required at: (identify street/driveway name) |
|--|--|--|
| Median Openings | N/A | <input type="checkbox"/> _____ <input checked="" type="checkbox"/> None |
| Driveways or streets with a daily entering right- or left-turn traffic volume of 500 vehicle trips or 50 vehicle peak hour trips | <input checked="" type="checkbox"/> FM 1103 & new arterial <input type="checkbox"/> None | <input checked="" type="checkbox"/> FM 1103 & new arterial <input type="checkbox"/> None |
| Required by TxDOT | <input type="checkbox"/> _____ <input checked="" type="checkbox"/> None | <input type="checkbox"/> _____ <input checked="" type="checkbox"/> None |
| Where unsafe conditions may exist (limited sight distance, high speed, uneven grade, etc.) | <input type="checkbox"/> _____ <input checked="" type="checkbox"/> None | <input type="checkbox"/> _____ <input checked="" type="checkbox"/> None |

Comments

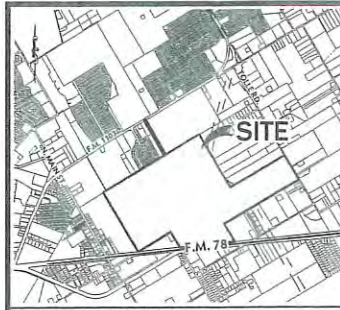
(For Official Use Only, Do Not Write in this Box)

TIA report is required. A TIA report is **not required**. The traffic generated by the proposed development does not exceed the threshold requirements.

The traffic impact analysis has been waived for the following reasons: _____

Reviewed by: _____ Date: _____

NOTE: GFA = Gross Floor Area (bldg. size). ITE = Institute of Transportation Engineers, Trip Generation, 9th Edition. 525 School Street, S.W., Suite 410, Washington, DC 20024-2729; (202) 554-8050.



LEGAL DESCRIPTION:
 411.584 ACRES OF LAND BEING OUT OF THE GERONIMO LEAL SURVEY NO. 85, ABSTRACT NO. 210 AND THE DAVID MILLER SURVEY NO. 87, ABSTRACT NO. 226, IN THE CITY OF CIBOLO, GUADALUPE COUNTY, TEXAS, AND BEING A PORTION OF THAT CERTAIN CALLED 310.989 ACRES OF LAND, AS DESCRIBED IN VOLUME 1302, PAGES 583-586, OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS; THAT CERTAIN CALLED 85.60 ACRES, AS DESCRIBED IN VOLUME 2250, PAGE 634, OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS AND A PORTION OF THAT CERTAIN TRACT OF LAND CONVEYED TO JANET SCHUBERT SKINNER, ET AL, AS DESCRIBED IN DOCUMENT NUMBER 2015025575, OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS.

DEVELOPER:
 DR HORTON, INC.
 211 N. LOOP 1604 E, SUITE 130
 SAN ANTONIO, TX 78232
 CONTACT PERSON: LESLIE OSTRANDER

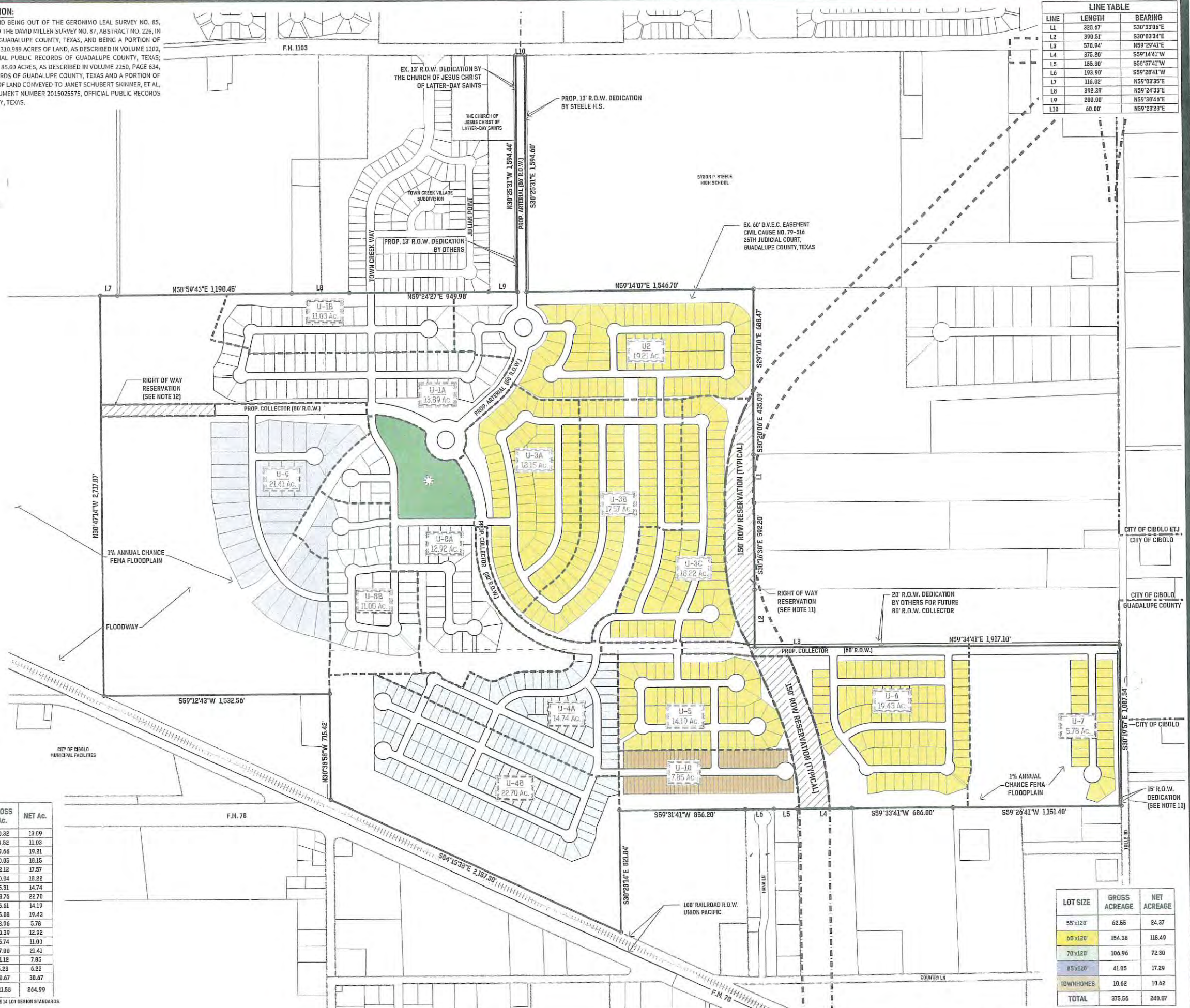
CIVIL ENGINEER:
 CUDE ENGINEERS
 CONTACT PERSON: PATRICK MURPHY, P.E.
 4122 POND HILL ROAD, SUITE 101
 SAN ANTONIO, TX 78231
 TEL: (210) 681-2951
 FAX: (210) 523-7112

| LINE | LENGTH | BEARING |
|------|--------|-------------|
| L1 | 328.67 | S30°33'06"E |
| L2 | 390.51 | S30°03'34"E |
| L3 | 570.94 | N50°29'41"W |
| L4 | 375.20 | S59°14'41"W |
| L5 | 155.30 | S59°57'41"W |
| L6 | 193.90 | S59°28'41"W |
| L7 | 116.02 | N59°03'35"E |
| L8 | 392.39 | N59°24'33"E |
| L9 | 200.00 | N59°30'46"E |
| L10 | 60.00 | N59°23'28"E |

- LEGEND:**
- SITE BOUNDARY
 - - - CITY LIMIT BOUNDARY
 - ⊙ EXISTING LIFT STATION
 - EXISTING SEWER MAIN
 - EXISTING WATER MAIN
 - EXISTING OVERHEAD ELECTRIC
 - EXISTING RAIL ROAD TRACKS
 - - - EXISTING ZONING BOUNDARY
 - - - EXISTING DEED LINE
 - - - PROPOSED PHASE BOUNDARY
 - - - PROPOSED MAJOR THOROUGHFARE
 - ⊙ PROPOSED PRIVATE PARK & AMENITY CENTER
 - 1% ANNUAL CHANCE FEMA FLOODPLAIN
 - FLOODWAY
 - PROPOSED CLOMR FLOODPLAIN REVISIONS
 - EXISTING CANOPY COVER
 - PROPOSED OPEN SPACE

| UNIT | LAND USE TYPE | PLATTING ORDER | MAX. LOT COVERAGE | MAX DENSITY | GROSS Ac. | NET Ac. |
|--------------|----------------------------|----------------|-------------------|-------------|---------------|---------------|
| 1A | MEDIUM DENSITY RESIDENTIAL | 2 | 60% | 4 | 30.32 | 13.89 |
| 1B | MEDIUM DENSITY RESIDENTIAL | 7 | 60% | 4 | 14.52 | 11.03 |
| 2 | MIXED DENSITY RESIDENTIAL | 1 | 60% | 5.5 | 29.66 | 19.21 |
| 3A | MIXED DENSITY RESIDENTIAL | 3 | 60% | 5.5 | 20.05 | 18.15 |
| 3B | MIXED DENSITY RESIDENTIAL | 8 | 60% | 5.5 | 22.12 | 17.87 |
| 3C | MIXED DENSITY RESIDENTIAL | 12 | 60% | 5.5 | 20.04 | 18.22 |
| 4A | MIXED DENSITY RESIDENTIAL | 4 | 60% | 5.5 | 15.31 | 14.74 |
| 4B | MIXED DENSITY RESIDENTIAL | 9 | 60% | 5.5 | 43.76 | 22.70 |
| 5 | MIXED DENSITY RESIDENTIAL | 5 | 60% | 5.5 | 15.01 | 14.19 |
| 6 | MIXED DENSITY RESIDENTIAL | 14 | 60% | 5.5 | 25.08 | 19.43 |
| 7 | MIXED DENSITY RESIDENTIAL | 15 | 60% | 5.5 | 23.96 | 5.78 |
| 8A | MEDIUM DENSITY RESIDENTIAL | 10 | 60% | 4 | 20.39 | 12.92 |
| 8B | MEDIUM DENSITY RESIDENTIAL | 13 | 60% | 4 | 15.74 | 11.00 |
| 9 | LOW DENSITY RESIDENTIAL | 11 | 60% | 2 | 67.00 | 21.41 |
| 10 | TOWNHOME | 6 | 75% | 18 | 11.12 | 7.85 |
| - | PARK SPACE | | | | 6.23 | 6.23 |
| - | RIGHT OF WAY | | | | 30.67 | 30.67 |
| TOTAL | | | | | 411.56 | 264.99 |

① EQUIVALENT DISTRICT CODE WITH H DESIGNATION INDICATES A MODIFICATION TO ONE OR MORE OF THE ARTICLE 14 LOT DESIGN STANDARDS.
 ② RIGHT-OF-WAY AS INDICATED ON THE MAJOR THOROUGHFARE PLAN & FUTURE LAND USE MAP.
 ③ PARKLAND DEDICATION REQUIRED = 264.99 Ac. ± 0.68 ± 21.20 Ac.

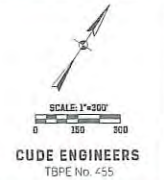


CUDEENGINEERS.COM
 4122 Pond Hill Road, Suite 101
 San Antonio, Texas 78231
 P: (210) 681-2951 F: (210) 523-7112

**STEELE CREEK SUBDIVISION
 PLANNED UNIT DEVELOPMENT**
 LAND STUDY:
 PROPOSED USE & DEVELOPMENT

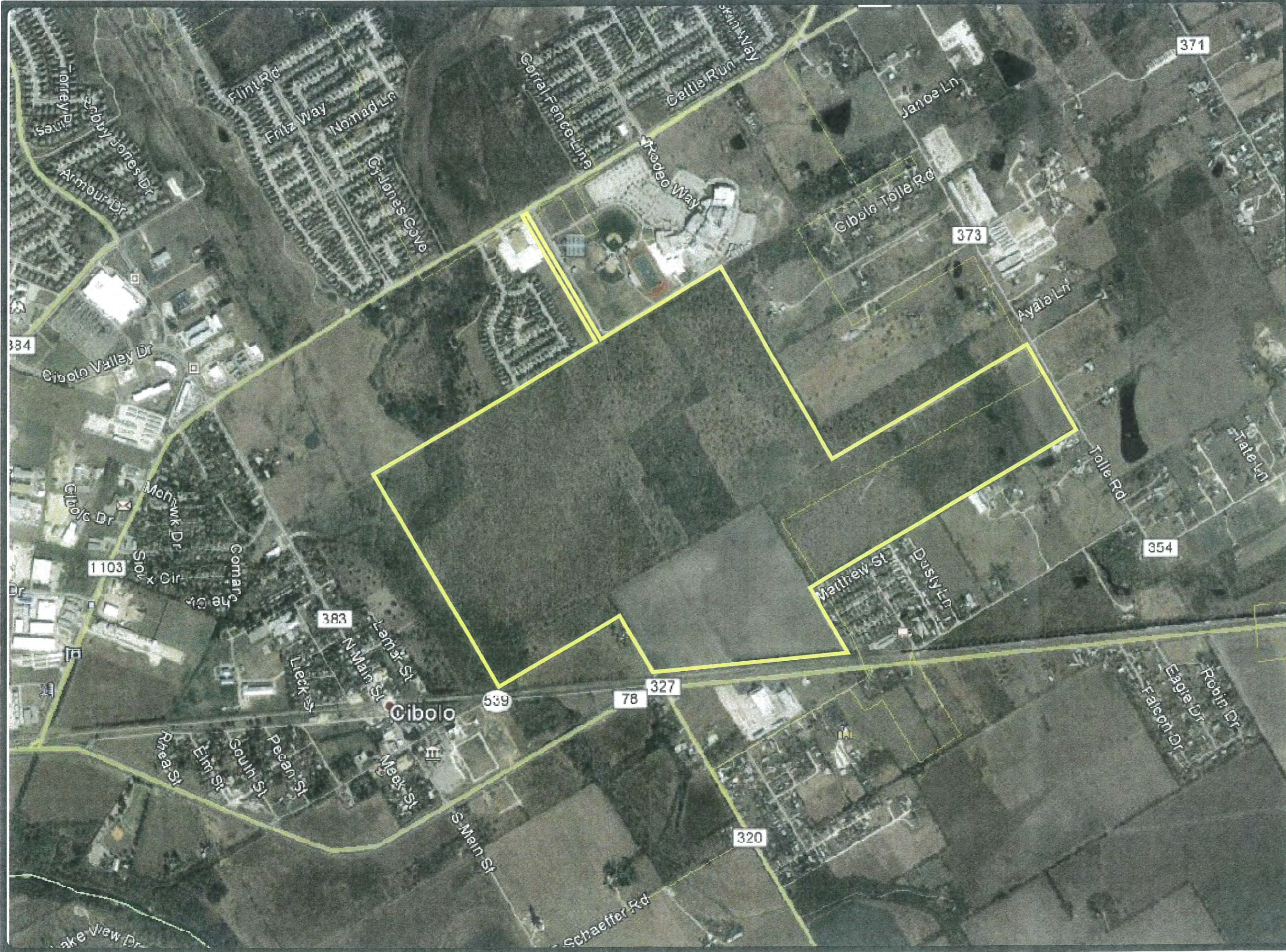
DATE: 2018-04-04
 PROJECT NO.: 02907.300
 DRAWN BY: PMB
 CHECKED BY: JMC

- REVISIONS**
- 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
 - 7.
 - 8.
 - 9.



CUDE ENGINEERS
 TBPE No. 455

E24.2



DESIGNED BY:
 DRAWN BY:
 CHECKED BY:
 DATE: January 2018
 JOB NUMBER: E059760

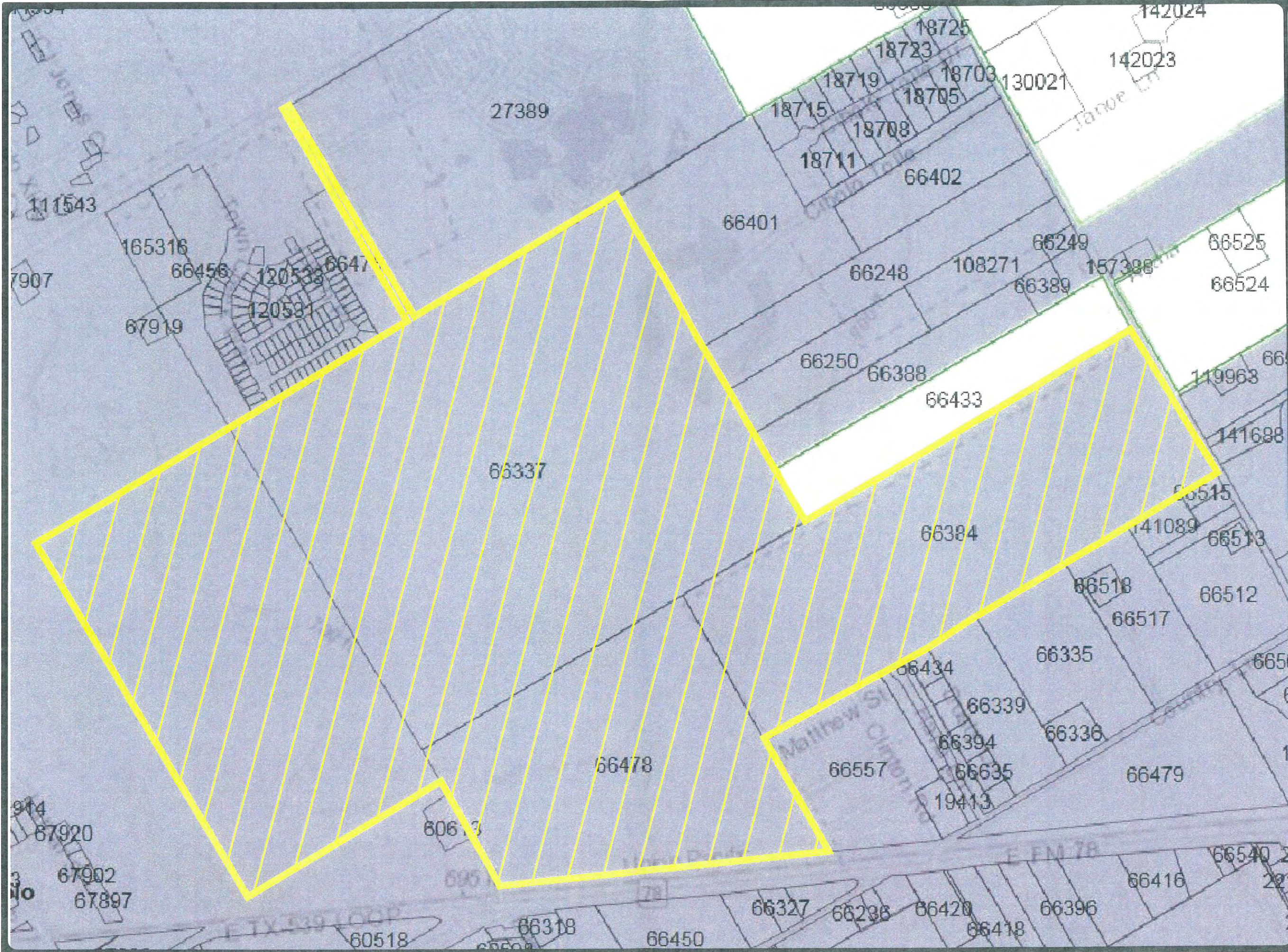
CIVIL ENGINEERING CONSULTANTS
 DON D U R D E N , I N C .
 11550 I.H. 10 WEST, SUITE 395
 SAN ANTONIO, TEXAS 78230
 TEL: 12101 641-9999
 FAX: 12101 641-6440
 EMAIL: cec@cectexas.com



| REV | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |
| | | |
| | | |

Steele Creek Planned Unit
 Development
 Aerial Photo Exhibit

B



DESIGNED BY:
 DRAWN BY:
 CHECKED BY:
 DATE: January 2018
 JOB NUMBER: E097600

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 11550 I.H. 10 WEST, SUITE 395
 SAN ANTONIO, TEXAS 78230
 TEL: 12101 641-9999
 FAX: 12101 641-6440
 EMAIL: cec@cectexas.com



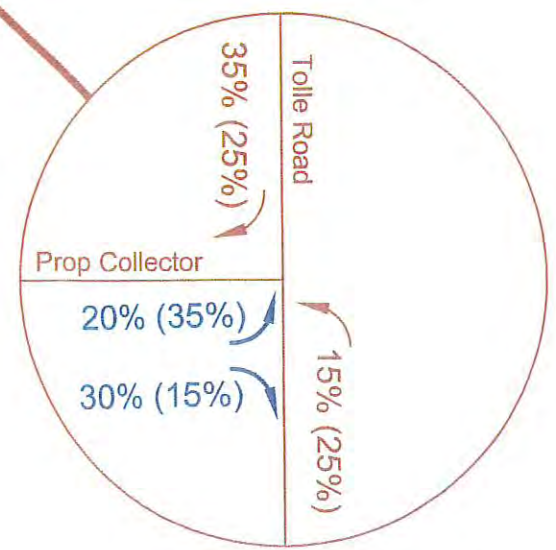
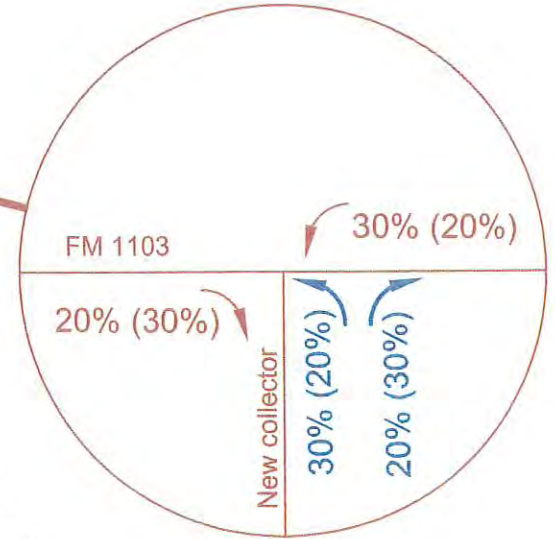
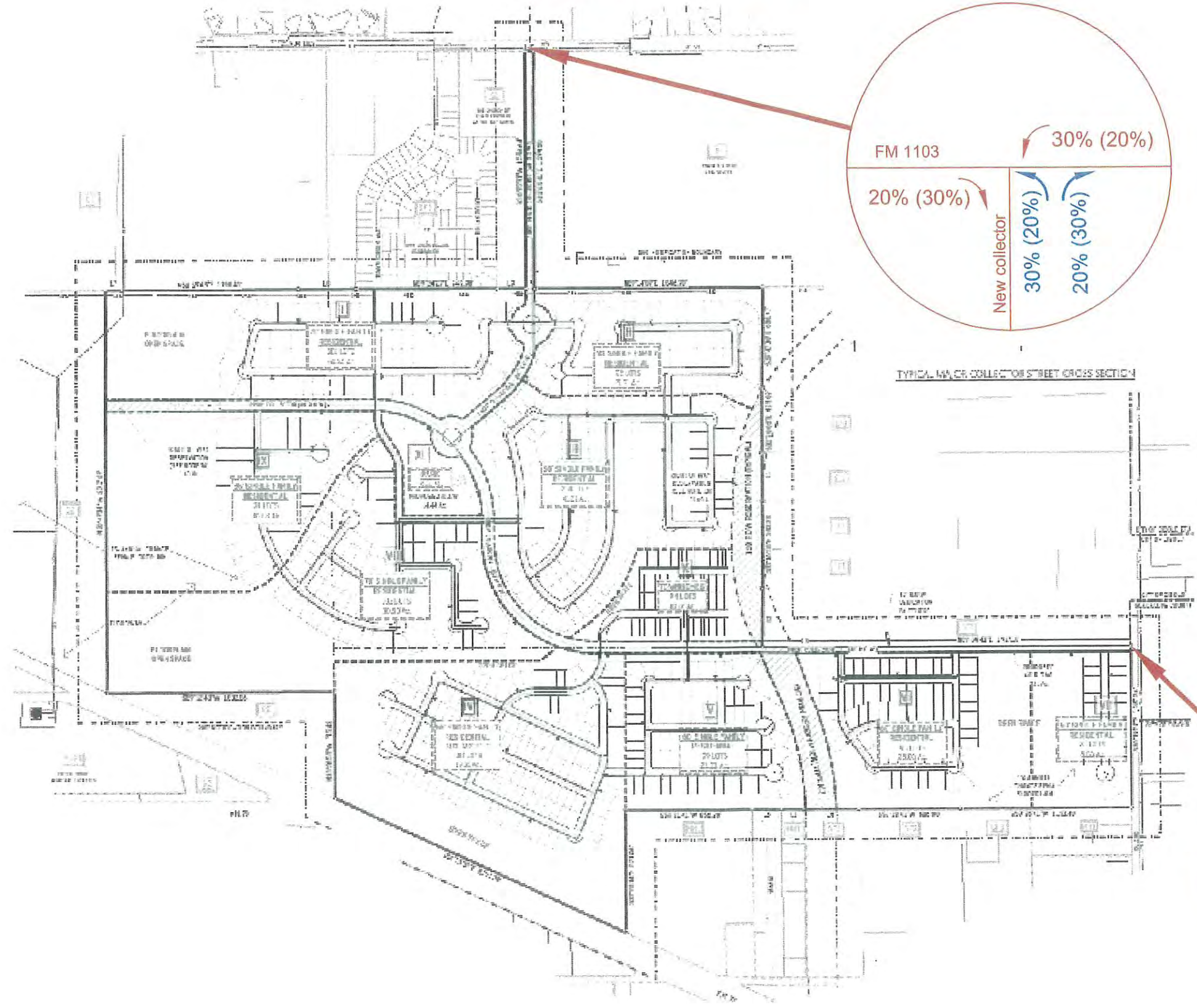
| REV | DATE | DESCRIPTION |
|-----|------|-------------|
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| | | |

Steele Creek Planned Unit
 Development
 Guadalupe County
 Appraisal Map Exhibit

C


PEAK PERIOD TRIP DISTRIBUTION XX% (YY%) AM (PM) PERCENTAGE

← ENTER → EXIT



DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE: January 2018
JOB NUMBER: E0587000

CIVIL ENGINEERING CONSULTANTS
DON D U R D E N , I N C .
11550 I.H. 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
TEL: (210) 641-9999
FAX: (210) 641-6440
EMAIL: cec@cectexas.com



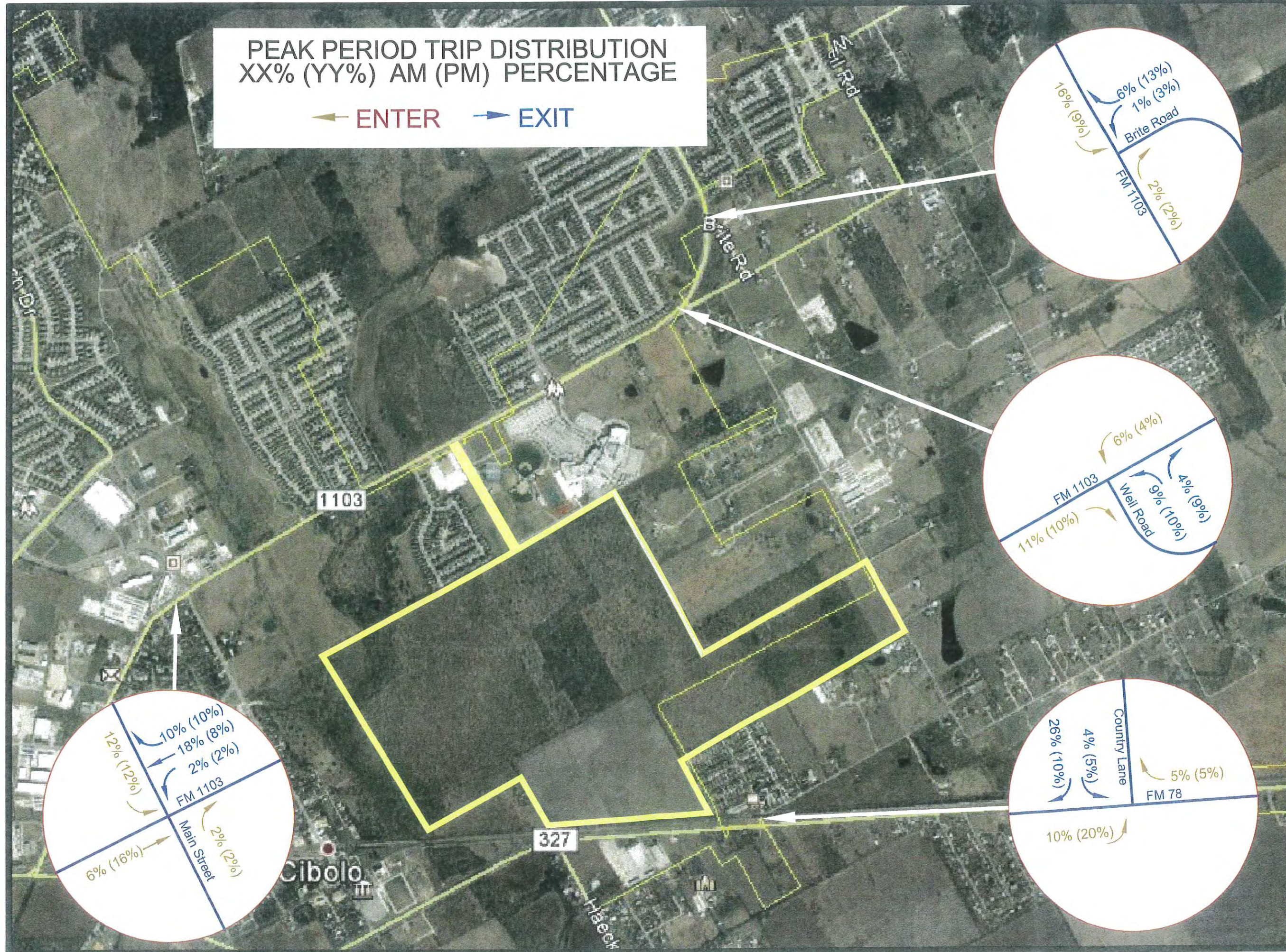
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|-----|------|-------------|
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| | | |

Steele Creek Planned Unit
Development
Site Trip Distribution
Percentage Exhibit

D1

PEAK PERIOD TRIP DISTRIBUTION
XX% (YY%) AM (PM) PERCENTAGE

← ENTER → EXIT



DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE: January 2018
JOB NUMBER: E059700

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11550 I.H. 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
TEL: (210) 641-9999
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EMAIL: cec@cectexas.com



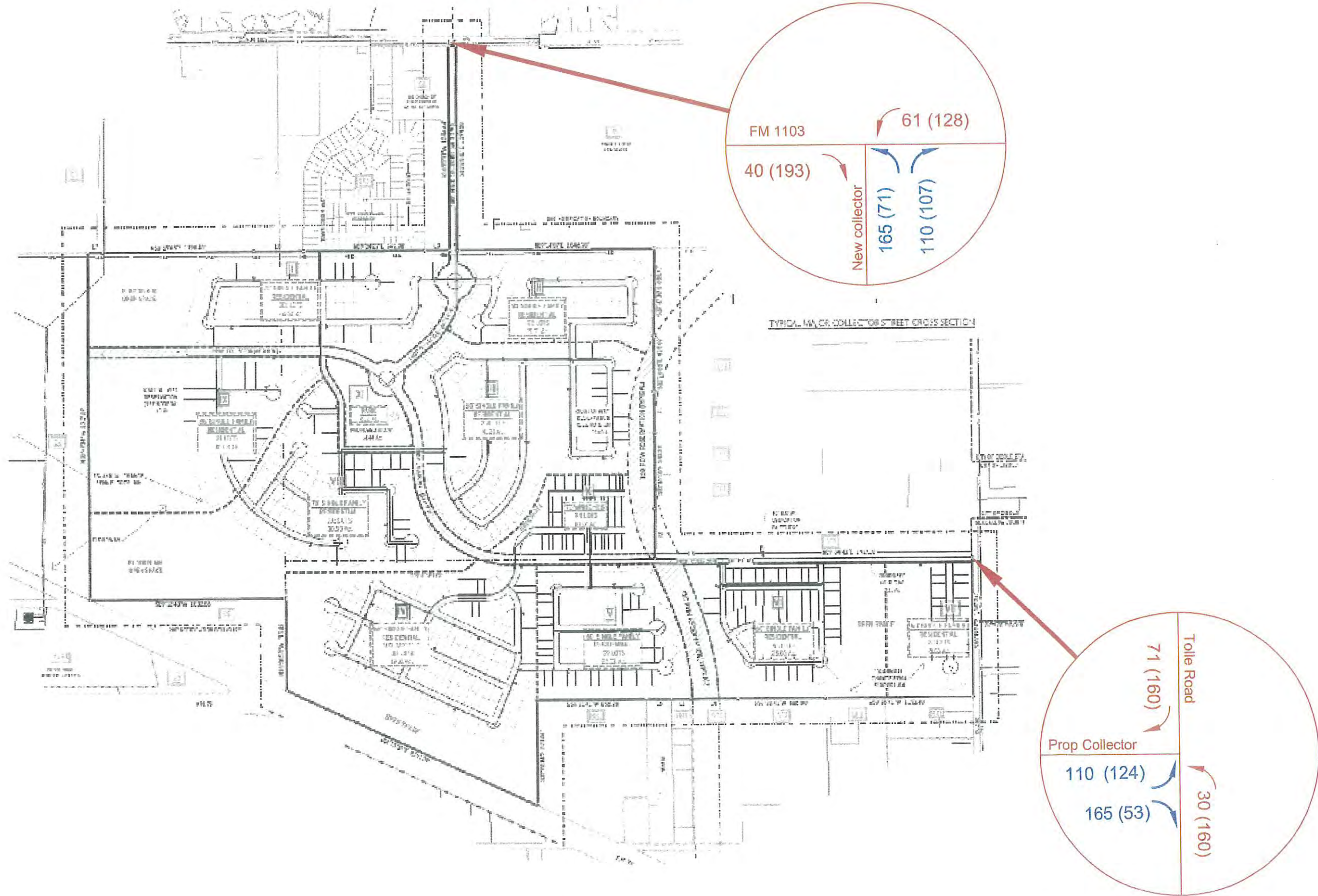
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|-----|------|-------------|
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| | | |

Steele Creek Planned Unit
Development
Area Trip Distribution
Percentage Exhibit

D2

PEAK PERIOD TRIP DISTRIBUTION XX (YY) AM (PM) VOLUMES

← ENTER → EXIT



CIVIL ENGINEERING CONSULTANTS
D O N D U R D E N , I N C .
11550 L.H. 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
TEL: (210) 641-9999
FAX: (210) 641-6440
EMAIL: cec@cectexas.com



DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE: January 2018
JOB NUMBER: E0587000

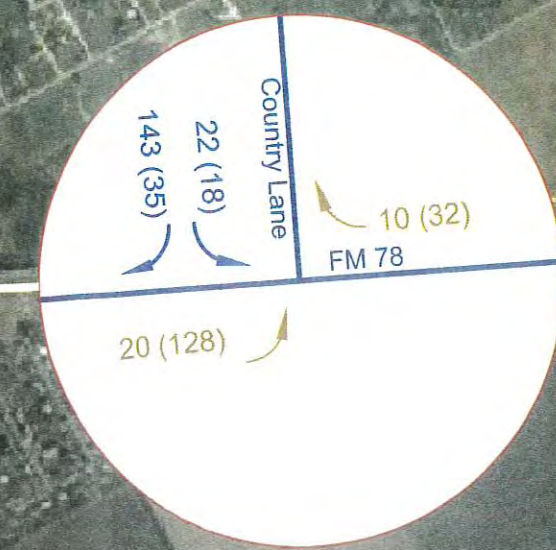
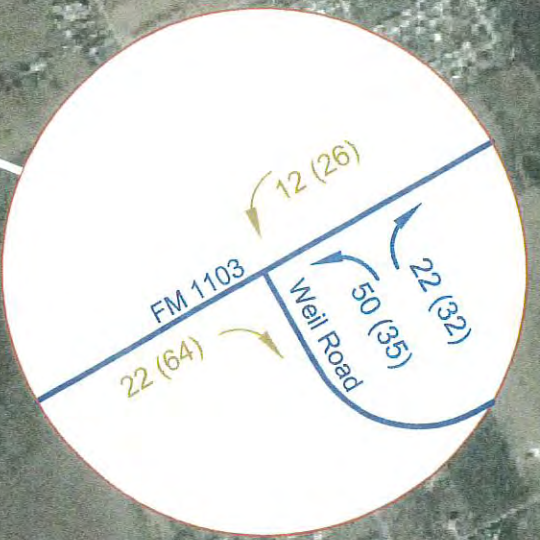
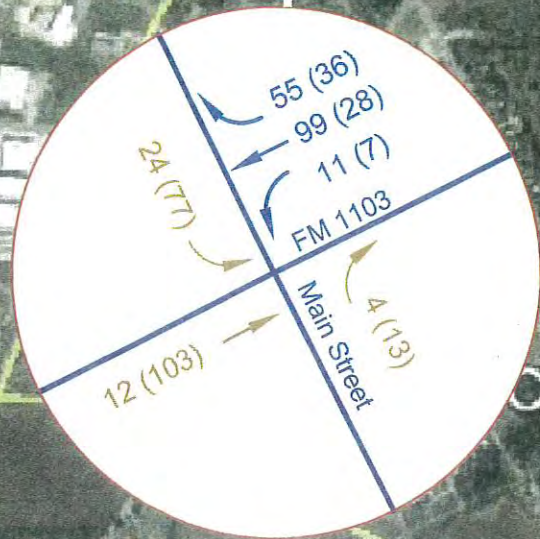
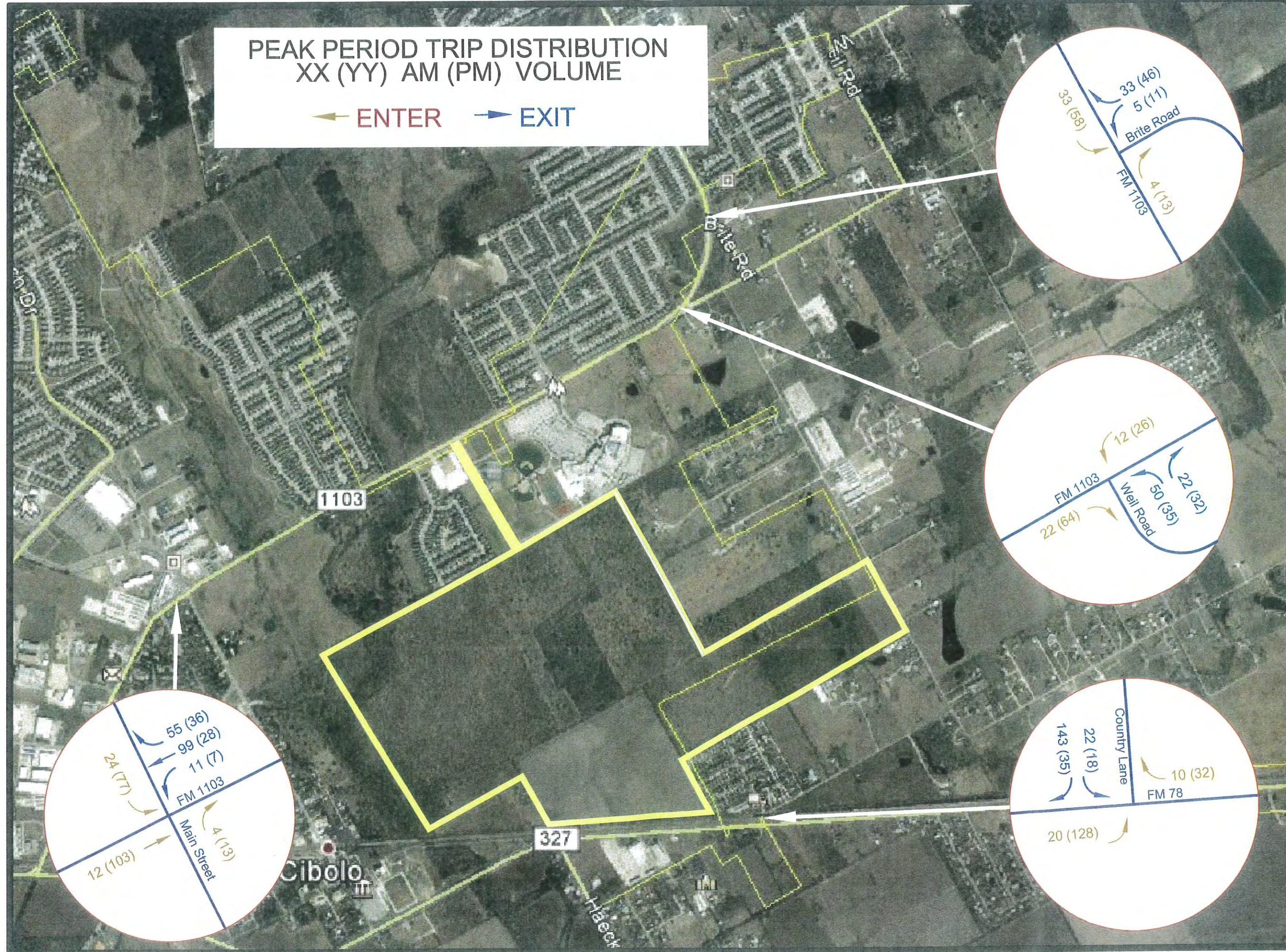
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| | | |

Steele Creek Planned Unit
Development
Site Trip Distribution
Volume Exhibit

E1

PEAK PERIOD TRIP DISTRIBUTION
XX (YY) AM (PM) VOLUME

← ENTER → EXIT



| REV | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |
| | | |
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Steele Creek Planned Unit
Development
Area Trip Distribution
Volume Exhibit

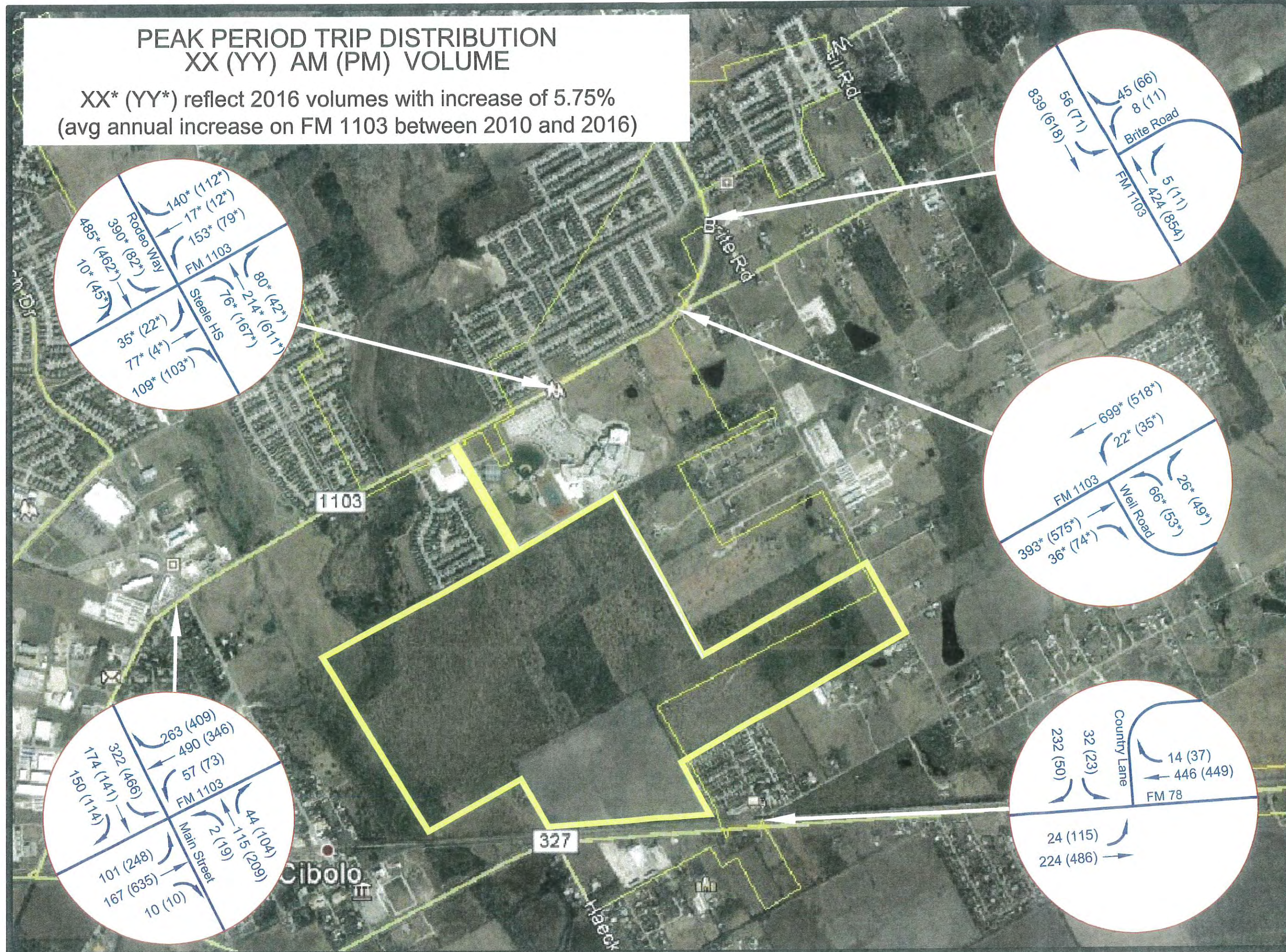
E2

CFC
CIVIL ENGINEERING CONSULTANTS
DON D. DURDEN, INC.
11550 I.H. 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
TEL: 12101 641-9999
FAX: 12101 641-6440
EMAIL: cec@cectexas.com

DESIGNED BY: _____
DRAWN BY: _____
CHECKED BY: _____
DATE: January 2018
JOB NUMBER: E059700

PEAK PERIOD TRIP DISTRIBUTION XX (YY) AM (PM) VOLUME

XX* (YY*) reflect 2016 volumes with increase of 5.75%
(avg annual increase on FM 1103 between 2010 and 2016)



DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE: January 2018
JOB NUMBER: E057600

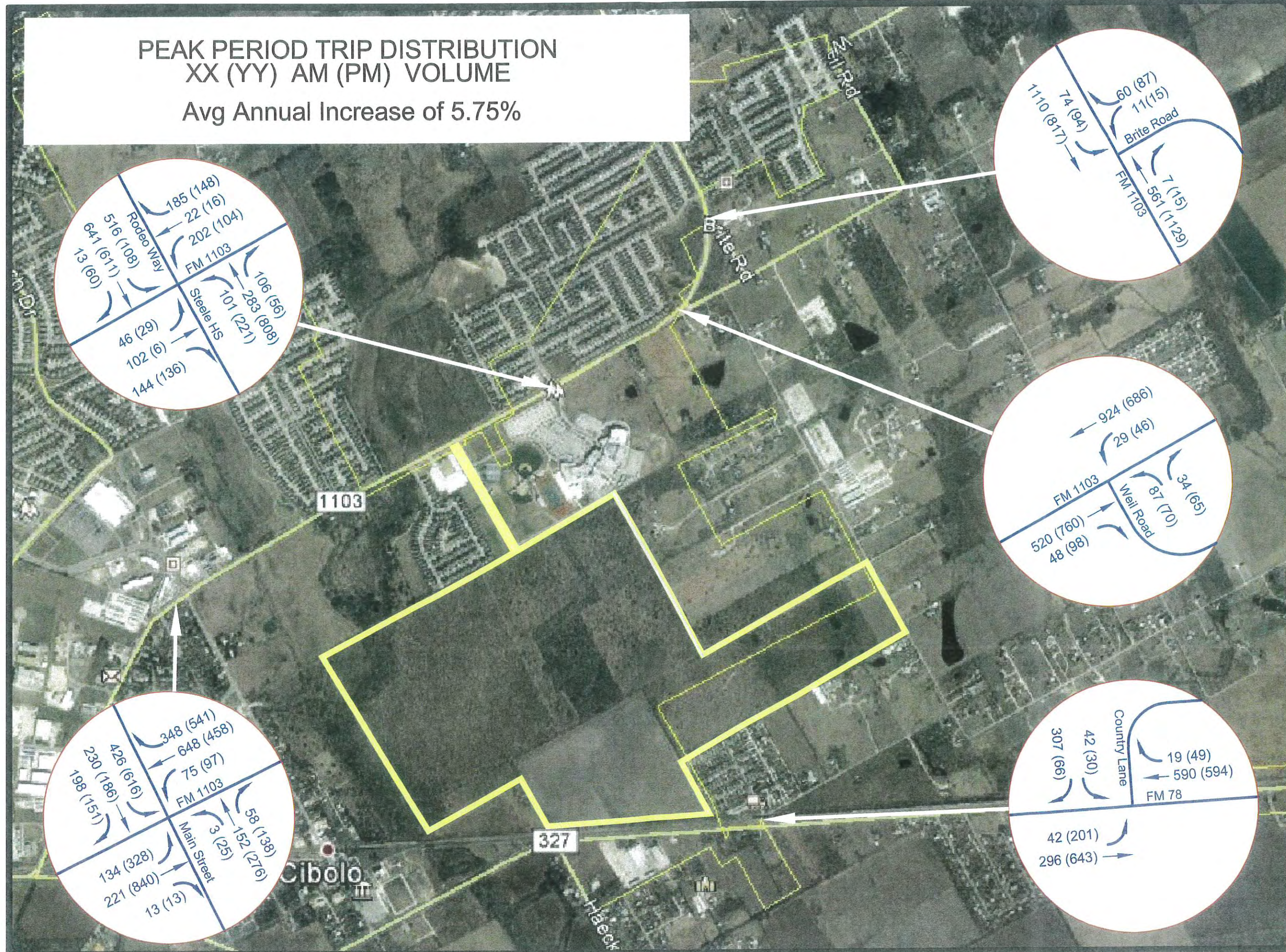
CIVIL ENGINEERING CONSULTANTS
DON DURDEN, INC.
11550 I.H. 40 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
TEL: 12101 641-9999
FAX: 12101 641-6440
EMAIL: cec@cectexas.com

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |
| | | |
| | | |

Steele Creek Planned Unit
Development
2017 Existing Volumes
Exhibit

PEAK PERIOD TRIP DISTRIBUTION
XX (YY) AM (PM) VOLUME

Avg Annual Increase of 5.75%



DESIGNED BY:
 DRAWN BY:
 CHECKED BY:
 DATE: January 2018
 JOB NUMBER: EC69760

CIVIL ENGINEERING CONSULTANTS
 DON DURDEN, INC.
 11550 I.H. 10 WEST, SUITE 395
 SAN ANTONIO, TEXAS 78230
 TEL: 12101 641-9999
 FAX: 12101 641-6440
 EMAIL: cec@cectexas.com

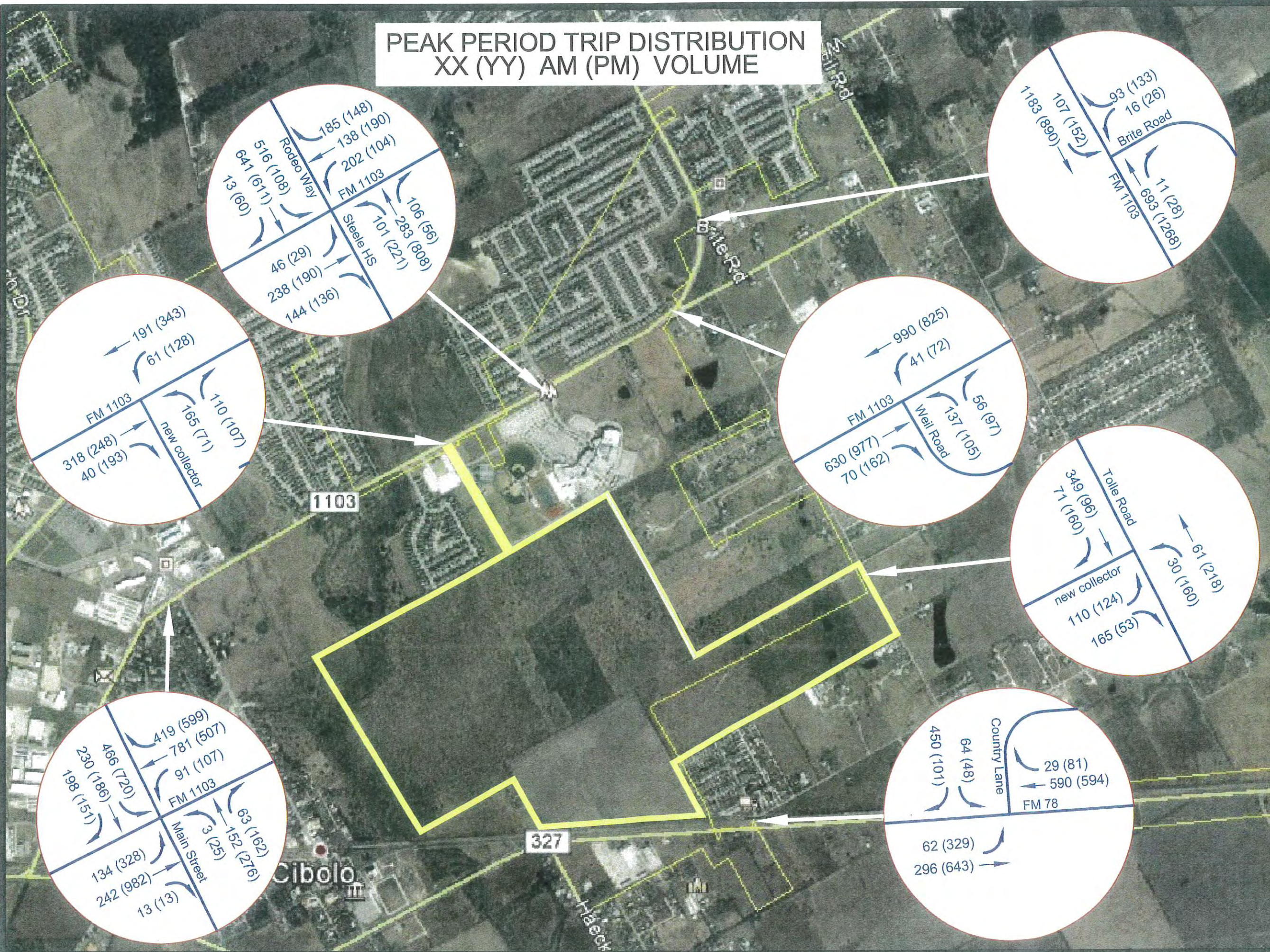


| REV | DATE | DESCRIPTION |
|-----|------|-------------|
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Steele Creek Planned Unit
 Development
 2023 Projected Volumes
 Exhibit



PEAK PERIOD TRIP DISTRIBUTION XX (YY) AM (PM) VOLUME



DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE: January 2018
JOB NUMBER: E0687600

CIVIL ENGINEERING CONSULTANTS
DON D U R D E N , I N C .
11550 L.H. 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
TEL: (210) 641-9999
FAX: (210) 641-6440
EMAIL: cec@cectexas.com



| REV | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |
| | | |
| | | |

Steele Creek Planned Unit
Development
2023 Proposed Volumes
Exhibit



APPENDIX B

TRAFFIC SURVEY

TRAFFIC DATA SURVEY

**FM 1103
Cibolo, Texas
Guadalupe County**



Prepared for: Civil Engineering Consultants
11550 IH 10 W, Suite 395
San Antonio, Texas 78230



Prepared By: AC Group, LLC
5828 Sebastian Place, Ste. 108
San Antonio, Texas 78249



**Project 2017011200
December 19, 2017**



11550 IH 10 W, Suite 395
San Antonio, Texas 78230

Office: (214) 256-2447
Fax: (214) 519-0500

December 19, 2017

Civil Engineering Consultants
Mr. Joe Nix, P.E., PTOE
11550 IH 10 W, Suite 395
San Antonio, Texas 78230

Mr. Nix,

This report contains the traffic survey requested for three intersections in Cibolo, Texas. Turning movement count (TMC) data were collected on Wednesday, December 13, 2017 during the morning (7:00 – 9:00 AM) and evening (4:00 – 6:00 PM) peak period. A site map is included to illustrate the study area.

The traffic data found in this document is true and conducted to the best of our ability. Thank you for the opportunity to assist you and AC Group, LLC looks forward to working with Civil Engineering Consultants in the future.

A handwritten signature in black ink, appearing to read "Rene Arredondo".

Rene Arredondo, P.E., PTOE
Principal
AC Group, LLC



➔ Average Daily Traffic Data (24-Hour)
● Turning Movement Count Data (AM/PM)



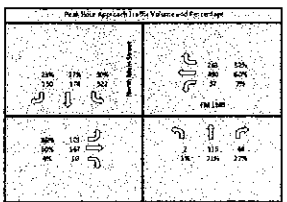
FM 1103
Cibolo, Texas

TURNING MOVEMENT COUNT (TMC) DATA
Wednesday, December 13, 2017

| City/State | | Project No. | | Date/Time | | Peak Period | | Peak Hour | | Traffic Control | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------|-------------|-----|-----------------------------|-------------------|-------------------|-----|-------------------|---------|-------------------|-----|---------------------------|--|--|--|--|--|--|--|--|--|--|--|----------|-------------------|---|---|---|-------------------|---|---|---|---------|---|---|---|-------------------|----|-----|----|---|-----|-----|-----|---|-----|-----|----|---------|---------|----|-----|-----|----|-----|-----|-----|----|-----|-----|-----|---------|-------|----|-----|-----|----|-----|-----|-----|----|-----|-----|-----|---------|---|----|----|---|----|----|----|---|----|----|---|---|---------|---|----|----|---|----|----|----|---|----|----|---|---|---------|---|----|----|---|-----|----|----|---|----|----|---|---|---------|---|----|----|---|----|----|----|---|----|----|---|---|---------|---|----|---|---|----|---|----|---|----|----|---|---|---------|---|----|---|---|----|----|----|---|----|----|---|---|--|--|--|--|--|--|--|--|--|--|--|--|---------------------------|--|--|--|--|--|--|--|--|--|--|--|----------|---|---|---|---|---|---|---|---|---|---|---|---|-------------------|----|-----|----|---|-----|-----|-----|---|-----|-----|----|---|---------|----|-----|-----|---|-----|-----|-----|---|-----|-----|-----|---|-------|----|-----|-----|---|-----|-----|-----|---|-----|-----|-----|---|
| San Antonio, Texas | | 10278109 | | Wednesday, October 13, 2017 | | 7:00 AM - 9:00 AM | | 7:00 AM - 9:00 AM | | 2:00 AM - 2:00 AM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th colspan="12">Information Approaches</th> </tr> <tr> <th rowspan="2">Hour</th> <th colspan="4">North Main Street</th> <th colspan="4">North Main Street</th> <th colspan="4">FM 1103</th> </tr> <tr> <th>L</th><th>T</th><th>R</th><th>U</th> <th>L</th><th>T</th><th>R</th><th>U</th> <th>L</th><th>T</th><th>R</th><th>U</th> </tr> </thead> <tbody> <tr> <td>7:00 AM</td> <td>4</td><td>21</td><td>5</td><td>0</td> <td>22</td><td>47</td><td>41</td><td>0</td> <td>11</td><td>11</td><td>0</td><td>0</td> </tr> <tr> <td>7:15 AM</td> <td>5</td><td>16</td><td>5</td><td>0</td> <td>42</td><td>49</td><td>41</td><td>0</td> <td>22</td><td>19</td><td>5</td><td>0</td> </tr> <tr> <td>7:30 AM</td> <td>3</td><td>23</td><td>22</td><td>0</td> <td>68</td><td>43</td><td>42</td><td>0</td> <td>34</td><td>26</td><td>1</td><td>0</td> </tr> <tr> <td>7:45 AM</td> <td>0</td><td>27</td><td>22</td><td>0</td> <td>91</td><td>41</td><td>45</td><td>0</td> <td>31</td><td>31</td><td>2</td><td>0</td> </tr> <tr> <td>8:00 AM</td> <td>0</td><td>31</td><td>22</td><td>0</td> <td>120</td><td>43</td><td>42</td><td>0</td> <td>33</td><td>30</td><td>2</td><td>0</td> </tr> <tr> <td>8:15 AM</td> <td>1</td><td>37</td><td>21</td><td>0</td> <td>16</td><td>20</td><td>18</td><td>0</td> <td>27</td><td>30</td><td>0</td><td>0</td> </tr> <tr> <td>8:30 AM</td> <td>2</td><td>35</td><td>7</td><td>0</td> <td>26</td><td>1</td><td>29</td><td>0</td> <td>19</td><td>48</td><td>0</td><td>0</td> </tr> <tr> <td>8:45 AM</td> <td>0</td><td>34</td><td>4</td><td>0</td> <td>27</td><td>13</td><td>20</td><td>0</td> <td>20</td><td>30</td><td>0</td><td>0</td> </tr> <tr> <td colspan="12"> <table border="1"> <thead> <tr> <th colspan="12">Peak Hour Approach Totals</th> </tr> <tr> <th>Approach</th> <th>L</th><th>T</th><th>R</th><th>U</th> <th>L</th><th>T</th><th>R</th><th>U</th> <th>L</th><th>T</th><th>R</th><th>U</th> </tr> </thead> <tbody> <tr> <td>North Main Street</td> <td>12</td><td>111</td><td>44</td><td>0</td> <td>312</td><td>171</td><td>155</td><td>0</td> <td>101</td><td>147</td><td>10</td><td>0</td> </tr> <tr> <td>FM 1103</td> <td>15</td><td>276</td><td>276</td><td>0</td> <td>325</td><td>276</td><td>276</td><td>0</td> <td>325</td><td>276</td><td>276</td><td>0</td> </tr> <tr> <td>Total</td> <td>27</td><td>387</td><td>220</td><td>0</td> <td>637</td><td>447</td><td>431</td><td>0</td> <td>426</td><td>423</td><td>276</td><td>0</td> </tr> </tbody> </table> </td> </tr> </tbody> </table> | | | | | | | | | | | | Information Approaches | | | | | | | | | | | | Hour | North Main Street | | | | North Main Street | | | | FM 1103 | | | | L | T | R | U | L | T | R | U | L | T | R | U | 7:00 AM | 4 | 21 | 5 | 0 | 22 | 47 | 41 | 0 | 11 | 11 | 0 | 0 | 7:15 AM | 5 | 16 | 5 | 0 | 42 | 49 | 41 | 0 | 22 | 19 | 5 | 0 | 7:30 AM | 3 | 23 | 22 | 0 | 68 | 43 | 42 | 0 | 34 | 26 | 1 | 0 | 7:45 AM | 0 | 27 | 22 | 0 | 91 | 41 | 45 | 0 | 31 | 31 | 2 | 0 | 8:00 AM | 0 | 31 | 22 | 0 | 120 | 43 | 42 | 0 | 33 | 30 | 2 | 0 | 8:15 AM | 1 | 37 | 21 | 0 | 16 | 20 | 18 | 0 | 27 | 30 | 0 | 0 | 8:30 AM | 2 | 35 | 7 | 0 | 26 | 1 | 29 | 0 | 19 | 48 | 0 | 0 | 8:45 AM | 0 | 34 | 4 | 0 | 27 | 13 | 20 | 0 | 20 | 30 | 0 | 0 | <table border="1"> <thead> <tr> <th colspan="12">Peak Hour Approach Totals</th> </tr> <tr> <th>Approach</th> <th>L</th><th>T</th><th>R</th><th>U</th> <th>L</th><th>T</th><th>R</th><th>U</th> <th>L</th><th>T</th><th>R</th><th>U</th> </tr> </thead> <tbody> <tr> <td>North Main Street</td> <td>12</td><td>111</td><td>44</td><td>0</td> <td>312</td><td>171</td><td>155</td><td>0</td> <td>101</td><td>147</td><td>10</td><td>0</td> </tr> <tr> <td>FM 1103</td> <td>15</td><td>276</td><td>276</td><td>0</td> <td>325</td><td>276</td><td>276</td><td>0</td> <td>325</td><td>276</td><td>276</td><td>0</td> </tr> <tr> <td>Total</td> <td>27</td><td>387</td><td>220</td><td>0</td> <td>637</td><td>447</td><td>431</td><td>0</td> <td>426</td><td>423</td><td>276</td><td>0</td> </tr> </tbody> </table> | | | | | | | | | | | | Peak Hour Approach Totals | | | | | | | | | | | | Approach | L | T | R | U | L | T | R | U | L | T | R | U | North Main Street | 12 | 111 | 44 | 0 | 312 | 171 | 155 | 0 | 101 | 147 | 10 | 0 | FM 1103 | 15 | 276 | 276 | 0 | 325 | 276 | 276 | 0 | 325 | 276 | 276 | 0 | Total | 27 | 387 | 220 | 0 | 637 | 447 | 431 | 0 | 426 | 423 | 276 | 0 |
| Information Approaches | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hour | North Main Street | | | | North Main Street | | | | FM 1103 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | L | T | R | U | L | T | R | U | L | T | R | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7:00 AM | 4 | 21 | 5 | 0 | 22 | 47 | 41 | 0 | 11 | 11 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7:15 AM | 5 | 16 | 5 | 0 | 42 | 49 | 41 | 0 | 22 | 19 | 5 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7:30 AM | 3 | 23 | 22 | 0 | 68 | 43 | 42 | 0 | 34 | 26 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7:45 AM | 0 | 27 | 22 | 0 | 91 | 41 | 45 | 0 | 31 | 31 | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8:00 AM | 0 | 31 | 22 | 0 | 120 | 43 | 42 | 0 | 33 | 30 | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8:15 AM | 1 | 37 | 21 | 0 | 16 | 20 | 18 | 0 | 27 | 30 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8:30 AM | 2 | 35 | 7 | 0 | 26 | 1 | 29 | 0 | 19 | 48 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8:45 AM | 0 | 34 | 4 | 0 | 27 | 13 | 20 | 0 | 20 | 30 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th colspan="12">Peak Hour Approach Totals</th> </tr> <tr> <th>Approach</th> <th>L</th><th>T</th><th>R</th><th>U</th> <th>L</th><th>T</th><th>R</th><th>U</th> <th>L</th><th>T</th><th>R</th><th>U</th> </tr> </thead> <tbody> <tr> <td>North Main Street</td> <td>12</td><td>111</td><td>44</td><td>0</td> <td>312</td><td>171</td><td>155</td><td>0</td> <td>101</td><td>147</td><td>10</td><td>0</td> </tr> <tr> <td>FM 1103</td> <td>15</td><td>276</td><td>276</td><td>0</td> <td>325</td><td>276</td><td>276</td><td>0</td> <td>325</td><td>276</td><td>276</td><td>0</td> </tr> <tr> <td>Total</td> <td>27</td><td>387</td><td>220</td><td>0</td> <td>637</td><td>447</td><td>431</td><td>0</td> <td>426</td><td>423</td><td>276</td><td>0</td> </tr> </tbody> </table> | | | | | | | | | | | | Peak Hour Approach Totals | | | | | | | | | | | | Approach | L | T | R | U | L | T | R | U | L | T | R | U | North Main Street | 12 | 111 | 44 | 0 | 312 | 171 | 155 | 0 | 101 | 147 | 10 | 0 | FM 1103 | 15 | 276 | 276 | 0 | 325 | 276 | 276 | 0 | 325 | 276 | 276 | 0 | Total | 27 | 387 | 220 | 0 | 637 | 447 | 431 | 0 | 426 | 423 | 276 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour Approach Totals | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approach | L | T | R | U | L | T | R | U | L | T | R | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| North Main Street | 12 | 111 | 44 | 0 | 312 | 171 | 155 | 0 | 101 | 147 | 10 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FM 1103 | 15 | 276 | 276 | 0 | 325 | 276 | 276 | 0 | 325 | 276 | 276 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 27 | 387 | 220 | 0 | 637 | 447 | 431 | 0 | 426 | 423 | 276 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Information Approaches | | | | | | | | | | | | |
|------------------------|-------------------|----|----|---|-------------------|----|----|---|---------|----|---|---|
| Hour | North Main Street | | | | North Main Street | | | | FM 1103 | | | |
| | L | T | R | U | L | T | R | U | L | T | R | U |
| 7:00 AM | 4 | 21 | 5 | 0 | 22 | 47 | 41 | 0 | 11 | 11 | 0 | 0 |
| 7:15 AM | 5 | 16 | 5 | 0 | 42 | 49 | 41 | 0 | 22 | 19 | 5 | 0 |
| 7:30 AM | 3 | 23 | 22 | 0 | 68 | 43 | 42 | 0 | 34 | 26 | 1 | 0 |
| 7:45 AM | 0 | 27 | 22 | 0 | 91 | 41 | 45 | 0 | 31 | 31 | 2 | 0 |
| 8:00 AM | 0 | 31 | 22 | 0 | 120 | 43 | 42 | 0 | 33 | 30 | 2 | 0 |
| 8:15 AM | 1 | 37 | 21 | 0 | 16 | 20 | 18 | 0 | 27 | 30 | 0 | 0 |
| 8:30 AM | 2 | 35 | 7 | 0 | 26 | 1 | 29 | 0 | 19 | 48 | 0 | 0 |
| 8:45 AM | 0 | 34 | 4 | 0 | 27 | 13 | 20 | 0 | 20 | 30 | 0 | 0 |

| Peak Hour Approach Totals | | | | | | | | | | | | |
|---------------------------|----|-----|-----|---|-----|-----|-----|---|-----|-----|-----|---|
| Approach | L | T | R | U | L | T | R | U | L | T | R | U |
| North Main Street | 12 | 111 | 44 | 0 | 312 | 171 | 155 | 0 | 101 | 147 | 10 | 0 |
| FM 1103 | 15 | 276 | 276 | 0 | 325 | 276 | 276 | 0 | 325 | 276 | 276 | 0 |
| Total | 27 | 387 | 220 | 0 | 637 | 447 | 431 | 0 | 426 | 423 | 276 | 0 |

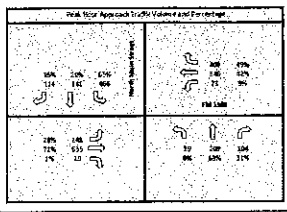


FM 1103 and Main Street

Intersection: North/South 1st Sts, East/West 1st St
 North/South 1st St, East/West 1st St
 City/State: San Antonio, Texas
 Project No.: 2017-1103
 Date Reported: Wednesday, December 11, 2017
 Peak Period: 4:00 PM - 5:00 PM
 Peak Hour: 4:45 PM to 5:15 PM



| Hour | North/South 1st St | | | | East/West 1st St | | | | Total | Hourly Total |
|---------------------|--------------------|-------|-------|-------|------------------|-------|-------|-------|-------|--------------|
| | L | T | R | U | L | T | R | U | | |
| 4:00 PM | 2 | 11 | 15 | 15 | 12 | 11 | 1 | 1 | 39 | 150 |
| 4:15 PM | 2 | 16 | 24 | 15 | 10 | 20 | 2 | 1 | 55 | 160 |
| 4:30 PM | 2 | 11 | 21 | 14 | 20 | 22 | 1 | 1 | 60 | 160 |
| 4:45 PM | 4 | 13 | 27 | 16 | 23 | 17 | 2 | 1 | 80 | 150 |
| 5:00 PM | 2 | 10 | 22 | 18 | 21 | 14 | 1 | 1 | 70 | 150 |
| 5:15 PM | 6 | 15 | 23 | 18 | 21 | 14 | 1 | 1 | 79 | 150 |
| 5:30 PM | 7 | 12 | 22 | 15 | 18 | 14 | 1 | 1 | 70 | 150 |
| 5:45 PM | 3 | 16 | 16 | 10 | 17 | 15 | 1 | 1 | 69 | 150 |
| 5:00 PM | 2 | 15 | 18 | 15 | 18 | 14 | 1 | 1 | 73 | 150 |
| 5:15 PM | 2 | 15 | 18 | 15 | 18 | 14 | 1 | 1 | 73 | 150 |
| 5:30 PM | 2 | 15 | 18 | 15 | 18 | 14 | 1 | 1 | 73 | 150 |
| 5:45 PM | 2 | 15 | 18 | 15 | 18 | 14 | 1 | 1 | 73 | 150 |
| Peak Hour | 4 | 13 | 27 | 16 | 23 | 17 | 2 | 1 | 80 | 150 |
| Peak Hour Percent | 53 | 55 | 101 | 66 | 53 | 105 | 10 | 6 | 105 | 100 |
| Peak Approach Total | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| MSA | 0.176 | 0.202 | 0.211 | 0.195 | 0.214 | 0.211 | 0.181 | 0.187 | 0.205 | 0.212 |



| NB | | | | SB | | | | EB | | | | WB | | | |
|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|
| L | T | R | U | L | T | R | U | L | T | R | U | L | T | R | U |
| 1 | 34 | 14 | 0 | 1 | 33 | 14 | 0 | 1 | 33 | 14 | 0 | 1 | 33 | 14 | 0 |
| 2 | 56 | 24 | 0 | 2 | 55 | 24 | 0 | 2 | 55 | 24 | 0 | 2 | 55 | 24 | 0 |
| 3 | 22 | 12 | 0 | 3 | 21 | 12 | 0 | 3 | 21 | 12 | 0 | 3 | 21 | 12 | 0 |
| 4 | 13 | 17 | 0 | 4 | 12 | 17 | 0 | 4 | 12 | 17 | 0 | 4 | 12 | 17 | 0 |
| 5 | 18 | 21 | 0 | 5 | 17 | 21 | 0 | 5 | 17 | 21 | 0 | 5 | 17 | 21 | 0 |
| 6 | 65 | 23 | 0 | 6 | 64 | 23 | 0 | 6 | 64 | 23 | 0 | 6 | 64 | 23 | 0 |
| 7 | 42 | 21 | 0 | 7 | 41 | 21 | 0 | 7 | 41 | 21 | 0 | 7 | 41 | 21 | 0 |
| 8 | 62 | 26 | 0 | 8 | 61 | 26 | 0 | 8 | 61 | 26 | 0 | 8 | 61 | 26 | 0 |

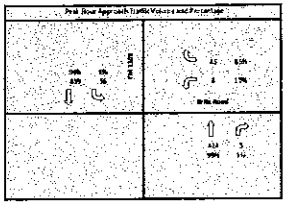
| SB | | | | NB | | | | WB | | | | EB | | | |
|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|
| L | T | R | U | L | T | R | U | L | T | R | U | L | T | R | U |
| 1 | 34 | 14 | 0 | 1 | 33 | 14 | 0 | 1 | 33 | 14 | 0 | 1 | 33 | 14 | 0 |
| 2 | 56 | 24 | 0 | 2 | 55 | 24 | 0 | 2 | 55 | 24 | 0 | 2 | 55 | 24 | 0 |
| 3 | 22 | 12 | 0 | 3 | 21 | 12 | 0 | 3 | 21 | 12 | 0 | 3 | 21 | 12 | 0 |
| 4 | 13 | 17 | 0 | 4 | 12 | 17 | 0 | 4 | 12 | 17 | 0 | 4 | 12 | 17 | 0 |
| 5 | 18 | 21 | 0 | 5 | 17 | 21 | 0 | 5 | 17 | 21 | 0 | 5 | 17 | 21 | 0 |
| 6 | 65 | 23 | 0 | 6 | 64 | 23 | 0 | 6 | 64 | 23 | 0 | 6 | 64 | 23 | 0 |
| 7 | 42 | 21 | 0 | 7 | 41 | 21 | 0 | 7 | 41 | 21 | 0 | 7 | 41 | 21 | 0 |
| 8 | 62 | 26 | 0 | 8 | 61 | 26 | 0 | 8 | 61 | 26 | 0 | 8 | 61 | 26 | 0 |

FM 1103 and Brito Road

Intersection: North/South Depts / East/West Depts / 1941193 / Brito Road
 City/State: San Antonio, Texas
 Project No.: 2012-11-0000
 Date Revised: Wednesday, December 11, 2013
 Peak Period: 7:00 AM - 8:00 AM
 Peak Street: FM 1103



| Hour Time | Intersection Approach | | | | | | | | | | | | | | | | Total | New V |
|---------------------|--|------|-------|---|---------|------|-------|---|------------|------|-------|---|------------|------|-------|---|-------|-------|
| | FM 1103 | | | | FM 1103 | | | | Brito Road | | | | Brito Road | | | | | |
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 86 | 0 | 0 | 0 | 11 | 103 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 121 | |
| 7:15 AM | 70 | 0 | 0 | 0 | 27 | 149 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 0 | 0 | 229 | |
| 7:30 AM | 66 | 0 | 0 | 0 | 13 | 141 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 0 | 230 | |
| 7:45 AM | 109 | 0 | 0 | 0 | 10 | 147 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 19 | 0 | 0 | 259 | 1307 |
| 8:00 AM | 119 | 0 | 0 | 0 | 11 | 216 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 0 | 0 | 352 | |
| 8:15 AM | 110 | 0 | 0 | 0 | 1 | 249 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 0 | 379 | |
| 8:30 AM | 119 | 0 | 0 | 0 | 1 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 123 | |
| 8:45 AM | 71 | 0 | 0 | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 179 | 1151 |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour Period | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Approach Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Notes | <p>FM 1103: 0.1503 0.1511 0.1521 0.1531 0.1541 0.1551 0.1561 0.1571 0.1581 0.1591 0.1601 0.1611 0.1621 0.1631 0.1641 0.1651 0.1661 0.1671 0.1681 0.1691 0.1701 0.1711 0.1721 0.1731 0.1741 0.1751 0.1761 0.1771 0.1781 0.1791 0.1801 0.1811 0.1821 0.1831 0.1841 0.1851 0.1861 0.1871 0.1881 0.1891 0.1901 0.1911 0.1921 0.1931 0.1941 0.1951 0.1961 0.1971 0.1981 0.1991 0.2001 0.2011 0.2021 0.2031 0.2041 0.2051 0.2061 0.2071 0.2081 0.2091 0.2101 0.2111 0.2121 0.2131 0.2141 0.2151 0.2161 0.2171 0.2181 0.2191 0.2201 0.2211 0.2221 0.2231 0.2241 0.2251 0.2261 0.2271 0.2281 0.2291 0.2301 0.2311 0.2321 0.2331 0.2341 0.2351 0.2361 0.2371 0.2381 0.2391 0.2401 0.2411 0.2421 0.2431 0.2441 0.2451 0.2461 0.2471 0.2481 0.2491 0.2501 0.2511 0.2521 0.2531 0.2541 0.2551 0.2561 0.2571 0.2581 0.2591 0.2601 0.2611 0.2621 0.2631 0.2641 0.2651 0.2661 0.2671 0.2681 0.2691 0.2701 0.2711 0.2721 0.2731 0.2741 0.2751 0.2761 0.2771 0.2781 0.2791 0.2801 0.2811 0.2821 0.2831 0.2841 0.2851 0.2861 0.2871 0.2881 0.2891 0.2901 0.2911 0.2921 0.2931 0.2941 0.2951 0.2961 0.2971 0.2981 0.2991 0.3001 0.3011 0.3021 0.3031 0.3041 0.3051 0.3061 0.3071 0.3081 0.3091 0.3101 0.3111 0.3121 0.3131 0.3141 0.3151 0.3161 0.3171 0.3181 0.3191 0.3201 0.3211 0.3221 0.3231 0.3241 0.3251 0.3261 0.3271 0.3281 0.3291 0.3301 0.3311 0.3321 0.3331 0.3341 0.3351 0.3361 0.3371 0.3381 0.3391 0.3401 0.3411 0.3421 0.3431 0.3441 0.3451 0.3461 0.3471 0.3481 0.3491 0.3501 0.3511 0.3521 0.3531 0.3541 0.3551 0.3561 0.3571 0.3581 0.3591 0.3601 0.3611 0.3621 0.3631 0.3641 0.3651 0.3661 0.3671 0.3681 0.3691 0.3701 0.3711 0.3721 0.3731 0.3741 0.3751 0.3761 0.3771 0.3781 0.3791 0.3801 0.3811 0.3821 0.3831 0.3841 0.3851 0.3861 0.3871 0.3881 0.3891 0.3901 0.3911 0.3921 0.3931 0.3941 0.3951 0.3961 0.3971 0.3981 0.3991 0.4001 0.4011 0.4021 0.4031 0.4041 0.4051 0.4061 0.4071 0.4081 0.4091 0.4101 0.4111 0.4121 0.4131 0.4141 0.4151 0.4161 0.4171 0.4181 0.4191 0.4201 0.4211 0.4221 0.4231 0.4241 0.4251 0.4261 0.4271 0.4281 0.4291 0.4301 0.4311 0.4321 0.4331 0.4341 0.4351 0.4361 0.4371 0.4381 0.4391 0.4401 0.4411 0.4421 0.4431 0.4441 0.4451 0.4461 0.4471 0.4481 0.4491 0.4501 0.4511 0.4521 0.4531 0.4541 0.4551 0.4561 0.4571 0.4581 0.4591 0.4601 0.4611 0.4621 0.4631 0.4641 0.4651 0.4661 0.4671 0.4681 0.4691 0.4701 0.4711 0.4721 0.4731 0.4741 0.4751 0.4761 0.4771 0.4781 0.4791 0.4801 0.4811 0.4821 0.4831 0.4841 0.4851 0.4861 0.4871 0.4881 0.4891 0.4901 0.4911 0.4921 0.4931 0.4941 0.4951 0.4961 0.4971 0.4981 0.4991 0.5001 0.5011 0.5021 0.5031 0.5041 0.5051 0.5061 0.5071 0.5081 0.5091 0.5101 0.5111 0.5121 0.5131 0.5141 0.5151 0.5161 0.5171 0.5181 0.5191 0.5201 0.5211 0.5221 0.5231 0.5241 0.5251 0.5261 0.5271 0.5281 0.5291 0.5301 0.5311 0.5321 0.5331 0.5341 0.5351 0.5361 0.5371 0.5381 0.5391 0.5401 0.5411 0.5421 0.5431 0.5441 0.5451 0.5461 0.5471 0.5481 0.5491 0.5501 0.5511 0.5521 0.5531 0.5541 0.5551 0.5561 0.5571 0.5581 0.5591 0.5601 0.5611 0.5621 0.5631 0.5641 0.5651 0.5661 0.5671 0.5681 0.5691 0.5701 0.5711 0.5721 0.5731 0.5741 0.5751 0.5761 0.5771 0.5781 0.5791 0.5801 0.5811 0.5821 0.5831 0.5841 0.5851 0.5861 0.5871 0.5881 0.5891 0.5901 0.5911 0.5921 0.5931 0.5941 0.5951 0.5961 0.5971 0.5981 0.5991 0.6001 0.6011 0.6021 0.6031 0.6041 0.6051 0.6061 0.6071 0.6081 0.6091 0.6101 0.6111 0.6121 0.6131 0.6141 0.6151 0.6161 0.6171 0.6181 0.6191 0.6201 0.6211 0.6221 0.6231 0.6241 0.6251 0.6261 0.6271 0.6281 0.6291 0.6301 0.6311 0.6321 0.6331 0.6341 0.6351 0.6361 0.6371 0.6381 0.6391 0.6401 0.6411 0.6421 0.6431 0.6441 0.6451 0.6461 0.6471 0.6481 0.6491 0.6501 0.6511 0.6521 0.6531 0.6541 0.6551 0.6561 0.6571 0.6581 0.6591 0.6601 0.6611 0.6621 0.6631 0.6641 0.6651 0.6661 0.6671 0.6681 0.6691 0.6701 0.6711 0.6721 0.6731 0.6741 0.6751 0.6761 0.6771 0.6781 0.6791 0.6801 0.6811 0.6821 0.6831 0.6841 0.6851 0.6861 0.6871 0.6881 0.6891 0.6901 0.6911 0.6921 0.6931 0.6941 0.6951 0.6961 0.6971 0.6981 0.6991 0.7001 0.7011 0.7021 0.7031 0.7041 0.7051 0.7061 0.7071 0.7081 0.7091 0.7101 0.7111 0.7121 0.7131 0.7141 0.7151 0.7161 0.7171 0.7181 0.7191 0.7201 0.7211 0.7221 0.7231 0.7241 0.7251 0.7261 0.7271 0.7281 0.7291 0.7301 0.7311 0.7321 0.7331 0.7341 0.7351 0.7361 0.7371 0.7381 0.7391 0.7401 0.7411 0.7421 0.7431 0.7441 0.7451 0.7461 0.7471 0.7481 0.7491 0.7501 0.7511 0.7521 0.7531 0.7541 0.7551 0.7561 0.7571 0.7581 0.7591 0.7601 0.7611 0.7621 0.7631 0.7641 0.7651 0.7661 0.7671 0.7681 0.7691 0.7701 0.7711 0.7721 0.7731 0.7741 0.7751 0.7761 0.7771 0.7781 0.7791 0.7801 0.7811 0.7821 0.7831 0.7841 0.7851 0.7861 0.7871 0.7881 0.7891 0.7901 0.7911 0.7921 0.7931 0.7941 0.7951 0.7961 0.7971 0.7981 0.7991 0.8001 0.8011 0.8021 0.8031 0.8041 0.8051 0.8061 0.8071 0.8081 0.8091 0.8101 0.8111 0.8121 0.8131 0.8141 0.8151 0.8161 0.8171 0.8181 0.8191 0.8201 0.8211 0.8221 0.8231 0.8241 0.8251 0.8261 0.8271 0.8281 0.8291 0.8301 0.8311 0.8321 0.8331 0.8341 0.8351 0.8361 0.8371 0.8381 0.8391 0.8401 0.8411 0.8421 0.8431 0.8441 0.8451 0.8461 0.8471 0.8481 0.8491 0.8501 0.8511 0.8521 0.8531 0.8541 0.8551 0.8561 0.8571 0.8581 0.8591 0.8601 0.8611 0.8621 0.8631 0.8641 0.8651 0.8661 0.8671 0.8681 0.8691 0.8701 0.8711 0.8721 0.8731 0.8741 0.8751 0.8761 0.8771 0.8781 0.8791 0.8801 0.8811 0.8821 0.8831 0.8841 0.8851 0.8861 0.8871 0.8881 0.8891 0.8901 0.8911 0.8921 0.8931 0.8941 0.8951 0.8961 0.8971 0.8981 0.8991 0.9001 0.9011 0.9021 0.9031 0.9041 0.9051 0.9061 0.9071 0.9081 0.9091 0.9101 0.9111 0.9121 0.9131 0.9141 0.9151 0.9161 0.9171 0.9181 0.9191 0.9201 0.9211 0.9221 0.9231 0.9241 0.9251 0.9261 0.9271 0.9281 0.9291 0.9301 0.9311 0.9321 0.9331 0.9341 0.9351 0.9361 0.9371 0.9381 0.9391 0.9401 0.9411 0.9421 0.9431 0.9441 0.9451 0.9461 0.9471 0.9481 0.9491 0.9501 0.9511 0.9521 0.9531 0.9541 0.9551 0.9561 0.9571 0.9581 0.9591 0.9601 0.9611 0.9621 0.9631 0.9641 0.9651 0.9661 0.9671 0.9681 0.9691 0.9701 0.9711 0.9721 0.9731 0.9741 0.9751 0.9761 0.9771 0.9781 0.9791 0.9801 0.9811 0.9821 0.9831 0.9841 0.9851 0.9861 0.9871 0.9881 0.9891 0.9901 0.9911 0.9921 0.9931 0.9941 0.9951 0.9961 0.9971 0.9981 0.9991 1.0001</p> | | | | | | | | | | | | | | | | | |



| L | NB | | | | SB | | | | EB | | | | WB | | | |
|---|-----|---|---|---|----|-----|---|---|----|---|---|---|----|---|---|---|
| | T | R | U | L | T | R | U | L | T | R | U | L | T | R | U | L |
| 0 | 64 | 1 | 0 | 0 | 23 | 182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 78 | 0 | 0 | 0 | 27 | 169 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 86 | 0 | 0 | 0 | 29 | 157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 107 | 0 | 0 | 0 | 10 | 147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 119 | 0 | 0 | 0 | 11 | 216 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 110 | 0 | 0 | 0 | 1 | 249 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 119 | 0 | 0 | 0 | 1 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 71 | 0 | 0 | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| LT | SB | | WB | | EB | | NB | | WB | | EB | | NB | | WB | | EB | |
|----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | AT | PTD | LT | RT | LT | RT | LT | RT | LT | RT | LT | RT | LT | RT | LT | RT | LT | RT |
| 23 | 182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 169 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 157 | 0 | 0 | 0 | | | | | | | | | | | | | | |

FM 1103 and Brite Road

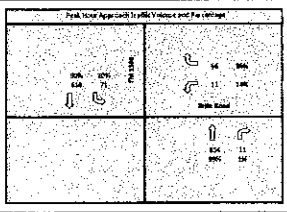
Intersection: North/South Street: FM 1103 East/West Street: Brite Road
 City/State: San Antonio, Texas
 Project No.: 2010-1103
 Date Approved: Wednesday, December 15, 2011
 Peak Period: 4:00 PM - 6:00 PM
 Peak Hour: 2:45 PM



| Peak Time | FM 1103 | | | | FM 1103 | | | | Brite Road | | | | Brite Road | | | | Total | Signal |
|-----------|---------|------|-------|-----|---------|------|-------|-----|------------|------|-------|---|------------|------|-------|---|-------|--------|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 114 | 1 | 20 | 119 | 114 | 1 | 20 | 119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 PM | 210 | 1 | 14 | 190 | 210 | 1 | 14 | 190 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 PM | 184 | 1 | 8 | 189 | 184 | 1 | 8 | 189 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 PM | 189 | 3 | 11 | 193 | 189 | 3 | 11 | 193 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 PM | 244 | 4 | 20 | 250 | 244 | 4 | 20 | 250 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:15 PM | 208 | 4 | 14 | 198 | 208 | 4 | 14 | 198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 126 | 0 | 10 | 110 | 126 | 0 | 10 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 197 | 4 | 8 | 199 | 197 | 4 | 8 | 199 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| NB | | | | SB | | | | EB | | | | WB | | | |
|----|-----|---|---|----|-----|---|---|----|---|---|---|----|---|---|---|
| L | T | R | U | L | T | R | U | L | T | R | U | L | T | R | U |
| 0 | 224 | 0 | 0 | 24 | 113 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 319 | 0 | 0 | 14 | 138 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 188 | 0 | 0 | 8 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 195 | 0 | 0 | 11 | 161 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 348 | 0 | 0 | 24 | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 281 | 0 | 0 | 14 | 136 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 354 | 0 | 0 | 17 | 153 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 331 | 0 | 0 | 15 | 158 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| SB | | | | WB | | | | EB | | | | NB | | | |
|----|-----|---|---|----|---|---|---|----|---|---|---|----|---|---|---|
| L | T | R | U | L | T | R | U | L | T | R | U | L | T | R | U |
| 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



FM 78 and County Lane

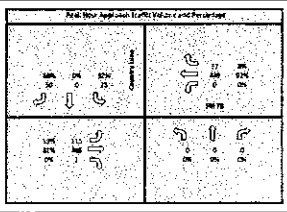
Intersection: FM 78 and County Lane
 City/State: San Antonio, Texas
 Date Revised: Wednesday, October 11, 2017
 Peak Period: 4:45 PM - 6:15 PM
 Peak Flow: 4252 PM



| Hour | County Lane | | | | County Lane | | | | FM 78 | | | | FM 78 | | | | Total | Hourly Total |
|-------------------|-------------|----------|----------|----------|-------------|----------|------------|----------|-----------|-------------|----------|----------|----------|-------------|-----------|----------|----------|--------------|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 4 | 0 | 11 | 0 | 11 | 119 | 0 | 0 | 0 | 25 | 5 | 0 | 0 | 245 |
| 4:30 PM | 0 | 0 | 0 | 0 | 5 | 0 | 28 | 0 | 10 | 210 | 0 | 0 | 0 | 255 | 10 | 0 | 0 | 337 |
| 4:45 PM | 0 | 0 | 0 | 0 | 10 | 0 | 12 | 0 | 11 | 110 | 0 | 0 | 0 | 117 | 10 | 0 | 0 | 237 |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 11 | 118 | 0 | 0 | 0 | 156 | 10 | 0 | 0 | 244 |
| 5:15 PM | 0 | 0 | 0 | 0 | 8 | 0 | 11 | 0 | 11 | 114 | 0 | 0 | 0 | 102 | 8 | 0 | 0 | 231 |
| 5:30 PM | 0 | 0 | 0 | 0 | 4 | 0 | 15 | 0 | 11 | 125 | 0 | 0 | 0 | 133 | 8 | 0 | 0 | 251 |
| 5:45 PM | 0 | 0 | 0 | 0 | 7 | 0 | 14 | 0 | 14 | 125 | 0 | 0 | 0 | 141 | 8 | 0 | 0 | 239 |
| Peak Total | 0 | 0 | 0 | 0 | 34 | 0 | 103 | 0 | 61 | 1252 | 0 | 0 | 0 | 1487 | 57 | 0 | 0 | 1644 |

| W | | | | S | | | | T | | | | W | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | T | R | U | L | T | R | U | L | T | R | U | L | T | R | U |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| S | | | | W | | | | T | | | | W | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | T | R | U | L | T | R | U | L | T | R | U | L | T | R | U |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



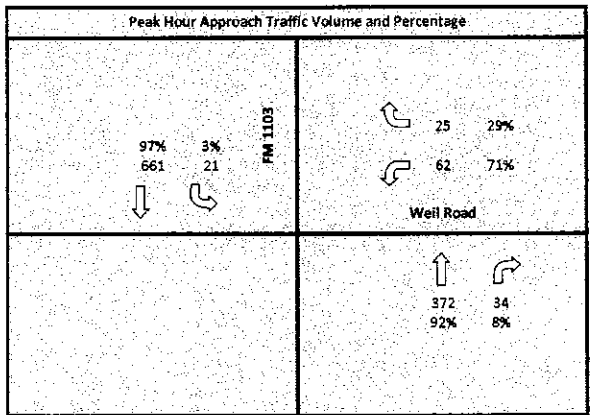
FM 1103 and Weil Road

Intersection: North/South Street : FM 1103
 East/West Street : Weil Road
 City / State: San Antonio, Texas
 Project No.: 010-16
 Date Recorded: Friday, February 12, 2016



Peak Period: 1 7:00 AM - 9:00 AM
 Peak Hour: 7:45 AM to 8:45 AM

| Start Time | Intersection Approaches | | | | | | | | | | | | | | | | Traffic Control | | |
|---------------------|-------------------------|-------|------------|------|-----------------------|-------|-----------|------|-------------------------|---------|------------|---------|-----------------------|-------|-----|----|-----------------|--------------|----|
| | FM 1103 | | | | FM 1103 | | | | Weil Road | | | | Weil Road | | | | Total | Hourly Total | |
| | Northbound | | Southbound | | Eastbound | | Westbound | | Northbound | | Southbound | | Westbound | | | | | | |
| Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | | | |
| 7:00 AM | 47 | 4 | 0 | 0 | 10 | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 5 | 0 | 231 | 932 | |
| 7:15 AM | 57 | 7 | 0 | 0 | 9 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 5 | 0 | 225 | | |
| 7:30 AM | 46 | 8 | 0 | 0 | 13 | 144 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 5 | 0 | 227 | | |
| 7:45 AM | 82 | 8 | 0 | 0 | 5 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 249 | | |
| 8:00 AM | 82 | 7 | 0 | 0 | 9 | 170 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 4 | 0 | 281 | | |
| 8:15 AM | 106 | 11 | 0 | 0 | 3 | 208 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 7 | 0 | 362 | | |
| 8:30 AM | 102 | 8 | 0 | 0 | 4 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 7 | 0 | 283 | | |
| 8:45 AM | 51 | 7 | 0 | 0 | 2 | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 5 | 0 | 152 | | |
| Total | 0 | 573 | 60 | 0 | 55 | 1175 | 0 | 0 | 0 | 0 | 0 | 0 | 102 | 0 | 45 | 0 | | 1078 | |
| Peak Total | 0 | 372 | 34 | 0 | 21 | 661 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 25 | 0 | | | |
| Peak Turn Percent | 0% | 92% | 8% | 0% | 3% | 97% | 0% | 0% | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | 71% | 0% | 29% | 0% | | | |
| Peak Approach Total | 406 | | | | 682 | | | | 0 | | | | 87 | | | | | | |
| PHF | FORMULA | | | | 0 | 424 | 44 | | 36 | 832 | 0 | | 0 | 0 | 0 | | 108 | 0 | 28 |
| | #DIV/0! 0.8774 0.7727 | | | | 0.5833 0.7945 #DIV/0! | | | | #DIV/0! #DIV/0! #DIV/0! | | | | 0.5741 #DIV/0! 0.8929 | | | | | | |
| Comments | | | | | | | | | | | | | | | | | | | |



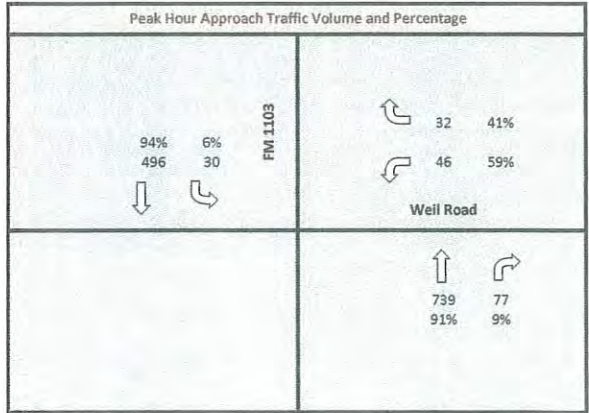
FM 1103 and Weil Road

Intersection North/South Street : FM 1103
 East/West Street : Weil Road
City / State San Antonio, Texas
Project No. 010-16
Date Recorded: Friday, February 12, 2016



Peak Period : 5
Peak Hour: 3:00 PM - 5:00 PM
 4:00 PM to 5:00 PM

| Start Time | Intersection Approaches | | | | | | | | | | | | | | | | Traffic Control | |
|----------------------------|-------------------------|--------|------------|------|-----------|--------|-----------|------|------------|---------|------------|---------|-----------|---------|-----------|----|-----------------|--------------|
| | FM 1103 | | | | FM 1103 | | | | Weil Road | | | | Weil Road | | | | Total | Hourly Total |
| | Northbound | | Southbound | | Eastbound | | Westbound | | Northbound | | Southbound | | Eastbound | | Westbound | | | |
| Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | | | |
| 3:00 PM | 114 | 21 | 0 | 4 | 100 | 0 | 0 | 10 | 0 | 0 | 0 | 10 | 0 | 8 | 0 | 0 | 257 | 1105 |
| 3:15 PM | 124 | 12 | 0 | 10 | 123 | 0 | 0 | 10 | 0 | 0 | 0 | 10 | 0 | 9 | 0 | 0 | 288 | |
| 3:30 PM | 128 | 19 | 0 | 5 | 112 | 0 | 0 | 11 | 0 | 0 | 0 | 11 | 0 | 9 | 0 | 0 | 284 | |
| 3:45 PM | 110 | 19 | 0 | 6 | 118 | 0 | 0 | 10 | 0 | 0 | 0 | 10 | 0 | 13 | 0 | 0 | 276 | |
| 4:00 PM | 194 | 20 | 0 | 5 | 122 | 0 | 0 | 16 | 0 | 0 | 0 | 16 | 0 | 10 | 0 | 0 | 367 | |
| 4:15 PM | 242 | 22 | 0 | 13 | 116 | 0 | 0 | 13 | 0 | 0 | 0 | 13 | 0 | 6 | 0 | 0 | 412 | |
| 4:30 PM | 146 | 20 | 0 | 7 | 135 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 9 | 0 | 0 | 323 | |
| 4:45 PM | 157 | 15 | 0 | 5 | 123 | 0 | 0 | 11 | 0 | 0 | 0 | 11 | 0 | 7 | 0 | 0 | 318 | |
| | | | | | | | | | | | | | | | | | Total | Hourly Total |
| 3:00 PM | | | | | | | | | | | | | | | | | 0 | 0 |
| 3:15 PM | | | | | | | | | | | | | | | | | 0 | |
| 3:30 PM | | | | | | | | | | | | | | | | | 0 | |
| 3:45 PM | | | | | | | | | | | | | | | | | 0 | |
| 4:00 PM | | | | | | | | | | | | | | | | | 0 | |
| 4:15 PM | | | | | | | | | | | | | | | | | 0 | |
| 4:30 PM | | | | | | | | | | | | | | | | | 0 | |
| 4:45 PM | | | | | | | | | | | | | | | | | 0 | |
| | | | | | | | | | | | | | | | | | Total | Hourly Total |
| 3:00 PM | 0 | 114 | 21 | 0 | 4 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 8 | 0 | 257 | 1105 |
| 3:15 PM | 0 | 124 | 12 | 0 | 10 | 123 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 9 | 0 | 0 | 288 | |
| 3:30 PM | 0 | 128 | 19 | 0 | 5 | 112 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 9 | 0 | 0 | 284 | |
| 3:45 PM | 0 | 110 | 19 | 0 | 6 | 118 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 13 | 0 | 0 | 276 | |
| 4:00 PM | 0 | 194 | 20 | 0 | 5 | 122 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 10 | 0 | 0 | 367 | |
| 4:15 PM | 0 | 242 | 22 | 0 | 13 | 116 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 6 | 0 | 0 | 412 | |
| 4:30 PM | 0 | 146 | 20 | 0 | 7 | 135 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 9 | 0 | 0 | 323 | |
| 4:45 PM | 0 | 157 | 15 | 0 | 5 | 123 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 7 | 0 | 0 | 318 | |
| Total | 0 | 1215 | 148 | 0 | 55 | 949 | 0 | 0 | 0 | 0 | 0 | 87 | 0 | 71 | 0 | 0 | | |
| Peak Total | 0 | 739 | 77 | 0 | 30 | 496 | 0 | 0 | 0 | 0 | 0 | 46 | 0 | 32 | 0 | 0 | | |
| Peak Turn Percent | 0% | 91% | 9% | 0% | 6% | 94% | 0% | 0% | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | 59% | 0% | 41% | 0% | | |
| Peak Approach Total | 816 | | | | 526 | | | | 0 | | | | 78 | | | | | |
| PHF | #DIV/0! | 0.7634 | 0.875 | | 0.5769 | 0.9185 | #DIV/0! | | #DIV/0! | #DIV/0! | #DIV/0! | | 0.7188 | #DIV/0! | 0.8 | | | |
| Comments | | | | | | | | | | | | | | | | | | |



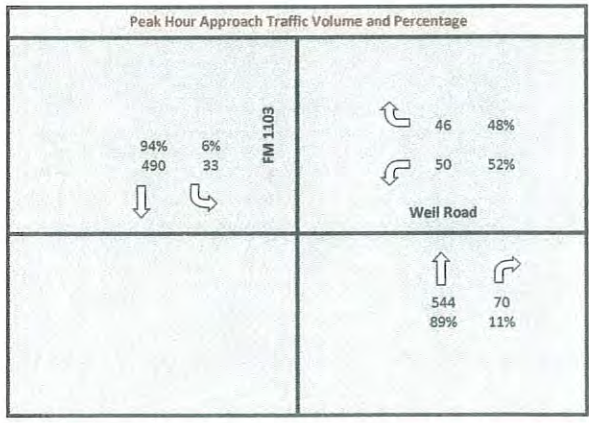
FM 1103 and Weil Road

Intersection: North/South Street : FM 1103
 East/West Street : Weil Road
 City / State: San Antonio, Texas
 Project No.: 010-16
 Date Recorded: Friday, February 12, 2016



Peak Period : 4
 Peak Hour: 5:00 PM to 6:00 PM

| Start Time | Intersection Approaches | | | | | | | | | | | | | | | | Traffic Control | | | | |
|---------------------|-------------------------|--------|------------|------|-----------|--------|-----------|------|------------|---------|------------|---------|-----------|---------|-----------|------|-----------------|--------------|---|--|--|
| | FM 1103 | | | | FM 1103 | | | | Weil Road | | | | Weil Road | | | | Total | Hourly Total | | | |
| | Northbound | | Southbound | | Eastbound | | Westbound | | Northbound | | Southbound | | Eastbound | | Westbound | | | | | | |
| Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | | |
| 5:00 PM | 127 | 23 | 0 | 10 | 87 | 0 | 0 | 16 | 0 | 20 | 0 | 12 | 0 | 8 | 0 | 283 | | | | | |
| 5:15 PM | 133 | 8 | 0 | 8 | 116 | 0 | 0 | 12 | 0 | 8 | 0 | 11 | 0 | 9 | 0 | 285 | | | | | |
| 5:30 PM | 136 | 16 | 0 | 6 | 134 | 0 | 0 | 11 | 0 | 9 | 0 | 11 | 0 | 9 | 0 | 312 | | | | | |
| 5:45 PM | 148 | 23 | 0 | 9 | 153 | 0 | 0 | 11 | 0 | 9 | 0 | 11 | 0 | 9 | 0 | 353 | 1233 | | | | |
| 6:00 PM | | | | | | | | | | | | | | | | 0 | | | | | |
| 6:15 PM | | | | | | | | | | | | | | | | 0 | | | | | |
| 6:30 PM | | | | | | | | | | | | | | | | 0 | | | | | |
| 6:45 PM | | | | | | | | | | | | | | | | 0 | 0 | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 5:00 PM | | | | | | | | | | | | | | | | 0 | | | | | |
| 5:15 PM | | | | | | | | | | | | | | | | 0 | | | | | |
| 5:30 PM | | | | | | | | | | | | | | | | 0 | | | | | |
| 5:45 PM | | | | | | | | | | | | | | | | 0 | 0 | | | | |
| 6:00 PM | | | | | | | | | | | | | | | | 0 | | | | | |
| 6:15 PM | | | | | | | | | | | | | | | | 0 | | | | | |
| 6:30 PM | | | | | | | | | | | | | | | | 0 | | | | | |
| 6:45 PM | | | | | | | | | | | | | | | | 0 | 0 | | | | |
| Total | 0 | 544 | 70 | 0 | 33 | 490 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 46 | 0 | | | | | |
| Peak Total | 0 | 544 | 70 | 0 | 33 | 490 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 46 | 0 | | | | | |
| Peak Turn Percent | 0% | 89% | 11% | 0% | 6% | 94% | 0% | 0% | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | 52% | 0% | 48% | 0% | | | | | |
| Peak Approach Total | 614 | | | | 523 | | | | 0 | | | | 96 | | | | | | | | |
| FORMULA | 0 | 592 | 92 | | 40 | 612 | 0 | | 0 | 0 | 0 | | 64 | 0 | 80 | | | | | | |
| PHF | #DIV/0! | 0.9189 | 0.7609 | | 0.825 | 0.8007 | #DIV/0! | | #DIV/0! | #DIV/0! | #DIV/0! | | 0.7813 | #DIV/0! | 0.575 | | | | | | |
| Comments | | | | | | | | | | | | | | | | | | | | | |



Rodeo Way and FM 1103

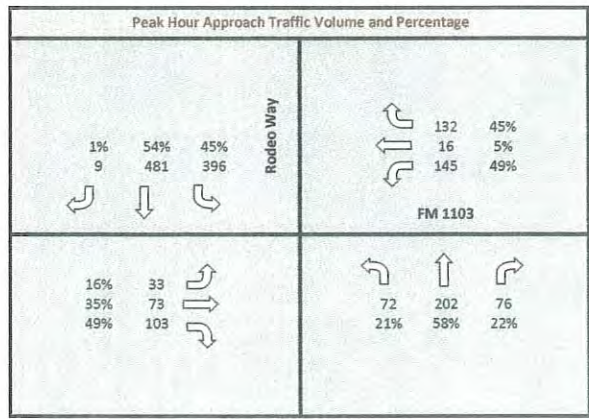
Intersection North/South Street : Rodeo Way
 East/West Street : FM 1103

City / State San Antonio, Texas
Project No. 010-16
Date Recorded: Wednesday, February 17, 2016

Peak Period : 1
Peak Hour: 7:00 AM - 9:00 AM
 7:45 AM to 8:45 AM



| Start Time | Intersection Approaches | | | | | | | | | | | | | | | | Traffic Control | | |
|----------------------------|-------------------------|--------|------------|----|-----------|--------|-----------|----|------------|--------|------------|----|-----------|------|-----------|----|-----------------|--------------|------|
| | Rodeo Way | | | | Rodeo Way | | | | FM 1103 | | | | FM 1103 | | | | Total | Hourly Total | |
| | Northbound | | Southbound | | Eastbound | | Westbound | | Northbound | | Southbound | | Eastbound | | Westbound | | | | |
| Car | Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | | | |
| 7:00 AM | 2 | 42 | 4 | 0 | 4 | 132 | 0 | 0 | 7 | 1 | 23 | 0 | 2 | 0 | 3 | 0 | | 220 | 1277 |
| 7:15 AM | 9 | 55 | 5 | 0 | 23 | 200 | 4 | 0 | 12 | 0 | 53 | 0 | 10 | 0 | 7 | 0 | | 378 | |
| 7:30 AM | 8 | 39 | 9 | 0 | 10 | 128 | 2 | 0 | 9 | 4 | 46 | 0 | 9 | 0 | 14 | 0 | | 278 | |
| 7:45 AM | 19 | 46 | 17 | 0 | 63 | 150 | 3 | 0 | 19 | 7 | 33 | 0 | 17 | 1 | 26 | 0 | | 401 | |
| 8:00 AM | 21 | 54 | 26 | 0 | 92 | 128 | 1 | 0 | 6 | 17 | 24 | 0 | 24 | 3 | 29 | 0 | | 425 | |
| 8:15 AM | 22 | 55 | 20 | 0 | 147 | 109 | 4 | 0 | 6 | 23 | 25 | 0 | 44 | 4 | 39 | 0 | | 498 | |
| 8:30 AM | 10 | 47 | 13 | 0 | 94 | 94 | 1 | 0 | 2 | 26 | 21 | 0 | 60 | 8 | 38 | 0 | | 414 | |
| 8:45 AM | 7 | 48 | 2 | 0 | 8 | 76 | 3 | 0 | 1 | 1 | 21 | 0 | 8 | 1 | 8 | 0 | | 184 | |
| Total | 98 | 386 | 96 | 0 | 441 | 1017 | 18 | 0 | 62 | 79 | 246 | 0 | 174 | 17 | 164 | 0 | | | 1521 |
| Peak Total | 72 | 202 | 76 | 0 | 396 | 481 | 9 | 0 | 33 | 73 | 103 | 0 | 145 | 16 | 132 | 0 | | | |
| Peak Turn Percent | 21% | 58% | 22% | 0% | 45% | 54% | 1% | 0% | 16% | 35% | 49% | 0% | 49% | 5% | 45% | 0% | | | |
| Peak Approach Total | 350 | | | | 886 | | | | 209 | | | | 293 | | | | | | |
| PHF | 0.8182 | 0.9182 | 0.7308 | | 0.6735 | 0.8017 | 0.5625 | | 0.4342 | 0.7019 | 0.7803 | | 0.6042 | 0.5 | 0.8462 | | | | |
| Comments | | | | | | | | | | | | | | | | | | | |

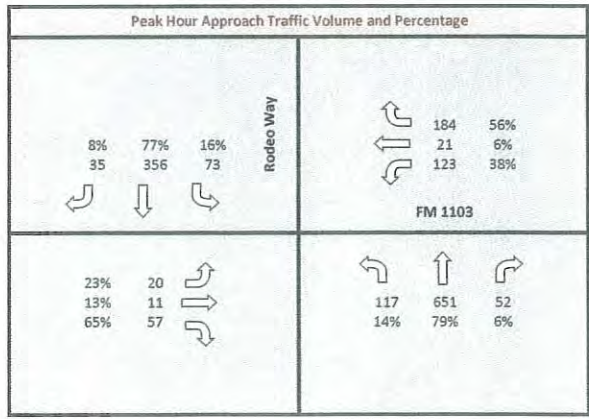


Rodeo Way and FM 1103

Intersection North/South Street : Rodeo Way East/West Street : FM 1103
City / State San Antonio, Texas
Project No. 010-16
Date Recorded: Wednesday, February 17, 2016
Peak Period : 5 3:00 PM - 5:00 PM
Peak Hour: 4:00 PM to 5:00 PM



| Start Time | Intersection Approaches | | | | | | | | | | | | | | | | Traffic Control | | | | | | | | | | | | | | | | | | |
|----------------------------|-------------------------|------|------------|---|-----------|------|-----------|---|------------|------|------------|---|-----------|------|-----------|---|-----------------|--------------|--------|--------|----|--------|--------|-------|----|--------|--------|--------|----|--------|------|--------|----|--|--|
| | Rodeo Way | | | | Rodeo Way | | | | FM 1103 | | | | FM 1103 | | | | Total | Hourly Total | | | | | | | | | | | | | | | | | |
| | Northbound | | Southbound | | Eastbound | | Westbound | | Northbound | | Southbound | | Eastbound | | Westbound | | | | | | | | | | | | | | | | | | | | |
| Car | Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | | | | | | | | | | | | | | | | | | | |
| 3:00 PM | 25 | 72 | 7 | 0 | 7 | 107 | 7 | 0 | 4 | 3 | 21 | 0 | 8 | 1 | 7 | 0 | 269 | 1166 | | | | | | | | | | | | | | | | | |
| 3:15 PM | 24 | 87 | 6 | 0 | 15 | 93 | 10 | 0 | 7 | 1 | 16 | 0 | 7 | 1 | 11 | 0 | 278 | | | | | | | | | | | | | | | | | | |
| 3:30 PM | 37 | 107 | 13 | 0 | 10 | 72 | 5 | 0 | 4 | 3 | 16 | 0 | 20 | 7 | 22 | 0 | 316 | | | | | | | | | | | | | | | | | | |
| 3:45 PM | 21 | 110 | 11 | 0 | 25 | 71 | 6 | 0 | 3 | 6 | 26 | 0 | 10 | 0 | 14 | 0 | 303 | | | | | | | | | | | | | | | | | | |
| 4:00 PM | 24 | 150 | 22 | 0 | 29 | 92 | 10 | 0 | 4 | 2 | 9 | 0 | 37 | 7 | 65 | 0 | 451 | | | | | | | | | | | | | | | | | | |
| 4:15 PM | 29 | 193 | 14 | 0 | 18 | 81 | 7 | 0 | 6 | 3 | 18 | 0 | 47 | 5 | 57 | 0 | 478 | | | | | | | | | | | | | | | | | | |
| 4:30 PM | 32 | 155 | 8 | 0 | 11 | 96 | 14 | 0 | 5 | 4 | 8 | 0 | 21 | 6 | 36 | 0 | 396 | | | | | | | | | | | | | | | | | | |
| 4:45 PM | 32 | 153 | 8 | 0 | 15 | 87 | 4 | 0 | 5 | 2 | 22 | 0 | 18 | 3 | 26 | 0 | 375 | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | 224 | 1027 | 89 | 0 | 130 | 699 | 63 | 0 | 38 | 24 | 136 | 0 | 168 | 30 | 238 | 0 | | |
| Peak Total | | | | | | | | | | | | | | | | | | 117 | 651 | 52 | 0 | 73 | 356 | 35 | 0 | 20 | 11 | 57 | 0 | 123 | 21 | 184 | 0 | | |
| Peak Turn Percent | | | | | | | | | | | | | | | | | | 14% | 79% | 6% | 0% | 16% | 77% | 8% | 0% | 23% | 13% | 65% | 0% | 38% | 6% | 56% | 0% | | |
| Peak Approach Total | | | | | | | | | | | | | | | | | | 820 | | | | 464 | | | | 88 | | | | 328 | | | | | |
| PHF | | | | | | | | | | | | | | | | | | 0.9141 | 0.8433 | 0.5909 | | 0.6293 | 0.9271 | 0.625 | | 0.8333 | 0.6875 | 0.6477 | | 0.6543 | 0.75 | 0.7077 | | | |
| Comments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



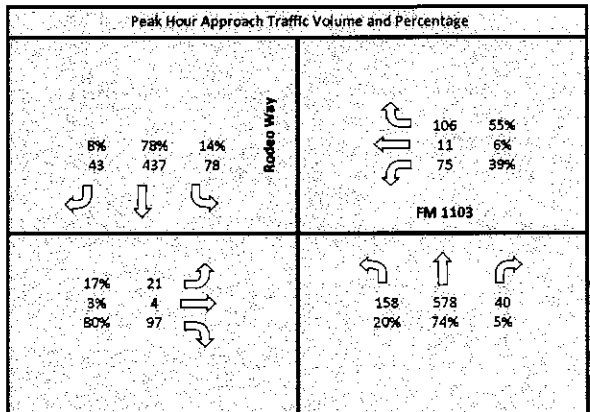
Rodeo Way and FM 1103

Intersection: North/South Street : Rodeo Way
 East/West Street : FM 1103
 City / State: San Antonio, Texas
 Project No.: 010-16
 Date Recorded: Wednesday, February 17, 2016



Peak Period : 4
 Peak Hour: 5:00 PM to 6:00 PM

| Start Time | Intersection Approaches | | | | | | | | | | | | | | | | Traffic Control | | |
|----------------------------|-------------------------|-------|------------|----|-----------|--------|-----------|----|------------|------|------------|----|-----------|------|-----------|----|-----------------|--------------|---|
| | Rodeo Way | | | | Rodeo Way | | | | FM 1103 | | | | FM 1103 | | | | Total | Hourly Total | |
| | Northbound | | Southbound | | Eastbound | | Westbound | | Northbound | | Southbound | | Eastbound | | Westbound | | | | |
| Car | Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | Left | Thur | Right | U | | | |
| 5:00 PM | 31 | 124 | 7 | 0 | 20 | 91 | 16 | 0 | 3 | 0 | 21 | 0 | 18 | 1 | 24 | 0 | 356 | 1648 | |
| 5:15 PM | 49 | 129 | 14 | 0 | 16 | 112 | 7 | 0 | 6 | 1 | 24 | 0 | 22 | 1 | 33 | 0 | 414 | | |
| 5:30 PM | 36 | 156 | 11 | 0 | 28 | 119 | 12 | 0 | 8 | 1 | 26 | 0 | 20 | 4 | 22 | 0 | 443 | | |
| 5:45 PM | 42 | 169 | 8 | 0 | 14 | 115 | 8 | 0 | 4 | 2 | 26 | 0 | 15 | 5 | 27 | 0 | 435 | | |
| 6:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 6:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 6:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 158 | 578 | 40 | 0 | 78 | 437 | 43 | 0 | 21 | 4 | 97 | 0 | 75 | 11 | 106 | 0 | | | |
| Peak Total | 158 | 578 | 40 | 0 | 78 | 437 | 43 | 0 | 21 | 4 | 97 | 0 | 75 | 11 | 106 | 0 | | | |
| Peak Turn Percent | 20% | 74% | 5% | 0% | 14% | 78% | 8% | 0% | 17% | 3% | 80% | 0% | 39% | 6% | 55% | 0% | | | |
| Peak Approach Total | 776 | | | | 558 | | | | 122 | | | | 192 | | | | | | |
| FORMULA | 196 | 676 | 56 | | 112 | 476 | 64 | | 32 | 8 | 104 | | 88 | 20 | 132 | | | | |
| PHF | 0.8061 | 0.855 | 0.7143 | | 0.6964 | 0.9181 | 0.6719 | | 0.6563 | 0.5 | 0.9327 | | 0.8523 | 0.55 | 0.803 | | | | |
| Comments | | | | | | | | | | | | | | | | | | | |



APPENDIX C

CAPACITY ANALYSIS WORKSHEETS

Intersection

Int Delay, s/veh 11.6

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↕ | | ↘ | ↗ |
| Traffic Vol, veh/h | 24 | 224 | 446 | 14 | 232 | 32 |
| Future Vol, veh/h | 24 | 224 | 446 | 14 | 232 | 32 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 26 | 243 | 485 | 15 | 252 | 35 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 500 | 0 | 788 |
| Stage 1 | - | - | 492 |
| Stage 2 | - | - | 296 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 1064 | - | 360 |
| Stage 1 | - | - | 615 |
| Stage 2 | - | - | 755 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1064 | - | 351 |
| Mov Cap-2 Maneuver | - | - | 351 |
| Stage 1 | - | - | 615 |
| Stage 2 | - | - | 737 |

| Approach | EB | WB | SW |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.8 | 0 | 42 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBRSWLn1 |
|-----------------------|-------|-----|-----|----------|
| Capacity (veh/h) | 1064 | - | - | 368 |
| HCM Lane V/C Ratio | 0.025 | - | - | 0.78 |
| HCM Control Delay (s) | 8.5 | - | - | 42 |
| HCM Lane LOS | A | - | - | E |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 6.5 |

Intersection

| Int Delay, s/veh | 1 | | | | | |
|--------------------------|------|------|------|------|------|------|
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | T | | | T |
| Traffic Vol, veh/h | 8 | 45 | 424 | 5 | 56 | 839 |
| Future Vol, veh/h | 8 | 45 | 424 | 5 | 56 | 839 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 9 | 49 | 461 | 5 | 61 | 912 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|-------|--------|---|--------|---|
| Conflicting Flow All | 1498 | 464 | 0 | 0 | 466 | 0 |
| Stage 1 | 464 | - | - | - | - | - |
| Stage 2 | 1034 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 135 | 598 | - | - | 1095 | - |
| Stage 1 | 633 | - | - | - | - | - |
| Stage 2 | 343 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 120 | 598 | - | - | 1095 | - |
| Mov Cap-2 Maneuver | 120 | - | - | - | - | - |
| Stage 1 | 633 | - | - | - | - | - |
| Stage 2 | 304 | - | - | - | - | - |

| Approach | WB | | NB | | SB |
|----------------------|------|--|----|--|-----|
| HCM Control Delay, s | 16.4 | | 0 | | 0.5 |
| HCM LOS | C | | | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 373 | 1095 | - |
| HCM Lane V/C Ratio | - | - | 0.154 | 0.056 | - |
| HCM Control Delay (s) | - | - | 16.4 | 8.5 | 0 |
| HCM Lane LOS | - | - | C | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.5 | 0.2 | - |

HCM 2010 Signalized Intersection Summary
 7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 101 | 167 | 10 | 57 | 490 | 263 | 2 | 115 | 44 | 322 | 174 | 150 |
| Future Volume (veh/h) | 101 | 167 | 10 | 57 | 490 | 263 | 2 | 115 | 44 | 322 | 174 | 150 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 110 | 182 | 0 | 62 | 533 | 0 | 2 | 125 | 0 | 350 | 189 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 216 | 227 | 0 | 582 | 611 | 0 | 488 | 775 | 0 | 543 | 775 | 0 |
| Arrive On Green | 0.12 | 0.12 | 0.00 | 0.33 | 0.33 | 0.00 | 0.42 | 0.42 | 0.00 | 0.42 | 0.42 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1189 | 1863 | 0 | 1261 | 1863 | 0 |
| Grp Volume(v), veh/h | 110 | 182 | 0 | 62 | 533 | 0 | 2 | 125 | 0 | 350 | 189 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1189 | 1863 | 0 | 1261 | 1863 | 0 |
| Q Serve(g_s), s | 5.8 | 9.6 | 0.0 | 2.5 | 27.1 | 0.0 | 0.1 | 4.2 | 0.0 | 24.2 | 6.6 | 0.0 |
| Cycle Q Clear(g_c), s | 5.8 | 9.6 | 0.0 | 2.5 | 27.1 | 0.0 | 6.8 | 4.2 | 0.0 | 28.5 | 6.6 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 216 | 227 | 0 | 582 | 611 | 0 | 488 | 775 | 0 | 543 | 775 | 0 |
| V/C Ratio(X) | 0.51 | 0.80 | 0.00 | 0.11 | 0.87 | 0.00 | 0.00 | 0.16 | 0.00 | 0.64 | 0.24 | 0.00 |
| Avail Cap(c_a), veh/h | 319 | 335 | 0 | 995 | 1045 | 0 | 488 | 775 | 0 | 543 | 775 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 41.4 | 43.0 | 0.0 | 23.6 | 31.8 | 0.0 | 21.3 | 18.4 | 0.0 | 27.3 | 19.1 | 0.0 |
| Incr Delay (d2), s/veh | 1.8 | 8.4 | 0.0 | 0.1 | 4.3 | 0.0 | 0.0 | 0.4 | 0.0 | 5.8 | 0.7 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.0 | 5.4 | 0.0 | 1.2 | 14.7 | 0.0 | 0.0 | 2.3 | 0.0 | 9.2 | 3.6 | 0.0 |
| LnGrp Delay(d),s/veh | 43.3 | 51.4 | 0.0 | 23.6 | 36.2 | 0.0 | 21.3 | 18.9 | 0.0 | 33.1 | 19.9 | 0.0 |
| LnGrp LOS | D | D | | C | D | | C | B | | C | B | |
| Approach Vol, veh/h | | 292 | | | 595 | | | 127 | | | 539 | |
| Approach Delay, s/veh | | 48.3 | | | 34.9 | | | 18.9 | | | 28.5 | |
| Approach LOS | | D | | | C | | | B | | | C | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 46.4 | | 16.8 | | 46.4 | | 37.5 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 41.9 | | 18.1 | | 41.9 | | 56.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 8.8 | | 11.6 | | 30.5 | | 29.1 | | | | |
| Green Ext Time (p_c), s | | 3.3 | | 0.7 | | 2.5 | | 3.9 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 33.9 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |

Intersection

Int Delay, s/veh 2.6

| Movement | WBL | WBR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↕ | | ↔ | | | ↕ |
| Traffic Vol, veh/h | 66 | 26 | 393 | 36 | 22 | 699 |
| Future Vol, veh/h | 66 | 26 | 393 | 36 | 22 | 699 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 72 | 28 | 427 | 39 | 24 | 760 |

| Major/Minor | Minor1 | Minor2 | Major1 | Major2 | Major3 | Major4 |
|----------------------|--------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1255 | 447 | 0 | 0 | 466 | 0 |
| Stage 1 | 447 | - | - | - | - | - |
| Stage 2 | 808 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 189 | 612 | - | - | 1095 | - |
| Stage 1 | 644 | - | - | - | - | - |
| Stage 2 | 438 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 182 | 612 | - | - | 1095 | - |
| Mov Cap-2 Maneuver | 182 | - | - | - | - | - |
| Stage 1 | 644 | - | - | - | - | - |
| Stage 2 | 421 | - | - | - | - | - |

| Approach | WB | NE | SW |
|----------------------|------|----|-----|
| HCM Control Delay, s | 32.8 | 0 | 0.3 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NET | NER | WBLn1 | SWL | SWT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 227 | 1095 | - |
| HCM Lane V/C Ratio | - | - | 0.441 | 0.022 | - |
| HCM Control Delay (s) | - | - | 32.8 | 8.4 | 0 |
| HCM Lane LOS | - | - | D | A | A |
| HCM 95th %tile Q(veh) | - | - | 2.1 | 0.1 | - |

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO

01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 35 | 77 | 109 | 153 | 17 | 140 | 76 | 214 | 80 | 390 | 485 | 10 |
| Future Volume (veh/h) | 35 | 77 | 109 | 153 | 17 | 140 | 76 | 214 | 80 | 390 | 485 | 10 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 38 | 84 | 118 | 166 | 18 | 152 | 83 | 233 | 87 | 424 | 527 | 11 |
| Adj No. of Lanes | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 305 | 435 | 370 | 363 | 40 | 336 | 511 | 779 | 291 | 675 | 1095 | 23 |
| Arrive On Green | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| Sat Flow, veh/h | 1210 | 1863 | 1583 | 1175 | 170 | 1439 | 864 | 1294 | 483 | 1055 | 1818 | 38 |
| Grp Volume(v), veh/h | 38 | 84 | 118 | 166 | 0 | 170 | 83 | 0 | 320 | 424 | 0 | 538 |
| Grp Sat Flow(s),veh/h/ln | 1210 | 1863 | 1583 | 1175 | 0 | 1609 | 864 | 0 | 1777 | 1055 | 0 | 1856 |
| Q Serve(g_s), s | 1.5 | 2.0 | 3.4 | 7.2 | 0.0 | 5.0 | 3.3 | 0.0 | 4.8 | 17.9 | 0.0 | 8.9 |
| Cycle Q Clear(g_c), s | 6.5 | 2.0 | 3.4 | 9.2 | 0.0 | 5.0 | 12.2 | 0.0 | 4.8 | 22.6 | 0.0 | 8.9 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.89 | 1.00 | | 0.27 | 1.00 | | 0.02 |
| Lane Grp Cap(c), veh/h | 305 | 435 | 370 | 363 | 0 | 376 | 511 | 0 | 1070 | 675 | 0 | 1118 |
| V/C Ratio(X) | 0.12 | 0.19 | 0.32 | 0.46 | 0.00 | 0.45 | 0.16 | 0.00 | 0.30 | 0.63 | 0.00 | 0.48 |
| Avail Cap(c_a), veh/h | 419 | 612 | 520 | 475 | 0 | 528 | 511 | 0 | 1070 | 675 | 0 | 1118 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 20.8 | 16.9 | 17.4 | 20.6 | 0.0 | 18.0 | 9.5 | 0.0 | 5.3 | 10.8 | 0.0 | 6.1 |
| Incr Delay (d2), s/veh | 0.2 | 0.2 | 0.5 | 0.9 | 0.0 | 0.9 | 0.7 | 0.0 | 0.7 | 4.4 | 0.0 | 1.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 1.0 | 1.5 | 2.4 | 0.0 | 2.3 | 0.9 | 0.0 | 2.5 | 5.9 | 0.0 | 4.9 |
| LnGrp Delay(d),s/veh | 21.0 | 17.1 | 17.9 | 21.4 | 0.0 | 18.8 | 10.2 | 0.0 | 6.0 | 15.2 | 0.0 | 7.6 |
| LnGrp LOS | C | B | B | C | | B | B | | A | B | | A |
| Approach Vol, veh/h | | 240 | | | 336 | | | 403 | | | 962 | |
| Approach Delay, s/veh | | 18.1 | | | 20.1 | | | 6.9 | | | 10.9 | |
| Approach LOS | | B | | | C | | | A | | | B | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 37.5 | | 17.3 | | 37.5 | | 17.3 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 33.0 | | 18.0 | | 33.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 14.2 | | 8.5 | | 24.6 | | 11.2 | | | | |
| Green Ext Time (p_c), s | | 8.2 | | 2.0 | | 4.9 | | 1.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 12.6 | | | | | | | | | |
| HCM 2010 LOS | | | B | | | | | | | | | |

Intersection

Int Delay, s/veh 2.4

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↗ | | ↘ | |
| Traffic Vol, veh/h | 115 | 486 | 449 | 37 | 23 | 50 |
| Future Vol, veh/h | 115 | 486 | 449 | 37 | 23 | 50 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 125 | 528 | 488 | 40 | 25 | 54 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 528 | 0 | 1286 |
| Stage 1 | - | - | 508 |
| Stage 2 | - | - | 778 |
| Critical Hdwy | 4.12 | - | 7.12 |
| Critical Hdwy Stg 1 | - | - | 6.12 |
| Critical Hdwy Stg 2 | - | - | 6.12 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 1039 | - | 141 |
| Stage 1 | - | - | 547 |
| Stage 2 | - | - | 389 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1039 | - | 128 |
| Mov Cap-2 Maneuver | - | - | 128 |
| Stage 1 | - | - | 481 |
| Stage 2 | - | - | 342 |

| Approach | EB | WB | SW |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.7 | 0 | 23.6 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1039 | - | - | - | 272 |
| HCM Lane V/C Ratio | 0.12 | - | - | - | 0.292 |
| HCM Control Delay (s) | 8.9 | - | - | - | 23.6 |
| HCM Lane LOS | A | - | - | - | C |
| HCM 95th %tile Q(veh) | 0.4 | - | - | - | 1.2 |

Intersection

Int Delay, s/veh 1.6

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | | ↗ | | | ↖ |
| Traffic Vol, veh/h | 11 | 66 | 854 | 11 | 6 | 71 |
| Future Vol, veh/h | 11 | 66 | 854 | 11 | 6 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 72 | 928 | 12 | 7 | 77 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|-------|--------|---|--------|---|
| Conflicting Flow All | 1024 | 934 | 0 | 0 | 940 | 0 |
| Stage 1 | 934 | - | - | - | - | - |
| Stage 2 | 90 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 261 | 322 | - | - | 729 | - |
| Stage 1 | 382 | - | - | - | - | - |
| Stage 2 | 934 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 258 | 322 | - | - | 729 | - |
| Mov Cap-2 Maneuver | 258 | - | - | - | - | - |
| Stage 1 | 382 | - | - | - | - | - |
| Stage 2 | 925 | - | - | - | - | - |

| Approach | WB | | NB | | SB |
|----------------------|------|--|----|--|-----|
| HCM Control Delay, s | 20.8 | | 0 | | 0.8 |
| HCM LOS | C | | | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 311 | 729 | - |
| HCM Lane V/C Ratio | - | - | 0.269 | 0.009 | - |
| HCM Control Delay (s) | - | - | 20.8 | 10 | 0 |
| HCM Lane LOS | - | - | C | A | A |
| HCM 95th %tile Q(veh) | - | - | 1.1 | 0 | - |

HCM 2010 Signalized Intersection Summary
7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|-------|-------|------|------|------|------|------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 248 | 635 | 10 | 73 | 346 | 409 | 19 | 209 | 104 | 466 | 141 | 114 |
| Future Volume (veh/h) | 248 | 635 | 10 | 73 | 346 | 409 | 19 | 209 | 104 | 466 | 141 | 114 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 270 | 690 | 0 | 79 | 376 | 0 | 21 | 227 | 0 | 507 | 153 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 492 | 517 | 0 | 420 | 441 | 0 | 373 | 517 | 0 | 315 | 517 | 0 |
| Arrive On Green | 0.28 | 0.28 | 0.00 | 0.24 | 0.24 | 0.00 | 0.28 | 0.28 | 0.00 | 0.28 | 0.28 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1229 | 1863 | 0 | 1149 | 1863 | 0 |
| Grp Volume(v), veh/h | 270 | 690 | 0 | 79 | 376 | 0 | 21 | 227 | 0 | 507 | 153 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1229 | 1863 | 0 | 1149 | 1863 | 0 |
| Q Serve(g_s), s | 8.4 | 18.0 | 0.0 | 2.3 | 12.5 | 0.0 | 0.9 | 6.5 | 0.0 | 11.5 | 4.2 | 0.0 |
| Cycle Q Clear(g_c), s | 8.4 | 18.0 | 0.0 | 2.3 | 12.5 | 0.0 | 5.1 | 6.5 | 0.0 | 18.0 | 4.2 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 492 | 517 | 0 | 420 | 441 | 0 | 373 | 517 | 0 | 315 | 517 | 0 |
| V/C Ratio(X) | 0.55 | 1.33 | 0.00 | 0.19 | 0.85 | 0.00 | 0.06 | 0.44 | 0.00 | 1.61 | 0.30 | 0.00 |
| Avail Cap(c_a), veh/h | 492 | 517 | 0 | 492 | 517 | 0 | 373 | 517 | 0 | 315 | 517 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 20.0 | 23.4 | 0.0 | 19.8 | 23.7 | 0.0 | 20.4 | 19.3 | 0.0 | 28.7 | 18.4 | 0.0 |
| Incr Delay (d2), s/veh | 1.3 | 163.4 | 0.0 | 0.2 | 11.5 | 0.0 | 0.3 | 2.7 | 0.0 | 289.3 | 1.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 4.3 | 32.5 | 0.0 | 1.1 | 7.8 | 0.0 | 0.3 | 3.7 | 0.0 | 30.8 | 2.4 | 0.0 |
| LnGrp Delay(d),s/veh | 21.3 | 186.8 | 0.0 | 20.0 | 35.2 | 0.0 | 20.7 | 22.0 | 0.0 | 318.0 | 19.9 | 0.0 |
| LnGrp LOS | C | F | | B | D | | C | C | | F | B | |
| Approach Vol, veh/h | | 960 | | | 455 | | | 248 | | | 660 | |
| Approach Delay, s/veh | | 140.3 | | | 32.5 | | | 21.9 | | | 248.9 | |
| Approach LOS | | F | | | C | | | C | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 22.5 | | 22.5 | | 22.5 | | 19.9 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 18.0 | | 18.0 | | 18.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+l1), s | | 8.5 | | 20.0 | | 20.0 | | 14.5 | | | | |
| Green Ext Time (p_c), s | | 3.3 | | 0.0 | | 0.0 | | 0.8 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 137.4 | | | | | | | | | |
| HCM 2010 LOS | | | F | | | | | | | | | |

Intersection

| Int Delay, s/veh | 2.8 | | | | | |
|--------------------------|------|------|------|------|------|------|
| Movement | NWL | NWR | NET | NER | SWL | SWT |
| Lane Configurations | Y | | ↑ | | | ↓ |
| Traffic Vol, veh/h | 53 | 49 | 575 | 74 | 35 | 518 |
| Future Vol, veh/h | 53 | 49 | 575 | 74 | 35 | 518 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 58 | 53 | 625 | 80 | 38 | 563 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|-------|--------|---|--------|---|
| Conflicting Flow All | 1304 | 665 | 0 | 0 | 705 | 0 |
| Stage 1 | 665 | - | - | - | - | - |
| Stage 2 | 639 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 177 | 460 | - | - | 893 | - |
| Stage 1 | 511 | - | - | - | - | - |
| Stage 2 | 526 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | |
| Mov Cap-1 Maneuver | 166 | 460 | - | - | 893 | - |
| Mov Cap-2 Maneuver | 166 | - | - | - | - | - |
| Stage 1 | 511 | - | - | - | - | - |
| Stage 2 | 493 | - | - | - | - | - |

| Approach | NW | NE | SW |
|----------------------|------|----|-----|
| HCM Control Delay, s | 32.3 | 0 | 0.6 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NET | NER | NWL | n1 | SWL | SWT |
|-----------------------|-----|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | - | 240 | 893 | - | - |
| HCM Lane V/C Ratio | - | - | 0.462 | 0.043 | - | - |
| HCM Control Delay (s) | - | - | 32.3 | 9.2 | 0 | 0 |
| HCM Lane LOS | - | - | D | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 2.3 | 0.1 | - | - |

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 22 | 4 | 103 | 79 | 12 | 112 | 167 | 611 | 42 | 82 | 462 | 45 |
| Future Volume (veh/h) | 22 | 4 | 103 | 79 | 12 | 112 | 167 | 611 | 42 | 82 | 462 | 45 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 24 | 4 | 112 | 86 | 13 | 122 | 182 | 664 | 46 | 89 | 502 | 49 |
| Adj No. of Lanes | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 246 | 295 | 251 | 344 | 25 | 230 | 584 | 1138 | 79 | 474 | 1104 | 108 |
| Arrive On Green | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Sat Flow, veh/h | 1249 | 1863 | 1583 | 1271 | 155 | 1452 | 853 | 1722 | 119 | 736 | 1671 | 163 |
| Grp Volume(v), veh/h | 24 | 4 | 112 | 86 | 0 | 135 | 182 | 0 | 710 | 89 | 0 | 551 |
| Grp Sat Flow(s),veh/h/ln | 1249 | 1863 | 1583 | 1271 | 0 | 1607 | 853 | 0 | 1842 | 736 | 0 | 1834 |
| Q Serve(g_s), s | 0.9 | 0.1 | 3.2 | 3.0 | 0.0 | 3.8 | 6.5 | 0.0 | 10.6 | 3.8 | 0.0 | 7.3 |
| Cycle Q Clear(g_c), s | 4.7 | 0.1 | 3.2 | 3.1 | 0.0 | 3.8 | 13.8 | 0.0 | 10.6 | 14.4 | 0.0 | 7.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.90 | 1.00 | | 0.06 | 1.00 | | 0.09 |
| Lane Grp Cap(c), veh/h | 246 | 295 | 251 | 344 | 0 | 255 | 584 | 0 | 1217 | 474 | 0 | 1212 |
| V/C Ratio(X) | 0.10 | 0.01 | 0.45 | 0.25 | 0.00 | 0.53 | 0.31 | 0.00 | 0.58 | 0.19 | 0.00 | 0.45 |
| Avail Cap(c_a), veh/h | 502 | 677 | 576 | 604 | 0 | 584 | 584 | 0 | 1217 | 474 | 0 | 1212 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 21.4 | 17.7 | 19.0 | 19.0 | 0.0 | 19.2 | 7.4 | 0.0 | 4.7 | 8.6 | 0.0 | 4.1 |
| Incr Delay (d2), s/veh | 0.2 | 0.0 | 1.2 | 0.4 | 0.0 | 1.7 | 1.4 | 0.0 | 2.0 | 0.9 | 0.0 | 1.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.3 | 0.0 | 1.5 | 1.1 | 0.0 | 1.8 | 1.7 | 0.0 | 5.8 | 0.9 | 0.0 | 3.9 |
| LnGrp Delay(d),s/veh | 21.6 | 17.7 | 20.2 | 19.4 | 0.0 | 21.0 | 8.8 | 0.0 | 6.7 | 9.5 | 0.0 | 5.3 |
| LnGrp LOS | C | B | C | B | | C | A | | A | A | | A |
| Approach Vol, veh/h | | 140 | | | 221 | | | 892 | | | 640 | |
| Approach Delay, s/veh | | 20.4 | | | 20.3 | | | 7.1 | | | 5.9 | |
| Approach LOS | | C | | | C | | | A | | | A | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 37.4 | | 12.4 | | 37.4 | | 12.4 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 32.9 | | 18.1 | | 32.9 | | 18.1 | | | | |
| Max Q Clear Time (g_c+I1), s | | 15.8 | | 6.7 | | 16.4 | | 5.8 | | | | |
| Green Ext Time (p_c), s | | 9.8 | | 1.2 | | 9.6 | | 1.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 9.2 | | | | | | | | | |
| HCM 2010 LOS | | | A | | | | | | | | | |

Intersection

Int Delay, s/veh 15.3

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↕ | | ↘ | |
| Traffic Vol, veh/h | 42 | 296 | 590 | 19 | 42 | 307 |
| Future Vol, veh/h | 42 | 296 | 590 | 19 | 42 | 307 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 46 | 322 | 641 | 21 | 46 | 334 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 662 | 0 | 1065 |
| Stage 1 | - | - | 652 |
| Stage 2 | - | - | 413 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 927 | - | 246 |
| Stage 1 | - | - | 518 |
| Stage 2 | - | - | 668 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 927 | - | 234 |
| Mov Cap-2 Maneuver | - | - | 234 |
| Stage 1 | - | - | 518 |
| Stage 2 | - | - | 635 |

| Approach | EB | WB | SW |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.1 | 0 | 55.7 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 927 | - | - | - | 418 |
| HCM Lane V/C Ratio | 0.049 | - | - | - | 0.908 |
| HCM Control Delay (s) | 9.1 | - | - | - | 55.7 |
| HCM Lane LOS | A | - | - | - | F |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 9.8 |

Intersection

Int Delay, s/veh 1

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | ↑↑ | | ↑ | ↑↑ |
| Traffic Vol, veh/h | 11 | 60 | 561 | 7 | 74 | 1110 |
| Future Vol, veh/h | 11 | 60 | 561 | 7 | 74 | 1110 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 65 | 610 | 8 | 80 | 1207 |

| Major/Minor | Minor1 | Minor2 | Major1 | Major2 | Major3 | Major4 |
|----------------------|--------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1378 | 309 | 0 | 0 | 617 | 0 |
| Stage 1 | 614 | - | - | - | - | - |
| Stage 2 | 764 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 136 | 687 | - | - | 959 | - |
| Stage 1 | 502 | - | - | - | - | - |
| Stage 2 | 420 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 125 | 687 | - | - | 959 | - |
| Mov Cap-2 Maneuver | 125 | - | - | - | - | - |
| Stage 1 | 502 | - | - | - | - | - |
| Stage 2 | 385 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|----|----|-----|
| HCM Control Delay, s | 16 | 0 | 0.6 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 405 | 959 | - |
| HCM Lane V/C Ratio | - | - | 0.191 | 0.084 | - |
| HCM Control Delay (s) | - | - | 16 | 9.1 | - |
| HCM Lane LOS | - | - | C | A | - |
| HCM 95th %tile Q(veh) | - | - | 0.7 | 0.3 | - |

HCM 2010 Signalized Intersection Summary
 7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------|------|-------|------|------|------|------|------|------|------|-------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 134 | 221 | 13 | 75 | 648 | 348 | 3 | 152 | 58 | 426 | 230 | 198 |
| Future Volume (veh/h) | 134 | 221 | 13 | 75 | 648 | 348 | 3 | 152 | 58 | 426 | 230 | 198 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 146 | 240 | 0 | 82 | 704 | 0 | 3 | 165 | 0 | 463 | 250 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 227 | 239 | 0 | 712 | 747 | 0 | 366 | 703 | 0 | 435 | 703 | 0 |
| Arrive On Green | 0.13 | 0.13 | 0.00 | 0.40 | 0.40 | 0.00 | 0.38 | 0.38 | 0.00 | 0.38 | 0.38 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Grp Volume(v), veh/h | 146 | 240 | 0 | 82 | 704 | 0 | 3 | 165 | 0 | 463 | 250 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Q Serve(g_s), s | 11.3 | 18.5 | 0.0 | 4.2 | 52.6 | 0.0 | 0.3 | 8.7 | 0.0 | 45.8 | 13.9 | 0.0 |
| Cycle Q Clear(g_c), s | 11.3 | 18.5 | 0.0 | 4.2 | 52.6 | 0.0 | 14.2 | 8.7 | 0.0 | 54.5 | 13.9 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 227 | 239 | 0 | 712 | 747 | 0 | 366 | 703 | 0 | 435 | 703 | 0 |
| V/C Ratio(X) | 0.64 | 1.01 | 0.00 | 0.12 | 0.94 | 0.00 | 0.01 | 0.23 | 0.00 | 1.06 | 0.36 | 0.00 |
| Avail Cap(c_a), veh/h | 227 | 239 | 0 | 780 | 819 | 0 | 366 | 703 | 0 | 435 | 703 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 59.8 | 63.0 | 0.0 | 27.2 | 41.6 | 0.0 | 37.5 | 30.7 | 0.0 | 52.0 | 32.4 | 0.0 |
| Incr Delay (d2), s/veh | 6.0 | 59.9 | 0.0 | 0.1 | 18.0 | 0.0 | 0.0 | 0.8 | 0.0 | 61.4 | 1.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.9 | 13.4 | 0.0 | 2.1 | 30.7 | 0.0 | 0.1 | 4.6 | 0.0 | 24.7 | 7.4 | 0.0 |
| LnGrp Delay(d),s/veh | 65.9 | 122.9 | 0.0 | 27.2 | 59.7 | 0.0 | 37.5 | 31.5 | 0.0 | 113.4 | 33.8 | 0.0 |
| LnGrp LOS | E | F | | C | E | | D | C | | F | C | |
| Approach Vol, veh/h | | 386 | | | 786 | | | 168 | | | 713 | |
| Approach Delay, s/veh | | 101.3 | | | 56.3 | | | 31.6 | | | 85.5 | |
| Approach LOS | | F | | | E | | | C | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 59.0 | | 23.0 | | 59.0 | | 62.5 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 54.5 | | 18.5 | | 54.5 | | 63.5 | | | | |
| Max Q Clear Time (g_c+1), s | | 16.2 | | 20.5 | | 56.5 | | 54.6 | | | | |
| Green Ext Time (p_c), s | | 4.9 | | 0.0 | | 0.0 | | 3.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 72.9 | | | | | | | | | |
| HCM 2010 LOS | | | E | | | | | | | | | |

Intersection

Int Delay, s/veh 3.1

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑↑ | | ↑↑ | | ↑ | ↑↑ |
| Traffic Vol, veh/h | 87 | 34 | 520 | 48 | 29 | 924 |
| Future Vol, veh/h | 87 | 34 | 520 | 48 | 29 | 924 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 95 | 37 | 565 | 52 | 32 | 1004 |






















| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1156 | 309 | 0 | 0 | 617 | 0 |
| Stage 1 | 591 | - | - | - | - | - |
| Stage 2 | 565 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 190 | 687 | - | - | 959 | - |
| Stage 1 | 516 | - | - | - | - | - |
| Stage 2 | 532 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | |
| Mov Cap-1 Maneuver | 184 | 687 | - | - | 959 | - |
| Mov Cap-2 Maneuver | 184 | - | - | - | - | - |
| Stage 1 | 516 | - | - | - | - | - |
| Stage 2 | 514 | - | - | - | - | - |

| Approach | NW | NE | SW |
|----------------------|------|----|-----|
| HCM Control Delay, s | 39.1 | 0 | 0.3 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NET | NERNWLn1 | SWL | SWT |
|-----------------------|-----|----------|-------|-----|
| Capacity (veh/h) | - | - 232 | 959 | - |
| HCM Lane V/C Ratio | - | - 0.567 | 0.033 | - |
| HCM Control Delay (s) | - | - 39.1 | 8.9 | - |
| HCM Lane LOS | - | - E | A | - |
| HCM 95th %tile Q(veh) | - | - 3.1 | 0.1 | - |

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  | |  |  | |  |  | |
| Traffic Volume (veh/h) | 46 | 102 | 144 | 202 | 22 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Future Volume (veh/h) | 46 | 102 | 144 | 202 | 22 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 50 | 111 | 157 | 220 | 24 | 201 | 110 | 308 | 115 | 561 | 697 | 14 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 184 | 728 | 325 | 279 | 364 | 325 | 451 | 899 | 336 | 655 | 1264 | 25 |
| Arrive On Green | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Sat Flow, veh/h | 1151 | 3539 | 1583 | 1107 | 1770 | 1583 | 736 | 1294 | 483 | 960 | 1820 | 37 |
| Grp Volume(v), veh/h | 50 | 111 | 157 | 220 | 24 | 201 | 110 | 0 | 423 | 561 | 0 | 711 |
| Grp Sat Flow(s),veh/h/ln | 1151 | 1770 | 1583 | 1107 | 1770 | 1583 | 736 | 0 | 1777 | 960 | 0 | 1856 |
| Q Serve(g_s), s | 3.7 | 2.3 | 7.9 | 16.2 | 1.0 | 10.4 | 7.8 | 0.0 | 8.6 | 50.7 | 0.0 | 17.1 |
| Cycle Q Clear(g_c), s | 14.1 | 2.3 | 7.9 | 18.5 | 1.0 | 10.4 | 24.9 | 0.0 | 8.6 | 59.3 | 0.0 | 17.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.27 | 1.00 | | 0.02 |
| Lane Grp Cap(c), veh/h | 184 | 728 | 325 | 279 | 364 | 325 | 451 | 0 | 1234 | 655 | 0 | 1289 |
| V/C Ratio(X) | 0.27 | 0.15 | 0.48 | 0.79 | 0.07 | 0.62 | 0.24 | 0.00 | 0.34 | 0.86 | 0.00 | 0.55 |
| Avail Cap(c_a), veh/h | 184 | 728 | 325 | 279 | 364 | 325 | 451 | 0 | 1234 | 655 | 0 | 1289 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 39.0 | 29.3 | 31.5 | 37.7 | 28.8 | 32.5 | 13.0 | 0.0 | 5.5 | 17.4 | 0.0 | 6.8 |
| Incr Delay (d2), s/veh | 0.8 | 0.1 | 1.1 | 14.0 | 0.1 | 3.5 | 1.3 | 0.0 | 0.8 | 13.5 | 0.0 | 1.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 1.1 | 3.5 | 6.5 | 0.5 | 4.8 | 1.7 | 0.0 | 4.4 | 15.7 | 0.0 | 9.1 |
| LnGrp Delay(d),s/veh | 39.7 | 29.4 | 32.6 | 51.7 | 28.9 | 36.0 | 14.3 | 0.0 | 6.3 | 30.9 | 0.0 | 8.5 |
| LnGrp LOS | D | C | C | D | C | D | B | | A | C | | A |
| Approach Vol, veh/h | | 318 | | | 445 | | | 533 | | | 1272 | |
| Approach Delay, s/veh | | 32.6 | | | 43.4 | | | 7.9 | | | 18.4 | |
| Approach LOS | | C | | | D | | | A | | | B | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 67.0 | | 23.0 | | 67.0 | | 23.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 62.5 | | 18.5 | | 62.5 | | 18.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 26.9 | | 16.1 | | 61.3 | | 20.5 | | | | |
| Green Ext Time (p_c), s | | 17.0 | | 1.0 | | 1.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 22.3 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |

Intersection

Int Delay, s/veh 5.1

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↕ | | ↘ | ↗ |
| Traffic Vol, veh/h | 201 | 643 | 594 | 49 | 30 | 66 |
| Future Vol, veh/h | 201 | 643 | 594 | 49 | 30 | 66 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 218 | 699 | 646 | 53 | 33 | 72 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 699 | 0 | 1808 |
| Stage 1 | - | - | 672 |
| Stage 2 | - | - | 1136 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 898 | - | 87 |
| Stage 1 | - | - | 508 |
| Stage 2 | - | - | 306 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 898 | - | 66 |
| Mov Cap-2 Maneuver | - | - | 66 |
| Stage 1 | - | - | 508 |
| Stage 2 | - | - | 232 |

| Approach | EB | WB | SW |
|----------------------|-----|----|------|
| HCM Control Delay, s | 2.5 | 0 | 62.1 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 898 | - | - | - | 160 |
| HCM Lane V/C Ratio | 0.243 | - | - | - | 0.652 |
| HCM Control Delay (s) | 10.3 | - | - | - | 62.1 |
| HCM Lane LOS | B | - | - | - | F |
| HCM 95th %tile Q(veh) | 1 | - | - | - | 3.7 |

Intersection

Int Delay, s/veh 2.5

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | ↑↓ | | Y | ↑↑ |
| Traffic Vol, veh/h | 15 | 87 | 1129 | 15 | 94 | 817 |
| Future Vol, veh/h | 15 | 87 | 1129 | 15 | 94 | 817 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 16 | 95 | 1227 | 16 | 102 | 888 |

Major/Minor

| | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1883 | 622 | 0 | 0 | 1243 | 0 |
| Stage 1 | 1235 | - | - | - | - | - |
| Stage 2 | 648 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 63 | 430 | - | - | 556 | - |
| Stage 1 | 238 | - | - | - | - | - |
| Stage 2 | 483 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 51 | 430 | - | - | 556 | - |
| Mov Cap-2 Maneuver | 51 | - | - | - | - | - |
| Stage 1 | 238 | - | - | - | - | - |
| Stage 2 | 394 | - | - | - | - | - |

Approach





















| | WB | | NB | | SB |
|----------------------|------|--|----|--|-----|
| HCM Control Delay, s | 41.5 | | 0 | | 1.3 |
| HCM LOS | E | | | | |

Minor Lane/Major Mvmt

| | NBT | NBRWBLn1 | SBL | SBT | |
|-----------------------|-----|----------|-------|-----|--|
| Capacity (veh/h) | - | - 205 | 556 | - | |
| HCM Lane V/C Ratio | - | - 0.541 | 0.184 | - | |
| HCM Control Delay (s) | - | - 41.5 | 12.9 | - | |
| HCM Lane LOS | - | - E | B | - | |
| HCM 95th %tile Q(veh) | - | - 2.8 | 0.7 | - | |

HCM 2010 Signalized Intersection Summary
7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
01/24/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Volume (veh/h) | 328 | 840 | 13 | 97 | 458 | 541 | 25 | 276 | 138 | 616 | 186 | 151 |
| Future Volume (veh/h) | 328 | 840 | 13 | 97 | 458 | 541 | 25 | 276 | 138 | 616 | 186 | 151 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 357 | 913 | 0 | 105 | 498 | 0 | 27 | 300 | 0 | 670 | 202 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 408 | 428 | 0 | 455 | 478 | 0 | 463 | 789 | 0 | 384 | 789 | 0 |
| Arrive On Green | 0.23 | 0.23 | 0.00 | 0.26 | 0.26 | 0.00 | 0.42 | 0.42 | 0.00 | 0.42 | 0.42 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Grp Volume(v), veh/h | 357 | 913 | 0 | 105 | 498 | 0 | 27 | 300 | 0 | 670 | 202 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Q Serve(g_s), s | 29.1 | 34.5 | 0.0 | 7.0 | 38.5 | 0.0 | 2.3 | 16.6 | 0.0 | 46.9 | 10.5 | 0.0 |
| Cycle Q Clear(g_c), s | 29.1 | 34.5 | 0.0 | 7.0 | 38.5 | 0.0 | 12.8 | 16.6 | 0.0 | 63.5 | 10.5 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 408 | 428 | 0 | 455 | 478 | 0 | 463 | 789 | 0 | 384 | 789 | 0 |
| V/C Ratio(X) | 0.87 | 2.13 | 0.00 | 0.23 | 1.04 | 0.00 | 0.06 | 0.38 | 0.00 | 1.74 | 0.26 | 0.00 |
| Avail Cap(c_a), veh/h | 408 | 428 | 0 | 455 | 478 | 0 | 463 | 789 | 0 | 384 | 789 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 55.7 | 57.8 | 0.0 | 44.0 | 55.8 | 0.0 | 32.1 | 29.7 | 0.0 | 54.5 | 28.0 | 0.0 |
| Incr Delay (d2), s/veh | 18.6 | 516.8 | 0.0 | 0.3 | 52.4 | 0.0 | 0.2 | 1.4 | 0.0 | 345.7 | 0.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 16.4 | 79.2 | 0.0 | 3.5 | 26.7 | 0.0 | 0.8 | 8.8 | 0.0 | 52.8 | 5.6 | 0.0 |
| LnGrp Delay(d),s/veh | 74.3 | 574.5 | 0.0 | 44.3 | 108.2 | 0.0 | 32.4 | 31.1 | 0.0 | 400.2 | 28.8 | 0.0 |
| LnGrp LOS | E | F | | D | F | | C | C | | F | C | |
| Approach Vol, veh/h | | 1270 | | | 603 | | | 327 | | | 872 | |
| Approach Delay, s/veh | | 433.9 | | | 97.0 | | | 31.2 | | | 314.2 | |
| Approach LOS | | F | | | F | | | C | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 68.0 | | 39.0 | | 68.0 | | 43.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 63.5 | | 34.5 | | 63.5 | | 38.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 18.6 | | 36.5 | | 65.5 | | 40.5 | | | | |
| Green Ext Time (p_c), s | | 8.4 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 290.9 | | | | | | | | |
| HCM 2010 LOS | | | | F | | | | | | | | |

Intersection

Int Delay, s/veh 7.5

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | ↑↓ | | Y | ↑↑ |
| Traffic Vol, veh/h | 70 | 65 | 760 | 98 | 46 | 686 |
| Future Vol, veh/h | 70 | 65 | 760 | 98 | 46 | 686 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 76 | 71 | 826 | 107 | 50 | 746 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1352 | 466 | 0 | 0 | 933 | 0 |
| Stage 1 | 879 | - | - | - | - | - |
| Stage 2 | 473 | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 109 | 543 | - | - | 729 | - |
| Stage 1 | 309 | - | - | - | - | - |
| Stage 2 | 541 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 103 | 543 | - | - | 729 | - |
| Mov Cap-2 Maneuver | 103 | - | - | - | - | - |
| Stage 1 | 309 | - | - | - | - | - |
| Stage 2 | 504 | - | - | - | - | - |

| Approach | NW | NE | SW |
|----------------------|------|----|-----|
| HCM Control Delay, s | 92.6 | 0 | 0.6 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NET | NERNWLn1 | SWL | SWT |
|-----------------------|-----|----------|-------|-----|
| Capacity (veh/h) | - | - 169 | 729 | - |
| HCM Lane V/C Ratio | - | - 0.868 | 0.069 | - |
| HCM Control Delay (s) | - | - 92.6 | 10.3 | - |
| HCM Lane LOS | - | - F | B | - |
| HCM 95th %tile Q(veh) | - | - 6.2 | 0.2 | - |

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO

01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 29 | 6 | 136 | 104 | 16 | 148 | 221 | 808 | 56 | 108 | 611 | 60 |
| Future Volume (veh/h) | 29 | 6 | 136 | 104 | 16 | 148 | 221 | 808 | 56 | 108 | 611 | 60 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 32 | 7 | 148 | 113 | 17 | 161 | 240 | 878 | 61 | 117 | 664 | 65 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 211 | 614 | 275 | 325 | 307 | 275 | 458 | 1177 | 82 | 325 | 1142 | 112 |
| Arrive On Green | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Sat Flow, veh/h | 1201 | 3539 | 1583 | 1227 | 1770 | 1583 | 723 | 1722 | 120 | 594 | 1670 | 164 |
| Grp Volume(v), veh/h | 32 | 7 | 148 | 113 | 17 | 161 | 240 | 0 | 939 | 117 | 0 | 729 |
| Grp Sat Flow(s),veh/h/ln | 1201 | 1770 | 1583 | 1227 | 1770 | 1583 | 723 | 0 | 1842 | 594 | 0 | 1834 |
| Q Serve(g_s), s | 1.6 | 0.1 | 5.4 | 5.3 | 0.5 | 5.9 | 16.4 | 0.0 | 20.7 | 10.0 | 0.0 | 13.1 |
| Cycle Q Clear(g_c), s | 7.5 | 0.1 | 5.4 | 5.4 | 0.5 | 5.9 | 29.6 | 0.0 | 20.7 | 30.7 | 0.0 | 13.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.06 | 1.00 | | 0.09 |
| Lane Grp Cap(c), veh/h | 211 | 614 | 275 | 325 | 307 | 275 | 458 | 0 | 1259 | 325 | 0 | 1253 |
| V/C Ratio(X) | 0.15 | 0.01 | 0.54 | 0.35 | 0.06 | 0.59 | 0.52 | 0.00 | 0.75 | 0.36 | 0.00 | 0.58 |
| Avail Cap(c_a), veh/h | 346 | 1012 | 453 | 463 | 506 | 453 | 458 | 0 | 1259 | 325 | 0 | 1253 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 27.4 | 21.5 | 23.7 | 23.8 | 21.7 | 23.9 | 13.0 | 0.0 | 6.4 | 16.3 | 0.0 | 5.2 |
| Incr Delay (d2), s/veh | 0.3 | 0.0 | 1.6 | 0.6 | 0.1 | 2.0 | 4.3 | 0.0 | 4.1 | 3.1 | 0.0 | 2.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 0.1 | 2.5 | 1.8 | 0.3 | 2.7 | 3.8 | 0.0 | 11.6 | 1.9 | 0.0 | 7.2 |
| LnGrp Delay(d),s/veh | 27.7 | 21.5 | 25.3 | 24.4 | 21.8 | 25.9 | 17.3 | 0.0 | 10.5 | 19.4 | 0.0 | 7.2 |
| LnGrp LOS | C | C | C | C | C | C | B | | B | B | | A |
| Approach Vol, veh/h | | 187 | | | 291 | | | 1179 | | | | 846 |
| Approach Delay, s/veh | | 25.6 | | | 25.1 | | | 11.9 | | | | 8.9 |
| Approach LOS | | C | | | C | | | B | | | | A |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 47.5 | | 15.4 | | 47.5 | | 15.4 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 43.0 | | 18.0 | | 43.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 31.6 | | 9.5 | | 32.7 | | 7.9 | | | | |
| Green Ext Time (p_c), s | | 9.5 | | 1.5 | | 8.6 | | 1.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 13.4 | | | | | | | | | |
| HCM 2010 LOS | | | B | | | | | | | | | |

Intersection

Int Delay, s/veh 73.6

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↕ | | ↘↗ | |
| Traffic Vol, veh/h | 62 | 296 | 590 | 29 | 64 | 450 |
| Future Vol, veh/h | 62 | 296 | 590 | 29 | 64 | 450 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 67 | 322 | 641 | 32 | 70 | 489 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 673 | 0 | 1114 |
| Stage 1 | - | - | 657 |
| Stage 2 | - | - | 457 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 918 | - | 230 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 638 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 918 | - | 213 |
| Mov Cap-2 Maneuver | - | - | 213 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 591 |

| Approach | EB | WB | SW |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 1.6 | 0 | 212.5 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 918 | - | - | - | 405 |
| HCM Lane V/C Ratio | 0.073 | - | - | - | 1.379 |
| HCM Control Delay (s) | 9.2 | - | - | - | 212.5 |
| HCM Lane LOS | A | - | - | - | F |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 27 |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 2

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ¶¶ | | ↑↑ | | ¶ | ↑↑ |
| Traffic Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Future Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 17 | 101 | 753 | 12 | 116 | 1286 |

Major/Minor

| | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1635 | 383 | 0 | 0 | 765 | 0 |
| Stage 1 | 759 | - | - | - | - | - |
| Stage 2 | 876 | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 67 | 615 | - | - | 844 | - |
| Stage 1 | 365 | - | - | - | - | - |
| Stage 2 | 310 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | |
| Mov Cap-1 Maneuver | 60 | 615 | - | - | 844 | - |
| Mov Cap-2 Maneuver | 60 | - | - | - | - | - |
| Stage 1 | 365 | - | - | - | - | - |
| Stage 2 | 267 | - | - | - | - | - |

Approach

| | WB | | NB | | SB |
|----------------------|------|--|----|--|-----|
| HCM Control Delay, s | 29.8 | | 0 | | 0.8 |
| HCM LOS | D | | | | |

Minor Lane/Major Mvmt

| | NBT | NBR | WBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 261 | 844 | - |
| HCM Lane V/C Ratio | - | - | 0.454 | 0.138 | - |
| HCM Control Delay (s) | - | - | 29.8 | 9.9 | - |
| HCM Lane LOS | - | - | D | A | - |
| HCM 95th %tile Q(veh) | - | - | 2.2 | 0.5 | - |

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Future Volume (veh/h) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 308 | 115 | 561 | 697 | 14 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 849 | 317 | 617 | 1194 | 24 |
| Arrive On Green | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Sat Flow, veh/h | 1026 | 3539 | 1583 | 966 | 1770 | 1583 | 736 | 1294 | 483 | 960 | 1820 | 37 |
| Grp Volume(v), veh/h | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 0 | 423 | 561 | 0 | 711 |
| Grp Sat Flow(s),veh/h/ln | 1026 | 1770 | 1583 | 966 | 1770 | 1583 | 736 | 0 | 1777 | 960 | 0 | 1856 |
| Q Serve(g_s), s | 3.6 | 4.9 | 6.8 | 13.6 | 5.7 | 8.9 | 7.8 | 0.0 | 8.6 | 43.9 | 0.0 | 17.1 |
| Cycle Q Clear(g_c), s | 12.6 | 4.9 | 6.8 | 18.5 | 5.7 | 8.9 | 24.9 | 0.0 | 8.6 | 52.5 | 0.0 | 17.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.27 | 1.00 | | 0.02 |
| Lane Grp Cap(c), veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 0 | 1166 | 617 | 0 | 1218 |
| V/C Ratio(X) | 0.24 | 0.32 | 0.43 | 0.86 | 0.37 | 0.55 | 0.26 | 0.00 | 0.36 | 0.91 | 0.00 | 0.58 |
| Avail Cap(c_a), veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 0 | 1166 | 617 | 0 | 1218 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 32.6 | 25.5 | 26.2 | 34.9 | 25.8 | 27.1 | 14.6 | 0.0 | 6.2 | 19.4 | 0.0 | 7.7 |
| Incr Delay (d2), s/veh | 0.6 | 0.2 | 0.8 | 24.9 | 0.5 | 1.7 | 1.6 | 0.0 | 0.9 | 19.7 | 0.0 | 2.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.1 | 2.4 | 3.0 | 6.6 | 2.9 | 4.1 | 1.8 | 0.0 | 4.4 | 15.7 | 0.0 | 9.2 |
| LnGrp Delay(d),s/veh | 33.2 | 25.7 | 27.0 | 59.8 | 26.4 | 28.8 | 16.2 | 0.0 | 7.1 | 39.1 | 0.0 | 9.7 |
| LnGrp LOS | C | C | C | E | C | C | B | | A | D | | A |
| Approach Vol, veh/h | | 466 | | | 571 | | | 533 | | | | 1272 |
| Approach Delay, s/veh | | 27.0 | | | 40.1 | | | 9.0 | | | | 22.7 |
| Approach LOS | | C | | | D | | | A | | | | C |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 57.0 | | 23.0 | | 57.0 | | 23.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 52.5 | | 18.5 | | 52.5 | | 18.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 26.9 | | 14.6 | | 54.5 | | 20.5 | | | | |
| Green Ext Time (p_c), s | | 14.3 | | 2.1 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 24.3 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |

Intersection

Int Delay, s/veh 6.5

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↗ | | ↖ | ↗ | ↖ | |
| Traffic Vol, veh/h | 318 | 40 | 61 | 191 | 165 | 110 |
| Future Vol, veh/h | 318 | 40 | 61 | 191 | 165 | 110 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 250 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 346 | 43 | 66 | 208 | 179 | 120 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 389 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | - | 4.12 |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | - | 2.218 |
| Pot Cap-1 Maneuver | - | - | 1170 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1170 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|----|------|
| HCM Control Delay, s | 0 | 2 | 19.1 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 550 | - | - | 1170 | - |
| HCM Lane V/C Ratio | 0.543 | - | - | 0.057 | - |
| HCM Control Delay (s) | 19.1 | - | - | 8.3 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 3.2 | - | - | 0.2 | - |

Intersection

Int Delay, s/veh 6.8

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | W | | | ↑ | ↑ | |
| Traffic Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Future Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 120 | 179 | 33 | 66 | 379 | 77 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|----------------------|--------|-------|--------|---|--------|---|
| Conflicting Flow All | 550 | 418 | 457 | 0 | - | 0 |
| Stage 1 | 418 | - | - | - | - | - |
| Stage 2 | 132 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 496 | 635 | 1104 | - | - | - |
| Stage 1 | 664 | - | - | - | - | - |
| Stage 2 | 894 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 481 | 635 | 1104 | - | - | - |
| Mov Cap-2 Maneuver | 481 | - | - | - | - | - |
| Stage 1 | 664 | - | - | - | - | - |
| Stage 2 | 866 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 18.4 | 2.8 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 1104 | - | 563 | - | - |
| HCM Lane V/C Ratio | 0.03 | - | 0.531 | - | - |
| HCM Control Delay (s) | 8.4 | 0 | 18.4 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 3.1 | - | - |

Intersection

Int Delay, s/veh 73.6

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↔ | | ↖ | |
| Traffic Vol, veh/h | 62 | 296 | 590 | 29 | 64 | 450 |
| Future Vol, veh/h | 62 | 296 | 590 | 29 | 64 | 450 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 67 | 322 | 641 | 32 | 70 | 489 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 673 | 0 | 1114 |
| Stage 1 | - | - | 657 |
| Stage 2 | - | - | 457 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 918 | - | 230 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 638 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 918 | - | 213 |
| Mov Cap-2 Maneuver | - | - | 213 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 591 |

| Approach | EB | WB | SW |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 1.6 | 0 | 212.5 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 918 | - | - | - | 405 |
| HCM Lane V/C Ratio | 0.073 | - | - | - | 1.379 |
| HCM Control Delay (s) | 9.2 | - | - | - | 212.5 |
| HCM Lane LOS | A | - | - | - | F |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 27 |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.5

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↕↔ | | ↘ | ↗ |
| Traffic Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Future Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 100 | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 17 | 101 | 753 | 12 | 116 | 1286 |

| Major/Minor | Minor1 | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1635 | 383 | 0 | 0 |
| Stage 1 | 759 | - | - | - |
| Stage 2 | 876 | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | 4.14 |
| Critical Hdwy Stg 1 | 5.84 | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | 2.22 |
| Pot Cap-1 Maneuver | 92 | 615 | - | 844 |
| Stage 1 | 423 | - | - | - |
| Stage 2 | 368 | - | - | - |
| Platoon blocked, % | | | - | - |
| Mov Cap-1 Maneuver | 79 | 615 | - | 844 |
| Mov Cap-2 Maneuver | 79 | - | - | - |
| Stage 1 | 423 | - | - | - |
| Stage 2 | 317 | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 19.5 | 0 | 0.8 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 79 | 615 | 844 | - |
| HCM Lane V/C Ratio | - | - | 0.22 | 0.164 | 0.138 | - |
| HCM Control Delay (s) | - | - | 63 | 12 | 9.9 | - |
| HCM Lane LOS | - | - | F | B | A | - |
| HCM 95th %tile Q(veh) | - | - | 0.8 | 0.6 | 0.5 | - |

HCM 2010 Signalized Intersection Summary
 7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|-------|------|-------|------|------|------|------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Future Volume (veh/h) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 146 | 263 | 0 | 99 | 849 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| Arrive On Green | 0.12 | 0.12 | 0.00 | 0.43 | 0.43 | 0.00 | 0.36 | 0.36 | 0.00 | 0.36 | 0.36 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Grp Volume(v), veh/h | 146 | 263 | 0 | 99 | 849 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Q Serve(g_s), s | 11.8 | 18.5 | 0.0 | 5.1 | 64.5 | 0.0 | 0.3 | 9.4 | 0.0 | 44.1 | 15.0 | 0.0 |
| Cycle Q Clear(g_c), s | 11.8 | 18.5 | 0.0 | 5.1 | 64.5 | 0.0 | 15.3 | 9.4 | 0.0 | 53.5 | 15.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| V/C Ratio(X) | 0.67 | 1.14 | 0.00 | 0.13 | 1.06 | 0.00 | 0.01 | 0.25 | 0.00 | 1.25 | 0.38 | 0.00 |
| Avail Cap(c_a), veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 62.8 | 65.8 | 0.0 | 25.8 | 42.8 | 0.0 | 41.5 | 34.1 | 0.0 | 55.6 | 35.9 | 0.0 |
| Incr Delay (d2), s/veh | 7.5 | 104.0 | 0.0 | 0.1 | 48.9 | 0.0 | 0.0 | 0.9 | 0.0 | 131.5 | 1.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.3 | 16.1 | 0.0 | 2.5 | 44.0 | 0.0 | 0.1 | 5.0 | 0.0 | 31.6 | 8.0 | 0.0 |
| LnGrp Delay(d),s/veh | 70.3 | 169.7 | 0.0 | 25.9 | 91.6 | 0.0 | 41.6 | 35.0 | 0.0 | 187.0 | 37.5 | 0.0 |
| LnGrp LOS | E | F | | C | F | | D | C | | F | D | |
| Approach Vol, veh/h | | 409 | | | 948 | | | 168 | | | 757 | |
| Approach Delay, s/veh | | 134.2 | | | 84.8 | | | 35.1 | | | 137.6 | |
| Approach LOS | | F | | | F | | | D | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 58.0 | | 23.0 | | 58.0 | | 69.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 53.5 | | 18.5 | | 53.5 | | 64.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 17.3 | | 20.5 | | 55.5 | | 66.5 | | | | |
| Green Ext Time (p_c), s | | 5.1 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 107.5 | | | | | | | | |
| HCM 2010 LOS | | | | F | | | | | | | | |

Intersection

Int Delay, s/veh 13

| Movement | WBL | WBR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↕↔ | | ↘ | ↕↕ |
| Traffic Vol, veh/h | 137 | 56 | 630 | 70 | 41 | 990 |
| Future Vol, veh/h | 137 | 56 | 630 | 70 | 41 | 990 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 100 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 149 | 61 | 685 | 76 | 45 | 1076 |

| Major/Minor | Minor1 | Minor2 | Major1 | Major2 | Major3 | Major4 |
|----------------------|--------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1350 | 380 | 0 | 0 | 761 | 0 |
| Stage 1 | 723 | - | - | - | - | - |
| Stage 2 | 627 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 142 | 618 | - | - | 847 | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 495 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 134 | 618 | - | - | 847 | - |
| Mov Cap-2 Maneuver | ~ 134 | - | - | - | - | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 469 | - | - | - | - | - |

| Approach | WB | NE | SW |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 127.9 | 0 | 0.4 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NET | NER | WBLn1 | WBLn2 | SWL | SWT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 134 | 618 | 847 | - |
| HCM Lane V/C Ratio | - | - | 1.111 | 0.098 | 0.053 | - |
| HCM Control Delay (s) | - | - | 175.5 | 11.5 | 9.5 | - |
| HCM Lane LOS | - | - | F | B | A | - |
| HCM 95th %tile Q(veh) | - | - | 8.5 | 0.3 | 0.2 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Future Volume (veh/h) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 308 | 115 | 561 | 697 | 14 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 849 | 317 | 617 | 1194 | 24 |
| Arrive On Green | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Sat Flow, veh/h | 1026 | 3539 | 1583 | 966 | 1770 | 1583 | 736 | 1294 | 483 | 960 | 1820 | 37 |
| Grp Volume(v), veh/h | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 0 | 423 | 561 | 0 | 711 |
| Grp Sat Flow(s),veh/h/ln | 1026 | 1770 | 1583 | 966 | 1770 | 1583 | 736 | 0 | 1777 | 960 | 0 | 1856 |
| Q Serve(g_s), s | 3.6 | 4.9 | 6.8 | 13.6 | 5.7 | 8.9 | 7.8 | 0.0 | 8.6 | 43.9 | 0.0 | 17.1 |
| Cycle Q Clear(g_c), s | 12.6 | 4.9 | 6.8 | 18.5 | 5.7 | 8.9 | 24.9 | 0.0 | 8.6 | 52.5 | 0.0 | 17.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.27 | 1.00 | | 0.02 |
| Lane Grp Cap(c), veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 0 | 1166 | 617 | 0 | 1218 |
| V/C Ratio(X) | 0.24 | 0.32 | 0.43 | 0.86 | 0.37 | 0.55 | 0.26 | 0.00 | 0.36 | 0.91 | 0.00 | 0.58 |
| Avail Cap(c_a), veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 0 | 1166 | 617 | 0 | 1218 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 32.6 | 25.5 | 26.2 | 34.9 | 25.8 | 27.1 | 14.6 | 0.0 | 6.2 | 19.4 | 0.0 | 7.7 |
| Incr Delay (d2), s/veh | 0.6 | 0.2 | 0.8 | 24.9 | 0.5 | 1.7 | 1.6 | 0.0 | 0.9 | 19.7 | 0.0 | 2.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.1 | 2.4 | 3.0 | 6.6 | 2.9 | 4.1 | 1.8 | 0.0 | 4.4 | 15.7 | 0.0 | 9.2 |
| LnGrp Delay(d),s/veh | 33.2 | 25.7 | 27.0 | 59.8 | 26.4 | 28.8 | 16.2 | 0.0 | 7.1 | 39.1 | 0.0 | 9.7 |
| LnGrp LOS | C | C | C | E | C | C | B | | A | D | | A |
| Approach Vol, veh/h | | 466 | | | 571 | | | 533 | | | 1272 | |
| Approach Delay, s/veh | | 27.0 | | | 40.1 | | | 9.0 | | | 22.7 | |
| Approach LOS | | C | | | D | | | A | | | C | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 57.0 | | 23.0 | | 57.0 | | 23.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 52.5 | | 18.5 | | 52.5 | | 18.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 26.9 | | 14.6 | | 54.5 | | 20.5 | | | | |
| Green Ext Time (p_c), s | | 14.3 | | 2.1 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 24.3 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |

Intersection

Int Delay, s/veh 6.5

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | ↔ | ↔ | ↔ | |
| Traffic Vol, veh/h | 318 | 40 | 61 | 191 | 165 | 110 |
| Future Vol, veh/h | 318 | 40 | 61 | 191 | 165 | 110 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 250 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 346 | 43 | 66 | 208 | 179 | 120 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 389 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | - | 4.12 |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | - | 2.218 |
| Pot Cap-1 Maneuver | - | - | 1170 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1170 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|----|------|
| HCM Control Delay, s | 0 | 2 | 19.1 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 550 | - | - | 1170 | - |
| HCM Lane V/C Ratio | 0.543 | - | - | 0.057 | - |
| HCM Control Delay (s) | 19.1 | - | - | 8.3 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 3.2 | - | - | 0.2 | - |

Intersection

Int Delay, s/veh 6.8

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Future Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 120 | 179 | 33 | 66 | 379 | 77 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|----------------------|--------|-------|--------|---|--------|---|
| Conflicting Flow All | 550 | 418 | 457 | 0 | - | 0 |
| Stage 1 | 418 | - | - | - | - | - |
| Stage 2 | 132 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 496 | 635 | 1104 | - | - | - |
| Stage 1 | 664 | - | - | - | - | - |
| Stage 2 | 894 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 481 | 635 | 1104 | - | - | - |
| Mov Cap-2 Maneuver | 481 | - | - | - | - | - |
| Stage 1 | 664 | - | - | - | - | - |
| Stage 2 | 866 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 18.4 | 2.8 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 1104 | - | 563 | - | - |
| HCM Lane V/C Ratio | 0.03 | - | 0.531 | - | - |
| HCM Control Delay (s) | 8.4 | 0 | 18.4 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 3.1 | - | - |

Intersection

Int Delay, s/veh 15.5

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↖ | | ↘ | |
| Traffic Vol, veh/h | 62 | 296 | 590 | 29 | 43 | 297 |
| Future Vol, veh/h | 62 | 296 | 590 | 29 | 43 | 297 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 67 | 322 | 641 | 32 | 47 | 323 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 673 | 0 | 1114 |
| Stage 1 | - | - | 657 |
| Stage 2 | - | - | 457 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 918 | - | 230 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 638 |
| Platoon blocked, % | | | |
| Mov Cap-1 Maneuver | 918 | - | 213 |
| Mov Cap-2 Maneuver | - | - | 213 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 591 |

| Approach | EB | WB | SW |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.6 | 0 | 58.3 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBRSWLn1 |
|-----------------------|-------|-----|-----|----------|
| Capacity (veh/h) | 918 | - | - | 404 |
| HCM Lane V/C Ratio | 0.073 | - | - | 0.915 |
| HCM Control Delay (s) | 9.2 | - | - | 58.3 |
| HCM Lane LOS | A | - | - | F |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 9.8 |

Intersection

Int Delay, s/veh 1.7

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑↓ | | ↑↑ | | ↑ | ↑↑ |
| Traffic Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Future Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 17 | 101 | 753 | 12 | 116 | 1286 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1635 | 383 | 0 |
| Stage 1 | 759 | - | - |
| Stage 2 | 876 | - | - |
| Critical Hdwy | 6.84 | 6.94 | 4.14 |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | 2.22 |
| Pot Cap-1 Maneuver | 92 | 615 | 844 |
| Stage 1 | 423 | - | - |
| Stage 2 | 368 | - | - |
| Platoon blocked, % | | | |
| Mov Cap-1 Maneuver | 79 | 615 | 844 |
| Mov Cap-2 Maneuver | 79 | - | - |
| Stage 1 | 423 | - | - |
| Stage 2 | 317 | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 23.8 | 0 | 0.8 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-----|
| Capacity (veh/h) | - | - 308 | 844 | - |
| HCM Lane V/C Ratio | - | - 0.385 | 0.138 | - |
| HCM Control Delay (s) | - | - 23.8 | 9.9 | - |
| HCM Lane LOS | - | - C | A | - |
| HCM 95th %tile Q(veh) | - | - 1.7 | 0.5 | - |

HCM 2010 Signalized Intersection Summary
7: MAIN ST & FM 1103

01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 134 | 132 | 13 | 91 | 457 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Future Volume (veh/h) | 134 | 132 | 13 | 91 | 457 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 146 | 143 | 0 | 99 | 497 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 181 | 190 | 0 | 533 | 560 | 0 | 518 | 909 | 0 | 591 | 909 | 0 |
| Arrive On Green | 0.10 | 0.10 | 0.00 | 0.30 | 0.30 | 0.00 | 0.49 | 0.49 | 0.00 | 0.49 | 0.49 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Grp Volume(v), veh/h | 146 | 143 | 0 | 99 | 497 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Q Serve(g_s), s | 9.9 | 9.2 | 0.0 | 5.1 | 31.3 | 0.0 | 0.2 | 6.1 | 0.0 | 49.4 | 9.8 | 0.0 |
| Cycle Q Clear(g_c), s | 9.9 | 9.2 | 0.0 | 5.1 | 31.3 | 0.0 | 10.0 | 6.1 | 0.0 | 55.5 | 9.8 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 181 | 190 | 0 | 533 | 560 | 0 | 518 | 909 | 0 | 591 | 909 | 0 |
| V/C Ratio(X) | 0.81 | 0.75 | 0.00 | 0.19 | 0.89 | 0.00 | 0.01 | 0.18 | 0.00 | 0.86 | 0.28 | 0.00 |
| Avail Cap(c_a), veh/h | 260 | 273 | 0 | 844 | 886 | 0 | 518 | 909 | 0 | 591 | 909 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 54.0 | 53.7 | 0.0 | 31.9 | 41.0 | 0.0 | 21.6 | 17.7 | 0.0 | 33.3 | 18.6 | 0.0 |
| Incr Delay (d2), s/veh | 11.7 | 7.0 | 0.0 | 0.2 | 7.0 | 0.0 | 0.0 | 0.4 | 0.0 | 14.9 | 0.7 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.5 | 5.1 | 0.0 | 2.5 | 17.2 | 0.0 | 0.1 | 3.3 | 0.0 | 18.9 | 5.2 | 0.0 |
| LnGrp Delay(d),s/veh | 65.7 | 60.7 | 0.0 | 32.0 | 48.0 | 0.0 | 21.6 | 18.1 | 0.0 | 48.1 | 19.4 | 0.0 |
| LnGrp LOS | E | E | | C | D | | C | B | | D | B | |
| Approach Vol, veh/h | | 289 | | | 596 | | | 168 | | | 757 | |
| Approach Delay, s/veh | | 63.2 | | | 45.4 | | | 18.2 | | | 38.6 | |
| Approach LOS | | E | | | D | | | B | | | D | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 64.5 | | 17.0 | | 64.5 | | 41.4 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 60.0 | | 18.0 | | 60.0 | | 58.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 12.0 | | 11.9 | | 57.5 | | 33.3 | | | | |
| Green Ext Time (p_c), s | | 5.2 | | 0.6 | | 1.2 | | 3.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 42.9 | | | | | | | | | |
| HCM 2010 LOS | | | D | | | | | | | | | |

Intersection

Int Delay, s/veh 19.3

| Movement | WBL | WBR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | ↑↓ | | ↓ | ↑↑ |
| Traffic Vol, veh/h | 137 | 56 | 630 | 70 | 41 | 990 |
| Future Vol, veh/h | 137 | 56 | 630 | 70 | 41 | 990 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 149 | 61 | 685 | 76 | 45 | 1076 |

| Major/Minor | Minor1 | Minor2 | Major1 | Major2 | Major3 | Major4 |
|----------------------|--------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1350 | 380 | 0 | 0 | 761 | 0 |
| Stage 1 | 723 | - | - | - | - | - |
| Stage 2 | 627 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 142 | 618 | - | - | 847 | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 495 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 134 | 618 | - | - | 847 | - |
| Mov Cap-2 Maneuver | ~ 134 | - | - | - | - | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 469 | - | - | - | - | - |

| Approach | WB | NE | SW |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 190.5 | 0 | 0.4 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NET | NER | WBLn1 | SWL | SWT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 173 | 847 | - |
| HCM Lane V/C Ratio | - | - | 1.213 | 0.053 | - |
| HCM Control Delay (s) | - | - | 190.5 | 9.5 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 11.5 | 0.2 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Future Volume (veh/h) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 308 | 115 | 561 | 697 | 14 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 849 | 317 | 617 | 1194 | 24 |
| Arrive On Green | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Sat Flow, veh/h | 1026 | 3539 | 1583 | 966 | 1770 | 1583 | 736 | 1294 | 483 | 960 | 1820 | 37 |
| Grp Volume(v), veh/h | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 0 | 423 | 561 | 0 | 711 |
| Grp Sat Flow(s),veh/h/ln | 1026 | 1770 | 1583 | 966 | 1770 | 1583 | 736 | 0 | 1777 | 960 | 0 | 1856 |
| Q Serve(g_s), s | 3.6 | 4.9 | 6.8 | 13.6 | 5.7 | 8.9 | 7.8 | 0.0 | 8.6 | 43.9 | 0.0 | 17.1 |
| Cycle Q Clear(g_c), s | 12.6 | 4.9 | 6.8 | 18.5 | 5.7 | 8.9 | 24.9 | 0.0 | 8.6 | 52.5 | 0.0 | 17.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.27 | 1.00 | | 0.02 |
| Lane Grp Cap(c), veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 0 | 1166 | 617 | 0 | 1218 |
| V/C Ratio(X) | 0.24 | 0.32 | 0.43 | 0.86 | 0.37 | 0.55 | 0.26 | 0.00 | 0.36 | 0.91 | 0.00 | 0.58 |
| Avail Cap(c_a), veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 0 | 1166 | 617 | 0 | 1218 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 32.6 | 25.5 | 26.2 | 34.9 | 25.8 | 27.1 | 14.6 | 0.0 | 6.2 | 19.4 | 0.0 | 7.7 |
| Incr Delay (d2), s/veh | 0.6 | 0.2 | 0.8 | 24.9 | 0.5 | 1.7 | 1.6 | 0.0 | 0.9 | 19.7 | 0.0 | 2.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.1 | 2.4 | 3.0 | 6.6 | 2.9 | 4.1 | 1.8 | 0.0 | 4.4 | 15.7 | 0.0 | 9.2 |
| LnGrp Delay(d),s/veh | 33.2 | 25.7 | 27.0 | 59.8 | 26.4 | 28.8 | 16.2 | 0.0 | 7.1 | 39.1 | 0.0 | 9.7 |
| LnGrp LOS | C | C | C | E | C | C | B | | A | D | | A |
| Approach Vol, veh/h | | 466 | | | 571 | | | 533 | | | 1272 | |
| Approach Delay, s/veh | | 27.0 | | | 40.1 | | | 9.0 | | | 22.7 | |
| Approach LOS | | C | | | D | | | A | | | C | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 57.0 | | 23.0 | | 57.0 | | 23.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 52.5 | | 18.5 | | 52.5 | | 18.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 26.9 | | 14.6 | | 54.5 | | 20.5 | | | | |
| Green Ext Time (p_c), s | | 14.3 | | 2.1 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 24.3 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |

Intersection

Int Delay, s/veh 6.5

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↗ | | ↖ | ↗ | ↖ | |
| Traffic Vol, veh/h | 318 | 40 | 61 | 191 | 165 | 110 |
| Future Vol, veh/h | 318 | 40 | 61 | 191 | 165 | 110 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 250 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 346 | 43 | 66 | 208 | 179 | 120 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 389 | 0 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | - | - | 1170 | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1170 | - |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|----|------|
| HCM Control Delay, s | 0 | 2 | 19.1 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 550 | - | - | 1170 | - |
| HCM Lane V/C Ratio | 0.543 | - | - | 0.057 | - |
| HCM Control Delay (s) | 19.1 | - | - | 8.3 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 3.2 | - | - | 0.2 | - |

Intersection

Int Delay, s/veh 7.3

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | | 4 | 1 | |
| Traffic Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Future Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 120 | 179 | 33 | 66 | 379 | 77 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|----------------------|--------|-------|--------|---|--------|---|
| Conflicting Flow All | 550 | 418 | 457 | 0 | - | 0 |
| Stage 1 | 418 | - | - | - | - | - |
| Stage 2 | 132 | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 6.12 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 446 | 635 | 1104 | - | - | - |
| Stage 1 | 612 | - | - | - | - | - |
| Stage 2 | 871 | - | - | - | - | - |
| Platoon blocked, % | | | | | - | - |
| Mov Cap-1 Maneuver | 435 | 635 | 1104 | - | - | - |
| Mov Cap-2 Maneuver | 435 | - | - | - | - | - |
| Stage 1 | 593 | - | - | - | - | - |
| Stage 2 | 844 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 19.9 | 2.8 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 1104 | - | 536 | - | - |
| HCM Lane V/C Ratio | 0.03 | - | 0.558 | - | - |
| HCM Control Delay (s) | 8.4 | 0 | 19.9 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 3.4 | - | - |

Intersection

Int Delay, s/veh 73.6

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↗ | | ↘ | |
| Traffic Vol, veh/h | 62 | 296 | 590 | 29 | 64 | 450 |
| Future Vol, veh/h | 62 | 296 | 590 | 29 | 64 | 450 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 67 | 322 | 641 | 32 | 70 | 489 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 673 | 0 | 1114 |
| Stage 1 | - | - | 657 |
| Stage 2 | - | - | 457 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 918 | - | 230 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 638 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 918 | - | 213 |
| Mov Cap-2 Maneuver | - | - | 213 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 591 |

| Approach | EB | WB | SW |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 1.6 | 0 | 212.5 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 918 | - | - | - | 405 |
| HCM Lane V/C Ratio | 0.073 | - | - | - | 1.379 |
| HCM Control Delay (s) | 9.2 | - | - | - | 212.5 |
| HCM Lane LOS | A | - | - | - | F |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 27 |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.7

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘↗ | | ↑↑ | | ↘ | ↑↑ |
| Traffic Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Future Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 17 | 101 | 753 | 12 | 116 | 1286 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1635 | 383 | 0 | 0 | 765 | 0 |
| Stage 1 | 759 | - | - | - | - | - |
| Stage 2 | 876 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 92 | 615 | - | - | 844 | - |
| Stage 1 | 423 | - | - | - | - | - |
| Stage 2 | 368 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 79 | 615 | - | - | 844 | - |
| Mov Cap-2 Maneuver | 79 | - | - | - | - | - |
| Stage 1 | 423 | - | - | - | - | - |
| Stage 2 | 317 | - | - | - | - | - |

| Approach | WB | | NB | | SB |
|----------------------|------|--|----|--|-----|
| HCM Control Delay, s | 23.8 | | 0 | | 0.8 |
| HCM LOS | C | | | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 308 | 844 | - |
| HCM Lane V/C Ratio | - | - | 0.385 | 0.138 | - |
| HCM Control Delay (s) | - | - | 23.8 | 9.9 | - |
| HCM Lane LOS | - | - | C | A | - |
| HCM 95th %tile Q(veh) | - | - | 1.7 | 0.5 | - |

HCM 2010 Signalized Intersection Summary
7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|-------|-------|------|------|------|------|------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Future Volume (veh/h) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 146 | 263 | 0 | 99 | 849 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| Arrive On Green | 0.12 | 0.12 | 0.00 | 0.43 | 0.43 | 0.00 | 0.36 | 0.36 | 0.00 | 0.36 | 0.36 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Grp Volume(v), veh/h | 146 | 263 | 0 | 99 | 849 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Q Serve(g_s), s | 11.8 | 18.5 | 0.0 | 5.1 | 64.5 | 0.0 | 0.3 | 9.4 | 0.0 | 44.1 | 15.0 | 0.0 |
| Cycle Q Clear(g_c), s | 11.8 | 18.5 | 0.0 | 5.1 | 64.5 | 0.0 | 15.3 | 9.4 | 0.0 | 53.5 | 15.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| V/C Ratio(X) | 0.67 | 1.14 | 0.00 | 0.13 | 1.06 | 0.00 | 0.01 | 0.25 | 0.00 | 1.25 | 0.38 | 0.00 |
| Avail Cap(c_a), veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 62.8 | 65.8 | 0.0 | 25.8 | 42.8 | 0.0 | 41.5 | 34.1 | 0.0 | 55.6 | 35.9 | 0.0 |
| Incr Delay (d2), s/veh | 7.5 | 104.0 | 0.0 | 0.1 | 48.9 | 0.0 | 0.0 | 0.9 | 0.0 | 131.5 | 1.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.3 | 16.1 | 0.0 | 2.5 | 44.0 | 0.0 | 0.1 | 5.0 | 0.0 | 31.6 | 8.0 | 0.0 |
| LnGrp Delay(d),s/veh | 70.3 | 169.7 | 0.0 | 25.9 | 91.6 | 0.0 | 41.6 | 35.0 | 0.0 | 187.0 | 37.5 | 0.0 |
| LnGrp LOS | E | F | | C | F | | D | C | | F | D | |
| Approach Vol, veh/h | | 409 | | | 948 | | | 168 | | | 757 | |
| Approach Delay, s/veh | | 134.2 | | | 84.8 | | | 35.1 | | | 137.6 | |
| Approach LOS | | F | | | F | | | D | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 58.0 | | 23.0 | | 58.0 | | 69.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 53.5 | | 18.5 | | 53.5 | | 64.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 17.3 | | 20.5 | | 55.5 | | 66.5 | | | | |
| Green Ext Time (p_c), s | | 5.1 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 107.5 | | | | | | | | | |
| HCM 2010 LOS | | | F | | | | | | | | | |

Intersection

Int Delay, s/veh 6.3

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑ | ↗ | ↘ | ↑ | ↘ | |
| Traffic Vol, veh/h | 318 | 40 | 61 | 191 | 165 | 110 |
| Future Vol, veh/h | 318 | 40 | 61 | 191 | 165 | 110 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 250 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 346 | 43 | 66 | 208 | 179 | 120 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 346 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | - | 4.12 |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | - | 2.218 |
| Pot Cap-1 Maneuver | - | - | 1213 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1213 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|----|------|
| HCM Control Delay, s | 0 | 2 | 18.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 561 | - | - | 1213 | - |
| HCM Lane V/C Ratio | 0.533 | - | - | 0.055 | - |
| HCM Control Delay (s) | 18.5 | - | - | 8.1 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 3.1 | - | - | 0.2 | - |

Intersection

Int Delay, s/veh 6.3

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | W | | | W | W | W |
| Traffic Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Future Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | 250 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 120 | 179 | 33 | 66 | 379 | 77 |

| Major/Minor | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 511 | 379 | 0 |
| Stage 1 | 379 | - | - |
| Stage 2 | 132 | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 |
| Pot Cap-1 Maneuver | 523 | 668 | 1179 |
| Stage 1 | 692 | - | - |
| Stage 2 | 894 | - | - |
| Platoon blocked, % | | | - |
| Mov Cap-1 Maneuver | 508 | 668 | 1179 |
| Mov Cap-2 Maneuver | 508 | - | - |
| Stage 1 | 692 | - | - |
| Stage 2 | 868 | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 17.1 | 2.7 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1179 | - | 593 | - | - |
| HCM Lane V/C Ratio | 0.028 | - | 0.504 | - | - |
| HCM Control Delay (s) | 8.1 | 0 | 17.1 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 2.8 | - | - |

Intersection

Int Delay, s/veh 73.6

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↘ | | ↘ | |
| Traffic Vol, veh/h | 62 | 296 | 590 | 29 | 64 | 450 |
| Future Vol, veh/h | 62 | 296 | 590 | 29 | 64 | 450 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 67 | 322 | 641 | 32 | 70 | 489 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 673 | 0 | 1114 |
| Stage 1 | - | - | 657 |
| Stage 2 | - | - | 457 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 918 | - | 230 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 638 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 918 | - | 213 |
| Mov Cap-2 Maneuver | - | - | 213 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 591 |

| Approach | EB | WB | SW |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 1.6 | 0 | 212.5 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 918 | - | - | - | 405 |
| HCM Lane V/C Ratio | 0.073 | - | - | - | 1.379 |
| HCM Control Delay (s) | 9.2 | - | - | - | 212.5 |
| HCM Lane LOS | A | - | - | - | F |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 27 |

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.7

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | TT | | TT | | T | TT |
| Traffic Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Future Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 17 | 101 | 753 | 12 | 116 | 1286 |




















| Major/Minor | Minor1 | Minor2 | Major1 | Major2 | Major3 | Major4 |
|----------------------|--------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1635 | 383 | 0 | 0 | 765 | 0 |
| Stage 1 | 759 | - | - | - | - | - |
| Stage 2 | 876 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 92 | 615 | - | - | 844 | - |
| Stage 1 | 423 | - | - | - | - | - |
| Stage 2 | 368 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 79 | 615 | - | - | 844 | - |
| Mov Cap-2 Maneuver | 79 | - | - | - | - | - |
| Stage 1 | 423 | - | - | - | - | - |
| Stage 2 | 317 | - | - | - | - | - |

| Approach | WB | WB | NB | SB |
|----------------------|------|----|----|-----|
| HCM Control Delay, s | 23.8 | | 0 | 0.8 |
| HCM LOS | C | | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 308 | 844 | - |
| HCM Lane V/C Ratio | - | - | 0.385 | 0.138 | - |
| HCM Control Delay (s) | - | - | 23.8 | 9.9 | - |
| HCM Lane LOS | - | - | C | A | - |
| HCM 95th %tile Q(veh) | - | - | 1.7 | 0.5 | - |

HCM 2010 Signalized Intersection Summary
7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
01/24/2018

| |  |  |  |  |  |  |  |  |  |  |  | |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Volume (veh/h) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Future Volume (veh/h) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 146 | 263 | 0 | 99 | 849 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| Arrive On Green | 0.12 | 0.12 | 0.00 | 0.43 | 0.43 | 0.00 | 0.36 | 0.36 | 0.00 | 0.36 | 0.36 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Grp Volume(v), veh/h | 146 | 263 | 0 | 99 | 849 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Q Serve(g_s), s | 11.8 | 18.5 | 0.0 | 5.1 | 64.5 | 0.0 | 0.3 | 9.4 | 0.0 | 44.1 | 15.0 | 0.0 |
| Cycle Q Clear(g_c), s | 11.8 | 18.5 | 0.0 | 5.1 | 64.5 | 0.0 | 15.3 | 9.4 | 0.0 | 53.5 | 15.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| V/C Ratio(X) | 0.67 | 1.14 | 0.00 | 0.13 | 1.06 | 0.00 | 0.01 | 0.25 | 0.00 | 1.25 | 0.38 | 0.00 |
| Avail Cap(c_a), veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 62.8 | 65.8 | 0.0 | 25.8 | 42.8 | 0.0 | 41.5 | 34.1 | 0.0 | 55.6 | 35.9 | 0.0 |
| Incr Delay (d2), s/veh | 7.5 | 104.0 | 0.0 | 0.1 | 48.9 | 0.0 | 0.0 | 0.9 | 0.0 | 131.5 | 1.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.3 | 16.1 | 0.0 | 2.5 | 44.0 | 0.0 | 0.1 | 5.0 | 0.0 | 31.6 | 8.0 | 0.0 |
| LnGrp Delay(d),s/veh | 70.3 | 169.7 | 0.0 | 25.9 | 91.6 | 0.0 | 41.6 | 35.0 | 0.0 | 187.0 | 37.5 | 0.0 |
| LnGrp LOS | E | F | | C | F | | D | C | | F | D | |
| Approach Vol, veh/h | | 409 | | | 948 | | | 168 | | | 757 | |
| Approach Delay, s/veh | | 134.2 | | | 84.8 | | | 35.1 | | | 137.6 | |
| Approach LOS | | F | | | F | | | D | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 58.0 | | 23.0 | | 58.0 | | 69.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 53.5 | | 18.5 | | 53.5 | | 64.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 17.3 | | 20.5 | | 55.5 | | 66.5 | | | | |
| Green Ext Time (p_c), s | | 5.1 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 107.5 | | | | | | | | | |
| HCM 2010 LOS | | | F | | | | | | | | | |

Intersection

Int Delay, s/veh 19.3

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | ↕↔ | | ↔ | ↕↕ |
| Traffic Vol, veh/h | 137 | 56 | 630 | 70 | 41 | 990 |
| Future Vol, veh/h | 137 | 56 | 630 | 70 | 41 | 990 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 149 | 61 | 685 | 76 | 45 | 1076 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1350 | 380 | 0 | 0 | 761 | 0 |
| Stage 1 | 723 | - | - | - | - | - |
| Stage 2 | 627 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 142 | 618 | - | - | 847 | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 495 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | |
| Mov Cap-1 Maneuver | ~ 134 | 618 | - | - | 847 | - |
| Mov Cap-2 Maneuver | ~ 134 | - | - | - | - | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 469 | - | - | - | - | - |

| Approach | NW | | NE | | SW |
|----------------------|-------|--|----|--|-----|
| HCM Control Delay, s | 190.5 | | 0 | | 0.4 |
| HCM LOS | F | | | | |

| Minor Lane/Major Mvmt | NET | NER | NWLn1 | SWL | SWT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 173 | 847 | - |
| HCM Lane V/C Ratio | - | - | 1.213 | 0.053 | - |
| HCM Control Delay (s) | - | - | 190.5 | 9.5 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 11.5 | 0.2 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Future Volume (veh/h) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 308 | 115 | 561 | 697 | 14 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 849 | 317 | 617 | 1194 | 24 |
| Arrive On Green | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Sat Flow, veh/h | 1026 | 3539 | 1583 | 966 | 1770 | 1583 | 736 | 1294 | 483 | 960 | 1820 | 37 |
| Grp Volume(v), veh/h | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 0 | 423 | 561 | 0 | 711 |
| Grp Sat Flow(s),veh/h/ln | 1026 | 1770 | 1583 | 966 | 1770 | 1583 | 736 | 0 | 1777 | 960 | 0 | 1856 |
| Q Serve(g_s), s | 3.6 | 4.9 | 6.8 | 13.6 | 5.7 | 8.9 | 7.8 | 0.0 | 8.6 | 43.9 | 0.0 | 17.1 |
| Cycle Q Clear(g_c), s | 12.6 | 4.9 | 6.8 | 18.5 | 5.7 | 8.9 | 24.9 | 0.0 | 8.6 | 52.5 | 0.0 | 17.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.27 | 1.00 | | 0.02 |
| Lane Grp Cap(c), veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 0 | 1166 | 617 | 0 | 1218 |
| V/C Ratio(X) | 0.24 | 0.32 | 0.43 | 0.86 | 0.37 | 0.55 | 0.26 | 0.00 | 0.36 | 0.91 | 0.00 | 0.58 |
| Avail Cap(c_a), veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 0 | 1166 | 617 | 0 | 1218 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 32.6 | 25.5 | 26.2 | 34.9 | 25.8 | 27.1 | 14.6 | 0.0 | 6.2 | 19.4 | 0.0 | 7.7 |
| Incr Delay (d2), s/veh | 0.6 | 0.2 | 0.8 | 24.9 | 0.5 | 1.7 | 1.6 | 0.0 | 0.9 | 19.7 | 0.0 | 2.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.1 | 2.4 | 3.0 | 6.6 | 2.9 | 4.1 | 1.8 | 0.0 | 4.4 | 15.7 | 0.0 | 9.2 |
| LnGrp Delay(d),s/veh | 33.2 | 25.7 | 27.0 | 59.8 | 26.4 | 28.8 | 16.2 | 0.0 | 7.1 | 39.1 | 0.0 | 9.7 |
| LnGrp LOS | C | C | C | E | C | C | B | | A | D | | A |
| Approach Vol, veh/h | | 466 | | | 571 | | | 533 | | | 1272 | |
| Approach Delay, s/veh | | 27.0 | | | 40.1 | | | 9.0 | | | 22.7 | |
| Approach LOS | | C | | | D | | | A | | | C | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 57.0 | | 23.0 | | 57.0 | | 23.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 52.5 | | 18.5 | | 52.5 | | 18.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 26.9 | | 14.6 | | 54.5 | | 20.5 | | | | |
| Green Ext Time (p_c), s | | 14.3 | | 2.1 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 24.3 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |

Intersection

Int Delay, s/veh 6.9

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑ | ↗ | ↘ | ↑ | ↘ | |
| Traffic Vol, veh/h | 318 | 40 | 61 | 191 | 165 | 110 |
| Future Vol, veh/h | 318 | 40 | 61 | 191 | 165 | 110 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 250 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 346 | 43 | 66 | 208 | 179 | 120 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 346 | 0 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | - | - | 1213 | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1213 | - |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|----|------|
| HCM Control Delay, s | 0 | 2 | 20.3 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 529 | - | - | 1213 | - |
| HCM Lane V/C Ratio | 0.565 | - | - | 0.055 | - |
| HCM Control Delay (s) | 20.3 | - | - | 8.1 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 3.5 | - | - | 0.2 | - |

Intersection

| Int Delay, s/veh | 6.8 | | | | | |
|--------------------------|------|------|------|------|------|------|
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Traffic Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Future Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 120 | 179 | 33 | 66 | 379 | 77 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|----------------------|--------|-------|--------|---|--------|---|
| Conflicting Flow All | 550 | 418 | 457 | 0 | - | 0 |
| Stage 1 | 418 | - | - | - | - | - |
| Stage 2 | 132 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 496 | 635 | 1104 | - | - | - |
| Stage 1 | 664 | - | - | - | - | - |
| Stage 2 | 894 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 481 | 635 | 1104 | - | - | - |
| Mov Cap-2 Maneuver | 481 | - | - | - | - | - |
| Stage 1 | 664 | - | - | - | - | - |
| Stage 2 | 866 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 18.4 | 2.8 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 1104 | - | 563 | - | - |
| HCM Lane V/C Ratio | 0.03 | - | 0.531 | - | - |
| HCM Control Delay (s) | 8.4 | 0 | 18.4 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 3.1 | - | - |

Intersection

Int Delay, s/veh 73.6

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↗ | | ↘ | |
| Traffic Vol, veh/h | 62 | 296 | 590 | 29 | 64 | 450 |
| Future Vol, veh/h | 62 | 296 | 590 | 29 | 64 | 450 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 67 | 322 | 641 | 32 | 70 | 489 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 673 | 0 | 1114 |
| Stage 1 | - | - | 657 |
| Stage 2 | - | - | 457 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 918 | - | 230 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 638 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 918 | - | 213 |
| Mov Cap-2 Maneuver | - | - | 213 |
| Stage 1 | - | - | 516 |
| Stage 2 | - | - | 591 |

| Approach | EB | WB | SW |
|----------------------|-----|----|-------|
| HCM Control Delay, s | 1.6 | 0 | 212.5 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 918 | - | - | - | 405 |
| HCM Lane V/C Ratio | 0.073 | - | - | - | 1.379 |
| HCM Control Delay (s) | 9.2 | - | - | - | 212.5 |
| HCM Lane LOS | A | - | - | - | F |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 27 |

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.7

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | ↕↕ | | ↔ | ↕↕ |
| Traffic Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Future Vol, veh/h | 16 | 93 | 693 | 11 | 107 | 1183 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 17 | 101 | 753 | 12 | 116 | 1286 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1635 | 383 | 0 | 0 | 765 | 0 |
| Stage 1 | 759 | - | - | - | - | - |
| Stage 2 | 876 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 92 | 615 | - | - | 844 | - |
| Stage 1 | 423 | - | - | - | - | - |
| Stage 2 | 368 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 79 | 615 | - | - | 844 | - |
| Mov Cap-2 Maneuver | 79 | - | - | - | - | - |
| Stage 1 | 423 | - | - | - | - | - |
| Stage 2 | 317 | - | - | - | - | - |

| Approach | WB | | NB | | SB |
|----------------------|------|--|----|--|-----|
| HCM Control Delay, s | 23.8 | | 0 | | 0.8 |
| HCM LOS | C | | | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 308 | 844 | - |
| HCM Lane V/C Ratio | - | - | 0.385 | 0.138 | - |
| HCM Control Delay (s) | - | - | 23.8 | 9.9 | - |
| HCM Lane LOS | - | - | C | A | - |
| HCM 95th %tile Q(veh) | - | - | 1.7 | 0.5 | - |

HCM Signalized Intersection Capacity Analysis
7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-------|-------|------|------|-------|------|------|------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Future Volume (vph) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 0.95 | | 1.00 | 0.96 | | 1.00 | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1849 | | 1770 | 1765 | | 1770 | 1781 | | 1770 | 1734 | |
| Flt Permitted | 0.95 | 1.00 | | 0.59 | 1.00 | | 0.23 | 1.00 | | 0.50 | 1.00 | |
| Satd. Flow (perm) | 1770 | 1849 | | 1098 | 1765 | | 421 | 1781 | | 932 | 1734 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 146 | 263 | 14 | 99 | 849 | 455 | 3 | 165 | 68 | 507 | 250 | 215 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 13 | 0 | 0 | 10 | 0 | 0 | 21 | 0 |
| Lane Group Flow (vph) | 146 | 276 | 0 | 99 | 1291 | 0 | 3 | 223 | 0 | 507 | 444 | 0 |
| Turn Type | Split | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 18.5 | 18.5 | | 64.5 | 64.5 | | 53.5 | 53.5 | | 53.5 | 53.5 | |
| Effective Green, g (s) | 18.5 | 18.5 | | 64.5 | 64.5 | | 53.5 | 53.5 | | 53.5 | 53.5 | |
| Actuated g/C Ratio | 0.12 | 0.12 | | 0.43 | 0.43 | | 0.36 | 0.36 | | 0.36 | 0.36 | |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 218 | 228 | | 472 | 758 | | 150 | 635 | | 332 | 618 | |
| v/s Ratio Prot | 0.08 | c0.15 | | | c0.73 | | | 0.13 | | | 0.26 | |
| v/s Ratio Perm | | | | 0.09 | | | 0.01 | | | c0.54 | | |
| v/c Ratio | 0.67 | 1.21 | | 0.21 | 1.70 | | 0.02 | 0.35 | | 1.53 | 0.72 | |
| Uniform Delay, d1 | 62.8 | 65.8 | | 26.8 | 42.8 | | 31.3 | 35.5 | | 48.2 | 41.7 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 7.6 | 128.5 | | 0.2 | 322.0 | | 0.2 | 1.5 | | 252.0 | 7.1 | |
| Delay (s) | 70.4 | 194.2 | | 27.0 | 364.8 | | 31.5 | 37.0 | | 300.2 | 48.8 | |
| Level of Service | E | F | | C | F | | C | D | | F | D | |
| Approach Delay (s) | | 151.5 | | | 340.9 | | | 37.0 | | | 180.0 | |
| Approach LOS | | F | | | F | | | D | | | F | |

Intersection Summary





















| | | | |
|-----------------------------------|--------|---------------------------|------|
| HCM 2000 Control Delay | 239.3 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.57 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 13.5 |
| Intersection Capacity Utilization | 126.7% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO

01/24/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Volume (veh/h) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Future Volume (veh/h) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 146 | 263 | 0 | 99 | 849 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| Arrive On Green | 0.12 | 0.12 | 0.00 | 0.43 | 0.43 | 0.00 | 0.36 | 0.36 | 0.00 | 0.36 | 0.36 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Grp Volume(v), veh/h | 146 | 263 | 0 | 99 | 849 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Q Serve(g_s), s | 11.8 | 18.5 | 0.0 | 5.1 | 64.5 | 0.0 | 0.3 | 9.4 | 0.0 | 44.1 | 15.0 | 0.0 |
| Cycle Q Clear(g_c), s | 11.8 | 18.5 | 0.0 | 5.1 | 64.5 | 0.0 | 15.3 | 9.4 | 0.0 | 53.5 | 15.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| V/C Ratio(X) | 0.67 | 1.14 | 0.00 | 0.13 | 1.06 | 0.00 | 0.01 | 0.25 | 0.00 | 1.25 | 0.38 | 0.00 |
| Avail Cap(c_a), veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 62.8 | 65.8 | 0.0 | 25.8 | 42.8 | 0.0 | 41.5 | 34.1 | 0.0 | 55.6 | 35.9 | 0.0 |
| Incr Delay (d2), s/veh | 7.5 | 104.0 | 0.0 | 0.1 | 48.9 | 0.0 | 0.0 | 0.9 | 0.0 | 131.5 | 1.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.3 | 16.1 | 0.0 | 2.5 | 44.0 | 0.0 | 0.1 | 5.0 | 0.0 | 31.6 | 8.0 | 0.0 |
| LnGrp Delay(d),s/veh | 70.3 | 169.7 | 0.0 | 25.9 | 91.6 | 0.0 | 41.6 | 35.0 | 0.0 | 187.0 | 37.5 | 0.0 |
| LnGrp LOS | E | F | | C | F | | D | C | | F | D | |
| Approach Vol, veh/h | | 409 | | | 948 | | | 168 | | | 757 | |
| Approach Delay, s/veh | | 134.2 | | | 84.8 | | | 35.1 | | | 137.6 | |
| Approach LOS | | F | | | F | | | D | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 58.0 | | 23.0 | | 58.0 | | 69.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 53.5 | | 18.5 | | 53.5 | | 64.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 17.3 | | 20.5 | | 55.5 | | 66.5 | | | | |
| Green Ext Time (p_c), s | | 5.1 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 107.5 | | | | | | | | | |
| HCM 2010 LOS | | | F | | | | | | | | | |

Intersection

Int Delay, s/veh 19.3

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | ↑↓ | | ↓ | ↑↑ |
| Traffic Vol, veh/h | 137 | 56 | 630 | 70 | 41 | 990 |
| Future Vol, veh/h | 137 | 56 | 630 | 70 | 41 | 990 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 149 | 61 | 685 | 76 | 45 | 1076 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1350 | 380 | 0 | 0 | 761 | 0 |
| Stage 1 | 723 | - | - | - | - | - |
| Stage 2 | 627 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 142 | 618 | - | - | 847 | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 495 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | ~ 134 | 618 | - | - | 847 | - |
| Mov Cap-2 Maneuver | ~ 134 | - | - | - | - | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 469 | - | - | - | - | - |

| Approach | NW | | NE | | SW |
|----------------------|-------|--|----|--|-----|
| HCM Control Delay, s | 190.5 | | 0 | | 0.4 |
| HCM LOS | F | | | | |

| Minor Lane/Major Mvmt | NET | NERNWLn1 | SWL | SWT |
|-----------------------|-----|----------|-------|-----|
| Capacity (veh/h) | - | - 173 | 847 | - |
| HCM Lane V/C Ratio | - | - 1.213 | 0.053 | - |
| HCM Control Delay (s) | - | - 190.5 | 9.5 | - |
| HCM Lane LOS | - | - F | A | - |
| HCM 95th %tile Q(veh) | - | - 11.5 | 0.2 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM Signalized Intersection Capacity Analysis
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|------|------|------|-------|------|------|------|------|------|-------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Future Volume (vph) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.91 | | 1.00 | 0.96 | | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 3235 | | 1770 | 1787 | | 1770 | 1857 | |
| Flt Permitted | 0.46 | 1.00 | 1.00 | 0.57 | 1.00 | | 0.30 | 1.00 | | 0.48 | 1.00 | |
| Satd. Flow (perm) | 866 | 3539 | 1583 | 1069 | 3235 | | 553 | 1787 | | 891 | 1857 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 308 | 115 | 561 | 697 | 14 |
| RTOR Reduction (vph) | 0 | 0 | 122 | 0 | 156 | 0 | 0 | 17 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 50 | 259 | 35 | 220 | 195 | 0 | 110 | 406 | 0 | 561 | 710 | 0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 17.9 | 17.9 | 17.9 | 17.9 | 17.9 | | 52.5 | 52.5 | | 52.5 | 52.5 | |
| Effective Green, g (s) | 17.9 | 17.9 | 17.9 | 17.9 | 17.9 | | 52.5 | 52.5 | | 52.5 | 52.5 | |
| Actuated g/C Ratio | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | | 0.66 | 0.66 | | 0.66 | 0.66 | |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 195 | 797 | 356 | 240 | 729 | | 365 | 1181 | | 589 | 1227 | |
| v/s Ratio Prot | | 0.07 | | | 0.06 | | | 0.23 | | | | 0.38 |
| v/s Ratio Perm | 0.06 | | 0.02 | c0.21 | | | 0.20 | | | c0.63 | | |
| v/c Ratio | 0.26 | 0.32 | 0.10 | 0.92 | 0.27 | | 0.30 | 0.34 | | 0.95 | 0.58 | |
| Uniform Delay, d1 | 25.3 | 25.7 | 24.4 | 30.0 | 25.3 | | 5.7 | 5.9 | | 12.3 | 7.4 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.7 | 0.2 | 0.1 | 36.0 | 0.2 | | 2.1 | 0.8 | | 27.0 | 2.0 | |
| Delay (s) | 26.0 | 25.9 | 24.5 | 66.0 | 25.5 | | 7.8 | 6.7 | | 39.4 | 9.4 | |
| Level of Service | C | C | C | E | C | | A | A | | D | A | |
| Approach Delay (s) | | 25.5 | | | 41.1 | | | 6.9 | | | 22.6 | |
| Approach LOS | | C | | | D | | | A | | | C | |

Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay | 23.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.94 | | |
| Actuated Cycle Length (s) | 79.4 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 82.7% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Future Volume (veh/h) | 46 | 238 | 144 | 202 | 138 | 185 | 101 | 283 | 106 | 516 | 641 | 13 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 308 | 115 | 561 | 697 | 14 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 849 | 317 | 617 | 1194 | 24 |
| Arrive On Green | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| Sat Flow, veh/h | 1026 | 3539 | 1583 | 966 | 1770 | 1583 | 736 | 1294 | 483 | 960 | 1820 | 37 |
| Grp Volume(v), veh/h | 50 | 259 | 157 | 220 | 150 | 201 | 110 | 0 | 423 | 561 | 0 | 711 |
| Grp Sat Flow(s),veh/h/ln | 1026 | 1770 | 1583 | 966 | 1770 | 1583 | 736 | 0 | 1777 | 960 | 0 | 1856 |
| Q Serve(g_s), s | 3.6 | 4.9 | 6.8 | 13.6 | 5.7 | 8.9 | 7.8 | 0.0 | 8.6 | 43.9 | 0.0 | 17.1 |
| Cycle Q Clear(g_c), s | 12.6 | 4.9 | 6.8 | 18.5 | 5.7 | 8.9 | 24.9 | 0.0 | 8.6 | 52.5 | 0.0 | 17.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.27 | 1.00 | | 0.02 |
| Lane Grp Cap(c), veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 0 | 1166 | 617 | 0 | 1218 |
| V/C Ratio(X) | 0.24 | 0.32 | 0.43 | 0.86 | 0.37 | 0.55 | 0.26 | 0.00 | 0.36 | 0.91 | 0.00 | 0.58 |
| Avail Cap(c_a), veh/h | 213 | 818 | 366 | 255 | 409 | 366 | 416 | 0 | 1166 | 617 | 0 | 1218 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 32.6 | 25.5 | 26.2 | 34.9 | 25.8 | 27.1 | 14.6 | 0.0 | 6.2 | 19.4 | 0.0 | 7.7 |
| Incr Delay (d2), s/veh | 0.6 | 0.2 | 0.8 | 24.9 | 0.5 | 1.7 | 1.6 | 0.0 | 0.9 | 19.7 | 0.0 | 2.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.1 | 2.4 | 3.0 | 6.6 | 2.9 | 4.1 | 1.8 | 0.0 | 4.4 | 15.7 | 0.0 | 9.2 |
| LnGrp Delay(d),s/veh | 33.2 | 25.7 | 27.0 | 59.8 | 26.4 | 28.8 | 16.2 | 0.0 | 7.1 | 39.1 | 0.0 | 9.7 |
| LnGrp LOS | C | C | C | E | C | C | B | | A | D | | A |
| Approach Vol, veh/h | | 466 | | | 571 | | | 533 | | | 1272 | |
| Approach Delay, s/veh | | 27.0 | | | 40.1 | | | 9.0 | | | 22.7 | |
| Approach LOS | | C | | | D | | | A | | | C | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 57.0 | | 23.0 | | 57.0 | | 23.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 52.5 | | 18.5 | | 52.5 | | 18.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 26.9 | | 14.6 | | 54.5 | | 20.5 | | | | |
| Green Ext Time (p_c), s | | 14.3 | | 2.1 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 24.3 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis
 18: New Collector 1 & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| | → | ↘ | ↙ | ← | ↖ | ↗ |
|------------------------|-------|------|------|------|-------|------|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↙ | ↑ | ↘ | |
| Traffic Volume (vph) | 318 | 40 | 61 | 191 | 165 | 110 |
| Future Volume (vph) | 318 | 40 | 61 | 191 | 165 | 110 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.95 | |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | |
| Satd. Flow (prot) | 1863 | 1583 | 1770 | 1863 | 1711 | |
| Flt Permitted | 1.00 | 1.00 | 0.41 | 1.00 | 0.97 | |
| Satd. Flow (perm) | 1863 | 1583 | 763 | 1863 | 1711 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 346 | 43 | 66 | 208 | 179 | 120 |
| RTOR Reduction (vph) | 0 | 30 | 0 | 0 | 33 | 0 |
| Lane Group Flow (vph) | 346 | 13 | 66 | 208 | 266 | 0 |
| Turn Type | NA | Perm | Perm | NA | Prot | |
| Protected Phases | 4 | | | 8 | 2 | |
| Permitted Phases | | 4 | 8 | | | |
| Actuated Green, G (s) | 14.5 | 14.5 | 14.5 | 14.5 | 25.7 | |
| Effective Green, g (s) | 14.5 | 14.5 | 14.5 | 14.5 | 25.7 | |
| Actuated g/C Ratio | 0.29 | 0.29 | 0.29 | 0.29 | 0.52 | |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 549 | 466 | 224 | 549 | 893 | |
| v/s Ratio Prot | c0.19 | | | 0.11 | c0.16 | |
| v/s Ratio Perm | | 0.01 | 0.09 | | | |
| v/c Ratio | 0.63 | 0.03 | 0.29 | 0.38 | 0.30 | |
| Uniform Delay, d1 | 15.0 | 12.3 | 13.4 | 13.8 | 6.6 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.4 | 0.0 | 0.7 | 0.4 | 0.9 | |
| Delay (s) | 17.4 | 12.4 | 14.1 | 14.2 | 7.5 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | 16.8 | | | 14.2 | 7.5 | |
| Approach LOS | B | | | B | A | |

| Intersection Summary | | | |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay | 13.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 49.2 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 48.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

Intersection

Int Delay, s/veh 6.7

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↕ | | | ↕ | ↕ | ↕ |
| Traffic Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Future Vol, veh/h | 110 | 165 | 30 | 61 | 349 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | 250 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 120 | 179 | 33 | 66 | 379 | 77 |

| Major/Minor | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 511 | 379 | 0 |
| Stage 1 | 379 | - | - |
| Stage 2 | 132 | - | - |
| Critical Hdwy | 7.12 | 6.22 | 4.12 |
| Critical Hdwy Stg 1 | 6.12 | - | - |
| Critical Hdwy Stg 2 | 6.12 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 |
| Pot Cap-1 Maneuver | 473 | 668 | 1179 |
| Stage 1 | 643 | - | - |
| Stage 2 | 871 | - | - |
| Platoon blocked, % | | | - |
| Mov Cap-1 Maneuver | 463 | 668 | 1179 |
| Mov Cap-2 Maneuver | 463 | - | - |
| Stage 1 | 624 | - | - |
| Stage 2 | 846 | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 18.2 | 2.7 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1179 | - | 567 | - | - |
| HCM Lane V/C Ratio | 0.028 | - | 0.527 | - | - |
| HCM Control Delay (s) | 8.1 | 0 | 18.2 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 3.1 | - | - |

Intersection

Int Delay, s/veh 41.2

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↕ | | ↘ | ↗ |
| Traffic Vol, veh/h | 329 | 643 | 594 | 81 | 48 | 101 |
| Future Vol, veh/h | 329 | 643 | 594 | 81 | 48 | 101 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 358 | 699 | 646 | 88 | 52 | 110 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 734 | 0 | 2104 |
| Stage 1 | - | - | 690 |
| Stage 2 | - | - | 1414 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 871 | - | 57 |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 225 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 871 | - | ~ 34 |
| Mov Cap-2 Maneuver | - | - | ~ 34 |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 133 |

| Approach | EB | WB | SW |
|----------------------|-----|----|----------|
| HCM Control Delay, s | 4.1 | 0 | \$ 469.9 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|-----------|
| Capacity (veh/h) | 871 | - | - | - | 91 |
| HCM Lane V/C Ratio | 0.411 | - | - | - | 1.78 |
| HCM Control Delay (s) | 12 | - | - | - | -\$ 469.9 |
| HCM Lane LOS | B | - | - | - | F |
| HCM 95th %tile Q(veh) | 2 | - | - | - | 13.4 |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 22.6

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ¶¶ | | ↑↓ | | ¶ | ↑↑ |
| Traffic Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Future Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 28 | 145 | 1378 | 30 | 165 | 967 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 2207 | 704 | 0 | 0 | 1409 | 0 |
| Stage 1 | 1393 | - | - | - | - | - |
| Stage 2 | 814 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 38 | 379 | - | - | 480 | - |
| Stage 1 | 195 | - | - | - | - | - |
| Stage 2 | 396 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | ~ 25 | 379 | - | - | 480 | - |
| Mov Cap-2 Maneuver | ~ 25 | - | - | - | - | - |
| Stage 1 | 195 | - | - | - | - | - |
| Stage 2 | 260 | - | - | - | - | - |

| Approach | WB | | NB | | SB |
|----------------------|----------|--|----|--|-----|
| HCM Control Delay, s | \$ 339.8 | | 0 | | 2.4 |
| HCM LOS | F | | | | |





















| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|------------|-------|-----|
| Capacity (veh/h) | - | - 114 | 480 | - |
| HCM Lane V/C Ratio | - | - 1.516 | 0.344 | - |
| HCM Control Delay (s) | - | - \$ 339.8 | 16.4 | - |
| HCM Lane LOS | - | - F | C | - |
| HCM 95th %tile Q(veh) | - | - 12.5 | 1.5 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Volume (veh/h) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Future Volume (veh/h) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 357 | 1067 | 0 | 116 | 551 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| Arrive On Green | 0.24 | 0.24 | 0.00 | 0.27 | 0.27 | 0.00 | 0.40 | 0.40 | 0.00 | 0.40 | 0.40 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Grp Volume(v), veh/h | 357 | 1067 | 0 | 116 | 551 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Q Serve(g_s), s | 28.6 | 36.5 | 0.0 | 7.7 | 40.5 | 0.0 | 2.4 | 17.4 | 0.0 | 42.1 | 11.0 | 0.0 |
| Cycle Q Clear(g_c), s | 28.6 | 36.5 | 0.0 | 7.7 | 40.5 | 0.0 | 13.4 | 17.4 | 0.0 | 59.5 | 11.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| V/C Ratio(X) | 0.83 | 2.35 | 0.00 | 0.24 | 1.10 | 0.00 | 0.06 | 0.41 | 0.00 | 2.24 | 0.27 | 0.00 |
| Avail Cap(c_a), veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 53.8 | 56.8 | 0.0 | 42.8 | 54.7 | 0.0 | 35.2 | 32.5 | 0.0 | 56.8 | 30.6 | 0.0 |
| Incr Delay (d2), s/veh | 12.5 | 616.1 | 0.0 | 0.3 | 68.7 | 0.0 | 0.3 | 1.7 | 0.0 | 566.2 | 0.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 15.5 | 96.3 | 0.0 | 3.8 | 30.4 | 0.0 | 0.8 | 9.3 | 0.0 | 69.5 | 5.9 | 0.0 |
| LnGrp Delay(d),s/veh | 66.3 | 672.9 | 0.0 | 43.0 | 123.4 | 0.0 | 35.4 | 34.2 | 0.0 | 623.1 | 31.5 | 0.0 |
| LnGrp LOS | E | F | | D | F | | D | C | | F | C | |
| Approach Vol, veh/h | | 1424 | | | 667 | | | 327 | | | 985 | |
| Approach Delay, s/veh | | 520.8 | | | 109.5 | | | 34.3 | | | 501.8 | |
| Approach LOS | | F | | | F | | | C | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 64.0 | | 41.0 | | 64.0 | | 45.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 59.5 | | 36.5 | | 59.5 | | 40.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 19.4 | | 38.5 | | 61.5 | | 42.5 | | | | |
| Green Ext Time (p_c), s | | 9.6 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 387.9 | | | | | | | | |
| HCM 2010 LOS | | | | F | | | | | | | | |

Intersection

Int Delay, s/veh 76

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | ↕↔ | | ↔ | ↕↕ |
| Traffic Vol, veh/h | 105 | 97 | 977 | 162 | 72 | 825 |
| Future Vol, veh/h | 105 | 97 | 977 | 162 | 72 | 825 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 114 | 105 | 1062 | 176 | 78 | 897 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1755 | 619 | 0 | 0 | 1238 | 0 |
| Stage 1 | 1150 | - | - | - | - | - |
| Stage 2 | 605 | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 54 | 432 | - | - | 558 | - |
| Stage 1 | 211 | - | - | - | - | - |
| Stage 2 | 451 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | ~ 48 | 432 | - | - | 558 | - |
| Mov Cap-2 Maneuver | ~ 48 | - | - | - | - | - |
| Stage 1 | 211 | - | - | - | - | - |
| Stage 2 | 388 | - | - | - | - | - |

| Approach | NW | | NE | | SW |
|----------------------|----------|--|----|--|----|
| HCM Control Delay, s | \$ 837.9 | | 0 | | 1 |
| HCM LOS | F | | | | |

| Minor Lane/Major Mvmt | NET | NER | NWLn1 | SWL | SWT |
|-----------------------|-----|-----|----------|------|-----|
| Capacity (veh/h) | - | - | 84 | 558 | - |
| HCM Lane V/C Ratio | - | - | 2.614 | 0.14 | - |
| HCM Control Delay (s) | - | - | \$ 837.9 | 12.5 | - |
| HCM Lane LOS | - | - | F | B | - |
| HCM 95th %tile Q(veh) | - | - | 20.9 | 0.5 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 29 | 190 | 136 | 104 | 190 | 148 | 221 | 808 | 56 | 108 | 611 | 60 |
| Future Volume (veh/h) | 29 | 190 | 136 | 104 | 190 | 148 | 221 | 808 | 56 | 108 | 611 | 60 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 32 | 207 | 148 | 113 | 207 | 161 | 240 | 878 | 61 | 117 | 664 | 65 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 389 | 1017 | 455 | 438 | 558 | 413 | 283 | 818 | 57 | 190 | 794 | 78 |
| Arrive On Green | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1010 | 3539 | 1583 | 1022 | 1941 | 1437 | 723 | 1722 | 120 | 594 | 1670 | 164 |
| Grp Volume(v), veh/h | 32 | 207 | 148 | 113 | 188 | 180 | 240 | 0 | 939 | 117 | 0 | 729 |
| Grp Sat Flow(s),veh/h/ln | 1010 | 1770 | 1583 | 1022 | 1770 | 1609 | 723 | 0 | 1842 | 594 | 0 | 1834 |
| Q Serve(g_s), s | 1.0 | 1.7 | 2.8 | 3.6 | 3.2 | 3.4 | 4.9 | 0.0 | 18.0 | 0.0 | 0.0 | 13.1 |
| Cycle Q Clear(g_c), s | 4.4 | 1.7 | 2.8 | 5.2 | 3.2 | 3.4 | 18.0 | 0.0 | 18.0 | 18.0 | 0.0 | 13.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.89 | 1.00 | | 0.06 | 1.00 | | 0.09 |
| Lane Grp Cap(c), veh/h | 389 | 1017 | 455 | 438 | 508 | 462 | 283 | 0 | 875 | 190 | 0 | 871 |
| V/C Ratio(X) | 0.08 | 0.20 | 0.33 | 0.26 | 0.37 | 0.39 | 0.85 | 0.00 | 1.07 | 0.62 | 0.00 | 0.84 |
| Avail Cap(c_a), veh/h | 579 | 1682 | 752 | 630 | 841 | 765 | 283 | 0 | 875 | 190 | 0 | 871 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 12.6 | 10.2 | 10.6 | 12.2 | 10.8 | 10.8 | 18.0 | 0.0 | 9.9 | 18.9 | 0.0 | 8.7 |
| Incr Delay (d2), s/veh | 0.1 | 0.1 | 0.4 | 0.3 | 0.4 | 0.5 | 25.7 | 0.0 | 52.0 | 14.0 | 0.0 | 9.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.3 | 0.8 | 1.2 | 1.0 | 1.6 | 1.6 | 4.4 | 0.0 | 21.4 | 1.9 | 0.0 | 8.8 |
| LnGrp Delay(d),s/veh | 12.7 | 10.3 | 11.0 | 12.5 | 11.2 | 11.4 | 43.6 | 0.0 | 61.9 | 33.0 | 0.0 | 18.0 |
| LnGrp LOS | B | B | B | B | B | B | D | | F | C | | B |
| Approach Vol, veh/h | | 387 | | | 481 | | | 1179 | | | | 846 |
| Approach Delay, s/veh | | 10.8 | | | 11.6 | | | 58.2 | | | | 20.1 |
| Approach LOS | | B | | | B | | | E | | | | C |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 22.5 | | 15.4 | | 22.5 | | 15.4 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 18.0 | | 18.0 | | 18.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 20.0 | | 6.4 | | 20.0 | | 7.2 | | | | |
| Green Ext Time (p_c), s | | 0.0 | | 3.8 | | 0.0 | | 3.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 33.0 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |

Intersection

Int Delay, s/veh 3.8

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑ | | ↑ | ↑ | ↑ | |
| Traffic Vol, veh/h | 248 | 193 | 128 | 343 | 71 | 107 |
| Future Vol, veh/h | 248 | 193 | 128 | 343 | 71 | 107 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 250 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 270 | 210 | 139 | 373 | 77 | 116 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 1025 |
| Stage 1 | - | - | 374 |
| Stage 2 | - | - | 651 |
| Critical Hdwy | - | 4.12 | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | - | 2.218 | 3.518 |
| Pot Cap-1 Maneuver | - | 1083 | 260 |
| Stage 1 | - | - | 696 |
| Stage 2 | - | - | 519 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | 1083 | 227 |
| Mov Cap-2 Maneuver | - | - | 346 |
| Stage 1 | - | - | 696 |
| Stage 2 | - | - | 452 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 2.4 | 17.1 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 488 | - | - | 1083 | - |
| HCM Lane V/C Ratio | 0.396 | - | - | 0.128 | - |
| HCM Control Delay (s) | 17.1 | - | - | 8.8 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 1.9 | - | - | 0.4 | - |

Intersection

Int Delay, s/veh 6.8

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | | | ↗ | ↗ | |
| Traffic Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Future Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 135 | 58 | 174 | 237 | 104 | 174 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|----------------------|--------|-------|--------|---|--------|---|
| Conflicting Flow All | 776 | 191 | 278 | 0 | - | 0 |
| Stage 1 | 191 | - | - | - | - | - |
| Stage 2 | 585 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 366 | 851 | 1285 | - | - | - |
| Stage 1 | 841 | - | - | - | - | - |
| Stage 2 | 557 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 309 | 851 | 1285 | - | - | - |
| Mov Cap-2 Maneuver | 309 | - | - | - | - | - |
| Stage 1 | 841 | - | - | - | - | - |
| Stage 2 | 470 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 23.6 | 3.5 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1285 | - | 382 | - | - |
| HCM Lane V/C Ratio | 0.135 | - | 0.504 | - | - |
| HCM Control Delay (s) | 8.2 | 0 | 23.6 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.5 | - | 2.7 | - | - |

Intersection

Int Delay, s/veh 41.2

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↗ | | ↘ | |
| Traffic Vol, veh/h | 329 | 643 | 594 | 81 | 48 | 101 |
| Future Vol, veh/h | 329 | 643 | 594 | 81 | 48 | 101 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 358 | 699 | 646 | 88 | 52 | 110 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 734 | 0 | 690 |
| Stage 1 | - | - | 690 |
| Stage 2 | - | - | 1414 |
| Critical Hdwy | 4.12 | - | 6.22 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.318 |
| Pot Cap-1 Maneuver | 871 | - | 445 |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 225 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 871 | - | 445 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 133 |

| Approach | EB | WB | SW |
|----------------------|-----|----|----------|
| HCM Control Delay, s | 4.1 | 0 | \$ 469.9 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|----------|
| Capacity (veh/h) | 871 | - | - | - | 91 |
| HCM Lane V/C Ratio | 0.411 | - | - | - | 1.78 |
| HCM Control Delay (s) | 12 | - | - | - | \$ 469.9 |
| HCM Lane LOS | B | - | - | - | F |
| HCM 95th %tile Q(veh) | 2 | - | - | - | 13.4 |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 6.8

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↕↔ | | ↘ | ↗ |
| Traffic Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Future Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 100 | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 28 | 145 | 1378 | 30 | 165 | 967 |

Major/Minor

| | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 2207 | 704 | 0 | 0 | 1409 | 0 |
| Stage 1 | 1393 | - | - | - | - | - |
| Stage 2 | 814 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 38 | 379 | - | - | 480 | - |
| Stage 1 | 195 | - | - | - | - | - |
| Stage 2 | 396 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 25 | 379 | - | - | 480 | - |
| Mov Cap-2 Maneuver | ~ 25 | - | - | - | - | - |
| Stage 1 | 195 | - | - | - | - | - |
| Stage 2 | 260 | - | - | - | - | - |

Approach

| | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 90.6 | 0 | 2.4 |
| HCM LOS | F | | |

Minor Lane/Major Mvmt





















| | NBT | NBR | WBLn1 | WBLn2 | SBL | SBT |
|-----------------------|-----|-----|-------|-------|-------|-----|
| Capacity (veh/h) | - | - | 25 | 379 | 480 | - |
| HCM Lane V/C Ratio | - | - | 1.13 | 0.381 | 0.344 | - |
| HCM Control Delay (s) | - | - | 450.6 | 20.2 | 16.4 | - |
| HCM Lane LOS | - | - | F | C | C | - |
| HCM 95th %tile Q(veh) | - | - | 3.5 | 1.7 | 1.5 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
01/24/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Volume (veh/h) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Future Volume (veh/h) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 357 | 1067 | 0 | 116 | 551 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| Arrive On Green | 0.24 | 0.24 | 0.00 | 0.27 | 0.27 | 0.00 | 0.40 | 0.40 | 0.00 | 0.40 | 0.40 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Grp Volume(v), veh/h | 357 | 1067 | 0 | 116 | 551 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Q Serve(g_s), s | 28.6 | 36.5 | 0.0 | 7.7 | 40.5 | 0.0 | 2.4 | 17.4 | 0.0 | 42.1 | 11.0 | 0.0 |
| Cycle Q Clear(g_c), s | 28.6 | 36.5 | 0.0 | 7.7 | 40.5 | 0.0 | 13.4 | 17.4 | 0.0 | 59.5 | 11.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| V/C Ratio(X) | 0.83 | 2.35 | 0.00 | 0.24 | 1.10 | 0.00 | 0.06 | 0.41 | 0.00 | 2.24 | 0.27 | 0.00 |
| Avail Cap(c_a), veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 53.8 | 56.8 | 0.0 | 42.8 | 54.7 | 0.0 | 35.2 | 32.5 | 0.0 | 56.8 | 30.6 | 0.0 |
| Incr Delay (d2), s/veh | 12.5 | 616.1 | 0.0 | 0.3 | 68.7 | 0.0 | 0.3 | 1.7 | 0.0 | 566.2 | 0.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 15.5 | 96.3 | 0.0 | 3.8 | 30.4 | 0.0 | 0.8 | 9.3 | 0.0 | 69.5 | 5.9 | 0.0 |
| LnGrp Delay(d),s/veh | 66.3 | 672.9 | 0.0 | 43.0 | 123.4 | 0.0 | 35.4 | 34.2 | 0.0 | 623.1 | 31.5 | 0.0 |
| LnGrp LOS | E | F | | D | F | | D | C | | F | C | |
| Approach Vol, veh/h | | 1424 | | | 667 | | | 327 | | | 985 | |
| Approach Delay, s/veh | | 520.8 | | | 109.5 | | | 34.3 | | | 501.8 | |
| Approach LOS | | F | | | F | | | C | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 64.0 | | 41.0 | | 64.0 | | 45.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 59.5 | | 36.5 | | 59.5 | | 40.5 | | | | |
| Max Q Clear Time (g_c+l1), s | | 19.4 | | 38.5 | | 61.5 | | 42.5 | | | | |
| Green Ext Time (p_c), s | | 9.6 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 387.9 | | | | | | | | | |
| HCM 2010 LOS | | | F | | | | | | | | | |

Intersection

Int Delay, s/veh 24.6

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↕↔ | | ↘ | ↕↕ |
| Traffic Vol, veh/h | 105 | 97 | 977 | 162 | 72 | 825 |
| Future Vol, veh/h | 105 | 97 | 977 | 162 | 72 | 825 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 100 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 114 | 105 | 1062 | 176 | 78 | 897 |

| Major/Minor | Minor1 | Minor2 | Major1 | Major2 | Major3 | Major4 |
|----------------------|--------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1755 | 619 | 0 | 0 | 1238 | 0 |
| Stage 1 | 1150 | - | - | - | - | - |
| Stage 2 | 605 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 76 | 432 | - | - | 558 | - |
| Stage 1 | 264 | - | - | - | - | - |
| Stage 2 | 508 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 65 | 432 | - | - | 558 | - |
| Mov Cap-2 Maneuver | ~ 65 | - | - | - | - | - |
| Stage 1 | 264 | - | - | - | - | - |
| Stage 2 | 437 | - | - | - | - | - |

| Approach | NW | NE | SW |
|----------------------|-------|----|----|
| HCM Control Delay, s | 267.6 | 0 | 1 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NET | NERNWLn1 | NWLn2 | SWL | SWT |
|-----------------------|-----|----------|-------------|------|-----|
| Capacity (veh/h) | - | - | 65 432 | 558 | - |
| HCM Lane V/C Ratio | - | - | 1.756 0.244 | 0.14 | - |
| HCM Control Delay (s) | - | - | \$ 500.1 16 | 12.5 | - |
| HCM Lane LOS | - | - | F C | B | - |
| HCM 95th %tile Q(veh) | - | - | 10.3 0.9 | 0.5 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 29 | 190 | 136 | 104 | 190 | 148 | 221 | 808 | 56 | 108 | 611 | 60 |
| Future Volume (veh/h) | 29 | 190 | 136 | 104 | 190 | 148 | 221 | 808 | 56 | 108 | 611 | 60 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 32 | 207 | 148 | 113 | 207 | 161 | 240 | 878 | 61 | 117 | 664 | 65 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 389 | 1017 | 455 | 438 | 558 | 413 | 283 | 818 | 57 | 190 | 794 | 78 |
| Arrive On Green | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1010 | 3539 | 1583 | 1022 | 1941 | 1437 | 723 | 1722 | 120 | 594 | 1670 | 164 |
| Grp Volume(v), veh/h | 32 | 207 | 148 | 113 | 188 | 180 | 240 | 0 | 939 | 117 | 0 | 729 |
| Grp Sat Flow(s),veh/h/ln | 1010 | 1770 | 1583 | 1022 | 1770 | 1609 | 723 | 0 | 1842 | 594 | 0 | 1834 |
| Q Serve(g_s), s | 1.0 | 1.7 | 2.8 | 3.6 | 3.2 | 3.4 | 4.9 | 0.0 | 18.0 | 0.0 | 0.0 | 13.1 |
| Cycle Q Clear(g_c), s | 4.4 | 1.7 | 2.8 | 5.2 | 3.2 | 3.4 | 18.0 | 0.0 | 18.0 | 18.0 | 0.0 | 13.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.89 | 1.00 | | 0.06 | 1.00 | | 0.09 |
| Lane Grp Cap(c), veh/h | 389 | 1017 | 455 | 438 | 508 | 462 | 283 | 0 | 875 | 190 | 0 | 871 |
| V/C Ratio(X) | 0.08 | 0.20 | 0.33 | 0.26 | 0.37 | 0.39 | 0.85 | 0.00 | 1.07 | 0.62 | 0.00 | 0.84 |
| Avail Cap(c_a), veh/h | 579 | 1682 | 752 | 630 | 841 | 765 | 283 | 0 | 875 | 190 | 0 | 871 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 12.6 | 10.2 | 10.6 | 12.2 | 10.8 | 10.8 | 18.0 | 0.0 | 9.9 | 18.9 | 0.0 | 8.7 |
| Incr Delay (d2), s/veh | 0.1 | 0.1 | 0.4 | 0.3 | 0.4 | 0.5 | 25.7 | 0.0 | 52.0 | 14.0 | 0.0 | 9.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.3 | 0.8 | 1.2 | 1.0 | 1.6 | 1.6 | 4.4 | 0.0 | 21.4 | 1.9 | 0.0 | 8.8 |
| LnGrp Delay(d),s/veh | 12.7 | 10.3 | 11.0 | 12.5 | 11.2 | 11.4 | 43.6 | 0.0 | 61.9 | 33.0 | 0.0 | 18.0 |
| LnGrp LOS | B | B | B | B | B | B | D | | F | C | | B |
| Approach Vol, veh/h | | 387 | | | 481 | | | 1179 | | | | 846 |
| Approach Delay, s/veh | | 10.8 | | | 11.6 | | | 58.2 | | | | 20.1 |
| Approach LOS | | B | | | B | | | E | | | | C |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 22.5 | | 15.4 | | 22.5 | | 15.4 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 18.0 | | 18.0 | | 18.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 20.0 | | 6.4 | | 20.0 | | 7.2 | | | | |
| Green Ext Time (p_c), s | | 0.0 | | 3.8 | | 0.0 | | 3.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 33.0 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |

Intersection

Int Delay, s/veh 4.1

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | ↔ | | ↔ | |
| Traffic Vol, veh/h | 248 | 193 | 128 | 343 | 71 | 107 |
| Future Vol, veh/h | 248 | 193 | 128 | 343 | 71 | 107 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 250 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 270 | 210 | 139 | 373 | 77 | 116 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 1025 |
| Stage 1 | - | - | 374 |
| Stage 2 | - | - | 651 |
| Critical Hdwy | - | 4.12 | 7.12 |
| Critical Hdwy Stg 1 | - | - | 6.12 |
| Critical Hdwy Stg 2 | - | - | 6.12 |
| Follow-up Hdwy | - | 2.218 | 3.518 |
| Pot Cap-1 Maneuver | - | 1083 | 213 |
| Stage 1 | - | - | 647 |
| Stage 2 | - | - | 457 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | 1083 | 192 |
| Mov Cap-2 Maneuver | - | - | 305 |
| Stage 1 | - | - | 647 |
| Stage 2 | - | - | 398 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 2.4 | 18.7 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 454 | - | - | 1083 | - |
| HCM Lane V/C Ratio | 0.426 | - | - | 0.128 | - |
| HCM Control Delay (s) | 18.7 | - | - | 8.8 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 2.1 | - | - | 0.4 | - |

Intersection

Int Delay, s/veh 6.8

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | | ↑ | ↑ | |
| Traffic Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Future Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 135 | 58 | 174 | 237 | 104 | 174 |

| Major/Minor | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 776 | 191 | 278 |
| Stage 1 | 191 | - | - |
| Stage 2 | 585 | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 |
| Pot Cap-1 Maneuver | 366 | 851 | 1285 |
| Stage 1 | 841 | - | - |
| Stage 2 | 557 | - | - |
| Platoon blocked, % | | | - |
| Mov Cap-1 Maneuver | 309 | 851 | 1285 |
| Mov Cap-2 Maneuver | 309 | - | - |
| Stage 1 | 841 | - | - |
| Stage 2 | 470 | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 23.6 | 3.5 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1285 | - | 382 | - | - |
| HCM Lane V/C Ratio | 0.135 | - | 0.504 | - | - |
| HCM Control Delay (s) | 8.2 | 0 | 23.6 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.5 | - | 2.7 | - | - |

Intersection

Int Delay, s/veh 7.5

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↘ | | ↘ | |
| Traffic Vol, veh/h | 229 | 643 | 594 | 81 | 33 | 68 |
| Future Vol, veh/h | 229 | 643 | 594 | 81 | 33 | 68 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 249 | 699 | 646 | 88 | 36 | 74 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 734 | 0 | 1887 |
| Stage 1 | - | - | 690 |
| Stage 2 | - | - | 1197 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 871 | - | 77 |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 286 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 871 | - | 55 |
| Mov Cap-2 Maneuver | - | - | 55 |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 204 |

| Approach | EB | WB | SW |
|----------------------|-----|----|------|
| HCM Control Delay, s | 2.8 | 0 | 98.7 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 871 | - | - | - | 134 |
| HCM Lane V/C Ratio | 0.286 | - | - | - | 0.819 |
| HCM Control Delay (s) | 10.8 | - | - | - | 98.7 |
| HCM Lane LOS | B | - | - | - | F |
| HCM 95th %tile Q(veh) | 1.2 | - | - | - | 5.1 |

Intersection

Int Delay, s/veh 35.4

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | ↕↕ | | ↔ | ↕↕ |
| Traffic Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Future Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 28 | 145 | 1378 | 30 | 165 | 967 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 2207 | 704 | 0 | 0 | 1409 | 0 |
| Stage 1 | 1393 | - | - | - | - | - |
| Stage 2 | 814 | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 25 | 379 | - | - | 480 | - |
| Stage 1 | 149 | - | - | - | - | - |
| Stage 2 | 338 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 18 | 379 | - | - | 480 | - |
| Mov Cap-2 Maneuver | ~ 18 | - | - | - | - | - |
| Stage 1 | 149 | - | - | - | - | - |
| Stage 2 | 222 | - | - | - | - | - |

| Approach | WB | | NB | | SB |
|----------------------|----------|--|----|--|-----|
| HCM Control Delay, s | \$ 540.7 | | 0 | | 2.4 |
| HCM LOS | F | | | | |





















| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|-----------------------|-----|-----|----------|-------|-----|
| Capacity (veh/h) | - | - | 89 | 480 | - |
| HCM Lane V/C Ratio | - | - | 1.942 | 0.344 | - |
| HCM Control Delay (s) | - | - | \$ 540.7 | 16.4 | - |
| HCM Lane LOS | - | - | F | C | - |
| HCM 95th %tile Q(veh) | - | - | 14.8 | 1.5 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Volume (veh/h) | 328 | 562 | 13 | 107 | 78 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Future Volume (veh/h) | 328 | 562 | 13 | 107 | 78 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 357 | 611 | 0 | 116 | 85 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 403 | 424 | 0 | 153 | 161 | 0 | 671 | 1063 | 0 | 587 | 1063 | 0 |
| Arrive On Green | 0.23 | 0.23 | 0.00 | 0.09 | 0.09 | 0.00 | 0.57 | 0.57 | 0.00 | 0.57 | 0.57 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Grp Volume(v), veh/h | 357 | 611 | 0 | 116 | 85 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Q Serve(g_s), s | 22.7 | 26.5 | 0.0 | 7.5 | 5.1 | 0.0 | 1.3 | 9.6 | 0.0 | 56.9 | 6.1 | 0.0 |
| Cycle Q Clear(g_c), s | 22.7 | 26.5 | 0.0 | 7.5 | 5.1 | 0.0 | 7.4 | 9.6 | 0.0 | 66.5 | 6.1 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 403 | 424 | 0 | 153 | 161 | 0 | 671 | 1063 | 0 | 587 | 1063 | 0 |
| V/C Ratio(X) | 0.88 | 1.44 | 0.00 | 0.76 | 0.53 | 0.00 | 0.04 | 0.28 | 0.00 | 1.34 | 0.19 | 0.00 |
| Avail Cap(c_a), veh/h | 403 | 424 | 0 | 358 | 376 | 0 | 671 | 1063 | 0 | 587 | 1063 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 43.5 | 45.0 | 0.0 | 52.1 | 51.0 | 0.0 | 13.8 | 12.8 | 0.0 | 32.8 | 12.1 | 0.0 |
| Incr Delay (d2), s/veh | 20.2 | 212.1 | 0.0 | 7.5 | 2.7 | 0.0 | 0.1 | 0.7 | 0.0 | 162.1 | 0.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 13.4 | 38.5 | 0.0 | 4.0 | 2.7 | 0.0 | 0.4 | 5.1 | 0.0 | 45.1 | 3.3 | 0.0 |
| LnGrp Delay(d),s/veh | 63.8 | 257.2 | 0.0 | 59.6 | 53.7 | 0.0 | 13.9 | 13.5 | 0.0 | 194.9 | 12.4 | 0.0 |
| LnGrp LOS | E | F | | E | D | | B | B | | F | B | |
| Approach Vol, veh/h | | 968 | | | 201 | | | 327 | | | 985 | |
| Approach Delay, s/veh | | 185.8 | | | 57.1 | | | 13.5 | | | 157.5 | |
| Approach LOS | | F | | | E | | | B | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 71.0 | | 31.0 | | 71.0 | | 14.5 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 66.5 | | 26.5 | | 66.5 | | 23.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 11.6 | | 28.5 | | 68.5 | | 9.5 | | | | |
| Green Ext Time (p_c), s | | 10.0 | | 0.0 | | 0.0 | | 0.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 141.5 | | | | | | | | | |
| HCM 2010 LOS | | | F | | | | | | | | | |

Intersection

Int Delay, s/veh 49.5

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | ↑↓ | | ↔ | ↑↑ |
| Traffic Vol, veh/h | 105 | 97 | 977 | 162 | 72 | 825 |
| Future Vol, veh/h | 105 | 97 | 977 | 162 | 72 | 825 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 114 | 105 | 1062 | 176 | 78 | 897 |

| Major/Minor | Minor1 | Minor2 | Major1 | Major2 | Major3 | Major4 |
|----------------------|--------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1755 | 619 | 0 | 0 | 1238 | 0 |
| Stage 1 | 1150 | - | - | - | - | - |
| Stage 2 | 605 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 76 | 432 | - | - | 558 | - |
| Stage 1 | 264 | - | - | - | - | - |
| Stage 2 | 508 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 65 | 432 | - | - | 558 | - |
| Mov Cap-2 Maneuver | ~ 65 | - | - | - | - | - |
| Stage 1 | 264 | - | - | - | - | - |
| Stage 2 | 437 | - | - | - | - | - |

| Approach | NW | NE | SW |
|----------------------|--------|----|----|
| HCM Control Delay, s | \$ 544 | 0 | 1 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NET | NERNWLn1 | SWL | SWT |
|-----------------------|-----|----------|------|-----|
| Capacity (veh/h) | - | - 110 | 558 | - |
| HCM Lane V/C Ratio | - | - 1.996 | 0.14 | - |
| HCM Control Delay (s) | - | - \$ 544 | 12.5 | - |
| HCM Lane LOS | - | - F | B | - |
| HCM 95th %tile Q(veh) | - | - 18.2 | 0.5 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 29 | 190 | 136 | 104 | 190 | 148 | 221 | 808 | 56 | 108 | 611 | 60 |
| Future Volume (veh/h) | 29 | 190 | 136 | 104 | 190 | 148 | 221 | 808 | 56 | 108 | 611 | 60 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 32 | 207 | 148 | 113 | 207 | 161 | 240 | 878 | 61 | 117 | 664 | 65 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 389 | 1017 | 455 | 438 | 558 | 413 | 283 | 818 | 57 | 190 | 794 | 78 |
| Arrive On Green | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1010 | 3539 | 1583 | 1022 | 1941 | 1437 | 723 | 1722 | 120 | 594 | 1670 | 164 |
| Grp Volume(v), veh/h | 32 | 207 | 148 | 113 | 188 | 180 | 240 | 0 | 939 | 117 | 0 | 729 |
| Grp Sat Flow(s),veh/h/ln | 1010 | 1770 | 1583 | 1022 | 1770 | 1609 | 723 | 0 | 1842 | 594 | 0 | 1834 |
| Q Serve(g_s), s | 1.0 | 1.7 | 2.8 | 3.6 | 3.2 | 3.4 | 4.9 | 0.0 | 18.0 | 0.0 | 0.0 | 13.1 |
| Cycle Q Clear(g_c), s | 4.4 | 1.7 | 2.8 | 5.2 | 3.2 | 3.4 | 18.0 | 0.0 | 18.0 | 18.0 | 0.0 | 13.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.89 | 1.00 | | 0.06 | 1.00 | | 0.09 |
| Lane Grp Cap(c), veh/h | 389 | 1017 | 455 | 438 | 508 | 462 | 283 | 0 | 875 | 190 | 0 | 871 |
| V/C Ratio(X) | 0.08 | 0.20 | 0.33 | 0.26 | 0.37 | 0.39 | 0.85 | 0.00 | 1.07 | 0.62 | 0.00 | 0.84 |
| Avail Cap(c_a), veh/h | 579 | 1682 | 752 | 630 | 841 | 765 | 283 | 0 | 875 | 190 | 0 | 871 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 12.6 | 10.2 | 10.6 | 12.2 | 10.8 | 10.8 | 18.0 | 0.0 | 9.9 | 18.9 | 0.0 | 8.7 |
| Incr Delay (d2), s/veh | 0.1 | 0.1 | 0.4 | 0.3 | 0.4 | 0.5 | 25.7 | 0.0 | 52.0 | 14.0 | 0.0 | 9.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.3 | 0.8 | 1.2 | 1.0 | 1.6 | 1.6 | 4.4 | 0.0 | 21.4 | 1.9 | 0.0 | 8.8 |
| LnGrp Delay(d),s/veh | 12.7 | 10.3 | 11.0 | 12.5 | 11.2 | 11.4 | 43.6 | 0.0 | 61.9 | 33.0 | 0.0 | 18.0 |
| LnGrp LOS | B | B | B | B | B | B | D | | F | C | | B |
| Approach Vol, veh/h | | 387 | | | 481 | | | 1179 | | | | 846 |
| Approach Delay, s/veh | | 10.8 | | | 11.6 | | | 58.2 | | | | 20.1 |
| Approach LOS | | B | | | B | | | E | | | | C |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 22.5 | | 15.4 | | 22.5 | | 15.4 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 18.0 | | 18.0 | | 18.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 20.0 | | 6.4 | | 20.0 | | 7.2 | | | | |
| Green Ext Time (p_c), s | | 0.0 | | 3.8 | | 0.0 | | 3.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 33.0 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |

Intersection

Int Delay, s/veh 3.8

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↗ | | ↖ | ↗ | ↖ | |
| Traffic Vol, veh/h | 248 | 193 | 128 | 343 | 71 | 107 |
| Future Vol, veh/h | 248 | 193 | 128 | 343 | 71 | 107 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 250 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 270 | 210 | 139 | 373 | 77 | 116 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 479 | 0 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | - | - | 1083 | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1083 | - |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 2.4 | 17.1 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 488 | - | - | 1083 | - |
| HCM Lane V/C Ratio | 0.396 | - | - | 0.128 | - |
| HCM Control Delay (s) | 17.1 | - | - | 8.8 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 1.9 | - | - | 0.4 | - |

Intersection

Int Delay, s/veh 6.8

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | | 4 | 1 | |
| Traffic Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Future Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 135 | 58 | 174 | 237 | 104 | 174 |

| Major/Minor | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 776 | 191 | 278 |
| Stage 1 | 191 | - | - |
| Stage 2 | 585 | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 |
| Pot Cap-1 Maneuver | 366 | 851 | 1285 |
| Stage 1 | 841 | - | - |
| Stage 2 | 557 | - | - |
| Platoon blocked, % | | | - |
| Mov Cap-1 Maneuver | 309 | 851 | 1285 |
| Mov Cap-2 Maneuver | 309 | - | - |
| Stage 1 | 841 | - | - |
| Stage 2 | 470 | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 23.6 | 3.5 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1285 | - | 382 | - | - |
| HCM Lane V/C Ratio | 0.135 | - | 0.504 | - | - |
| HCM Control Delay (s) | 8.2 | 0 | 23.6 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.5 | - | 2.7 | - | - |

Intersection

Int Delay, s/veh 41.2

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↗ | | ↘ | |
| Traffic Vol, veh/h | 329 | 643 | 594 | 81 | 48 | 101 |
| Future Vol, veh/h | 329 | 643 | 594 | 81 | 48 | 101 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 358 | 699 | 646 | 88 | 52 | 110 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 734 | 0 | 2104 |
| Stage 1 | - | - | 690 |
| Stage 2 | - | - | 1414 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 871 | - | 57 |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 225 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 871 | - | ~ 34 |
| Mov Cap-2 Maneuver | - | - | ~ 34 |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 133 |

| Approach | EB | WB | SW |
|----------------------|-----|----|----------|
| HCM Control Delay, s | 4.1 | 0 | \$ 469.9 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|----------|
| Capacity (veh/h) | 871 | - | - | - | 91 |
| HCM Lane V/C Ratio | 0.411 | - | - | - | 1.78 |
| HCM Control Delay (s) | 12 | - | - | - | \$ 469.9 |
| HCM Lane LOS | B | - | - | - | F |
| HCM 95th %tile Q(veh) | 2 | - | - | - | 13.4 |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 22.6

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | ↑↓ | | Y | ↑↑ |
| Traffic Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Future Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 28 | 145 | 1378 | 30 | 165 | 967 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 2207 | 704 | 0 | 0 | 1409 | 0 |
| Stage 1 | 1393 | - | - | - | - | - |
| Stage 2 | 814 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 38 | 379 | - | - | 480 | - |
| Stage 1 | 195 | - | - | - | - | - |
| Stage 2 | 396 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | ~ 25 | 379 | - | - | 480 | - |
| Mov Cap-2 Maneuver | ~ 25 | - | - | - | - | - |
| Stage 1 | 195 | - | - | - | - | - |
| Stage 2 | 260 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|----------|----|-----|
| HCM Control Delay, s | \$ 339.8 | 0 | 2.4 |
| HCM LOS | F | | |





















| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|-----------------------|-----|-----|----------|-------|-----|
| Capacity (veh/h) | - | - | 114 | 480 | - |
| HCM Lane V/C Ratio | - | - | 1.516 | 0.344 | - |
| HCM Control Delay (s) | - | - | \$ 339.8 | 16.4 | - |
| HCM Lane LOS | - | - | F | C | - |
| HCM 95th %tile Q(veh) | - | - | 12.5 | 1.5 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Volume (veh/h) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Future Volume (veh/h) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 357 | 1067 | 0 | 116 | 551 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| Arrive On Green | 0.24 | 0.24 | 0.00 | 0.27 | 0.27 | 0.00 | 0.40 | 0.40 | 0.00 | 0.40 | 0.40 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Grp Volume(v), veh/h | 357 | 1067 | 0 | 116 | 551 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Q Serve(g_s), s | 28.6 | 36.5 | 0.0 | 7.7 | 40.5 | 0.0 | 2.4 | 17.4 | 0.0 | 42.1 | 11.0 | 0.0 |
| Cycle Q Clear(g_c), s | 28.6 | 36.5 | 0.0 | 7.7 | 40.5 | 0.0 | 13.4 | 17.4 | 0.0 | 59.5 | 11.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| V/C Ratio(X) | 0.83 | 2.35 | 0.00 | 0.24 | 1.10 | 0.00 | 0.06 | 0.41 | 0.00 | 2.24 | 0.27 | 0.00 |
| Avail Cap(c_a), veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 53.8 | 56.8 | 0.0 | 42.8 | 54.7 | 0.0 | 35.2 | 32.5 | 0.0 | 56.8 | 30.6 | 0.0 |
| Incr Delay (d2), s/veh | 12.5 | 616.1 | 0.0 | 0.3 | 68.7 | 0.0 | 0.3 | 1.7 | 0.0 | 566.2 | 0.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 15.5 | 96.3 | 0.0 | 3.8 | 30.4 | 0.0 | 0.8 | 9.3 | 0.0 | 69.5 | 5.9 | 0.0 |
| LnGrp Delay(d),s/veh | 66.3 | 672.9 | 0.0 | 43.0 | 123.4 | 0.0 | 35.4 | 34.2 | 0.0 | 623.1 | 31.5 | 0.0 |
| LnGrp LOS | E | F | | D | F | | D | C | | F | C | |
| Approach Vol, veh/h | | 1424 | | | 667 | | | 327 | | | 985 | |
| Approach Delay, s/veh | | 520.8 | | | 109.5 | | | 34.3 | | | 501.8 | |
| Approach LOS | | F | | | F | | | C | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 64.0 | | 41.0 | | 64.0 | | 45.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 59.5 | | 36.5 | | 59.5 | | 40.5 | | | | |
| Max Q Clear Time (g_c+l1), s | | 19.4 | | 38.5 | | 61.5 | | 42.5 | | | | |
| Green Ext Time (p_c), s | | 9.6 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 387.9 | | | | | | | | |
| HCM 2010 LOS | | | | F | | | | | | | | |

Intersection

Int Delay, s/veh 49.5

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | ↑↑ | | ↓ | ↑↑ |
| Traffic Vol, veh/h | 105 | 97 | 977 | 162 | 72 | 825 |
| Future Vol, veh/h | 105 | 97 | 977 | 162 | 72 | 825 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 114 | 105 | 1062 | 176 | 78 | 897 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1755 | 619 | 0 | 0 | 1238 | 0 |
| Stage 1 | 1150 | - | - | - | - | - |
| Stage 2 | 605 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 76 | 432 | - | - | 558 | - |
| Stage 1 | 264 | - | - | - | - | - |
| Stage 2 | 508 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | |
| Mov Cap-1 Maneuver | ~ 65 | 432 | - | - | 558 | - |
| Mov Cap-2 Maneuver | ~ 65 | - | - | - | - | - |
| Stage 1 | 264 | - | - | - | - | - |
| Stage 2 | 437 | - | - | - | - | - |

| Approach | NW | NE | SW |
|----------------------|--------|----|----|
| HCM Control Delay, s | \$ 544 | 0 | 1 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NET | NERNWLn1 | SWL | SWT |
|-----------------------|-----|----------|------|-----|
| Capacity (veh/h) | - | - 110 | 558 | - |
| HCM Lane V/C Ratio | - | - 1.996 | 0.14 | - |
| HCM Control Delay (s) | - | - \$ 544 | 12.5 | - |
| HCM Lane LOS | - | - F | B | - |
| HCM 95th %tile Q(veh) | - | - 18.2 | 0.5 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 15: STEELE HS/RODEO WAY & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 29 | 190 | 136 | 104 | 190 | 148 | 221 | 808 | 56 | 108 | 611 | 60 |
| Future Volume (veh/h) | 29 | 190 | 136 | 104 | 190 | 148 | 221 | 808 | 56 | 108 | 611 | 60 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1863 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 32 | 207 | 148 | 113 | 207 | 161 | 240 | 878 | 61 | 117 | 664 | 65 |
| Adj No. of Lanes | 1 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 229 | 774 | 346 | 282 | 424 | 314 | 407 | 1113 | 77 | 273 | 1079 | 106 |
| Arrive On Green | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 |
| Sat Flow, veh/h | 1010 | 3539 | 1583 | 1022 | 1941 | 1437 | 723 | 1722 | 120 | 594 | 1670 | 164 |
| Grp Volume(v), veh/h | 32 | 207 | 148 | 113 | 188 | 180 | 240 | 0 | 939 | 117 | 0 | 729 |
| Grp Sat Flow(s),veh/h/ln | 1010 | 1770 | 1583 | 1022 | 1770 | 1609 | 723 | 0 | 1842 | 594 | 0 | 1834 |
| Q Serve(g_s), s | 1.9 | 3.2 | 5.4 | 6.9 | 6.2 | 6.6 | 19.4 | 0.0 | 24.5 | 11.8 | 0.0 | 15.5 |
| Cycle Q Clear(g_c), s | 8.5 | 3.2 | 5.4 | 10.1 | 6.2 | 6.6 | 34.9 | 0.0 | 24.5 | 36.3 | 0.0 | 15.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.89 | 1.00 | | 0.06 | 1.00 | | 0.09 |
| Lane Grp Cap(c), veh/h | 229 | 774 | 346 | 282 | 387 | 352 | 407 | 0 | 1190 | 273 | 0 | 1185 |
| V/C Ratio(X) | 0.14 | 0.27 | 0.43 | 0.40 | 0.49 | 0.51 | 0.59 | 0.00 | 0.79 | 0.43 | 0.00 | 0.62 |
| Avail Cap(c_a), veh/h | 282 | 957 | 428 | 335 | 479 | 435 | 407 | 0 | 1190 | 273 | 0 | 1185 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 26.6 | 21.6 | 22.4 | 25.8 | 22.7 | 22.9 | 17.2 | 0.0 | 8.5 | 21.6 | 0.0 | 6.9 |
| Incr Delay (d2), s/veh | 0.3 | 0.2 | 0.8 | 0.9 | 0.9 | 1.2 | 6.2 | 0.0 | 5.4 | 4.8 | 0.0 | 2.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 1.6 | 2.4 | 2.0 | 3.1 | 3.0 | 4.6 | 0.0 | 14.0 | 2.3 | 0.0 | 8.5 |
| LnGrp Delay(d),s/veh | 26.9 | 21.8 | 23.2 | 26.7 | 23.7 | 24.0 | 23.3 | 0.0 | 13.9 | 26.4 | 0.0 | 9.3 |
| LnGrp LOS | C | C | C | C | C | C | C | | B | C | | A |
| Approach Vol, veh/h | | 387 | | | 481 | | | 1179 | | | | 846 |
| Approach Delay, s/veh | | 22.8 | | | 24.5 | | | 15.8 | | | | 11.7 |
| Approach LOS | | C | | | C | | | B | | | | B |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 47.5 | | 19.0 | | 47.5 | | 19.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 43.0 | | 18.0 | | 43.0 | | 18.0 | | | | |
| Max Q Clear Time (g_c+l1), s | | 36.9 | | 10.5 | | 38.3 | | 12.1 | | | | |
| Green Ext Time (p_c), s | | 5.3 | | 2.9 | | 4.2 | | 2.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 17.0 | | | | | | | | | |
| HCM 2010 LOS | | | B | | | | | | | | | |

Intersection

Int Delay, s/veh 3.4

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑ | ↗ | ↘ | ↑ | ↘ | |
| Traffic Vol, veh/h | 248 | 193 | 128 | 343 | 71 | 107 |
| Future Vol, veh/h | 248 | 193 | 128 | 343 | 71 | 107 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 250 | 250 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 270 | 210 | 139 | 373 | 77 | 116 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 270 |
| Stage 1 | - | - | 270 |
| Stage 2 | - | - | 651 |
| Critical Hdwy | - | 4.12 | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | - | 2.218 | 3.518 |
| Pot Cap-1 Maneuver | - | 1293 | 300 |
| Stage 1 | - | - | 775 |
| Stage 2 | - | - | 519 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | 1293 | 268 |
| Mov Cap-2 Maneuver | - | - | 373 |
| Stage 1 | - | - | 775 |
| Stage 2 | - | - | 463 |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 2.2 | 15.3 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 540 | - | - | 1293 | - |
| HCM Lane V/C Ratio | 0.358 | - | - | 0.108 | - |
| HCM Control Delay (s) | 15.3 | - | - | 8.1 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 1.6 | - | - | 0.4 | - |

Intersection

Int Delay, s/veh 5.8

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | | ↑ | ↑ | ↑ |
| Traffic Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Future Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | 250 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 135 | 58 | 174 | 237 | 104 | 174 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|----------------------|--------|-------|--------|---|--------|---|
| Conflicting Flow All | 689 | 104 | 104 | 0 | - | 0 |
| Stage 1 | 104 | - | - | - | - | - |
| Stage 2 | 585 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 412 | 951 | 1488 | - | - | - |
| Stage 1 | 920 | - | - | - | - | - |
| Stage 2 | 557 | - | - | - | - | - |
| Platoon blocked, % | | | | | | |
| Mov Cap-1 Maneuver | 356 | 951 | 1488 | - | - | - |
| Mov Cap-2 Maneuver | 356 | - | - | - | - | - |
| Stage 1 | 920 | - | - | - | - | - |
| Stage 2 | 482 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 19.5 | 3.3 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1488 | - | 438 | - | - |
| HCM Lane V/C Ratio | 0.117 | - | 0.439 | - | - |
| HCM Control Delay (s) | 7.7 | 0 | 19.5 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.4 | - | 2.2 | - | - |

Intersection

Int Delay, s/veh 41.2

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | ↘ | | ↗ | |
| Traffic Vol, veh/h | 329 | 643 | 594 | 81 | 48 | 101 |
| Future Vol, veh/h | 329 | 643 | 594 | 81 | 48 | 101 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 358 | 699 | 646 | 88 | 52 | 110 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 734 | 0 | 2104 |
| Stage 1 | - | - | 690 |
| Stage 2 | - | - | 1414 |
| Critical Hdwy | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | 871 | - | 57 |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 225 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 871 | - | ~ 34 |
| Mov Cap-2 Maneuver | - | - | ~ 34 |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 133 |

| Approach | EB | WB | SW |
|----------------------|-----|----|----------|
| HCM Control Delay, s | 4.1 | 0 | \$ 469.9 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBRSWLn1 |
|-----------------------|-------|-----|-----|----------|
| Capacity (veh/h) | 871 | - | - | 91 |
| HCM Lane V/C Ratio | 0.411 | - | - | 1.78 |
| HCM Control Delay (s) | 12 | - | - | \$ 469.9 |
| HCM Lane LOS | B | - | - | F |
| HCM 95th %tile Q(veh) | 2 | - | - | 13.4 |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 22.6

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | W | | T | | T | T |
| Traffic Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Future Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 28 | 145 | 1378 | 30 | 165 | 967 |

| Major/Minor | Minor1 | Minor2 | Major1 | Major2 | Major3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 2207 | 704 | 0 | 0 | 1409 |
| Stage 1 | 1393 | - | - | - | - |
| Stage 2 | 814 | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 |
| Pot Cap-1 Maneuver | 38 | 379 | - | - | 480 |
| Stage 1 | 195 | - | - | - | - |
| Stage 2 | 396 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 25 | 379 | - | - | 480 |
| Mov Cap-2 Maneuver | ~ 25 | - | - | - | - |
| Stage 1 | 195 | - | - | - | - |
| Stage 2 | 260 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|----------|----|-----|
| HCM Control Delay, s | \$ 339.8 | 0 | 2.4 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|-----------|-------|-----|
| Capacity (veh/h) | - | - 114 | 480 | - |
| HCM Lane V/C Ratio | - | - 1.516 | 0.344 | - |
| HCM Control Delay (s) | - | -\$ 339.8 | 16.4 | - |
| HCM Lane LOS | - | - F | C | - |
| HCM 95th %tile Q(veh) | - | - 12.5 | 1.5 | - |






















Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO

01/24/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Traffic Volume (veh/h) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Future Volume (veh/h) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 357 | 1067 | 0 | 116 | 551 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| Arrive On Green | 0.24 | 0.24 | 0.00 | 0.27 | 0.27 | 0.00 | 0.40 | 0.40 | 0.00 | 0.40 | 0.40 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Grp Volume(v), veh/h | 357 | 1067 | 0 | 116 | 551 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Q Serve(g_s), s | 28.6 | 36.5 | 0.0 | 7.7 | 40.5 | 0.0 | 2.4 | 17.4 | 0.0 | 42.1 | 11.0 | 0.0 |
| Cycle Q Clear(g_c), s | 28.6 | 36.5 | 0.0 | 7.7 | 40.5 | 0.0 | 13.4 | 17.4 | 0.0 | 59.5 | 11.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| V/C Ratio(X) | 0.83 | 2.35 | 0.00 | 0.24 | 1.10 | 0.00 | 0.06 | 0.41 | 0.00 | 2.24 | 0.27 | 0.00 |
| Avail Cap(c_a), veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 53.8 | 56.8 | 0.0 | 42.8 | 54.7 | 0.0 | 35.2 | 32.5 | 0.0 | 56.8 | 30.6 | 0.0 |
| Incr Delay (d2), s/veh | 12.5 | 616.1 | 0.0 | 0.3 | 68.7 | 0.0 | 0.3 | 1.7 | 0.0 | 566.2 | 0.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 15.5 | 96.3 | 0.0 | 3.8 | 30.4 | 0.0 | 0.8 | 9.3 | 0.0 | 69.5 | 5.9 | 0.0 |
| LnGrp Delay(d),s/veh | 66.3 | 672.9 | 0.0 | 43.0 | 123.4 | 0.0 | 35.4 | 34.2 | 0.0 | 623.1 | 31.5 | 0.0 |
| LnGrp LOS | E | F | | D | F | | D | C | | F | C | |
| Approach Vol, veh/h | | 1424 | | | 667 | | | 327 | | | | 985 |
| Approach Delay, s/veh | | 520.8 | | | 109.5 | | | 34.3 | | | | 501.8 |
| Approach LOS | | F | | | F | | | C | | | | F |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 64.0 | | 41.0 | | 64.0 | | 45.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 59.5 | | 36.5 | | 59.5 | | 40.5 | | | | |
| Max Q Clear Time (g_c+l1), s | | 19.4 | | 38.5 | | 61.5 | | 42.5 | | | | |
| Green Ext Time (p_c), s | | 9.6 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 387.9 | | | | | | | | | |
| HCM 2010 LOS | | | F | | | | | | | | | |

Intersection

Int Delay, s/veh 49.5

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑↑ | | ↑↑ | | ↑ | ↑↑ |
| Traffic Vol, veh/h | 105 | 97 | 977 | 162 | 72 | 825 |
| Future Vol, veh/h | 105 | 97 | 977 | 162 | 72 | 825 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 114 | 105 | 1062 | 176 | 78 | 897 |

| Major/Minor | Minor1 | Minor2 | Major1 | Major2 | Major2 | Major2 |
|----------------------|--------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 1755 | 619 | 0 | 0 | 1238 | 0 |
| Stage 1 | 1150 | - | - | - | - | - |
| Stage 2 | 605 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 76 | 432 | - | - | 558 | - |
| Stage 1 | 264 | - | - | - | - | - |
| Stage 2 | 508 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 65 | 432 | - | - | 558 | - |
| Mov Cap-2 Maneuver | ~ 65 | - | - | - | - | - |
| Stage 1 | 264 | - | - | - | - | - |
| Stage 2 | 437 | - | - | - | - | - |

| Approach | NW | NE | SW |
|----------------------|--------|----|----|
| HCM Control Delay, s | \$ 544 | 0 | 1 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NET | NERNWLn1 | SWL | SWT |
|-----------------------|-----|----------|------|-----|
| Capacity (veh/h) | - | - 110 | 558 | - |
| HCM Lane V/C Ratio | - | - 1.996 | 0.14 | - |
| HCM Control Delay (s) | - | - \$ 544 | 12.5 | - |
| HCM Lane LOS | - | - F | B | - |
| HCM 95th %tile Q(veh) | - | - 18.2 | 0.5 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 6.8

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | | ↑ | ↑ | |
| Traffic Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Future Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 135 | 58 | 174 | 237 | 104 | 174 |

| Major/Minor | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 776 | 191 | 278 |
| Stage 1 | 191 | - | - |
| Stage 2 | 585 | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 |
| Pot Cap-1 Maneuver | 366 | 851 | 1285 |
| Stage 1 | 841 | - | - |
| Stage 2 | 557 | - | - |
| Platoon blocked, % | | | - |
| Mov Cap-1 Maneuver | 309 | 851 | 1285 |
| Mov Cap-2 Maneuver | 309 | - | - |
| Stage 1 | 841 | - | - |
| Stage 2 | 470 | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 23.6 | 3.5 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1285 | - | 382 | - | - |
| HCM Lane V/C Ratio | 0.135 | - | 0.504 | - | - |
| HCM Control Delay (s) | 8.2 | 0 | 23.6 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.5 | - | 2.7 | - | - |

Intersection

Int Delay, s/veh 41.2

| Movement | EBL | EBT | WBT | WBR | SWL | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↖ | | ↖ | |
| Traffic Vol, veh/h | 329 | 643 | 594 | 81 | 48 | 101 |
| Future Vol, veh/h | 329 | 643 | 594 | 81 | 48 | 101 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 250 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 358 | 699 | 646 | 88 | 52 | 110 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 734 | 0 | 690 |
| Stage 1 | - | - | 690 |
| Stage 2 | - | - | 1414 |
| Critical Hdwy | 4.12 | - | 6.22 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | 3.318 |
| Pot Cap-1 Maneuver | 871 | - | 445 |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 225 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 871 | - | 445 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | 498 |
| Stage 2 | - | - | 133 |

| Approach | EB | WB | SW |
|----------------------|-----|----|----------|
| HCM Control Delay, s | 4.1 | 0 | \$ 469.9 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SWLn1 |
|-----------------------|-------|-----|-----|-----|----------|
| Capacity (veh/h) | 871 | - | - | - | 91 |
| HCM Lane V/C Ratio | 0.411 | - | - | - | 1.78 |
| HCM Control Delay (s) | 12 | - | - | - | \$ 469.9 |
| HCM Lane LOS | B | - | - | - | F |
| HCM 95th %tile Q(veh) | 2 | - | - | - | 13.4 |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 22.6

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | W | | ↑↓ | | ↑ | ↑↑ |
| Traffic Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Future Vol, veh/h | 26 | 133 | 1268 | 28 | 152 | 890 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 250 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 28 | 145 | 1378 | 30 | 165 | 967 |

| Major/Minor | Minor1 | Minor2 | Major1 | Major2 | Major3 | Major4 |
|----------------------|--------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 2207 | 704 | 0 | 0 | 1409 | 0 |
| Stage 1 | 1393 | - | - | - | - | - |
| Stage 2 | 814 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | 38 | 379 | - | - | 480 | - |
| Stage 1 | 195 | - | - | - | - | - |
| Stage 2 | 396 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | ~ 25 | 379 | - | - | 480 | - |
| Mov Cap-2 Maneuver | ~ 25 | - | - | - | - | - |
| Stage 1 | 195 | - | - | - | - | - |
| Stage 2 | 260 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|----------|----|-----|
| HCM Control Delay, s | \$ 339.8 | 0 | 2.4 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|-----------------------|-----|-----|----------|-------|-----|
| Capacity (veh/h) | - | - | 114 | 480 | - |
| HCM Lane V/C Ratio | - | - | 1.516 | 0.344 | - |
| HCM Control Delay (s) | - | - | \$ 339.8 | 16.4 | - |
| HCM Lane LOS | - | - | F | C | - |
| HCM 95th %tile Q(veh) | - | - | 12.5 | 1.5 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM Signalized Intersection Capacity Analysis

E0597600 SIENNA MDP CIBOLO

7: MAIN ST & FM 1103

01/24/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-------|-------|------|------|-------|------|------|------|------|--------|--------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Future Volume (vph) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | | 1.00 | 0.92 | | 1.00 | 0.94 | | 1.00 | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1859 | | 1770 | 1711 | | 1770 | 1759 | | 1770 | 1738 | |
| Flt Permitted | 0.95 | 1.00 | | 0.28 | 1.00 | | 0.37 | 1.00 | | 0.26 | 1.00 | |
| Satd. Flow (perm) | 1770 | 1859 | | 520 | 1711 | | 696 | 1759 | | 484 | 1738 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 357 | 1067 | 14 | 116 | 551 | 651 | 27 | 300 | 176 | 783 | 202 | 164 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 14 | 0 | 0 | 19 | 0 |
| Lane Group Flow (vph) | 357 | 1081 | 0 | 116 | 1174 | 0 | 27 | 462 | 0 | 783 | 347 | 0 |
| Turn Type | Split | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 36.5 | 36.5 | | 40.5 | 40.5 | | 59.5 | 59.5 | | 59.5 | 59.5 | |
| Effective Green, g (s) | 36.5 | 36.5 | | 40.5 | 40.5 | | 59.5 | 59.5 | | 59.5 | 59.5 | |
| Actuated g/C Ratio | 0.24 | 0.24 | | 0.27 | 0.27 | | 0.40 | 0.40 | | 0.40 | 0.40 | |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 430 | 452 | | 140 | 461 | | 276 | 697 | | 191 | 689 | |
| v/s Ratio Prot | 0.20 | c0.58 | | | c0.69 | | | 0.26 | | | 0.20 | |
| v/s Ratio Perm | | | | 0.22 | | | 0.04 | | | c1.62 | | |
| v/c Ratio | 0.83 | 2.39 | | 0.83 | 2.55 | | 0.10 | 0.66 | | 4.10 | 0.50 | |
| Uniform Delay, d1 | 53.8 | 56.8 | | 51.5 | 54.8 | | 28.4 | 37.0 | | 45.2 | 34.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 12.8 | 633.0 | | 31.4 | 701.9 | | 0.7 | 4.9 | | 1407.1 | 2.6 | |
| Delay (s) | 66.6 | 689.7 | | 82.9 | 756.7 | | 29.1 | 42.0 | | 1452.4 | 36.7 | |
| Level of Service | E | F | | F | F | | C | D | | F | D | |
| Approach Delay (s) | | 535.0 | | | 697.4 | | | 41.3 | | | 1001.4 | |
| Approach LOS | | F | | | F | | | D | | | F | |

Intersection Summary

| | | | |
|-----------------------------------|--------|---------------------------|------|
| HCM 2000 Control Delay | 648.8 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 3.17 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 13.5 |
| Intersection Capacity Utilization | 160.8% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

HCM 2010 Signalized Intersection Summary
 7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|-------|------|-------|-------|------|------|------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Future Volume (veh/h) | 328 | 982 | 13 | 107 | 507 | 599 | 25 | 276 | 162 | 720 | 186 | 151 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 357 | 1067 | 0 | 116 | 551 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| Arrive On Green | 0.24 | 0.24 | 0.00 | 0.27 | 0.27 | 0.00 | 0.40 | 0.40 | 0.00 | 0.40 | 0.40 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Grp Volume(v), veh/h | 357 | 1067 | 0 | 116 | 551 | 0 | 27 | 300 | 0 | 783 | 202 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1175 | 1863 | 0 | 1075 | 1863 | 0 |
| Q Serve(g_s), s | 28.6 | 36.5 | 0.0 | 7.7 | 40.5 | 0.0 | 2.4 | 17.4 | 0.0 | 42.1 | 11.0 | 0.0 |
| Cycle Q Clear(g_c), s | 28.6 | 36.5 | 0.0 | 7.7 | 40.5 | 0.0 | 13.4 | 17.4 | 0.0 | 59.5 | 11.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| V/C Ratio(X) | 0.83 | 2.35 | 0.00 | 0.24 | 1.10 | 0.00 | 0.06 | 0.41 | 0.00 | 2.24 | 0.27 | 0.00 |
| Avail Cap(c_a), veh/h | 432 | 453 | 0 | 479 | 503 | 0 | 428 | 739 | 0 | 350 | 739 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 53.8 | 56.8 | 0.0 | 42.8 | 54.7 | 0.0 | 35.2 | 32.5 | 0.0 | 56.8 | 30.6 | 0.0 |
| Incr Delay (d2), s/veh | 12.5 | 616.1 | 0.0 | 0.3 | 68.7 | 0.0 | 0.3 | 1.7 | 0.0 | 566.2 | 0.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 15.5 | 96.3 | 0.0 | 3.8 | 30.4 | 0.0 | 0.8 | 9.3 | 0.0 | 69.5 | 5.9 | 0.0 |
| LnGrp Delay(d),s/veh | 66.3 | 672.9 | 0.0 | 43.0 | 123.4 | 0.0 | 35.4 | 34.2 | 0.0 | 623.1 | 31.5 | 0.0 |
| LnGrp LOS | E | F | | D | F | | D | C | | F | C | |
| Approach Vol, veh/h | | 1424 | | | 667 | | | 327 | | | 985 | |
| Approach Delay, s/veh | | 520.8 | | | 109.5 | | | 34.3 | | | 501.8 | |
| Approach LOS | | F | | | F | | | C | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 64.0 | | 41.0 | | 64.0 | | 45.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 59.5 | | 36.5 | | 59.5 | | 40.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 19.4 | | 38.5 | | 61.5 | | 42.5 | | | | |
| Green Ext Time (p_c), s | | 9.6 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 387.9 | | | | | | | | |
| HCM 2010 LOS | | | | F | | | | | | | | |

HCM Signalized Intersection Capacity Analysis
 18: New Collector 1 & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| | → | ↘ | ↙ | ← | ↖ | ↗ |
|------------------------|------|------|------|-------|-------|------|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | ↙ | ↑ | ↖ | |
| Traffic Volume (vph) | 248 | 193 | 128 | 343 | 71 | 107 |
| Future Volume (vph) | 248 | 193 | 128 | 343 | 71 | 107 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.92 | |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | |
| Satd. Flow (prot) | 1863 | 1583 | 1770 | 1863 | 1678 | |
| Flt Permitted | 1.00 | 1.00 | 0.54 | 1.00 | 0.98 | |
| Satd. Flow (perm) | 1863 | 1583 | 1012 | 1863 | 1678 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 270 | 210 | 139 | 373 | 77 | 116 |
| RTOR Reduction (vph) | 0 | 143 | 0 | 0 | 59 | 0 |
| Lane Group Flow (vph) | 270 | 67 | 139 | 373 | 134 | 0 |
| Turn Type | NA | Perm | Perm | NA | Prot | |
| Protected Phases | 4 | | | 8 | 2 | |
| Permitted Phases | | 4 | 8 | | | |
| Actuated Green, G (s) | 15.4 | 15.4 | 15.4 | 15.4 | 23.8 | |
| Effective Green, g (s) | 15.4 | 15.4 | 15.4 | 15.4 | 23.8 | |
| Actuated g/C Ratio | 0.32 | 0.32 | 0.32 | 0.32 | 0.49 | |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 595 | 505 | 323 | 595 | 828 | |
| v/s Ratio Prot | 0.14 | | | c0.20 | c0.08 | |
| v/s Ratio Perm | | 0.04 | 0.14 | | | |
| v/c Ratio | 0.45 | 0.13 | 0.43 | 0.63 | 0.16 | |
| Uniform Delay, d1 | 13.1 | 11.7 | 12.9 | 14.0 | 6.7 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.6 | 0.1 | 0.9 | 2.1 | 0.4 | |
| Delay (s) | 13.6 | 11.8 | 13.9 | 16.0 | 7.1 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | 12.8 | | | 15.4 | 7.1 | |
| Approach LOS | B | | | B | A | |

Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay | 13.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.34 | | |
| Actuated Cycle Length (s) | 48.2 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 41.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

Intersection

Int Delay, s/veh 5.8

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | | Y | Y | Y |
| Traffic Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Future Vol, veh/h | 124 | 53 | 160 | 218 | 96 | 160 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | 250 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 135 | 58 | 174 | 237 | 104 | 174 |

| Major/Minor | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 689 | 104 | 0 |
| Stage 1 | 104 | - | - |
| Stage 2 | 585 | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 |
| Pot Cap-1 Maneuver | 412 | 951 | 1488 |
| Stage 1 | 920 | - | - |
| Stage 2 | 557 | - | - |
| Platoon blocked, % | | | |
| Mov Cap-1 Maneuver | 356 | 951 | 1488 |
| Mov Cap-2 Maneuver | 356 | - | - |
| Stage 1 | 920 | - | - |
| Stage 2 | 482 | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 19.5 | 3.3 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1488 | - | 438 | - | - |
| HCM Lane V/C Ratio | 0.117 | - | 0.439 | - | - |
| HCM Control Delay (s) | 7.7 | 0 | 19.5 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0.4 | - | 2.2 | - | - |

HCM 2010 Signalized Intersection Summary
 7: MAIN ST & FM 1103

E0597600 SIENNA MDP CIBOLO
 01/24/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|-------|------|-------|------|------|------|------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Future Volume (veh/h) | 134 | 242 | 13 | 91 | 781 | 419 | 3 | 152 | 63 | 466 | 230 | 198 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 | 1863 | 1863 | 1900 |
| Adj Flow Rate, veh/h | 146 | 263 | 0 | 99 | 849 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Adj No. of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| Arrive On Green | 0.12 | 0.12 | 0.00 | 0.43 | 0.43 | 0.00 | 0.36 | 0.36 | 0.00 | 0.36 | 0.36 | 0.00 |
| Sat Flow, veh/h | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Grp Volume(v), veh/h | 146 | 263 | 0 | 99 | 849 | 0 | 3 | 165 | 0 | 507 | 250 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1125 | 1863 | 0 | 1216 | 1863 | 0 |
| Q Serve(g_s), s | 11.8 | 18.5 | 0.0 | 5.1 | 64.5 | 0.0 | 0.3 | 9.4 | 0.0 | 44.1 | 15.0 | 0.0 |
| Cycle Q Clear(g_c), s | 11.8 | 18.5 | 0.0 | 5.1 | 64.5 | 0.0 | 15.3 | 9.4 | 0.0 | 53.5 | 15.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| V/C Ratio(X) | 0.67 | 1.14 | 0.00 | 0.13 | 1.06 | 0.00 | 0.01 | 0.25 | 0.00 | 1.25 | 0.38 | 0.00 |
| Avail Cap(c_a), veh/h | 219 | 230 | 0 | 763 | 801 | 0 | 337 | 664 | 0 | 406 | 664 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 62.8 | 65.8 | 0.0 | 25.8 | 42.8 | 0.0 | 41.5 | 34.1 | 0.0 | 55.6 | 35.9 | 0.0 |
| Incr Delay (d2), s/veh | 7.5 | 104.0 | 0.0 | 0.1 | 48.9 | 0.0 | 0.0 | 0.9 | 0.0 | 131.5 | 1.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 6.3 | 16.1 | 0.0 | 2.5 | 44.0 | 0.0 | 0.1 | 5.0 | 0.0 | 31.6 | 8.0 | 0.0 |
| LnGrp Delay(d),s/veh | 70.3 | 169.7 | 0.0 | 25.9 | 91.6 | 0.0 | 41.6 | 35.0 | 0.0 | 187.0 | 37.5 | 0.0 |
| LnGrp LOS | E | F | | C | F | | D | C | | F | D | |
| Approach Vol, veh/h | | 409 | | | 948 | | | 168 | | | 757 | |
| Approach Delay, s/veh | | 134.2 | | | 84.8 | | | 35.1 | | | 137.6 | |
| Approach LOS | | F | | | F | | | D | | | F | |
| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 58.0 | | 23.0 | | 58.0 | | 69.0 | | | | |
| Change Period (Y+Rc), s | | 4.5 | | 4.5 | | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 53.5 | | 18.5 | | 53.5 | | 64.5 | | | | |
| Max Q Clear Time (g_c+I1), s | | 17.3 | | 20.5 | | 55.5 | | 66.5 | | | | |
| Green Ext Time (p_c), s | | 5.1 | | 0.0 | | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 107.5 | | | | | | | | |
| HCM 2010 LOS | | | | F | | | | | | | | |

Intersection

Int Delay, s/veh 19.3

| Movement | WBL | WBR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | Y | | ↑↑ | | Y | ↑↑ |
| Traffic Vol, veh/h | 137 | 56 | 630 | 70 | 41 | 990 |
| Future Vol, veh/h | 137 | 56 | 630 | 70 | 41 | 990 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 149 | 61 | 685 | 76 | 45 | 1076 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|----------------------|--------|------|--------|---|--------|---|
| Conflicting Flow All | 1350 | 380 | 0 | 0 | 761 | 0 |
| Stage 1 | 723 | - | - | - | - | - |
| Stage 2 | 627 | - | - | - | - | - |
| Critical Hdwy | 6.84 | 6.94 | - | - | 4.14 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - | - | 2.22 | - |
| Pot Cap-1 Maneuver | ~ 142 | 618 | - | - | 847 | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 495 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | ~ 134 | 618 | - | - | 847 | - |
| Mov Cap-2 Maneuver | ~ 134 | - | - | - | - | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 469 | - | - | - | - | - |

| Approach | WB | | NE | | SW |
|----------------------|-------|--|----|--|-----|
| HCM Control Delay, s | 190.5 | | 0 | | 0.4 |
| HCM LOS | F | | | | |

| Minor Lane/Major Mvmt | NET | NER | WBLn1 | SWL | SWT |
|-----------------------|-----|-----|-------|-------|-----|
| Capacity (veh/h) | - | - | 173 | 847 | - |
| HCM Lane V/C Ratio | - | - | 1.213 | 0.053 | - |
| HCM Control Delay (s) | - | - | 190.5 | 9.5 | - |
| HCM Lane LOS | - | - | F | A | - |
| HCM 95th %tile Q(veh) | - | - | 11.5 | 0.2 | - |

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

APPENDIX D

STREET PHOTOS



Source: Google Earth

FM 1103 at Main Street, looking east



Source: Google Earth

FM 1103 at Main Street, looking west



Source: Google Earth
Main Street at FM 1103, looking north



Source: Google Earth
Cibolo Parkway at FM 1103, looking south



Source: Google Earth
FM 1103 at west school drive, looking east



Source: Google Earth
FM 1103 at Rodeo Way, looking east



Source: Google Earth

FM 1103 at Rodeo Way, looking west



Source: Google Earth

Weil Road at FM 1103



Source: Google Earth

Brite Road at FM 1103



Source: Google Earth

Tolle Road near new collector location, looking north



Source: Google Earth
FM 78 at Country Lane, looking east



Source: Google Earth
Country Lane approaching FM 78

Property Owner Authorization

October 10, 2024

City of Cibolo
Planning Department
201 West Loop 539
Cibolo, Texas 78108

Attn: Authorization to Submit and Process an Application for a Land Plan Amendment for Property Generally Located at Southeast of FM 1103 and N. Main Street ("Property"), within the City of Cibolo ("City"), Guadalupe County, Texas

The purpose of this correspondence is to provide authorization to DR Horton, Killen, Griffin & Farrimond, PLLC, and Pape-Dawson Engineers to act as applicant and representative in the filing and processing for approval an application for a Land Plan Amendment for the Property.

I hereby declare that I represent the owner of the Property and have the authority to grant permission to request and process for approval a Land Plan Amendment for the Property. Thank you for your time and attention to this matter.

Owner:

Continental Homes of Texas, L.P.,
a Texas limited partnership

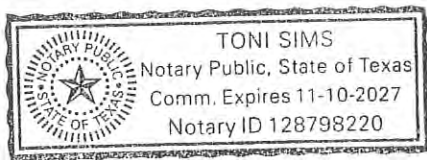
CHTEX of Texas, Inc.,
its General Partner

By: Leslie Ostrandek
Name: Leslie Ostrandek
Title: Assistant Secretary

State of Texas §
 §
County of Bexar §

Before me, the undersigned authority, a notary public for the State of Texas, on this day personally appeared leslie Ostrandek, known to me to be the person whose name is subscribed to the foregoing letter and acknowledge to me that they executed the same for the purpose and consideration therein expressed.

Given under my hand and seal of office, this the 11 day of Oct., 2024.



TS
Notary Public for the State of Texas

Signed Deposit Agreement

City of Cibolo

Deposit Agreement for Development Review

This agreement is made this 10th day of October, 2024, by the Applicant in favor of the City of Cibolo, Texas ("City").

Applicant: Name and Address

Continental Homes of Texas, LP

5419 North Loop 1604 East

San Antonio, Texas 78247

Applicant is requesting City approval of a rezoning, subdivision, variance, site plan, preliminary plat, final plat, conditional use permit, or any other development-related application. Under authority granted to it by applicable state and local laws, the City requires the Applicant to execute this Agreement and to provide a cash deposit to the City for the payment of all costs incurred by the City in reviewing the application.

Applicant shall deposit in cash with the City the initial amount identified within the approved Fee Schedule, a current copy of which is attached to this Agreement as Exhibit "A." A copy of the application that is subject to this Agreement is attached hereto as Exhibit "B." If the application is longer than ten (10) pages, a summary may be attached hereto in lieu of the full application, so long as the summary contains sufficient information to accurately identify the subject application.

Applicant acknowledges that the application shall not be deemed complete and accepted for processing, and the City shall not commence to review and process an application, until this Agreement is executed by the Applicant and the Agreement and the full deposit are delivered to the City.

The City will deposit the money in its account and draw upon the deposit to pay the costs it incurs in connection with the application. The City shall determine all of its costs, including both administrative and consulting services, in accordance with the Fee Schedule, as annually adopted by the City. To the extent that any interest accrues on any cash deposit held by the City under this Agreement, such interest shall be deemed to be part of the total review costs incurred by the City; as such, Applicant hereby waives any claim to such interest and acknowledges that the City shall not be responsible for paying any interest on money deposited under this Agreement.

If in the discretion of the City, there is deemed to be an inadequate balance in the Deposit Account to pay for all the fees and costs incurred by the City, the City will notify the Applicant of the need for additional funds and the amount required to be further paid. Applicant shall pay such additional funds within ten (10) calendar days of receipt of such notice. For purposes hereof, receipt of notice shall be deemed made upon written, email notification to the Applicant. If an application is placed upon a meeting agenda for public hearing and/or consideration by City Council or another City board or commission, failure by the Applicant to submit payment in full for any additional funds required under this Agreement may be cited as grounds for recommending disapproval or disapproving of an application, as applicable.

Internal Use: _____ (Case File#)

If the application process is completed, withdrawn by the Applicant, or disapproved by the City, any remaining balance in the Deposit Account shall be paid to the Applicant within 60 calendar days of the date on which the application process was completed, withdrawn, or disapproved.

Upon request, the City will provide the Applicant an accounting of all expenses charged against the Deposit Account, but in no event more often than monthly. An accounting will be provided when a notice is made by the City for additional funds.

Applicant shall indemnify and hold the City harmless from any liability, claim, action, or suit or any obligation to the Applicant arising from or in connection with the terms and conditions of this Agreement. The applicant shall pay all costs and expenses, including reasonable attorney fees and suit costs, incurred by the City arising from or in connection with the City enforcing any terms and conditions of this Agreement.

APPLICANT:

Leslie Ostrander, Vice President of Land

Name and Title

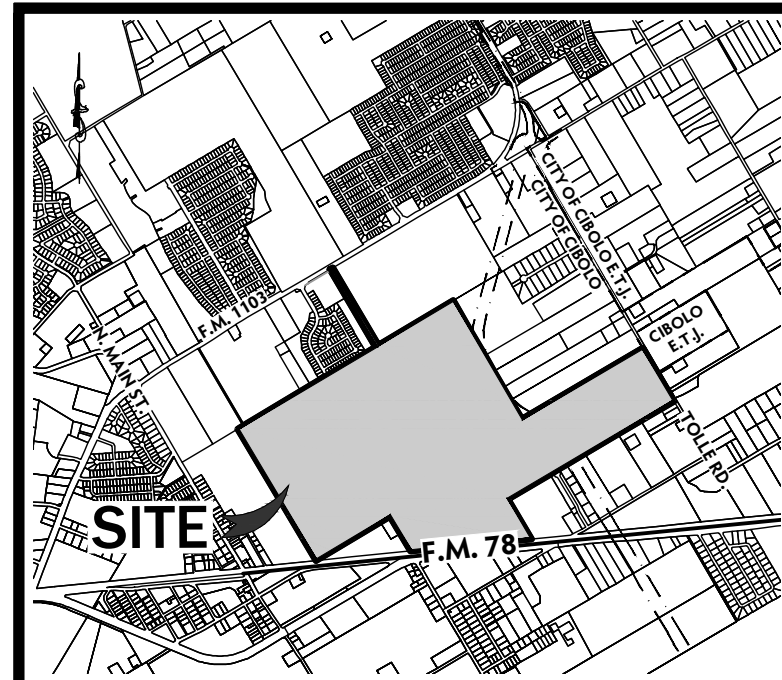


Signature

October 10th, 2024

Date

Internal Use: _____ (Case File#)



LOCATION MAP
N.T.S.

DEVELOPER:
DR HORTON, INC.
211 LOOP 1604 E, SUITE 130
SAN ANTONIO, TX 78232
CONTACT PERSON: LESLIE OSTRANDER
TEL: (210) 681-2951

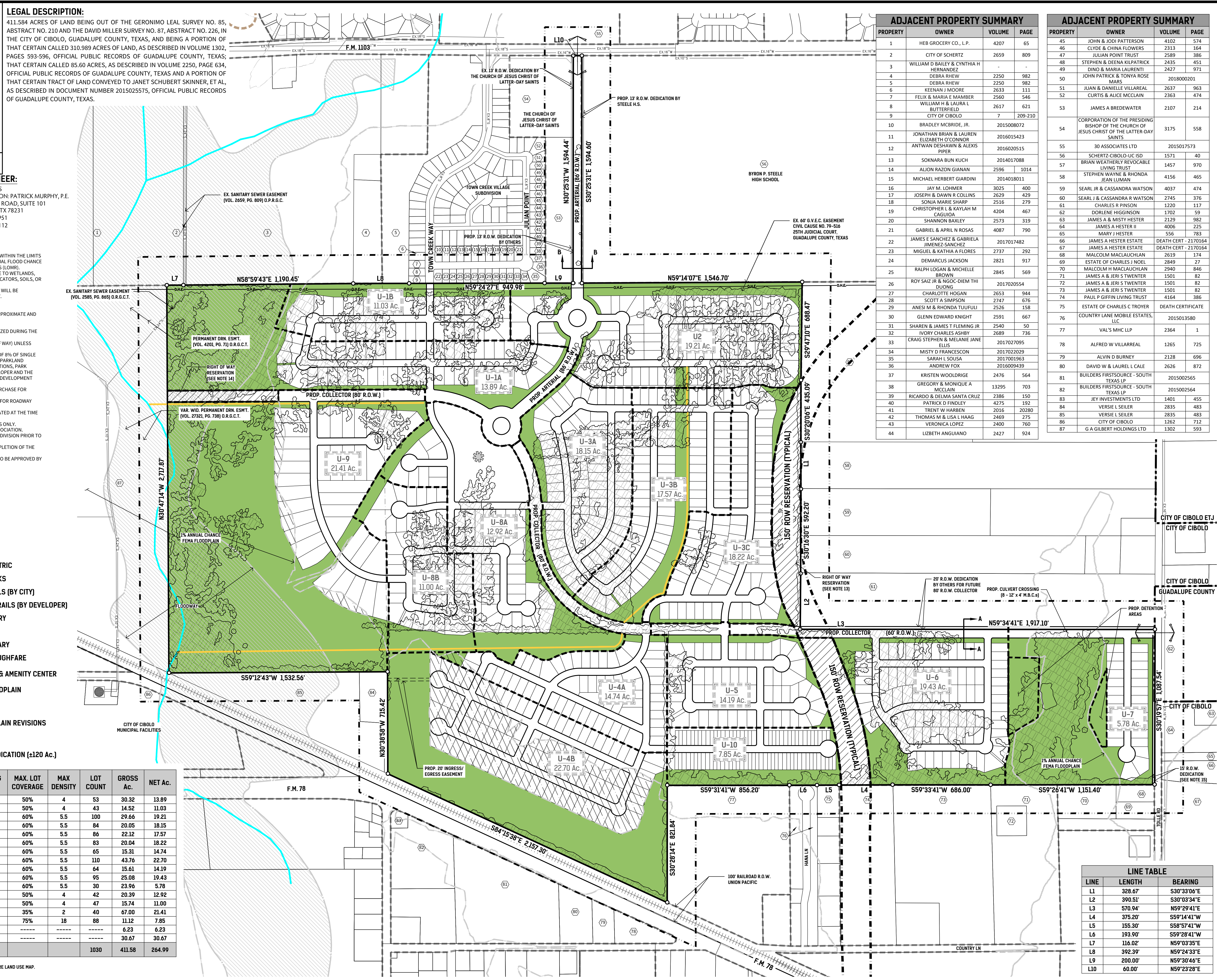
CIVIL ENGINEER:
CUDE ENGINEERS
CONTACT PERSON: PATRICK MURPHY, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

- NOTES:**
- SITE IS LOCATED WITHIN THE CITY OF CIBOLO.
 - THE SUBJECT TRACT IS CURRENTLY UNDEVELOPED.
 - PER FEMA FLOOD MAP PANEL 48187C0203F A PORTION OF THE SITE IS WITHIN THE LIMITS OF THE 1% ANNUAL CHANCE FLOODPLAIN. LOTS WITHIN THE 1% ANNUAL FLOOD CHANCE ARE CONDITIONALLY APPROVED PENDING A LETTER OF MAP REVISIONS (LOMR).
 - THERE ARE NO KNOWN ENVIRONMENTALLY SENSITIVE AREAS RELATIVE TO WETLANDS, ENDANGERED OR OTHERWISE LISTED SPECIES, ARCHAEOLOGICAL INDICATORS, SOILS, OR SLOPE ANALYSIS.
 - A TREE SURVEY SHOWING EXISTING HERITAGE AND PROTECTED TREES WILL BE SUBMITTED ON A UNIT-BY-UNIT BASIS PER AGREEMENT WITH THE CITY.
 - SITE ZONING: SF-1, SF-2, & SF-3, PER ORDINANCE #1230.
 - LOT STANDARDS ARE PER UDC #1048 (PRE 2018 UPDATES).
 - SANITARY SEWER, WATER, & UTILITY INFORMATION LOCATIONS ARE APPROXIMATE AND LOCATIONS NEED TO BE FIELD VERIFIED.
 - ORDER OF PLATTING APPROXIMATE AND SUBJECT TO CHANGE.
 - ALL STREET LOCATIONS ARE SUBJECT TO CHANGE AND WILL BE FINALIZED DURING THE PLATTING PROCESS.
 - ALL PROPOSED STREETS ARE DESIGNATED AS "LOCAL A" (50' RIGHT OF WAY) UNLESS OTHERWISE NOTED.
 - TOTAL PARKLAND DEDICATION FOR THE TRACT SHALL BE A MINIMUM OF 8% OF SINGLE FAMILY AND MULTI-FAMILY USE ACREAGE PER UDC SECTION 16. TOTAL PARKLAND DEDICATION MAY BE MET BY PARKLAND DEDICATION, CASH CONTRIBUTIONS, PARK IMPROVEMENTS AND/OR OTHER CREDITS AS AGREED TO BY THE DEVELOPER AND THE CITY OF CIBOLO TO BE FURTHER DEFINED IN THE LAND USE STUDY OR DEVELOPMENT AGREEMENT.
 - RIGHT OF WAY RESERVATION CROSSING PROPERTY RESERVED FOR PURCHASE FOR A FUTURE EXTENSION OF FM 1103 TOLLWAY BY OTHERS.
 - RIGHT OF WAY RESERVATION TO N MAIN ST RESERVED FOR PURCHASE FOR ROADWAY EXTENSION BY OTHERS.
 - RIGHT OF WAY DEDICATION ALONG EAST PROPERTY LINE TO BE DEDICATED AT THE TIME OF PLATTING OF UNIT 1.
 - ACCESS TO TOWN CREEK WAY TO BE LIMITED TO EMERGENCY VEHICLES ONLY.
 - OPEN SPACE WILL BE OWNED AND MAINTAINED BY HOME OWNERS ASSOCIATION.
 - A LEVEL 3 TRAFFIC IMPACT ANALYSIS WILL BE REQUIRED FOR THIS SUBDIVISION PRIOR TO THE PLATTING OF THE FIRST UNIT.
 - THE CONNECTION TO TOLLER RD MUST BE CONSTRUCTED BY THE COMPLETION OF THE 300TH HOME, UNLESS OTHERWISE NOTED.
 - PUBLIC IMPROVEMENTS AND PHASING WILL BE DETERMINED IN A PIA TO BE APPROVED BY CITY COUNCIL.

- LEGEND:**
- SITE BOUNDARY
 - CITY LIMIT BOUNDARY
 - EXISTING LIFT STATION
 - EXISTING SEWER MAIN
 - EXISTING WATER MAIN
 - EXISTING OVERHEAD ELECTRIC
 - EXISTING RAIL ROAD TRACKS
 - FUTURE PUBLIC-USE TRAILS (BY CITY)
 - PROPOSED PUBLIC-USE TRAILS (BY DEVELOPER)
 - EXISTING ZONING BOUNDARY
 - EXISTING DEED LINE
 - PROPOSED PHASE BOUNDARY
 - PROPOSED MAJOR THOROUGHFARE
 - PROPOSED PRIVATE PARK & AMENITY CENTER
 - 1% ANNUAL CHANCE FLOODPLAIN
 - FLOODWAY
 - PROPOSED LOMR FLOODPLAIN REVISIONS
 - EXISTING CANOPY COVER
 - PROPOSED PARKLAND DEDICATION (±120 Ac.)

| UNIT | LAND USE TYPE | PLATTING ORDER | MAX. LOT COVERAGE | MAX DENSITY | LOT COUNT | GROSS Ac. | NET Ac. |
|--------------|----------------------------------|----------------|-------------------|-------------|-------------|---------------|---------------|
| 1A | MEDIUM DENSITY RESIDENTIAL (SF2) | 2 | 50% | 4 | 53 | 30.32 | 13.89 |
| 1B | MEDIUM DENSITY RESIDENTIAL (SF2) | 7 | 50% | 4 | 43 | 14.52 | 11.03 |
| 2 | MIXED DENSITY RESIDENTIAL (SF3) | 1 | 60% | 5.5 | 100 | 29.66 | 19.21 |
| 3A | MIXED DENSITY RESIDENTIAL (SF3) | 4 | 60% | 5.5 | 84 | 20.05 | 18.15 |
| 3B | MIXED DENSITY RESIDENTIAL (SF3) | 8 | 60% | 5.5 | 86 | 22.12 | 17.57 |
| 3C | MIXED DENSITY RESIDENTIAL (SF3) | 12 | 60% | 5.5 | 83 | 20.04 | 18.22 |
| 4A | MIXED DENSITY RESIDENTIAL (SF3) | 3 | 60% | 5.5 | 65 | 15.31 | 14.74 |
| 4B | MIXED DENSITY RESIDENTIAL (SF3) | 9 | 60% | 5.5 | 110 | 43.76 | 22.70 |
| 5 | MIXED DENSITY RESIDENTIAL (SF3) | 5 | 60% | 5.5 | 64 | 15.61 | 14.19 |
| 6 | MIXED DENSITY RESIDENTIAL (SF3) | 14 | 60% | 5.5 | 95 | 25.08 | 19.43 |
| 7 | MIXED DENSITY RESIDENTIAL (SF3) | 15 | 60% | 5.5 | 30 | 23.96 | 5.78 |
| 8A | MEDIUM DENSITY RESIDENTIAL (SF2) | 10 | 50% | 4 | 42 | 20.39 | 12.92 |
| 8B | MEDIUM DENSITY RESIDENTIAL (SF2) | 13 | 50% | 4 | 47 | 15.74 | 11.00 |
| 9 | LOW DENSITY RESIDENTIAL (SF1) | 11 | 35% | 2 | 40 | 67.00 | 21.41 |
| 10 | TOWNHOME ① | 6 | 75% | 18 | 88 | 11.12 | 7.85 |
| - | PARK SPACE | - | - | - | - | 6.23 | 6.23 |
| - | RIGHT OF WAY ② | - | - | - | - | 30.67 | 30.67 |
| TOTAL | | | | | 1030 | 411.58 | 264.99 |

① SUBJECT TO APPROVAL OF A CONDITIONAL USE PERMIT
 ② RIGHT-OF-WAY AS INDICATED ON THE MAJOR THOROUGHFARE PLAN & FUTURE LAND USE MAP.
 PARKLAND DEDICATION REQUIRED = 264.99 AC. ± 0.08 ± 21.20 AC.



ADJACENT PROPERTY SUMMARY

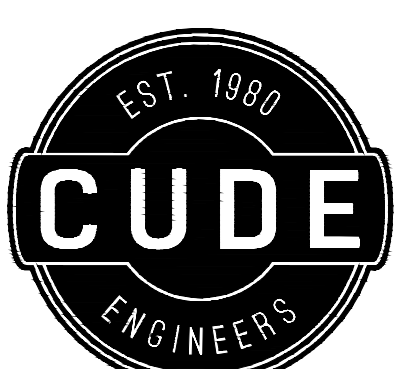
| PROPERTY | OWNER | VOLUME | PAGE |
|----------|--|------------|---------|
| 1 | HEB GROCERY CO., L.P. | 4207 | 65 |
| 2 | CITY OF SCHERTZ | 2659 | 809 |
| 3 | WILLIAM D BAILEY & CYNTHIA H HERNANDEZ | - | - |
| 4 | DEBRA RHEW | 2250 | 982 |
| 5 | DEBRA RHEW | 2250 | 982 |
| 6 | KEENAN J MOORE | 2633 | 111 |
| 7 | FELIX & MARIA E MAMBER | 2560 | 546 |
| 8 | WILLIAM H & LAURA L BUTTERFIELD | 2617 | 621 |
| 9 | CITY OF CIBOLO | 7 | 209-210 |
| 10 | BRADLEY MCBRIDE, JR. | 2015008072 | - |
| 11 | JONATHAN BRIAN & LAUREN ELIZABETH O'CONNOR | 2016015423 | - |
| 12 | ANTWAN DESHAWN & ALEXIS PIPER | 2016020515 | - |
| 13 | SOKNARA BUN KUCH | 2014017088 | - |
| 14 | ALION RAZON GIANAN | 2596 | 1014 |
| 15 | MICHAEL HERBERT GIARDINI | 2014018011 | - |
| 16 | JAY M. LOHMER | 3025 | 400 |
| 17 | JOSEPH & DAWN R COLLINS | 2529 | 429 |
| 18 | SONIA MARIE SHARP | 2516 | 279 |
| 19 | CHRISTOPHER L & KAYLAH M CAGUIOA | 4204 | 467 |
| 20 | SHANNON BAXLEY | 2573 | 319 |
| 21 | GABRIEL & APRIL N ROSAS | 4087 | 790 |
| 22 | JAMES E SANCHEZ & GABRIELA JIMENEZ SANCHEZ | 2017017482 | - |
| 23 | MIGUEL & KATHIA A FLORES | 2737 | 292 |
| 24 | DEMARCUS JACKSON | 2821 | 917 |
| 25 | RALPH LOGAN & MICHELLE BROWN | 2845 | 569 |
| 26 | ROY SAIZ JR & NGOC-DIEM THI DUONG | 2017020554 | - |
| 27 | CHARLOTTE HOGAN | 2653 | 944 |
| 28 | SCOTT A SIMPSON | 2747 | 676 |
| 29 | ANESI M & RHONDA TUJUFULLI | 2526 | 158 |
| 30 | GLENN EDWARD KNIGHT | 2591 | 667 |
| 31 | SHAREN & JAMES T FLEMING JR | 2540 | 50 |
| 32 | IVORY CHARLES ASHBY | 2689 | 736 |
| 33 | CRAIG STEPHEN & MELANIE JANE ELLIS | 2017027095 | - |
| 34 | MISTY D FRANCESCON | 2017022029 | - |
| 35 | SARAH L SOUSA | 2017001963 | - |
| 36 | ANDREW FOX | 2016009439 | - |
| 37 | KRISTEN WOODRIDGE | 2476 | 564 |
| 38 | GREGORY & MONIQUE A MCCLAIN | 13295 | 703 |
| 39 | RICARDO & DELMA SANTA CRUZ | 2386 | 150 |
| 40 | PATRICK D FINDLEY | 4275 | 192 |
| 41 | TRENT W HARBEN | 2016 | 20280 |
| 42 | THOMAS M & LISA L HAAG | 2469 | 275 |
| 43 | VERONICA LOPEZ | 2400 | 760 |
| 44 | LIZBETH ANGUIANO | 2427 | 924 |

ADJACENT PROPERTY SUMMARY

| PROPERTY | OWNER | VOLUME | PAGE |
|----------|--|----------------------|------|
| 45 | JOHN & JODI PATTERSON | 4102 | 574 |
| 46 | CLYDE & CHINA FLOWERS | 2313 | 164 |
| 47 | JULIAN POINT TRUST | 2589 | 386 |
| 48 | STEPHEN & DEENA KILPATRICK | 2435 | 451 |
| 49 | DINO & MARIA LAURENTI | 2427 | 971 |
| 50 | JOHN PATRICK & TONYA ROSE MARS | 2018000201 | - |
| 51 | JUAN & DANIELLE VILLAREAL | 2637 | 963 |
| 52 | CURTIS & ALICE MCCLAIN | 2363 | 474 |
| 53 | JAMES A BREDEWATER | 2107 | 214 |
| 54 | CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST OF THE LATTER-DAY SAINTS | 3175 | 558 |
| 55 | 30 ASSOCIATES LTD | 2015017573 | - |
| 56 | SCHERTZ-CIBOLO LIC ISD | 1571 | 40 |
| 57 | BRIAN WEATHERLY REVOCABLE LIVING TRUST | 1457 | 970 |
| 58 | STEPHEN WAYNE & RHONDA JEAN LUMAN | 4156 | 465 |
| 59 | SEARL JR & CASSANDRA WATSON | 4037 | 374 |
| 60 | SEARL J & CASSANDRA R WATSON | 2745 | 476 |
| 61 | CHARLES R PINSON | 1220 | 117 |
| 62 | DORLENE HIGGINSON | 1702 | 59 |
| 63 | JAMES A & MISTY HESTER | 2129 | 982 |
| 64 | JAMES A & JERI S TWENTER | 4006 | 225 |
| 65 | MARY J HESTER | 556 | 783 |
| 66 | JAMES A HESTER ESTATE | DEATH CERT - 2170164 | - |
| 67 | JAMES A HESTER ESTATE | DEATH CERT - 2170164 | - |
| 68 | MALCOLM MACLAUCHLAN | 2619 | 174 |
| 69 | ESTATE OF CHARLES J NOEL | 2849 | 27 |
| 70 | MALCOLM H MACLAUCHLAN | 2940 | 846 |
| 71 | JAMES A & JERI S TWENTER | 1501 | 82 |
| 72 | JAMES A & JERI S TWENTER | 1501 | 82 |
| 73 | JAMES A & JERI S TWENTER | 1501 | 82 |
| 74 | PAUL P GIFFIN LIVING TRUST | 4164 | 386 |
| 75 | ESTATE OF CHARLES C TROYER | DEATH CERTIFICATE | - |
| 76 | COUNTRY LANE MOBILE ESTATES, LLC | 2015013580 | - |
| 77 | VAL'S MHC LLP | 2364 | 1 |
| 78 | ALFRED W VILLAREAL | 1265 | 725 |
| 79 | ALVIN D BURNEY | 2128 | 696 |
| 80 | DAVID W & LAUREL L CALE | 2626 | 872 |
| 81 | BUILDERS FIRSTSOURCE - SOUTH TEXAS LP | 2015002565 | - |
| 82 | BUILDERS FIRSTSOURCE - SOUTH TEXAS LP | 2015002564 | - |
| 83 | JAY INVESTMENTS LTD | 1401 | 455 |
| 84 | VERSIE L SEILER | 2835 | 483 |
| 85 | VERSIE L SEILER | 2835 | 483 |
| 86 | CITY OF CIBOLO | 1262 | 712 |
| 87 | G A GILBERT HOLDINGS LTD | 1302 | 593 |

LINE TABLE

| LINE | LENGTH | BEARING |
|------|---------|-------------|
| L1 | 328.67' | S30°33'06"E |
| L2 | 390.51' | S30°03'34"E |
| L3 | 570.94' | N59°29'41"E |
| L4 | 375.20' | S59°14'41"W |
| L5 | 155.30' | S58°57'41"W |
| L6 | 193.90' | S59°28'41"W |
| L7 | 116.02' | N59°03'35"E |
| L8 | 392.39' | N59°24'33"E |
| L9 | 200.00' | N59°30'46"E |
| L10 | 60.00' | N59°23'28"E |



CUDEENGINEERS.COM
 4122 Pond Hill Road, Suite 101
 San Antonio, Texas 78231
 P:(210) 681-2951 F:(210) 523-7112

STEEL CREEK SUBDIVISION
 LAND STUDY
 PROPOSED USE & DEVELOPMENT

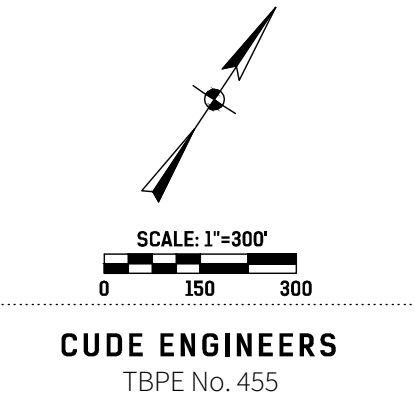
DATE
04-04-2018

PROJECT NO.
02907.300

DRAWN BY
PMB

CHECKED BY
JMC

- REVISIONS**
- REV. PER CITY COMMENTS (05-04-18)
 - REV. PER CITY COMMENTS (05-25-18)
 -
 -
 -
 -
 -
 -
 -



CUDE ENGINEERS
 TBPE No. 455

E24.2

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.

November 4, 2024

On behalf of the:

City of Cibolo
Attn: Grant Fore
200 S. Main Street
Cibolo, Texas 78108



Re: Amended Land Study Review
Steele Creek Subdivision (LS-24-03)

Mr. Fore,

Colliers Engineering & Design has completed its review of the referenced Land Study and has the following comments:

General Note -

1. Please include as part of your resubmittal a comment response letter addressing all comments.

Sheet 1 -

1. Any and all existing conditions within 200' of the proposed land study area to be shown and detailed out per UDC Section 20.3.2.B.2.
2. Please add "DATE PREPARED: MM/DD/YYYY" with the date provided in the shown format to all sheets.
3. Proposed/Existing Utility Layout sheets shall show all existing Water, wastewater, and Lift Stations within 200' of the subject property.
4. Include the Missing Ownership/legal description as indicated in the markup.
5. Provide Callouts indicating "Open Space" as shown in markups.
6. Update Callout to read as follows "DEDICATION NORTH-SOUTH COLLECTOR ROAD (80' ROW)(PER MASTER THOROUGHFARE)".
7. Add Callout to read as follows " DEDICATION NORTH-SOUTH COLLECTOR ROAD (80' ROW)(PER MASTER THOROUGHFARE)".
8. Remove Green hatch within dedicated ROW Limits.
9. Update legend line item as seen in markups to callout open space.
10. Please make the Dedicated ROW limits bold when passing through Steele Creek.

Our review of the project does not relieve or release the Engineer of Record or Surveyor of Record from complying with any and all the requirements of the local, state, and federal rules and regulations or guidelines impacting this project. If you require additional information, please contact our office.

Sincerely,

A handwritten signature in blue ink, appearing to read "Andy Carruth", written over a light blue rectangular background.

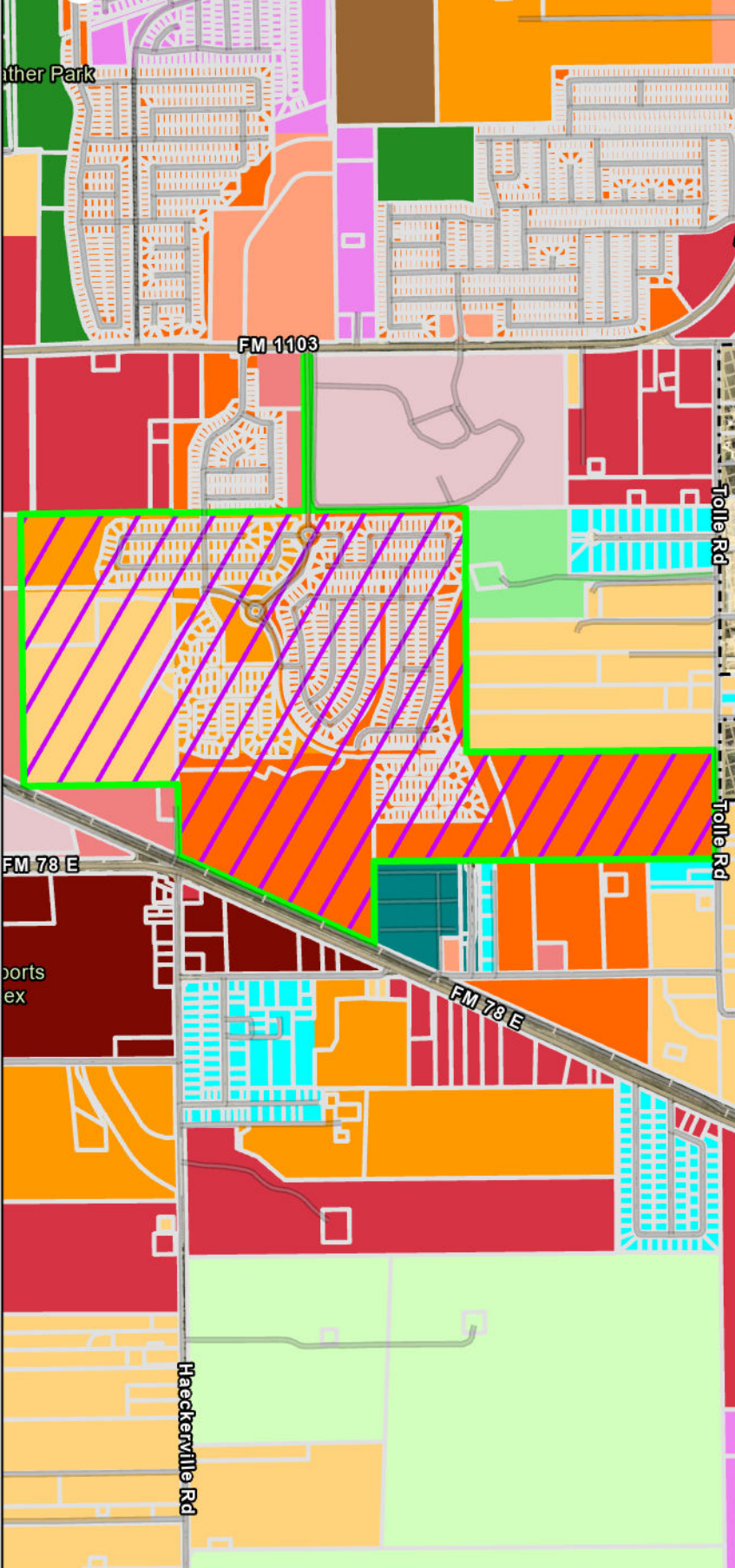
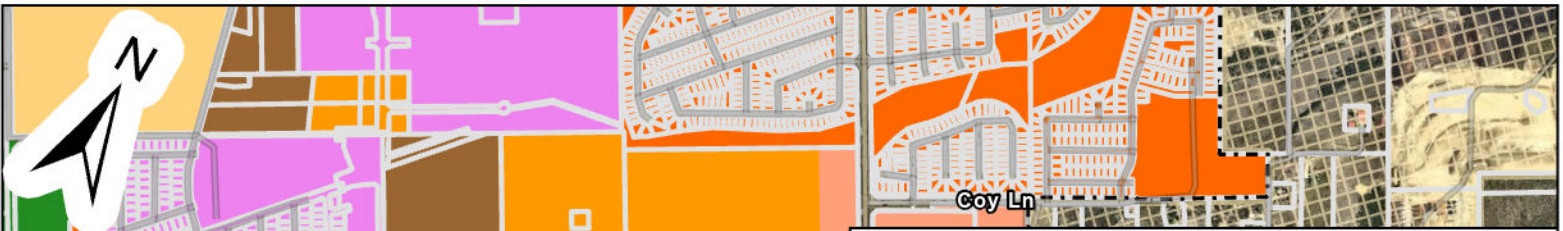
Andy Carruth, P.E.

Plan Reviewer for the City of Cibolo

City of Cibolo Planning Department comments:

In anticipation of the proposed amendment to the Public Improvements Agreement (PIA), the City has the following comments on the Land Study to ensure that the amended PIA aligns with the amended Land Study:

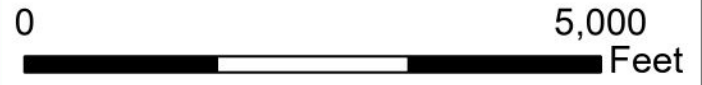
- Tree plantings should be proposed along the rear of Unit 9 in the Tree Preservation Plan.
- Indicate the width of the public use trail on the Land Study to ensure it meets the minimum requirement of 8 feet.
- Consider extending the public use trail eastward on Lance Crossing to enhance the open space and detention area in Unit 6.
- The approved Final Plat for Steele Creek Unit 6 (July 23, 2024) includes what was original proposed as Unit 7. Please update the Land Study to reflect this change.



Property Information Map Steele Creek Land Study

- Property of Interest
- Agricultural (AG)
- Temp. Agricultural (UDC 4.4.9)
- Neighborhood Commercial (C1)
- Community Retail/Service (C2)
- Retail / Office (C3)
- Retail/Office - Restrictive Alcohol Sales (C3R)
- General Commercial (C4)
- Multi-Family Residential (MF2)
- Manufactured Home Residential (MH1)
- Mobile Home Residential (MH2)
- Planned Unit Development (PUD)
- Low Density Single-Family Residential (SF2)
- Medium-High Density Single-Family Residential (SF5)
- High Density Single-Family Residential (SF6)
- Public Facility (PF) - Institution
- Public Facility (PF) - Park
- Parcel Boundaries
- Cibolo City Limits
- Cibolo ETJ

Water: City of Cibolo
Sewer Service: City of Cibolo
Council District: 7
Zoning: Low, Medium, High Density Single-Family residential (SF2)(SF5)(SF6)





Planning and Zoning Commission Staff Report

F. Discussion/Action regarding a Conditional Use Permit request to allow a Manufactured Home Residential use for certain real property located at 2090 Pfannstiel Lane, legally described as ABS: 272 SUR: JOSE ROSA 8.6500 AC and ABS: 272 SUR: JOSE ROSA 1.5000 AC.

| Meeting | Agenda Group |
|---------------------------------------|-----------------------------------|
| Wednesday, November 13, 2024, 6:30 PM | Discussion/Action Items Item: 8F. |
| From | |
| Lindsey Walker, Planner I | |
| Staff Contact(s) | |
| Lindsey Walker, | |

PLANNING & ZONING COMMISSION ACTION: Conduct 1st Public Hearing Discussion/Action and Recommendation regarding the above referenced petition

PROPERTY INFORMATION:

Project Name: CUP-24-09
 Owners: John Spillers
 Representative: John Spillers
 Location/Area: 2090 Pfannstiel Lane, 10.15 acres
 Location: North of Lower Seguin Road
 Council District: 7
 Future Land Use: Rural Residential/Agriculture
 Existing Zoning: Agricultural (AG)
 Requested Zoning: Conditional Use Permit (CUP)
 Proposed Use: Manufactured Home Residential

FINDINGS:

A zoning request is specifically about land use, not the future engineering of the land itself, and should meet criteria per UDC Article 4.3.1.5. Decisions regarding future engineering of the land occur with the platting process, where the property’s design is known. The applicant lot is located on Pfannstiel Lane, north of Lower Seguin Road. The property is within the Agriculture (AG) zoning district, with 95 acres of farmland surrounding the applicant property. The remaining nearby properties are within the ETJ. The requesting property is separated into two parcels totaling 10.15 acres. 1.5 acres is called out by the Guadalupe County for the homestead, and is where the existing historic home is situated. The remaining 8.65 acres contains other structures, including a tool shed, garage, and chicken coop.

Staff met with the applicant on August 20, 2024, to discuss the conversion of the existing home into an uninhabitable shed, while doing necessary repairs to preserve the structure for historic purposes. The City Building Official, Matt Hanson, inspected the property on August 26, 2024, and found that the home met the requirements for a dwelling unit. However, the applicant stated in their narrative that the stove has since been removed and is willing to sign an affidavit stating the building would not longer be used as a dwelling unit. The applicant is requesting a Conditional Use Permit for a manufactured home, which would be the new primary dwelling unit.

PUBLIC NOTICE:

Notice was published within the local newspaper (Seguin Gazette) on October 27, 2024, and the [City Website](#). Individual letters were sent by mail to 3 property owners within 200' of the site. To date, Staff has received two (2) in favor of and zero (0) in opposition. Public Hearings were scheduled on November 13, 2024 (Planning & Zoning Commission), and on December 10, 2024 (City Council). Approval/Disapproval of the zoning ordinance is tentatively scheduled for the January 14, 2025, City Council meeting.

STAFF CONCLUSIONS:

Staff recommends, should Council approve the CUP for Manufactured Home Residential use for property located at 2090 Pfannstiel, that it be subject to the following conditions:

1. Building & Fire Codes – Applicant must comply with all Building and Fire Code requirements.
2. Permits & Inspections – All required building permits and Certificate of Occupancy must be obtained. All permit applications submitted for this property are subject to the requirements of the Code.
3. Additional Uses – No other conditional uses are allowed under this conditional use permit.
4. Recordation of Plat – A subdivision plat must be submitted for review and approval with the City of Cibola and recorded upon completion.
5. AG Regulations – All regulations of the Agriculture Zoning District, other than those amended by the Conditional Use Permit, apply to the Property.
6. Affidavit from Owners – A signed affidavit from the property owner stating that the existing structure will not be used as a dwelling unit.

PLANNING & ZONING COMMISSION ACTION:

1. Recommend **Approval** to the Mayor and Council of the requested CUP for a Manufactured Home Residential use for property located at 2090 Pfannstiel Lane, legally described as ABS: 272 SUR: JOSE ROSA 8.6500 AC and ABS: 272 SUR: JOSE ROSA 1.5000 AC.
2. Recommend **Approval** to the Mayor and Council of the requested CUP for a Manufactured Home Residential use for property located at 2090 Pfannstiel Lane, legally described as ABS: 272 SUR: JOSE ROSA 8.6500 AC and ABS: 272 SUR: JOSE ROSA 1.5000 AC, *with conditions*.
3. Recommend **Denial** to the Mayor and Council the requested CUP for a Manufactured Home Residential use, *with findings*.

STAFF ANALYSIS:

Unified Development Code (UDC) Section 4.3.2 – Conditional Use Permit Approval Considerations

A CUP is intended to provide some flexibility to traditional zoning by offering a mechanism to balance specific site constraints and development plans with the larger interest of the community and the integrity of the UDC. An application for a CUP follows the same process as a Zoning Map Amendment Process (rezoning). The Permit, if granted, may include conditions placed upon the development of the property. The Planning & Zoning Commission and City Council shall consider the following, at a minimum, in conjunction with its deliberations for approval or denial of the application and the establishment of conditions: (*for reference, [UDC](#) and [Comprehensive/Master Plan](#)*)

A. Consistency with the Comprehensive Master Plan;

PlaceType: Rural Residential/Agriculture (pg. 39)

Character and Intent: Rural Residential/ Agricultural is intended for areas within the City which will maintain a rural character during the plan horizon and beyond. These areas are comprised of natural undeveloped space, agriculture, and large lots with large lot minimums.

Land Use Considerations:

- Primary Land Uses: Single-Family Detached Homes, Agricultural, Parks and Open Space

- Secondary Land Uses: Civic and Institutional, Agricultural Business
- Indicators and Assumptions: Lot size (range) more than 2 acres

Example Locations:

- Large tracts of undeveloped land between FM 78 & IH-10, Borgfeld property on Cibolo Valley Drive

STAFF FINDING: The request is consistent with the Comprehensive Master Plan. With the planned conversion of the existing structure to storage use, the placement of a new single-family detached home will align with the Land Use Considerations. The land will maintain its rural character as the owners continue to live on and work the land surrounding the homestead.

B. Conformance with applicable regulation in this UDC and standards established by the UDC;

STAFF FINDING: The Zoning Map Amendment will promote the health, safety, or general welfare of the City and the safe and orderly development of the City as it complies with the intent of the Comprehensive Master Plan and all applicable standards in the UDC.

C. Compatibility with existing or permitted uses on abutting sites, in terms of building height, bulk, scale, setbacks and open spaces, landscaping and site development, and access/circulation.

UDC Section 14.20 Agricultural

Intent – The Agricultural district is intended to serve as an initial temporary zoning designation for newly annexed properties into the City and as a permanent zoning designation for those rural properties of the City that are ideally suited for agricultural purposes. Since single-family residences are permitted in this district, this district is considered to be a very low-density residential district. Such acreage contributes to the rural to semi-rural setting of the City and is protected from incompatible uses.

| Lot Area | Lot Width | Front Setback | Rear Setback | Side Setback | Max Impervious Coverage | Maximum Height |
|----------|-----------|---------------|--------------|--------------|-------------------------|----------------|
| None | None | 35' | 10' | 10' | 35% | 35' |

STAFF FINDING: The UDC provides lot design guidelines within the Agriculture Zoning District that are designed in scale for compatibility with surrounding rural area.

D. Potential unfavorable impacts on existing or permitted uses on abutting sites, the extent that such impacts exceed those which reasonably may result from use of the site by a permitted use;

UDC Section 13.1 Uses allowed by right and with a Conditional Use Permit (CUP).

| AG uses allowed by right | AG allowed with CUP |
|---|---|
| Accessory Living Quarters | Manufactured Home Residential |
| Accessory Residential Units, Residential District | Campground |
| Greenhouse | Cemetery |
| Home Occupation* | Aviation Facilities |
| Manufactured Modular Housing | Day Care Services (Family)* |
| Single-family Residential | Day Care Services (Group)* |
| Kennel/Breeder | Day Care Services (General Commercial)* |
| Community Recreation | Concrete/Asphalt Batching Plant (Temporary) |

| | |
|----------------------------------|--|
| Life Care Services* | |
| Park and Recreation Services | |
| Local Utility Services | |
| Safety Services | |
| Secondary Educational Facilities | |

*Subject to supplemental use regulations of UDC Article 6.

STAFF FINDING: The proposed use is suitable for the zoning district and the surrounding rural area provided the CUP is approved.

E. Modifications to the site plan which would result in increased compatibility or would mitigate potentially unfavorable impacts or would be necessary to conform to applicable regulations and standards and to protect the public health, safety, morals and general welfare.

STAFF FINDING: The manufactured home as a "replacement" primary structure conforms with all applicable regulations as well as the intent of the Comprehensive Master Plan.

F. Safety and convenience of vehicular and pedestrian circulation in the vicinity, including traffic reasonably expected to be generated by the proposed use.

STAFF FINDING: Staff do not foresee major impacts to traffic as a result of granting the CUP. No additional traffic would be generated as the primary single-family dwelling unit is essentially being replaced.

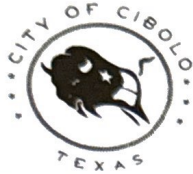
Attachments

[Application](#)

[Property Map](#)

[Response F.1](#)

[Response F.2](#)



City of Cibolo

Planning Department
201 Loop 539 W/P.O. Box 826
Cibolo, TX 78108
Phone: (210) 658 - 9900

UNIVERSAL APPLICATION - CONDITIONAL USE PERMIT

Please fill out this form completely, supplying all necessary information and documentation to support your request. *Please use a separate application for each submittal.* Your application will not be accepted until the application is completed and required information provided.

Project Name: Zuercher Farm : 2090 Pfannstiel Ln

Total Acres: 10.15 Survey Name: Jose M Rosa Survey Abstract No.: A272

Project Location (address): 2090 Pfannstiel Lane

Current Zoning: Agriculture Overlay: None Old Town FM 78

Proposed Zoning: Agriculture # of Lots: 1 # of Units: 1

Please Choose One: Single-Family Multi-Family Commercial Industrial
 Other

Current Use: Non habitable structure Total Proposed Square Footage: 1116

Proposed Use: Single Family Dwelling (Commercial/Industrial only)

Applicant Information:

Property Owner Name: Spillers Farm & Ranch, John Spillers President

Address: 3005 Sussex Gardens City: Austin

State: Texas Zip Code: 78748 Phone: 512.289.9258

Email: nona_evans@yahoo.com Fax: _____

*Applicant (if different than Owner): NONA EVANS SPILLERS

* Letter of Authorization required

Address: 3005 SUSSEX GARDENS City: AUSTIN

State: TX Zip Code: 78748 Phone: 512.289.9258

Email: nona-evans@yahoo.com Fax: _____

Representative: _____

Address: _____ City: _____

State: _____ Zip Code: _____ Phone: _____

Email: _____ Fax: _____

Authorization: By signing this application, you hereby grant Staff access to your property to perform work related to your application.

John Spillers
Owner or Representative's Signature

JOHN SPILLERS
Typed / Printed Name

State of Texas

County of Travis

Before me, Tracie Haddock, on this day personally appeared
Name of Notary Public

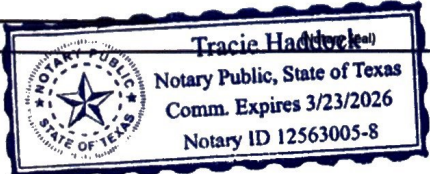
John Spillers, to be the person(s) who is/are subscribed to the
Name of signer(s)

foregoing instrument and acknowledge to me that he/she/they executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 17th day of September, 2024

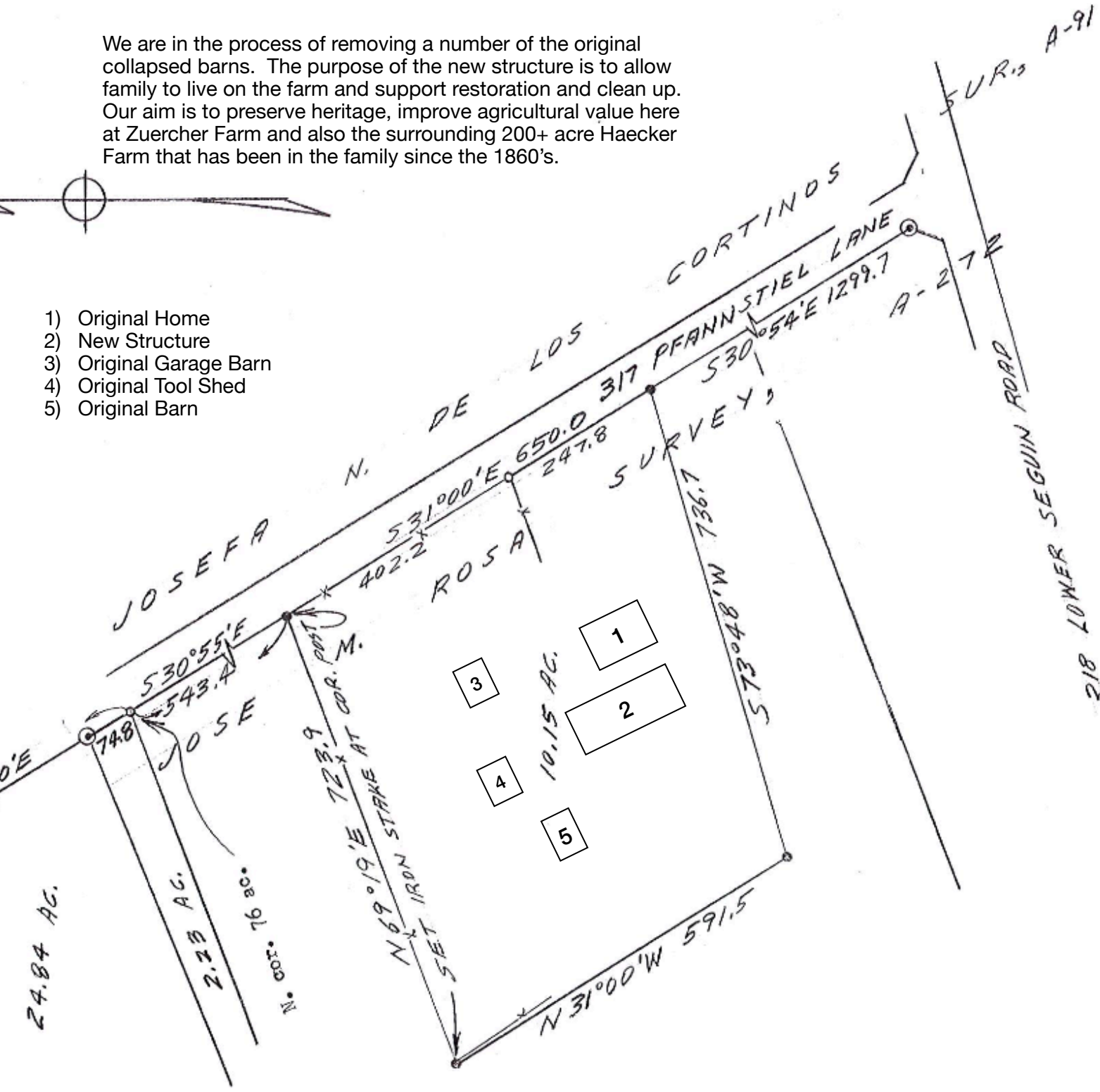
Tracie Haddock
Notary Public Signature

| |
|-------------------------|
| City of Cibolo Use Only |
| Total Fees |
| Payment Method |
| Submittal Date |
| Accepted by |
| Case Number |



We are in the process of removing a number of the original collapsed barns. The purpose of the new structure is to allow family to live on the farm and support restoration and clean up. Our aim is to preserve heritage, improve agricultural value here at Zuercher Farm and also the surrounding 200+ acre Haecker Farm that has been in the family since the 1860's.

- 1) Original Home
- 2) New Structure
- 3) Original Garage Barn
- 4) Original Tool Shed
- 5) Original Barn



SEGUIN, TEXAS
OCTOBER 21, 1983

I HEREBY CERTIFY THAT THE
PLAT SHOWN HEREON REPRESENTS
THE RESULTS OF AN ON-THE-GROUND
SURVEY MADE UNDER MY SUPERVISION
IN OCTOBER, 1983.

[Handwritten Signature]

H.S. BETTERSWORTH & ASSOC., INC.
315 S. CROCKETT STREET
SEGUIN, TEXAS 78155



PLAT OF PART OF THE MANSEL SPILLERS
76 ACRE TRACT SITUATED IN THE JOSE
ROSA SURVEY, A-272, GUADALUPE COUNTY,
TEXAS.

Scale: 1" = 200'

Called 76 ac. conveyed by Bertha
Haecker Grobe, et al to Mansel Spillers
et ux, vol. 224 at p. 542 of the Deed
Records.

2090 Pfannsteil Lane Narrative

Zuercher Farm is 10.15 acres amidst more than 220 acres that were the original homesteads in Cibolo. The Bornneman's built a home on the corner of Pfannstiel & Lower Segin in the early 1900's. Cora Lee Bornneman was born on the farm in 1926. Her half sister Laura Haecker (John Spillers' grandmother) gave Cora Lee & her husband Alfred Zuercher that 10 acre plot when they got married. Alfred farmed the entire area for decades. Our aim is to preserve as much of the family history as we can while cleaning up many of the buildings that are fallen. The future residents of 2090 Pfannstiel are family. Susan is an archivist, avid gardener and botanist. Dave is a craftsman and mechanic. He's already resuscitated the old Snapper mower that was hiding the one of the barns.



This 1940's structure has been inspected by the City and deemed utterly uninhabitable. Repairs for safety will be made and the building used as storage for canned and preserved goods as well as to house the historical artifacts that chart the story of the families and land.

In order to sustain a family farm...it takes family. We simply aim to make it possible for our family to live on the farm so they can sustain and improve its agricultural use and preserve a bit of the family heritage that is on the greater 200+ adjacent acres.

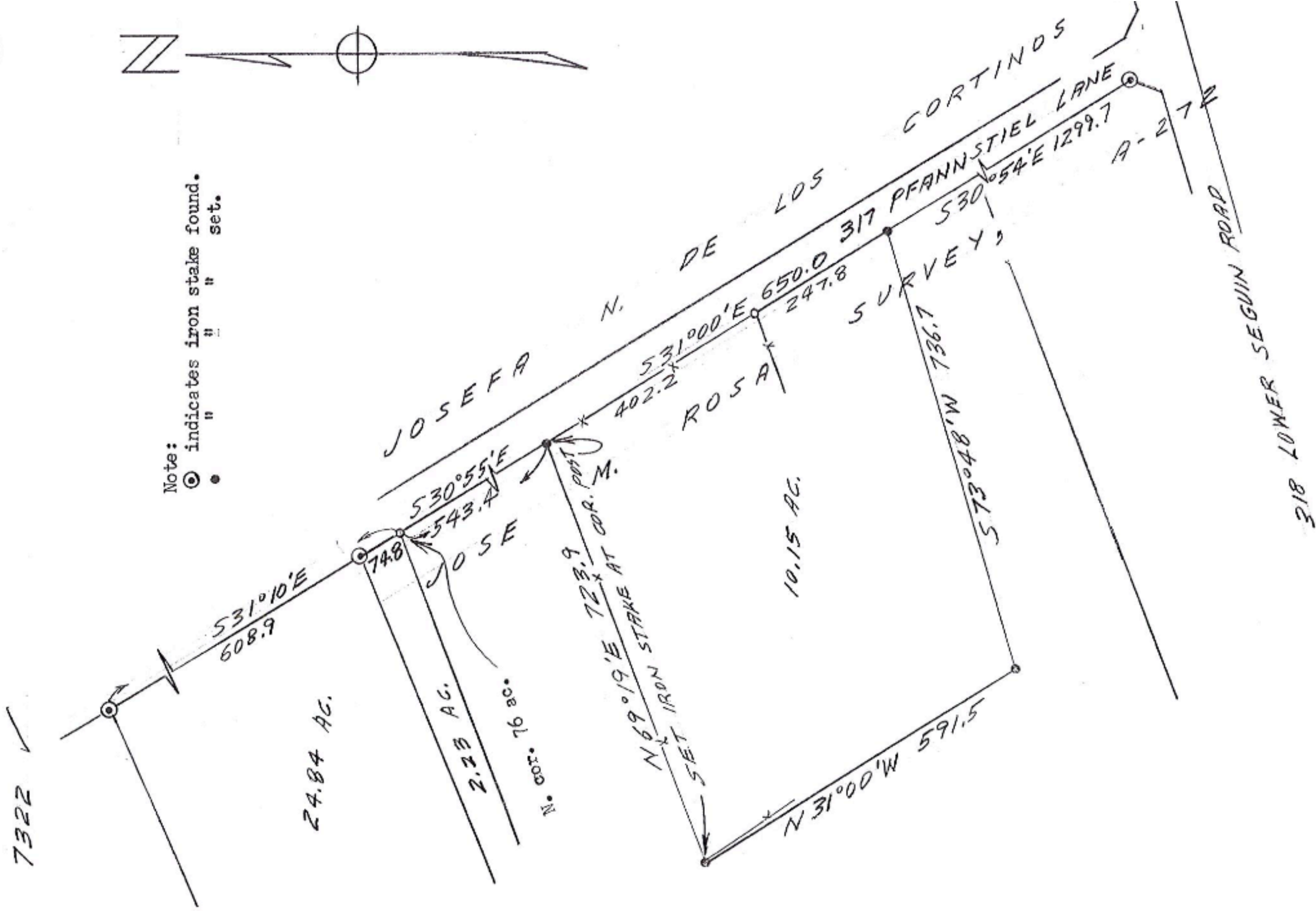
SITE PLAN & NEW STRUCTURE

At Aunt Cora's insistence she lived on her farm until at 97 she was no longer able. In October 2023 she had a fall and after rehab resided at Autumn Winds, where in her younger years she had run the kitchen. The current kitchen manager was one of her dish washers.



Our aim is to move a livable structure onto the property behind the original house so that family can reside on the property, begin cleaning up the decades worth of detritus and taking down many of the collapsed buildings. This family presence will extend our preservation efforts to the Haecker home built in the 1800's and the original Bornneman home built in the 1900's.

Ultimately, we hope to apply for heritage farm recognition and continue the tradition of farming that has been part of the area for nearly 200 years.



SEGUIN, TEXAS
 OCTOBER 21, 1983

I HEREBY CERTIFY THAT THE
 PLAT SHOWN HEREON REPRESENTS
 THE RESULTS OF AN ON-THE-GROUND
 SURVEY MADE UNDER MY SUPERVISION
 IN OCTOBER, 1983.

[Signature]
 H.S. BETTERTSWORTH & ASSOC., INC.
 315 S. CROCKETT STREET
 SEGUIN, TEXAS 78155



PLAT OF PART OF THE MANSE
 76 ACRE TRACT SITUATED IN
 ROSA SURVEY, A-272, GUADA
 TEXAS.

Scale: 1" = 2

Called 76 ac. conveyed by
 Haecker Grobe, et al to M
 et ux, vol. 224 at p. 542
 Records.

Well

Garage

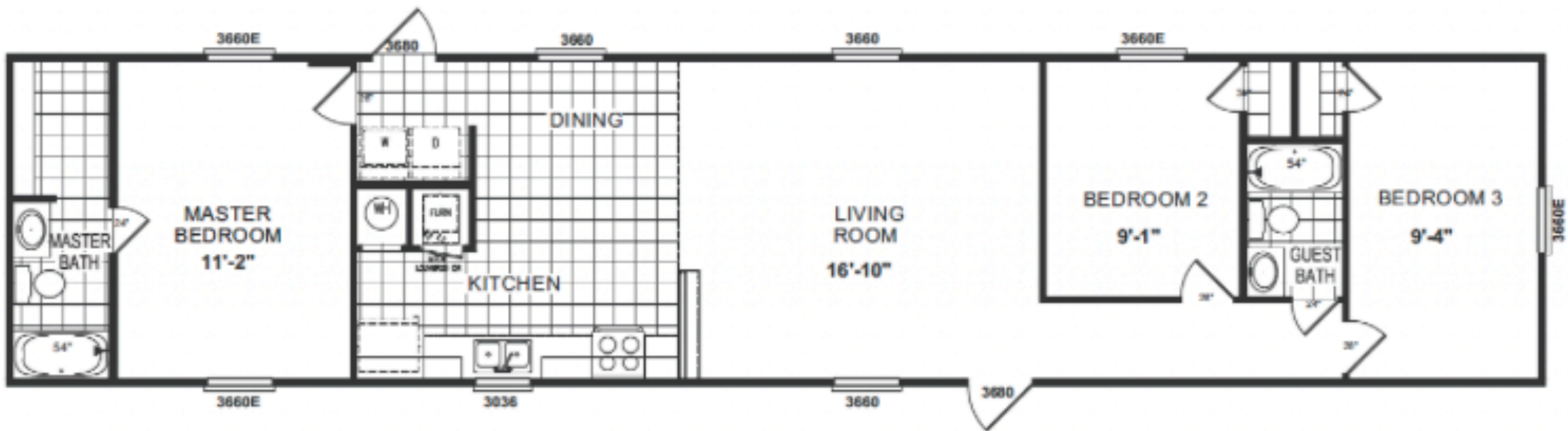
Tool
Shed

2090

16' x 72' Structure

Original
House

Chicken
Coop



Santa Fe 269

16 x 72 (76) Overall

15'6" x 72 Box 1,116 Lvg.Sq.Ft.

3 Bedroom 2 Bath

Rev. 10-11-22

- 1) \$1000 Refundable Deposit
- 2) Contractor Site Visit
- 3) 5% Deposit to Order
- 4) Hook ups / Pad
- 5) Closing
- 6) Delivery 4-6 weeks
- 7) Inspection



OAK CREEK
HOMES

CONTACTS

Contacts

Nona & John Spillers
Spillers Farm & Ranch
nona_evans@yahoo.com
512.289.9258

Susan & Dave Burhman
New Residents
susan.buhrman@gmail.com
512.507.7282



**BUILDING DEPARTMENT
PERMITS & INSPECTIONS**

Teresa Cook

EXECUTIVE ASSISTANT TO
THE CITY BUILDING OFFICIAL

(210) 658-4175

WWW.CIBOLOTX.GOV

TCOOK@CIBOLOTX.GOV

201 W.LOOP 539
CIBOLO, TEXAS 78108



Natalie Santos

Planning Technician

Direct: (210) 619-0046

201 W. Loop 539,
Cibolo, TX 78108

nsantos@cibolotx.gov
www.cibolotx.gov

Strengths: Futuristic | Consistency | Discipline | Focus | Relator

kcunningham@cibolotx.gov



**BUILDING DEPARTMENT
PERMITS & INSPECTIONS**

Matt Hanson

CITY BUILDING OFFICIAL

TSBPE I-3904
ICC, CERTIFIED BUILDING OFFICIAL
ICC, COMBINATION INSPECTOR

WWW.CIBOLOTX.GOV

CBO@CIBOLOTX.GOV

201 W.LOOP 539
CIBOLO, TEXAS 78108



Required Applications:

For the proposed project, the following development applications are required and thus must be submitted for review and approval (in the order identified below):

Notice: All applications may be submitted via [MGO Connect!](#)

- [Conditional Use Permit](#) – Sec. 4.3.2*
 - Approval Criteria – Sec. 4.3.2
- Subdivision Plat – Sec. 20.3*
 - [Minor Plat](#) – Sec. 20.3.16
 - [Development Plat](#) – Sec. 20.3.17
 - Applicable only if there are no public improvements (extension of water and/or sewer)

Other Plans or Policies:

- [Development Guide](#)
- [Platting Guide](#)
- [Guadalupe County list of Engineers](#)

QUESTIONS REQUIRING FOLLOW-UP:

1. CBO to schedule site visit to determine how to convert existing structure

NOTES COMPLETED BY:

| | | | | |
|-------------------------------------|----------------|-----------------------------|-----------------------|----------------------|
| <input type="checkbox"/> | Susana Huerta | Assistant Planning Director | (210) 658-9900 x 1041 | shuerta@cibolotx.gov |
| <input type="checkbox"/> | Grant Fore | Planner | (210) 658-9900 x 1046 | gfore@cibolotx.gov |
| <input checked="" type="checkbox"/> | Lindsey Walker | Planner | (210) 658-9900 x 1040 | lwalker@cibolotx.gov |

MEETING ATTENDEES:

City Staff:

- Kelsee Jordan Lee – Planning & Economic Director
- Susana Huerta – Assistant Planning Director
- Grant Fore – Planner II
- Lindsey Walker – Planner I
- Natalie Santos – Planning Tech
- Bobby Torres – City Engineer
- Dayane Cerros – City Engineer
- Matt Hanson – City Building Official
- Teresa Cook – Executive Assistant for CBO
- Timothy Fousse – Public Works Director
- Jacob Parsons – Assistant Public Works Director
- Isabella Ellis – Business Development Coordinator

Applicants:

- Nona Spillers
- John Spillers
- Susan Burhman

NOTE: This meeting is for informational purpose only. Any preliminary analysis provided by staff during this meeting does not constitute a formal review of the project, imply subsequent approval, nor preclude future comments. It is the responsibility of the applicant to read and comply with all applicable ordinances and requirements in effect on the submittal date.

The notes and comments provided at this meeting may be valid for six (6) months. Because existing site conditions and code requirements may change, you may need to discuss your proposed project with City staff should you submit an application after this 6-month period. Future meetings may be needed for subsequent applications.



Project Name: PDM-24-24 **Meeting Date:** 8/20/2024

Property Information: Address: 200 Pfannstiel Lane City / ETJ

Platted: Yes / No **Legal Description:** ABS: 272 SUR: JOSE ROSA 1.5000 AC

Zoning: AG **Overlay:** N/A **Future Land Use:** Rural Residential

MEETING COMMENTS:

Zoning:

This property's zoning district is Agricultural (AG). Under UDC Sec. 13.1, a Manufactured Home will require a CUP. However, a Manufactured Modular Home is allowed by right.

- A Manufactured Home is built entirely in a factory and transported to its final location on a steel chassis with wheels. It is designed to comply with a federal building code established by the U.S. Department of Housing and Urban Development (HUD).
- On the other hand, a Modular Home is also built in a factory, but it is transported to its final location in sections or modules. Once on-site, the modules are assembled and connected to a permanent foundation. Modular homes are built to comply with the same local building codes as traditional site-built homes.

Subdivision:

UDC Sec. 20.1.8 states that a property must be platted prior to the issuance of a building permit for a new residential dwelling unit.

Platting would not be required under Sec. 20.1.9.E.4 for the remodeling or repair which involves no expansion of square footage.

The property needs at least 1 acre for septic. There is one functional well on the property, which can be used, but a water quality test is strongly recommended due to potential agricultural contaminants.

For water service, GVSUD must be contacted regarding fees and connection procedures, and a permit from Cibola is needed for inspecting the waterline from the meter to the house. [Guadalupe County Public Works](#) must be contacted for septic requirements.

Applicable Development and Zoning Standards:

Overall development standards are outlined in the [UDC](#) sections listed below. However, please note this is not an all-inclusive list and that other sections of the UDC may apply to your project:

*denotes items explicitly discussed during the meeting. Please note that other sections may still apply.

- Permitted Use Tables – Article 13
 - Residential Uses – Sec. 13.1*
- Fences, Screening & Exterior Design Standards– Article 8
- Platting Requirements – Sec. 20.3.

NOTE: This meeting is for informational purpose only. Any preliminary analysis provided by staff during this meeting does not constitute a formal review of the project, imply subsequent approval, nor preclude future comments. It is the responsibility of the applicant to read and comply with all applicable ordinances and requirements in effect on the submittal date.

The notes and comments provided at this meeting may be valid for six (6) months. Because existing site conditions and code requirements may change, you may need to discuss your proposed project with City staff should you submit an application after this 6-month period. Future meetings may be needed for subsequent applications.

Hello,

On Monday, August 26, 2024, I inspected the existing structure at 2090 Pfannsteil Ln to determine whether it could be considered a dwelling unit. Mr. & Mrs. Evans explained on-site that they intend to eventually demo the more run-down portions of the house, including the only bathroom, create a "she-shed," and declassify it as a dwelling unit. That being said, the City cannot base decisions on assumptions. My findings are as follows: some can be seen in the attached pictures.

1. Working electricity, HVAC, and running water.
2. Full kitchen.
3. Significant exterior cornice & drainage plain damage.
4. Occupied until recently with the passing of a family member.
5. Sever termite damage witnessed around the entire home
6. The foundation beneath the single bathroom (1970s addition) is failing and pulling away from the original structure.

Conclusion: The 1940s home meets the requirements for a dwelling unit. However, it is nearly and may soon be utterly uninhabitable without significant repairs. The level of termite and weather damage has created a situation where any improvements would trigger the need for the entire house, sans masonry, to be rebuilt. I recommend the City not consider the original home a dwelling unit and that a signed affidavit stating the structure will not be used as one is required from the Evans'.

We are happy to sign an affidavit.

There is not a full kitchen as there is no stove or means to cook. There was a stove when Matt visited, it has since been removed.

We will likely remove the bathroom as soon as a livable structure (with bathroom) is on the premises.



**BUILDING DEPARTMENT
PERMITS & INSPECTIONS**

Matt Hanson

CITY BUILDING OFFICIAL

TSBPE 1-3904
ICC, CERTIFIED BUILDING OFFICIAL
ICC, COMBINATION INSPECTOR

WWW.CIBOLOTX.GOV

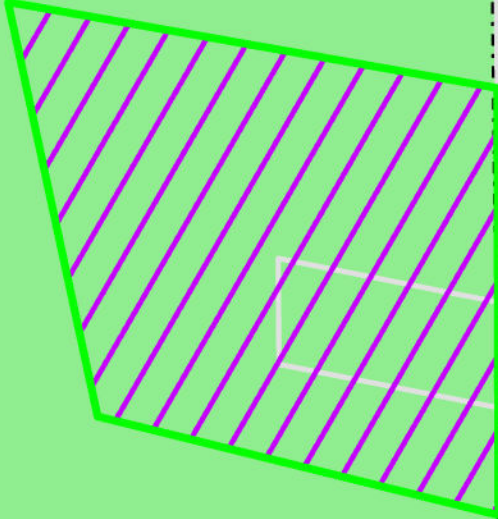
CBO@CIBOLOTX.GOV

201 W.LOOP 539
CIBOLO, TEXAS 78108

Click this link to Create an Account, Apply for Permits, or Pay Fees: mgoconnect.org

This is the original Haecker Farm home that is on our Spillers Farm & Ranch property toward Arizpe.










CIBOLO

Pfannstiel Ln

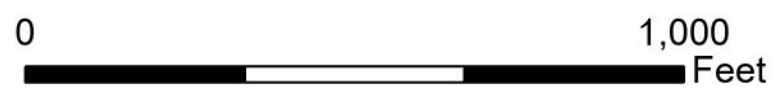
Pfannstiel Ln

Lower Seguin Rd

Property Information Map 2090 Pfannstiel Ln

-  Property of Interest
-  Agricultural (AG)
-  Parcel Boundaries
-  Cibolo City Limits
-  Cibolo ETJ

Water: GVSUD
Sewer Service: GVSUD
Council District: 7
Zoning: Agricultural (AG)





Notice of Conditional Use Permit Petition



October 22, 2024

Dear Property Owner,

In accordance with the Texas Local Government Code and the City of Cibolo Unified Development Code, you are receiving this official Notice of Conditional Use Permit Petition.

The purpose of this letter is to make you aware of a possible Conditional Use Permit for your property and provide you an opportunity to voice your opinion about the Conditional Use Permit. Your opinion matters.

In accordance with Code of Ordinances, the Planning and Zoning Commission will hold a public hearing on **Wednesday, November 13, 2024, at 6:30 p.m.** at the **Council Chambers of City Hall located at 200 South Main Street, Cibolo, Texas,** and the City Council will hold a public hearing on **Tuesday, December 10, 2024, at 6:30 p.m.** at the **Council Chambers of City Hall located at 200 South Main Street, Cibolo, Texas.**

The Conditional Use Permit proposal is as follows:

The purpose of both meetings is to hear public testimony regarding a request to allow a **Manufactured Home Residential** use for certain real property located at **2090 Pfannstiel Lane,** legally described as **ABS: 272 SUR: JOSE ROSA 8.6500 AC and ABS: 272 SUR: JOSE ROSA 1.5000 AC.**

Applicant/Owner: John Spillers, Spillers Farm & Ranch

Sincerely,
Lindsey Walker, CNU-A
Planner
lwalker@cibolotx.gov

REPLY NOTICE (CUP-24-09)

Name (please print): JOHN SPILLERS
Address (In relation to Map Exhibit): 2090 Pfannstiel & the surrounding 200 acres

You or your representatives may attend either or both public hearings. In order to officially register your support or opposition to the Conditional Use Permit you must sign and return this form **prior to the scheduled public hearing** by one of the following options:

| | |
|------------|---|
| US MAIL: | City of Cibolo, Attn: Planning Department, 200 S Main Street, Cibolo, TX 78108 |
| IN PERSON: | City Hall Annex: 201 W Loop 539, Cibolo, TX, 78108 (Mail NOT accepted at this address) |
| EMAIL: | Take a photo or scan it to planning@cibolotx.gov |

In Favor Opposed

Comments:

Signature: John Spillers Date: 10.26.24



Notice of Conditional Use Permit Petition



October 22, 2024

Dear Property Owner,

In accordance with the Texas Local Government Code and the City of Cibolo Unified Development Code, you are receiving this official Notice of Conditional Use Permit Petition.

This notice does not directly pertain to your property.

The purpose of this letter is to make you aware of a possible Conditional Use near your property and provide you an opportunity to voice your opinion about the possible Conditional Use Permit. Your opinion matters.

In accordance with Code of Ordinances, the Planning and Zoning Commission will hold a public hearing on **Wednesday, November 13, 2024, at 6:30 p.m.** at the **Council Chambers of City Hall located at 200 South Main Street, Cibolo, Texas,** and the City Council will hold a public hearing on **Tuesday, December 10, 2024, at 6:30 p.m.** at the **Council Chambers of City Hall located at 200 South Main Street, Cibolo, Texas.**

The Conditional Use Permit proposal is as follows:

The purpose of both meetings is to hear public testimony regarding a request to allow a **Manufactured Home Residential** use for certain real property located at **2090 Pfannstiel Lane, legally described as ABS: 272 SUR: JOSE ROSA 8.6500 AC and ABS: 272 SUR: JOSE ROSA 1.5000 AC.**

Applicant/Owner: John Spillers, Spillers Farm & Ranch

Sincerely,
Lindsey Walker, CNU-A
Planner
lwalker@cibolotx.gov

REPLY NOTICE (CUP-24-09)

Name (please print): Pfannstiel Farms LLC

Address (In relation to Map Exhibit): 1365 Pfannstiel LN, Cibolo, TX 78108

You or your representatives may attend either or both public hearings. In order to officially register your support or opposition to the Conditional Use Permit you must sign and return this form **prior to the scheduled public hearing** by one of the following options:

| | |
|------------|---|
| US MAIL: | City of Cibolo, Attn: Planning Department, 200 S Main Street, Cibolo, TX 78108 |
| IN PERSON: | City Hall Annex: 201 W Loop 539, Cibolo, TX, 78108 (Mail NOT accepted at this address) |
| EMAIL: | Take a photo or scan it to planning@cibolotx.gov |

In Favor Opposed

Comments:

Signature: Ray Jay Pfannstiel

Date: Oct 30, 2024



Planning and Zoning Commission Staff Report

G. Discussion/Action regarding a request to change zoning from Office/Retail (C-3) to Estate Residential (SF-1) for certain real property located at 210 Tolle Road and 633 Tolle Road, legally described as ABS: 210 SUR: JERONIMO LEAL 9.0000 AC, ABS: 210 SUR: JERONIMO LEAL 0.5000 AC, and ABS: 210 SUR: JERONIMO LEAL 0.5000 AC.

| Meeting | Agenda Group |
|---------------------------------------|-----------------------------------|
| Wednesday, November 13, 2024, 6:30 PM | Discussion/Action Items Item: 8G. |
| From | |
| Lindsey Walker, Planner I | |
| Staff Contact(s) | |
| Lindsey Walker, | |

PLANNING & ZONING COMMISSION ACTION: Conduct 1st Public Hearing Discussion/Action and Recommendation regarding the above referenced petition

PROPERTY INFORMATION:

Project Name: ZC-24-01
 Owners: Steven Krueger
 Representative: Steven Krueger
 Location/Area: 210 & 633 Tolle Road, 10 acres
 Location: North of the Tolle Road and Cibolo Tolle Road intersection
 Council District: 7
[Future Land Use:](#) Estate Residential
 Existing [Zoning:](#) Office/Retail (C-3)
 Requested Zoning: Estate Residential (SF-1)
 Proposed Use: Residential

FINDINGS:

A zoning request is specifically about land use, not the future engineering of the land itself, and should meet criteria per [UDC Article 4.3.1.5](#). Decisions regarding future engineering of the land occur with the platting process, where the property's design is known. 210 and 633 Tolle Road is a ten-acre property divided into three parcels, where two homesteads each sit on half-acre parcels. The property is currently zoned Office/Retail (C-3). North of the property are residentially used lots that are also within the C-3 zoning district. Steele High School, zoned PF-I, is located to the west of the applicant property. Directly south of the property is the Cibolo Tolle Residential Subdivision, which is within the Manufactured Home Residential (MH-1) zoning district. Across Tolle Road to the east is Cibolo's ETJ, notable uses include homesteads and a GVEC electrical station. After speaking with the City Manager, the applicant is requesting to change their zoning to the Estate Residential (SF-1) zoning district to align with the newly adopted Comprehensive Master Plan. In their narrative, the applicant mentioned that the property lost its agricultural tax exemption due to the commercial zoning. It is important to note, however, that the Guadalupe County Appraisal District considers only the use of the property, not the City's zoning classification, when appraising. Therefore, any change in zoning would have no bearing on how the property is taxed.

PUBLIC NOTICE:

Notice was published within the local newspaper (Seguin Gazette) on October 27, 2024, and the City Website. Individual letters were sent by mail to 18 property owners within 200' of the site. To date, Staff has received zero (0) in favor of and zero (0) in opposition. Public Hearings were scheduled on November 13, 2024 (Planning & Zoning Commission), and on December 10, 2024 (City Council). Approval/Disapproval of the zoning ordinance is tentatively scheduled for the January 14, 2025, City Council meeting.

PLANNING & ZONING COMMISSION ACTION:

1. Recommend **Approval** to the Mayor and Council of the requested rezone of 10 acres of property located at 210 Tolle Road and 633 Tolle Road, legally described as ABS: 210 SUR: JERONIMO LEAL 9.0000 AC, ABS: 210 SUR: JERONIMO LEAL 0.5000 AC, and ABS: 210 SUR: JERONIMO LEAL 0.5000 AC, from Office/Retail (C-3) to Estate Residential (SF-1).
2. Recommend **Denial** to the Mayor and Council of the requested rezone, *with findings*.

STAFF ANALYSIS:

Unified Development Code (UDC) Section 4.3.1.5 – Zoning Map Amendment Process Approval Criteria

In determining whether to approve, approve with modifications, or disapprove a proposed amendment, the Planning & Zoning and City Council shall consider the following: (*for reference, [UDC](#) and [Comprehensive/Master Plan](#)*)

- A. The application is complete, and the information contained within the application is sufficient and correct enough to allow adequate review and final action;**

UDC Section 4.3.1.1 (Submittal Requirements) of the UDC states “an application for Zoning Map Amendment shall be deemed complete when the applicant or agent has provided on or before the application submittal date prescribed by the City Planner or designee”:

- a. A letter or application form, signed by the property owner(s), stating the current and requested zoning classifications;
- b. A letter or application form, signed by the property owner(s), stating the current and requested zoning classifications;
- c. A copy of the current deed, indicating ownership and authority to file the application;
- d. A legal description of the property, whether by Lot and Block, or by metes and bounds;
- e. The full required fee for processing the application; and
- f. A list of property owners within two hundred (200) feet of the property for which the change in district boundary is proposed.

STAFF FINDING: A complete application was accepted by staff on October 16, 2024. This criteria has been satisfied.

- B. The Zoning Map Amendment is consistent with the City’s adopted Comprehensive Master Plan;**

PlaceType: Estate Residential (pg. 40)

Land Use Considerations:

- Primary Land Uses: Single-Family Detached Homes, Cluster Development, Parks and Open Space
- Secondary Land Uses: Civic and Institutional
- Indicators and Assumptions: Lot size (range) 1/2 to 2 acres

Example Locations:

- Single-Family Detached Homes: Persimmon Drive (south of Green Valley Road)
- Cluster Development: Spring Mesa in Arvada, CO

STAFF FINDING: The Amendment is consistent with the 2024 Comprehensive Master Plan. The Estate Residential (SF-1) zoning district is a low density residential district meant for single-family residences on lots that are a minimum of one acre.

It is important to note the difference between "Estate Residential" as a zoning district and "Estate Residential" as a PlaceType. While they share the same name, the PlaceType offers a broader range for land use, encompassing characteristics of the lower density zoning districts, such as SF-1, SF-2, and in some cases, AG. The homes along Persimmon Drive referenced in the example locations range in size from half-acre lots to over an acre. In contrast, only the properties an acre or more in size would fit the description of the Estate Residential zoning district, or SF-1, as shown below in item D. In short, the SF-1 zoning district aligns with the characteristics of the Estate Residential PlaceType, but the PlaceType is not limited in its application to only the SF-1 zoning district.

C. The Zoning Map Amendment promotes the health, safety, or general welfare of the city and the safe and orderly development of the City;

PlaceType: Estate Residential (pg. 40)

Character and Intent: Predominantly single-family housing on large lots located throughout the community. Residential uses are oriented with the front of the home facing the street and typically in a subdivision layout with access to some utilities. These kinds of lots may include farm and livestock uses. Cluster development, which involves the conservation of shared open space, natural areas, and scenic views, in exchange for smaller lot sizes, may be an alternative approach in certain circumstances.

STAFF FINDING: The applicant property is currently located in a predominantly residential area. The change in zoning would only fit the current use of the property. The request for the SF-1 zoning district also aligns with the character and intent of the Estate Residential PlaceType. Therefore, Zoning Map Amendment will promote the health, safety, or general welfare of the city and the safe and orderly development of the City.

D. The Zoning Map Amendment is compatible with the present zoning and conforming uses of nearby property and the character of the neighborhood; and

UDC Section 14.2.O.1 Estate Residential

- a. Intent – This district is established for large-lot single-family residential housing and agricultural use. It is consistent with a very low-density suburban/exurban environment with housing arranged in conventional detached format with a maximum density of one (1) unit per acre. These lots contribute to the semi-rural setting of the City and are protected from incompatible uses. Mobile/manufactured/ modular homes are not permitted.
- b. Permitted uses – one (1) dwelling unit per lot, community recreational facilities, and farms.
- c. Specific uses – subject to Site Plan approval, places of worship, schools, and private recreational amenities.

| Lot Area | Lot Width | Front Setback | Rear Setback | Side Setback | Max Impervious Coverage | Maximum Height |
|--------------|-----------|---------------|--------------|--------------|-------------------------|----------------|
| 43,560 sq ft | 100' | 40' | 25' | 25' | 35% | 35' |

STAFF FINDING: The existing homes are each located on half-acre parcels within the ten-acre tract. However, the applicant's lot currently meets the Lot Design Standards for the SF-1 zoning district and is compatible with the neighboring residential uses and zoning of surrounding properties.

E. The property to be rezoned is suitable for uses permitted by the district that would be applied by the proposed amendment.

UDC Section 13.1 Residential Uses allowed by right and with a Conditional Use Permit (CUP).

| | |
|-----------------------------------|------------------------------|
| SF-1 uses allowed by right | SF-1 allowed with CUP |
|-----------------------------------|------------------------------|

| | |
|---|---|
| Accessory Living Quarters | Kennel/Breeder |
| Accessory Residential Units, Residential District | Day Care Services (Family)* |
| Greenhouse | Day Care Services (Group)* |
| Home Occupation* | Day Care Services (General Commercial)* |
| Manufactured Modular Housing | Life Care Services* |
| Single-family Residential | Nursery School* |
| Assembly | Concrete/Asphalt Batching Plant (Temporary) |
| Community Recreation | |
| Local Utility Services | |
| Park and Recreation Services | |
| Primary Educational Facilities | |
| Safety Services | |
| Secondary Educational Facilities | |

*Subject to supplemental use regulations of UDC Article 6.

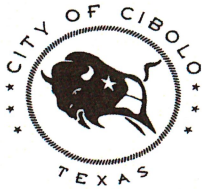
STAFF FINDING: The applicant property is suitable for the current and any future uses permitted within the SF-1 zoning district.

Attachments

[Application](#)

[Property Map](#)

[Response F.1](#)



City of Cibolo

Planning Department
201 Loop 539 W/P.O. Box 826
Cibolo, TX 78108
Phone: (210) 658 - 9900

UNIVERSAL APPLICATION - ZONING CHANGE

Please fill out this form completely, supplying all necessary information and documentation to support your request. *Please use a separate application for each submittal.* Your application will not be accepted until the application is completed and required information provided.

Project Name: KRUEGER - 633 TOLLE ROAD ZONING CHANGE
Total Acres: 9.971 Survey Name: JERONIMO LEAL SURVEY NO 85 Abstract No.: 210
Project Location (address): 210 & 633 TOLLE ROAD

Current Zoning: C-3 Overlay: None Old Town FM 78
Proposed Zoning: ESTATE RESIDENTIAL # of Lots: 1 # of Units: _____
Please Choose One: Single-Family Multi-Family Commercial Industrial
 Other _____
Current Use: RESIDENTIAL Total Proposed Square Footage: 434,349 ft²
Proposed Use: RESIDENTIAL (Commercial/Industrial only)

Applicant Information:

Property Owner Name: STEVEN BRIAN KRUEGER
Address: 729 ARMADILLO LANE City: COPPERAS COVE
State: TX Zip Code: 76522 Phone: 210-265-9360
Email: SKRUEGER6207@SBCGLOBAL.NET Fax: _____

*Applicant (if different than Owner): _____

* Letter of Authorization required

Address: _____ City: _____
State: _____ Zip Code: _____ Phone: _____
Email: _____ Fax: _____

Representative: _____

Address: _____ City: _____
State: _____ Zip Code: _____ Phone: _____
Email: _____ Fax: _____

Authorization: By signing this application, you hereby grant Staff access to your property to perform work related to your application.

Steven Krueger
Owner of Representative's Signature

STEVEN KRUEGER
Typed / Printed Name

State of Texas

County of Guadalupe

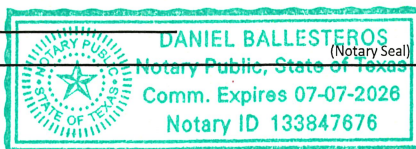
Before me, Daniel Ballesteros, on this day personally appeared
Name of Notary Public

Steven Krueger, to be the person(s) who is/are subscribed to the
Name of signer(s)

foregoing instrument and acknowledge to me that he/she/they executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 11th day of October.

[Signature]
Notary Public Signature



| |
|----------------------------|
| City of Cibolo Use Only |
| Total Fees |
| Payment Method |
| Submittal Date |
| Accepted by |
| Case Number |

Krueger - 633 Tolle Road Zoning Change

We are wanting to rezone our property because original the property was residential and the toll road project was going to give an opportunity for a commercial retail location. Since the toll project was cancelled and we are no longer in a prime area or demand for commercial retail., The configuration and size of the lot plus limited street access is not a viable commercial retail spot. We would like to have the property changed to estate residential. We are receiving several inquiries about our property for residential and are wanting to get this property sold as soon as possible. The taxes have increased dramatically over the past couple years due to lost of ag exemption because it is commercial and has become a financial burden. We would like to see someone buy it and make it a home again.

METES AND BOUNDS

Being 9.971 Acres more or less, out of the Jeronimo Leal Survey No. 85, Abstract 210, Guadalupe County, Texas, and being that same tract described in Independent Administrator's Deed recorded in Document No. 202299014537, Official Public Records of Guadalupe County, Texas; said 9.971 acres being more particularly described by metes and bounds as follows:

BEGINNING at 5/8-inch iron rod found for the upper northeast corner of this 9.971 acres, same being the East corner of the Adrian B. Potter, et ux 17.138 acres (Volume 1453, Page 891) and on the southwest Right-of-Way of Tolle Road, same also being the **POINT OF BEGINNING**;

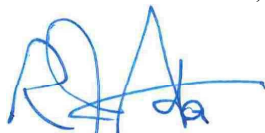
THENCE along the southwest Right-of-Way of said Tolle Road, South 30 degrees 12 minutes 45 seconds East (called South 30 degrees 04 minutes East), a distance of 292.27 feet (called 292.84 feet) to a 1/2-inch iron rod capped WALs set for the lower northeast corner of this 9.971 acres, same being the North corner of Lot 20, Cibolo Tolle Subdivision (Volume 4, Page 208);

THENCE along the line common to this 9.971 acres and said Cibolo Tolle Subdivision, South 59 degrees 38 minutes 04 seconds West (called South 59 degrees 44 minutes West), at a distance of 201.34 feet pass a 1/2-inch iron rod found for the West corner of said Lot 20, same being the North corner of Lot 19, at a distance of 851.95 feet pass a 1/2-inch iron rod found 1.11 feet to the right for the West corner of Lot 15, same being the North corner of Lot 14, at a distance of 980.80 feet pass a 1/2-inch iron rod found 0.31 feet to the right for the West corner of said Lot 14, same being the North corner of Lot 13, at a distance of 1110.96 feet pass a 1/2-inch iron rod found 0.18 feet to the right for the West corner of said Lot 13, same being the North corner of Lot 12, at a distance of 1240.67 feet pass a 1/2-inch iron rod found 0.32 feet to the left for the West corner of said Lot 12, same being the North corner of Lot 11, and in all a total distance of 1484.98 feet (called 1489.90 feet) to a 1/2-inch iron rod found for the lower southwest corner of this 9.971 acres, same being on the northwest line of the Kara Renee Latimer, et vir remainder of 31.540 acres (Conveyed in Document No. 201899029037, Described in Volume 1457, Page 970) and for the East corner of Lot 1, Block 1, High School Site (Volume 6, Page 391);

THENCE along the line common to this 9.971 acres and said Lot 1, North 29 degrees 56 minutes 47 seconds West (called North 29 degrees 09 minutes West), a distance of 292.99 feet (called 292.84 feet) to a 1/2-inch iron rod found for the upper southwest corner of this 9.971 acres, same being the South corner of the Dennis W. Bartoskewitz, et al remainder of 20.067 acres (Volume 545, Page 731);

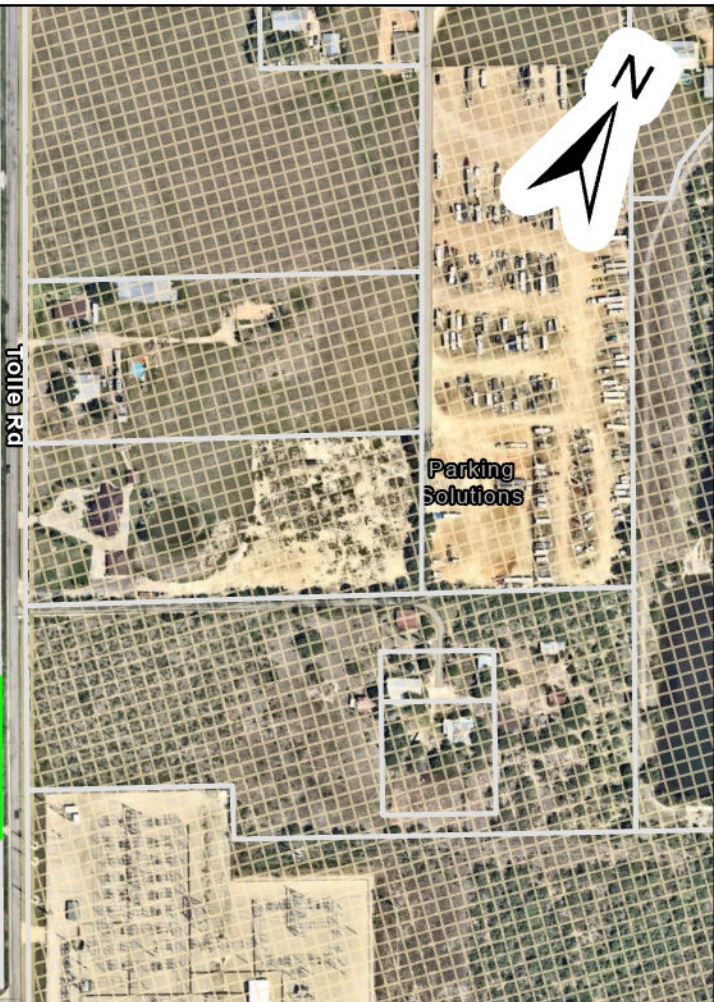
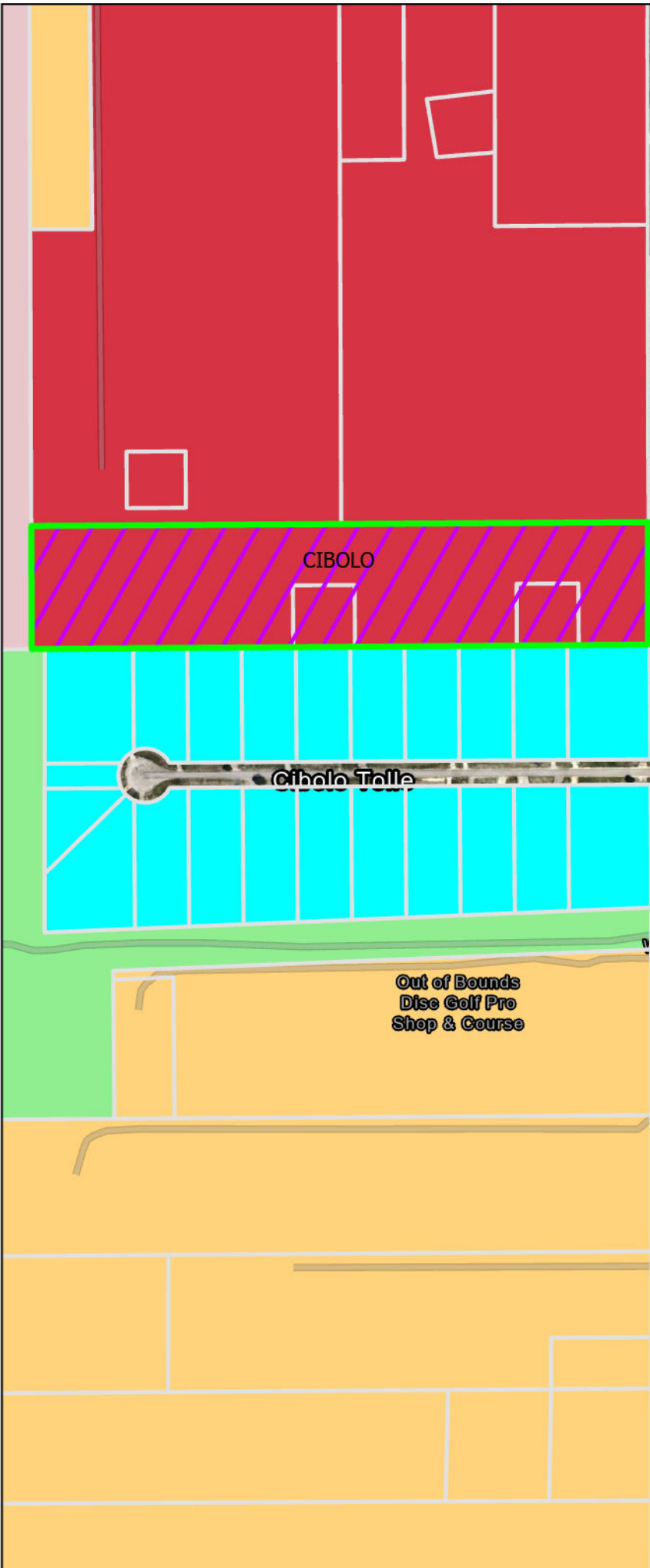
THENCE along the line common to this 9.971 acres and said Bartoskewitz remainder of 20.067 acres, North 59 degrees 39 minutes 43 seconds East (called North 59 degrees 44 minutes East), at a distance of 244.98 feet pass a 1/2-inch iron rod found 0.23 feet to the left, at a distance of 741.17 feet pass a 1/2-inch iron rod found 0.68 feet to the left for the southeast corner of said Bartoskewitz remainder of 20.067 acres and the South corner of said Potter 17.138 acres, and in all a total distance of 1483.62 feet (called 1485.20 feet to the **POINT OF BEGINNING**, and containing 9.971 acres of land, more or less.

I hereby certify that these field notes were prepared from an actual survey made on the ground under my supervision and are true and correct to the best of my knowledge and belief. A survey plat of the above described tract prepared this day is hereby attached to and made a part hereof. Bearings shown herein are based on actual GPS observations, Texas State Plane Coordinates, South Central Zone, Grid.












Rudolf J. Pata, Jr.
Registered Professional Land Surveyor
Texas Registration No. 5388
February 02, 2023

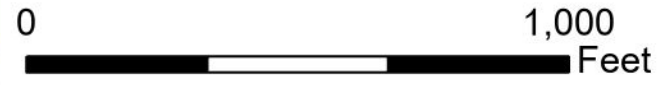




Property Information Map 633 Tolle Rd

-  Property of Interest
-  Agricultural (AG)
-  Retail / Office (C3)
-  Manufactured Home Residential (MH1)
-  Low Density Single-Family Residential (SF2)
-  Public Facility (PF) - Institution
-  Parcel Boundaries
-  Cibolo City Limits
-  Cibolo ETJ

Water: City of Cibolo
Sewer Service: City of Cibolo
Council District: 7
Zoning: Retail / Office (C3)



Name (please print):

STEVEN KRUEGER

Address (In relation to Map Exhibit):

633 TOLLE RD. Cibola, TX

You or your representatives may attend either or both public hearings. In order to officially register your support or opposition to the rezoning you must sign and return this form **prior to the scheduled public hearing** by one of the following options:

US MAIL:
IN PERSON:
EMAIL:

City of Cibola, Attn: Planning Department, 200 S Main Street, Cibola, TX 78108
City Hall Annex: 201 W Loop 539, Cibola, TX, 78108 (Mail NOT accepted at this address)
Take a photo or scan it to planning@cibola.tx.gov

Comments:



In Favor



Opposed

Signature:

Date:

11/5/2024

(210) 658-9900



www.cibola.tx.gov



200 S. Main Street Cibola, Texas 78108



Planning and Zoning Commission Staff Report

A. Staff Update

| Meeting | Agenda Group |
|---|---|
| Wednesday, November 13, 2024, 6:30 PM | UDC, CIP, Master Plan and Staff Updates Item: 9A. |
| From | |
| Eron Spencer, Assistant Planning Director | |

Attachments

[11-13-24 Staff Update](#)

[Development Projects Update - Economic Development Department](#)

Planning Department - Staff Update

November 13, 2024

Site Plans currently in review

| Project | Description |
|---------------------|--------------------------|
| 504 Pfeil | Tattoo Studio |
| Dorado Multi-Family | Multi-Family development |
| Cibolo Creek Center | Gas Station |

To follow permitted projects, visit our [website](#) for an interactive map on Current Development.

Site Plans recently approved

| Project | Description |
|---|-------------|
| No site plans approved since last update. | |

Plats currently in review

| Project | Application Type |
|--|------------------|
| Buffalo Crossing II Knights Crossing Ph. 2 (agenda item) | Final Plat |
| Cibolo Farms Unit 3 (agenda item) | Preliminary Plat |
| 504 Pfeil Road | Minor Plat |

P&Z Recommendations/City Council Action

| Agenda item | P&Z recommendation | date | City Council action | date |
|---|--|------------|--|------------|
| Old Wiederstein Self Storage Facility | Approval | 8/14/2024 | Tabled until 12/10/24 City Council meeting | 10/15/2024 |
| Homestead Cibolo Unit 1 Final Plat | Approval | 10/09/2024 | Approved | 10/29/2024 |
| Homestead Cibolo Unit 2 Final Plat | Approval | 10/09/2024 | Approved | 10/29/2024 |
| Scooters Coffee Sign Program | Approval with condition to omit Sign A | 10/09/2024 | TBD | 11/12/2024 |
| 432 Tolle Road MH CUP | Approval | 10/09/2024 | TBD | 11/12/2024 |
| IH-10 Convenience Store with Fuel Sales (larger than 5,000 square feet) CUP | Approval | 10/09/2024 | TBD | 11/12/2024 |



CIBOLO CITY COUNCIL

Economic Development

REPORT

Date: October 16, 2024

IN PLANNING REVIEW

| | |
|----------------------------|---|
| CIBOLO CROSSING | <ul style="list-style-type: none"> • Dorado @ Cibolo Crossing (Site Plan approval waiting for pedestrian easement) • Kids Academy (Awaiting Final Acceptance of Infrastructure) • Olive Garden (Pre-Application) |
| CIBOLO VALLEY DRIVE | <ul style="list-style-type: none"> • Andy's Frozen Custard (Awaiting Site Plan) • Dutch Bros Sign Program (Received, In-Review) |
| DOWNTOWN/ OLD TOWN | <ul style="list-style-type: none"> • 504 Pfeil Rd (Minor Plat on hold) • The Shops at the Mill Expansion (Pre-Development Meeting held) • 102 Short St (CUP Approved, Plat In-Progress) • 506 N Main St (Site Plan Application In-Progress) |
| FM 1103 | <ul style="list-style-type: none"> • Scooters Coffee Sign Program (Approved) • Old Wiederstein Road Self-Storage CUP (In-Progress) • Cibolo Creek Center (Site Plan in Review) • Pic N Pac Carwash (Site Plan in Review) |
| FM 78 | <ul style="list-style-type: none"> • Cibolo Small Animal Hospital (Plat Approved, Site Plan in Review) |
| IH-10 | <ul style="list-style-type: none"> • Sage Rentals (Pre-Application) • Truck Stop CUP (In-Progress) |
| OTHER | <ul style="list-style-type: none"> • Just-A-Closet (Drainage Revisions Approved) |

BUILDING PERMITS IN PROCESS

| | |
|-------------------------------|---|
| CIBOLO CROSSING | <ul style="list-style-type: none"> • SA Eye (Ophthalmologists) (Reviews Approved, Awaiting Payment) • Dorado @ Cibolo Crossing (Building Review Complete) • Salata (In Review) |
| CIBOLO VALLEY DRIVE | <ul style="list-style-type: none"> • Whataburger (Permitted) • Bentwood Oaks Medical Center (Permitted) • Dutch Bros. Coffee (Permitted) • Walmart (Remodel) • Crepeccino (In Review) |
| DOWNTOWN/ OLD TOWN | |
| FM 1103 | <ul style="list-style-type: none"> • Gas Station with Convenience Store at 2662 FM 1103 (Permitted) • QT – Location #1 at FM 1103 & Old Wiederstein Road (Permitted) • Mattengas (Awaiting Payment) • Scooter’s Coffee at Turning Stone (Permitted) |
| FM 78 | <ul style="list-style-type: none"> • CertaPro Painters (Awaiting Payment) • Bree Carleton Counseling (In Review) • QT – Location#2 – 632 FM 78 W (Permitted) • 9Round Fitness (Building Review Complete) |
| IH-10 | |
| OTHER | <ul style="list-style-type: none"> • Signature Plating (Permitted) |

NOW OPEN / C OF O ISSUED

| | |
|-------------------------------|---|
| CIBOLO CROSSING | |
| CIBOLO VALLEY DRIVE | <ul style="list-style-type: none">• Bioworx (Now Open) |
| DOWNTOWN/ OLD TOWN | |
| FM 1103 | <ul style="list-style-type: none">• Gracie Barra Brazilian Jiu-Jitsu and Martial Arts (C of O issued) |
| FM 78 | |
| IH-10 | |
| OTHER | |