



WAELTZ & PRETE, INC.
CIVIL ENGINEERS

August 01, 2025

TCEQ Reviewer
Edward Aquifer Protection Program
P.O. Box 13087
Austin, TX 78711-3087

**RE: San Gabriel Flats - Resubmittal: 806 E. Spring Street Georgetown, Texas
78626 Water Pollution Abatement Plan (WPAP) & Organized Sewage
Collection System (SCS) – Resubmittal**

Dear TCEQ Reviewer,

This letter is in support of the Water Pollution Abatement Plan (WPAP) & Organized Sewage Collection System (SCS) for the above referenced project.

The original WPAP & SCS approval has expired for this project. Therefore, we will be resubmitting documents to renew our approval. It should be noted that no changes or revisions have been made to the originally approved documents. The expired approval letter is attached for your reference.

Should you need additional information please don't hesitate to contact us.

Respectfully Submitted,

Antonio A. Prete, P.E.
Waeltz & Prete, Inc.

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 6, 2022

Mr. Tyler Wolf
806 E 13th St. Georgetown Apartments, LLC
903 N Austin Ave.
Georgetown, Texas 78628

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: San Gabriel Flats; Located at 806 E Spring St., Georgetown, Texas

TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP) and an Organized Sewage Collection System (SCS); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Edwards Aquifer Protection Program ID Nos. 11002905 (WPAP) and 11002906 (SCS); Regulated Entity No. RN111420626

Dear Mr. Wolf:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP and SCS applications for the above-referenced project submitted to the Austin Regional Office by Waeltz & Prete, Inc. on behalf of 806 E 13th St. Georgetown Apartments, LLC on January 31, 2022. Final review was completed after additional material was received on May 11, 2022 and June 6, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213 and Chapter 217. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. ***This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.***

PROJECT DESCRIPTION

WPAP DESCRIPTION

The proposed development has a total area of approximately 1.35 acres and includes the construction of six multi-family residential buildings, driveways, sidewalks, parking spaces, utilities, and a water quality basin. The proposed impervious cover will be 0.83 acres (61.5 percent).

SCS DESCRIPTION

The 178 linear feet gravity SCS will consist of 158 feet of 6-inch SDR 26 PVC ASTM D-3034 and 20 feet of 6-inch SDR 26 PVC ASTM D-2241 with associated manholes.

The wastewater generated by this project will be conveyed to the existing Pecan Branch Wastewater Treatment Plant for treatment and disposal. The project is located within the City of Georgetown and will conform to all applicable codes, ordinances, and requirements of the City of Georgetown.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, permeable pavers and a batch detention basin designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 237 pounds of TSS generated from the 0.83 acres of impervious cover. The approved and proposed measures meet the required 80 percent removal of the increased load in TSS caused by the project.

GEOLOGY

According to the Geologic Assessment (GA) included with the application, no sensitive geologic features were observed at the site. The surface geology of the area consists of Georgetown Formation (Kgt). The site is located entirely within Edwards Aquifer Recharge Zone. The TCEQ site assessment conducted on April 13, 2022 revealed the site to be generally as described by the GA.

SPECIAL CONDITIONS

- I. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.
- II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.
- III. By the responsible engineer's dated signature and seal on the Engineering Design Report attached to the submitted application, all information therein accurately reflects the information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer in accordance with the requirements of 30 TAC 213.5 (c) and Chapter 217.
- IV. All wastewater conveyance and treatment infrastructure shall be operational prior to any occupancy of the facility and prior to any wastewater flow being introduced into the sewage collection system.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP, SCS and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP and/or SCS application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP and SCS, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the

aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

13. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
18. No part of the system shall be used as a holding tank for a pump-and-haul operation.

After Completion of Construction:

19. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the Austin Regional Office within 30 days of site completion.
20. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
21. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
22. Certification by a Texas Licensed Professional Engineer of the testing of sewage collection systems required by 30 TAC Chapter 213 and Chapter 217 shall be submitted to the Austin Regional Office within 30 days of test completion and prior to the new sewage collection system being put into service. The certification should include the project name as it appeared on the approved application, the program ID number, and two copies of a site plan sheet(s) indicating the wastewater lines and manholes that were tested and are being

certified as complying with the appropriate regulations. The engineer must certify in writing that all wastewater lines have passed all required testing to the appropriate regional office within 30 days of test completion and prior to use of the new collection system. Should any test result fail to meet passing test criteria and then subsequently pass testing, the result(s) and an explanation of what repair, adjustment, or other means were taken to facilitate a subsequent passing result shall be provided.

23. Every five years after the initial certification, the sewage collection system shall be retested. Any lines that fail the test must be repaired and retested. Certification that the system continues to meet the requirements of 30 TAC Chapter 213 and Chapter 217 shall be submitted to the Austin Regional Office. The certification should include the project name as it appeared on the approved application, the program ID number and two copies of a site plan sheet(s) indicating the wastewater lines and manholes that were tested and are being certified as complying with the appropriate regulations. Should any test result fail to meet passing test criteria, and then subsequently pass testing, the result(s) and an explanation of what repair, adjustment, or other means were taken to facilitate a subsequent passing result shall be provided.
24. If ownership of this organized sewage collection system is legally transferred (e.g., developer to city or Municipal Utility District), the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
25. An Edwards Aquifer protection plan approval or extension will expire, and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
26. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mihaela (Miki) Chilarescu, P.E. of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,



Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/mec

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

Cc: Mr. Antonio Prete, P.E. - Waeltz & Prete, Inc

**WATER POLLUTION ABATEMENT PLAN (WPAP) &
ORGANIZED SEWAGE COLLECTION SYSTEM (SCS)**

**FOR
SAN GABRIEL FLATS**

**806 E SPRING STREET
GEORGETOWN, TEXAS 78626**

Prepared for:

806 E 13TH ST GEORGETOWN APARTMENTS, LLC

Mr. Tyler Wolf

903 N. Austin Ave.

Georgetown, TX 78628

Prepared by:

WAELTZ & PRETE, INC.

Antonio A. Prete, P.E.

211 N. A.W. Grimes Blvd.

Round Rock, Texas 78665



**WAELTZ & PRETE, INC.
CIVIL ENGINEERS**

211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

May 2022
Job No. 147-001

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with [30 TAC 213](#).

Administrative Review

1. [Edwards Aquifer applications](#) must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: <http://www.tceq.texas.gov/field/eapp>.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited.**
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: San Gabriel Flats				2. Regulated Entity No.:					
3. Customer Name: 806 E 13th St Georgetown Apartment, LLC				4. Customer No.:					
5. Project Type: (Please circle/check one)	New <input checked="" type="checkbox"/>	Modification			Extension	Exception			
6. Plan Type: (Please circle/check one)	WPAP <input checked="" type="checkbox"/>	CZP	SCS <input checked="" type="checkbox"/>	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residential		Non-residential <input checked="" type="checkbox"/>			8. Site (acres):		1.348	
9. Application Fee:	\$4,650.00 WPAP/SCS		10. Permanent BMP(s):			Batch Detention Pond & Permeable Pavers			
11. SCS (Linear Ft.):	178		12. AST/UST (No. Tanks):			n/a			
13. County:	Williamson		14. Watershed:			San Gabriel River			

Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the “Texas Groundwater Conservation Districts within the EAPP Boundaries” map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	Hays	Travis	Williamson
Original (1 req.)	—	—	<u>√</u>
Region (1 req.)	—	—	<u>√</u>
County(ies)	—	—	<u>√</u>
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input checked="" type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)	—	—	—	—	—
Region (1 req.)	—	—	—	—	—
County(ies)	—	—	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Trinity-Glen Rose	<input type="checkbox"/> Edwards Aquifer Authority	<input type="checkbox"/> Kinney	<input type="checkbox"/> EAA <input type="checkbox"/> Medina	<input type="checkbox"/> EAA <input type="checkbox"/> Uvalde
City(ies) Jurisdiction	<input type="checkbox"/> Castle Hills <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Helotes <input type="checkbox"/> Hill Country Village <input type="checkbox"/> Hollywood Park <input type="checkbox"/> San Antonio (SAWS) <input type="checkbox"/> Shavano Park	<input type="checkbox"/> Bulverde <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Garden Ridge <input type="checkbox"/> New Braunfels <input type="checkbox"/> Schertz	NA	<input type="checkbox"/> San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.

Antonio A. Prete, P.E.

Print Name of ~~Customer~~/Authorized Agent

AP

10May22

Signature of ~~Customer~~/Authorized Agent

Date

****FOR TCEQ INTERNAL USE ONLY****

Date(s) Reviewed:		Date Administratively Complete:	
Received From:		Correct Number of Copies:	
Received By:		Distribution Date:	
EAPP File Number:		Complex:	
Admin. Review(s) (No.):		No. AR Rounds:	
Delinquent Fees (Y/N):		Review Time Spent:	
Lat./Long. Verified:		SOS Customer Verification:	
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):
Core Data Form Complete (Y/N):			Signed (Y/N):
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: Antonio A. Prete, P.E.

Date: 05/10/2022

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: San Gabriel Flats
2. County: Williamson
3. Stream Basin: San Gabriel River
4. Groundwater Conservation District (If applicable): _____
5. Edwards Aquifer Zone:
 Recharge Zone
 Transition Zone
6. Plan Type:
 WPAP
 SCS
 Modification
 AST
 UST
 Exception Request

7. Customer (Applicant):

Contact Person: Tyler Wolf

Entity: 806 E 13th St Georgetown Apartments, LLC

Mailing Address: 903 N Austin Ave.

City, State: Georgetown, TX

Zip: 78628

Telephone: (512) 966-0117

FAX: N/A

Email Address: tyler@wolfinvestmentgroup.com

8. Agent/Representative (If any):

Contact Person: Antonio A. Prete, P.E.

Entity: Waeltz & Prete, Inc

Mailing Address: 211 N. A.W. Grimes Blvd.

City, State: Round Rock, Texas

Zip: 78665

Telephone: (512) 505-8953

FAX: N/A

Email Address: tony@w-pinc.com

9. Project Location:

The project site is located inside the city limits of Georgetown.

The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.

The project site is not located within any city's limits or ETJ.

10. The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

The site is located on the Northwest corner of the intersection of North Church Street & East Spring Street.

11. **Attachment A – Road Map.** A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.

12. **Attachment B - USGS / Edwards Recharge Zone Map.** A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

Project site boundaries.

USGS Quadrangle Name(s).

Boundaries of the Recharge Zone (and Transition Zone, if applicable).

Drainage path from the project site to the boundary of the Recharge Zone.

13. **The TCEQ must be able to inspect the project site or the application will be returned.** Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

Survey staking will be completed by this date: _____

14. **Attachment C – Project Description.** Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

- Area of the site
- Offsite areas
- Impervious cover
- Permanent BMP(s)
- Proposed site use
- Site history
- Previous development
- Area(s) to be demolished

15. Existing project site conditions are noted below:

- Existing commercial site
- Existing industrial site
- Existing residential site
- Existing paved and/or unpaved roads
- Undeveloped (Cleared)
- Undeveloped (Undisturbed/Uncleared)
- Other: _____

Prohibited Activities

16. I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
- (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
- (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
- (4) The use of sewage holding tanks as parts of organized collection systems; and
- (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
- (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:

- For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
- A request for an exception to any substantive portion of the regulations related to the protection of water quality.
- A request for an extension to a previously approved plan.

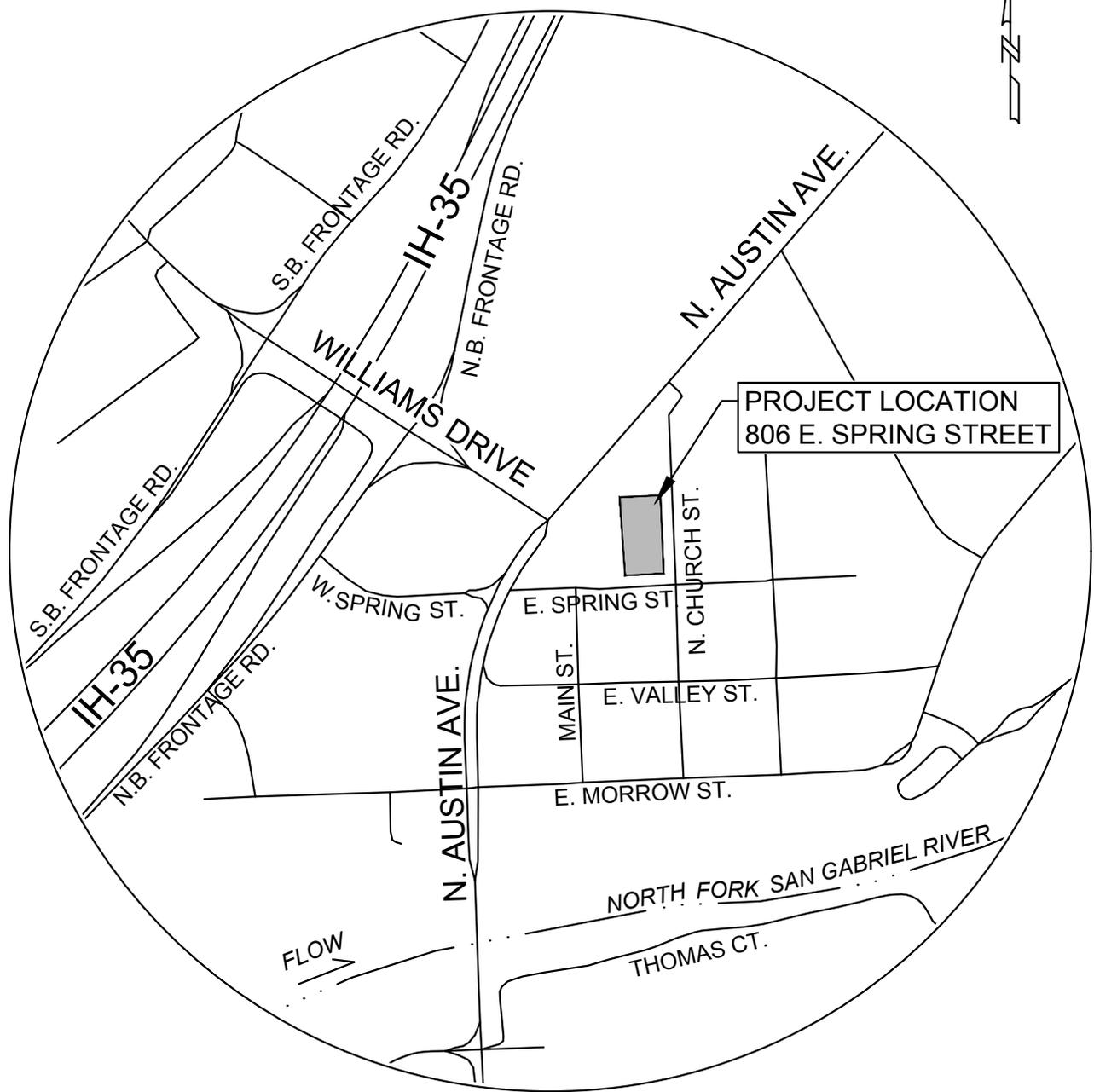
19. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

- TCEQ cashier
- Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

21. No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

ATTACHMENT "A" – ROAD MAP



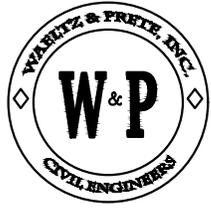
LOCATION MAP

SCALE: 1" = 500'

ATTACHMENT "A"

ROAD MAP

SAN GABRIEL FLATS

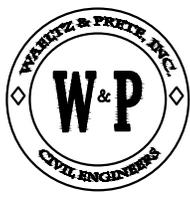
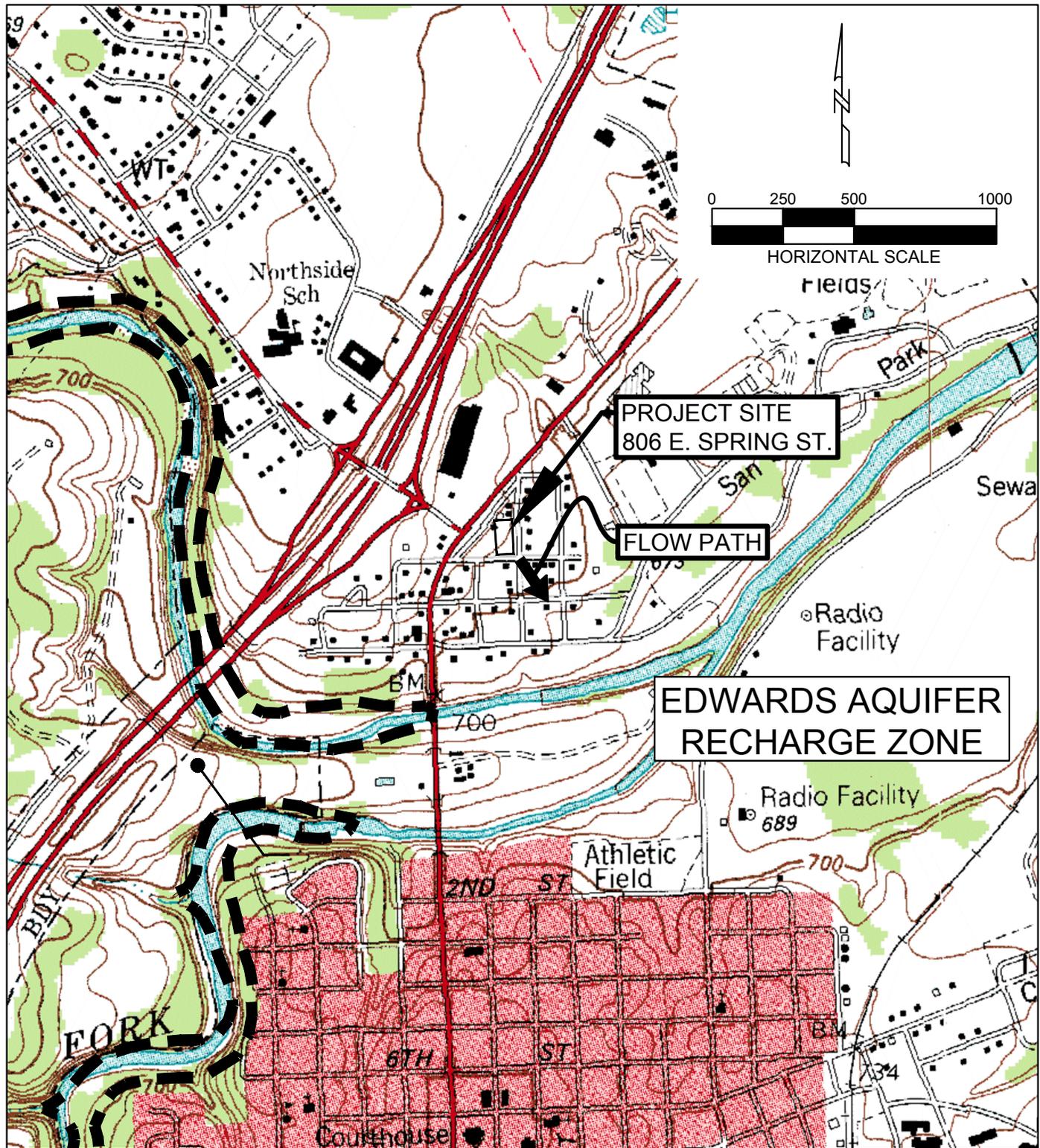


WAELTZ & PRETE, INC.
 CIVIL ENGINEERS

211 N. A.W. GRIMES BLVD.
 ROUND ROCK, TX. 78665
 PH (512) 505-8953
 FIRM TX. REG. #F-10308

ATTACHMENT "B" – USGS/EDWARDS RECHARGE ZONE MAP

K:\CAD\147-001 San Gabriel Flats4-CAD\EXHIBITS\WPAP USGS-EDWARDS RECHARGE MAP.dwg, Layout1, 12/20/2021 5:15:59 PM, DWG To PDF.pc3, 1:1, W-P, Inc., JBL



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USGS - 7 1/2 MIN.
 EDWARDS RECHARGE ZONE MAP
 WOLF CROSSING

ATTACHMENT "C" – PROJECT DESCRIPTION

We are submitting a Water Pollution Abatement Plan (WPAP) & Organized Sewage Collection System (SCS) for an overall 1.348-acre site located at the northwest corner of the intersection of N. Church Street & E Spring Street in Georgetown. The site is partially developed & what remains undeveloped has been previously cleared. The site lies within the Edward's Aquifer Recharge Zone. Therefore, Water Quality Best Management Practices (BMP's) are required for the site. An 85% TSS removal, as required by the City of Georgetown Salamander Ordinance, is achieved by capturing the runoff in the drainage basins and routing them to the BMP's. It should be noted the TCEQ only requires an 80% TSS removal.

There is an existing commercial building with parking on this site, the existing development was constructed before the adoption of Edward's Aquifer regulations in Williamson County in 1986, see 1981 aerial photo showing the existing commercial site attached behind Attachment 'C'. This development is on Lots 3-6, Block 12, & Lot 8, Block 19, of North Georgetown Addition and is a 0.6868 acres parcel with Williamson County Appraisal District property number R043535; this existing site is addressed at 901 N. Austin Avenue, Georgetown. The proposed San Gabriel Flats development is on the undeveloped portion of the property, being Lots 1-2 & 7-8, Block 12, of North Georgetown Addition, a 0.6612 acres parcel with property number R343382 and addressed at 806 E. Spring Street, Georgetown. Both tracts are owned by 806 E 13th St Georgetown Apartments, LLC. Reference the Tax Map Exhibit directly behind Attachment "C".

The San Gabriel Flats project will consist of constructing six multifamily-residential buildings, on-site & off-site parking spaces, reconstruction of driveway behind the adjacent & existing commercial building, sidewalks, water and wastewater services, grading, landscaping, storm sewer systems, a plunge pool, and a Batch Detention pond & permeable pavers for water quality treatment.

To account for impervious cover changes from this project to both the existing commercial and proposed multifamily developments, an impervious cover takeoff was prepared and included in plans, reference WQ Summary sheets. The 1.35 acre site has an impervious cover of 0.55 acres (41.02% IC). Post this project, the drainage area will have an impervious cover of 0.83 acres (61.20%). There is a net increase of 0.28 acres in impervious cover area, the 85% TSS removal required is 252 lbs. Reference the Water Quality Summary plan sheet for drainage and impervious cover limits.

To provide the required TSS removals, two new Water Quality Best Management Practices (BMP's) will be utilized for storm water treatment. The BMPs will be a Batch Detention Pond & Pervious Pavers, and TSS removals achieved are described below:

Batch Detention Pond:

A proposed Batch Detention Pond will be located at the Southeast corner of the site. This pond captures 0.47 acres with an impervious cover of 0.24 acres. This pond has a TSS removal capacity of 246 lbs and has been designed to achieve the max removal capacity.

Pervious Pavers:

A total of 1,792 SF (0.04 acres) of pervious paver sidewalk and driveways will be located along the eastern property line of the site. The pervious pavers have a TSS removal capacity of 40 lbs and has been designed to achieve the max removal capacity.

In summary, we have exceeded the required 85% TSS removals of 252 lbs. We have provided a total of 286 lbs of TSS removals.

The design of the Batch Detention Pond & Pervious Paver Sidewalk follow the TCEQ "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices" design criteria. TSS removal calculations (attached directly behind this page) have been provided and included with this application.

The proposed project will include a Sewage Collection System (SCS). The SCS ties into an existing City of Georgetown wastewater line at a proposed wastewater manhole. The SCS plan application have been included with this submittal.

Lastly, no sensitive geologic features were found on-site in the geologic assessment report, which has been included with this application.

Aerial Photo - 1981

Existing Commercial Development

Approx. site area

Williams Dr.

N. Austin Ave.

Church St.

Spring St.

Source: USDA NHAP81 (1981-09-17 - 1981-12-01)



SAN GABRIEL FLATS - TAX MAP EXHIBIT



R043535
Ex. Commercial Development
Lots 3-6 & 8, North
Georgetown Addition
901 N. Austin Ave.

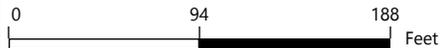
R343382
Ex. Undeveloped
Lots 1-2, 7-8, North
Georgetown Addition
806 E. Spring St.

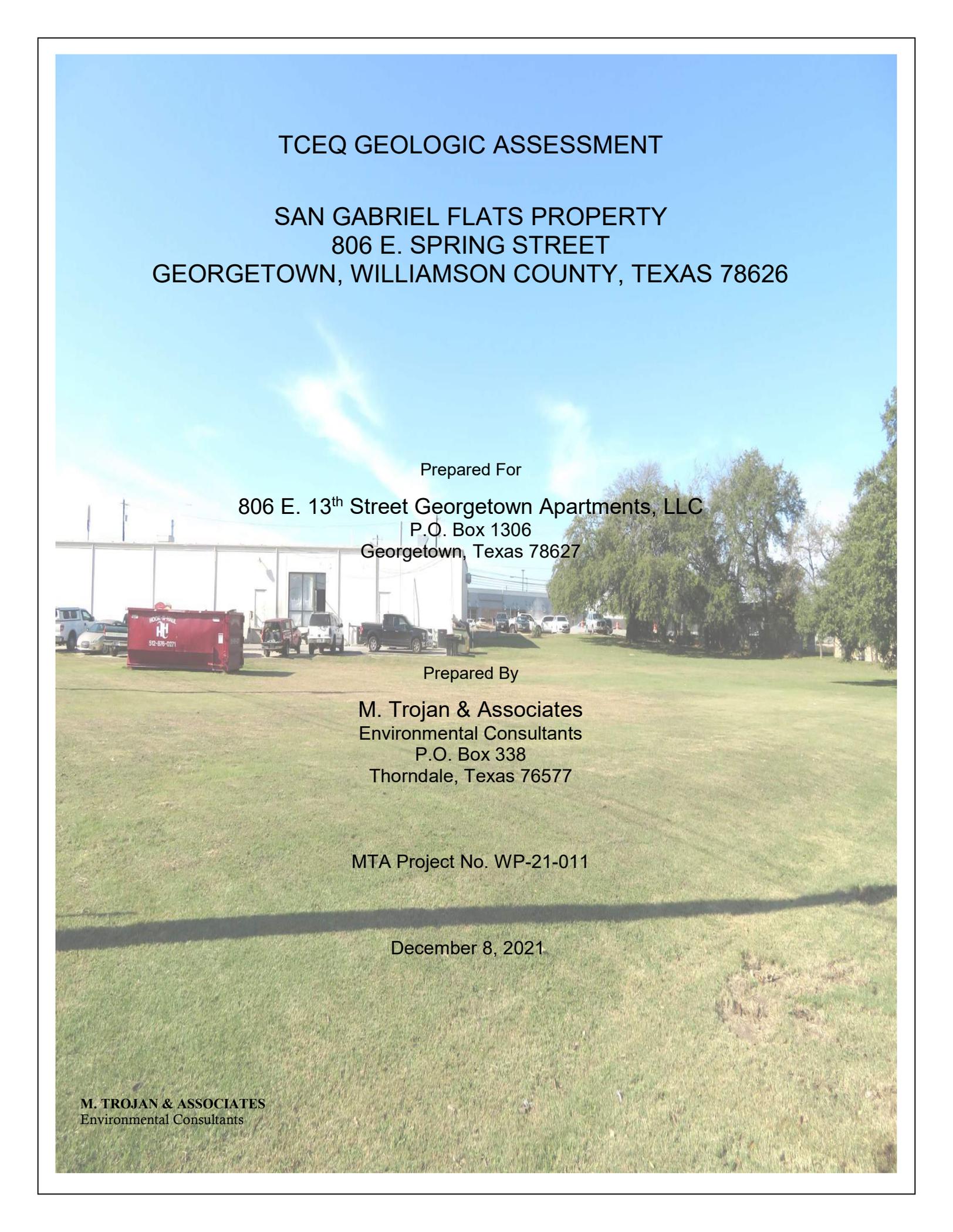
E. SPRING STREET

N. CHURCH ST.

Enter Map Title...
Web Print: 05/09/2022

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





TCEQ GEOLOGIC ASSESSMENT

SAN GABRIEL FLATS PROPERTY
806 E. SPRING STREET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78626

Prepared For

806 E. 13th Street Georgetown Apartments, LLC
P.O. Box 1306
Georgetown, Texas 78627

Prepared By

M. Trojan & Associates
Environmental Consultants
P.O. Box 338
Thorndale, Texas 76577

MTA Project No. WP-21-011

December 8, 2021

M. TROJAN & ASSOCIATES
Environmental Consultants

December 8, 2021

Mr. Tyler Wolf
806 E. 13th Street Georgetown Apartments, LLC
P.O. Box 1306
Georgetown, Texas 78627

Subject: Report of TCEQ Geologic Assessment
San Gabriel Flats Property
806 E. Spring Street
Georgetown, Williamson County, Texas 78626
MTA Project No. WP-21-011

Mr. Wolf:

M. Trojan & Associates is pleased to submit this report of a Texas Commission on Environmental Quality (TCEQ) *Geologic Assessment* for the above referenced property. This *Geologic Assessment* was performed in accordance with the TCEQ requirements and instructions for completing TCEQ Form 0585.

I appreciate the opportunity to assist you in your environmental matters associated with the subject property. Should you have any questions or require additional information, please feel free to contact me at (512) 917-3695, or forward an email to mtrojan0316@gmail.com.

Respectfully,



Michael Trojan, PG
M. TROJAN & ASSOCIATES



Certified Professional Geoscientist #1109 (TX)

c: MTA Project File WP-21-011

TABLE OF CONTENTS

1.0	TCEQ FORM 0585.....	1
2.0	OVERVIEW	5
3.0	GENERAL PROPERTY DESCRIPTION AND SITE DEVELOPMENT.....	6
3.1	STUDY AREA.....	6
3.2	PROPOSED SITE DEVELOPMENT.....	6
3.3	PREVIOUSLY PUBLISHED REPORTS	6
4.0	GEOLIC ASSESSMENT LIMITATIONS	7

ATTACHMENTS

ATTACHMENT A: GEOLOGIC ASSESSMENT TABLE

ATTACHMENT B: STRATIGRAPHIC COLUMN

ATTACHMENT C: SITE GEOLOGY

ATTACHMENT D: SITE GEOLOGIC MAPS

Figure 1 – Site Location Map

Figure 2 – Site Aerial Photograph

Figure 3 – Surface Water Hydrology

Figure 4 – Site Soils Map

Figure 5 – General Geologic Map

Figure 6 – Site Geologic Map

ATTACHMENT E: SITE PHOTOGRAPHS

1.0 TCEQ FORM 0585

Geologic Assessment
Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge/Transition Zones and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Michael Trojan, PG

Telephone: (512) 917-3695

Representing: M. Trojan & Associates

Fax: _____

Signature of Geologist:





Michael Trojan, PG
Certified Professional Geoscientist #1109 (TX)

Regulated Entity Name: San Gabriel Flats Property
806 E. Spring Street, Georgetown, Williamson Co, Texas 78626

Project Information

1. Date(s) Geologic Assessment was performed: December 2, 2021

2. Type of Project:

<input checked="" type="checkbox"/> WPAP	<input type="checkbox"/> AST
<input type="checkbox"/> SCS	<input type="checkbox"/> UST

3. Location of Project:

<input checked="" type="checkbox"/> Recharge Zone
<input type="checkbox"/> Transition Zone
<input type="checkbox"/> Contributing Zone within the Transition Zone

4. **Attachment A – Geologic Assessment Table.** Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

5. Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map (refer to Attachment D).

Table 1 – Soil Units, Infiltration, Characteristics and Thickness

Soil Units, Infiltration Characteristics & Thickness		
Soil Name	Group*	Thickness (feet)
Doss silty clay, 1–5% slopes (DoC)	C	up to 1.6

* Soil Group Definitions (Abbreviated)

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate infiltration rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

6. **Attachment B – Stratigraphic Column.** A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.
7. **Attachment C – Site Geology.** A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
8. **Attachment D – Site Geologic Map(s).** The Site Geologic Map must be the same scale as the applicant's Site Plan.
Applicant's Site Plan Scale: unknown
Site Geologic Map Scale: 1" = 90'
Site Soils Map Scale (if more than 1 soil type): 1" = 90'
9. Method of collecting positional data:
 Global Positioning System (GPS) technology.
 Other method(s). Please describe method of data collection: _____
10. The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. Surface geologic units are shown and labeled on the Site Geologic Map.
12. Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.
 Geologic or manmade features were not discovered on the project site during the field investigation.
13. The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section
 There are 0 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply).
 The wells are not in use and have been properly abandoned.

- The wells are not in use and will be properly abandoned.
- The wells are in use and comply with 16 TAC Chapter 76.
- There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

15. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

2.0 OVERVIEW

M. Trojan & Associates was retained to conduct a *Geologic Assessment* for proposed future development on a partially developed lot located at 806 E. Spring Street in Georgetown, Williamson County, Texas 78626 (refer to Figures 1 and 2 of Attachment D). All aspects of the *Geologic Assessment* were conducted by Mr. Michael Trojan, PG (Certified Professional Geoscientist #1109 in Texas), and the assessment was performed in accordance with Texas Commission on Environmental Quality (TCEQ) requirements and instructions for completing TCEQ Form 0585. The assessment included reconnaissance of the entire property as well as bordering portions of all neighboring properties.

Based on information obtained from the TCEQ, the study area is located on the Edwards Aquifer Recharge Zone. Accordingly, the objective of the *Geologic Assessment* was to identify any naturally occurring geologic (karst) or manmade features that may significantly contribute to recharge of the subsurface. The Edwards Aquifer rules define sensitive features as:

“ . . . those that have potential for interconnectedness between the surface and the Edwards Aquifer and where rapid infiltration to the subsurface may occur.”

The scope of the *Geologic Assessment* included the following general components:

- Review of published soils and geologic/hydrogeologic information;
- Field evaluation of topographic features;
- Field evaluation of soil types and horizons, relative thicknesses, and hydrologic characteristics (visual only);
- General review of the subsurface geologic units beneath the property as well as geologic units exposed at ground surface (if visible);
- Field evaluation of geologic conditions to determine the presence or absence of caves, solution cavities, solution-enlarged fractures, faults, other natural bedrock features, sinkholes, swallets or swallow holes in drainage features, non-karst closed depressions, manmade features in bedrock, and any other natural or manmade features, and evaluation of such features with respect to their potential ability to convey infiltrating surface water to the underlying subsurface; and
- Preparation of TCEQ Form 0585 for presentation of the findings of this assessment.

3.0 GENERAL PROPERTY DESCRIPTION AND SITE DEVELOPMENT

3.1 Study Area

The study area is located on the southeast side of N. Austin Ave. and north side of E. Spring Street (refer to Figures 1 and 2 of Attachment D and photographs included in Attachment E). The study area consists of land that has been partially developed with a retail building on the western half of the property. The remaining eastern half of the property is undeveloped and represents the proposed project area. This area exhibits grass cover that is routinely mowed/shredded.

3.2 Proposed Site Development

As of the writing of this *Geologic Assessment* report, the property is proposed to be developed as a residential complex, consisting of seven residential structures/units, paved driveways and parking areas and detention/water quality pond. The development will be restricted to the area highlighted on Figures 2, 3, 4 and 6 of Attachment D.

3.3 Previously Published Reports

No previously published, site-specific technical report were reviewed as part of this *Geologic Assessment*.

4.0 GEOLIC ASSESSMENT LIMITATIONS

This *Geologic Assessment* was conducted in accordance with rules and guidelines set forth by the TCEQ, as well as consistent with standard methods and practices generally employed by professionals engaged in conducting karst assessments. Still, the scope of the *Geologic Assessment* presents certain limitations. The primary limitations include:

1. The field reconnaissance is conducted to effectively identify the geologic conditions/features at the subject property. However, certain site conditions may render features undetectable as a result of obstruction by: (1) soil cover, (2) very dense, inaccessible vegetation, (3) manmade cover including, but not limited to driveways, concrete slabs, soil and debris piles/mounds, and/or (4) stormwater runoff ground cover following significant rainfall events.
2. The scope of the *Geologic Assessment* does not include identification of features that may be discovered at the time of site development – during excavation, trenching, grading and/or leveling.
3. While this *Geologic Assessment* is confident of the identification of karst features, or lack thereof, the regulatory community reserves the right to conduct a reconnaissance of the study area. At times, regulatory field inspectors may identify additional potential karst features that, in their professional opinion, may require consideration in terms of proposed development on the study area. In this event, the author of this *Geologic Assessment* and the developer are provided the opportunity to conduct additional field investigation of such features, including employment of certain invasive methodologies (e.g., excavation), to either confirm or refute the field findings of the regulatory field inspectors.

ATTACHMENT A
GEOLOGIC ASSESSMENT TABLE

ATTACHMENT B
STRATIGRAPHIC COLUMN

SYSTEM	SERIES	GROUP	FORMATION	LITHOLOGY/ THICKNESS	
QUATERNARY				TERRACE AND ALLUVIUM SAND, SILT, CLAY, AND GRAVEL THICKNESS NOT REPORTED	
CRETACEOUS	UPPER CRETACEOUS (GULFIAN)	AUSTIN		CHALK, MARL, AND LIMESTONE 325-420 FEET THICK	
		EAGLE FORD	EAGLE FORD	SHALE AND SILTY LIMESTONE TO CALCAREOUS SILTSTONE 25-65 FEET THICK	
			BUDA	LIMESTONE UP TO 45 FEET THICK	
			DEL RIO	CLAY 40-70 FEET THICK	
			GEORGETOWN	LIMESTONE AND MARL 30-80 FEET THICK	
	LOWER CRETACEOUS (COMANCHEAN)	FREDERICKSBURG	EDWARDS		LIMESTONE AND DOLOSTONE 60-350 FEET THICK
			COMANCHE PEAK		LIMESTONE AND MARL UP TO 80 FEET THICK
			WALNUT FORMATION		LIMESTONE AND MARL UP TO 130 FEET THICK
			PALUXY SAND		SAND UP TO 10 FEET THICK

Geologic unit that directly underlies the subject property



M. TROJAN & ASSOCIATES
Environmental Consultants
P.O. Box 338
Thorndale, Texas 76577
(512) 917-3695

Scale: No Scale
Date: December 8, 2021
Project: TCEQ Geologic Assessment
MTA Project: WP-21-011

STRATIGRAPHIC COLUMN
SAN GABRIEL FLATS PROPERTY
806 E. SPRING STREET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78626

ATTACHMENT C
SITE GEOLOGY

TOPOGRAPHY AND SURFACE WATER HYDROLOGY

The property slopes gently to the southeast (refer to Figure 3 of Attachment D). Topographic elevations on the study area range between approximately 717 and 707 feet above mean sea level (msl), with the highest elevations located at the northwest property corner and the lowest elevations near the southeast corner.

As is depicted on Figure 3 of Attachment D, all stormwater runoff generated on the study area flows as sheet flow directly offsite to shallow drainage ditches along E. Spring Street and N. Church Street. From the intersection of these two roadways, runoff continues to be channeled – via a shallow roadside drainage ditch – to the south along N. Church Street for a distance of 600 feet to an underground culvert at the intersection of N. Church Street and E. Morrow Street. The culvert discharges to an ephemeral stream to the south of E. Morrow Street that conveys runoff for approximately 300 additional feet to the San Gabriel River. There are no defined streams on the property.

The entire study area lies within the Smith Branch North San Gabriel River watershed. According to review of a FEMA Flood Insurance Rate Map, no portion of the study area lies within a floodplain. Moreover, no portion of the property lies within an established waterway setback.

SOILS

According to the *Soil Survey of Williamson County, Texas*, the soils that are reported to cover the study area are as follows (also refer to Figure 4 of Attachment D for soil type locations):

Soil Component Name:	Doss silty clay, 1–5% slopes (DoC)
Soil Surface Texture:	Dark grayish-brown silty clay to approximately 9 inches, underlain by brown silty clay loam to about 19 inches, underlain by limy earth interbedded with fragments of limestone
Hydrologic Group:	Permeability is slow; available water capacity is low
Soil Drainage Class:	Well drained

Based on the *Soil Survey* and as is depicted on Figure 4 of Attachment D, the Doss silty clay soils cover the entire study area.

Shallow excavations were made at various locations across the study area and soil characteristics were observed to be similar to those described in the *Soil Survey*. The soils were observed to be fine-grained and thin to medium-thick, and to be relatively

consistent across the eastern half of the property. Majority of the western half of the property was observed to exhibit impervious cover. The site reconnaissance did not observe any evidence of significant surface soil erosion.

GEOLOGY

Based on the *Geologic Atlas of Texas, Austin Sheet* and other available geologic/hydrologic publications, the outcropping (near surface) geologic material directly beneath the study area is the Georgetown Formation (Kgt) (refer to the stratigraphic column in Attachment B and Figure 5 of Attachment D). The Georgetown Formation consists of limestone and marl (mostly limestone). The limestone is light gray, fine grained, nodular, and moderately indurated. Some limestone is white, hard, brittle, and thick bedded. The Georgetown also includes some shale that is light gray to yellowish gray, marly, and soft. The thickness is reported to range 30 to 80 feet, and the formation thins southward.

Given the consistent soil cover and/or impervious cover over the entire study area, no true geologic rock outcrops were observed. Moreover, no geologic outcrops were observed on neighboring properties.

ONSITE FEATURES

The field reconnaissance of the study area included search for and identification of sensitive karst and manmade features, as defined by TCEQ, and to note potential ground recharge points that may be associated with such features. The field reconnaissance entailed walking 25-foot spaced transects across the entire study area. The results of the reconnaissance are provided below.

Caves

Based on TCEQ criteria, a cave is a natural underground open (or filled) space formed by dissolution of limestone that is large enough for an average-sized person to enter. When a surface cave opening is encountered, then the subsurface extent of the cave is relevant in terms of subsurface recharge.

Based on observations made across the entire study area, no cave openings/caves were identified.

Solution Cavities

Based on TCEQ criteria, a solution cavity is a natural cavity or depression formed as a result of dissolution of limestone. This category is designed to

capture features that are not large enough for a normal-sized person to enter but appear to be part of a system of interconnected voids that connect the surface with the subsurface. The size and geometry of the feature is defined by in-place bedrock. Solution cavities also include areas where dissolution has increased the opening size and permeability along bedding planes as well as fractures.

Based on observations made across the entire study area, no solution cavities were identified.

Solution-Enlarged Fractures

Based on TCEQ criteria, a solution-enlarged fracture is one that shows evidence of being locally enlarged by dissolution of limestone, recognized by measurable (larger than hairline) openings and miss-matched fracture surface shapes.

Based on observations made across the entire study area, no solution-enlarged fractures were identified.

Faults

Based on TCEQ criteria, a fault is defined as a fracture along which there has been displacement of one side of the fracture relative to the other side. Displaced geologic materials and/or an abrupt change in surface topography can both be indicative of the presence of a fault.

Based on observations made across the entire study area, no field evidence of the presence of faults was observed.

Swallet or Swallow Holes

Based on TCEQ criteria, a swallet or swallow hole may include a focused recharge feature in an intermittent drainage or stream in karst terrain. Some swallow holes have a surface expression, for example, a cave opening or formation of a whirlpool in the stream at high flow. The general case is that fine soil and sediment as well as gravel are deposited over the bedrock feature during falling stages of flow, thereby intermittently or frequently obscuring the feature.

Based on observations made across the entire study area, no swallet or swallow holes were identified.

Sinkholes

Based on TCEQ criteria, a sinkhole represents a shallow, broad topographic depression formed in response to karst processes. Sinkholes are pragmatically defined as features greater than six (6) feet in diameter with more than six (6) inches of topographic relief. Sinkholes are usually circular in map view. In cross section they may be subtle swales or funnel-shaped pits and some have exposed rimrock at the perimeter. The presence of a sinkhole implies that processes including collapse, subsidence, and soil sapping over geologic time have caused the land surface to sink below the surrounding area.

Based on observations made across the entire study area, no sinkholes were identified.

Non-karst Closed Depressions

Based on TCEQ criteria, a non-karst closed depression is a natural or non-natural topographic depression that is not formed by karst processes and is not bedrock floored. A feature larger than six (6) feet in at least one direction and with six (6) inches or more of topographic relief should be considered as a feature.

Based on observations made across the entire study area, no non-karst closed depressions were identified.

Zones

Based on TCEQ criteria, a zone is an area in which any type of karst feature occurs along a trend or in a cluster. Clustered or aligned features are more likely to be an indicator of an integrated flow system at depth than isolated features. Alignment is expected in areas where conduit flow is strongly influenced by structurally controlled fractures.

Based on observations made across the entire study area, no zones were identified.

Other Natural Bedrock Features

Based on TCEQ criteria, other natural bedrock features include vuggy rock and reef deposits that may contain large holes or vugs.

Based on observations made across the entire study area, no other natural bedrock features were identified.

Manmade Features in Bedrock

Based on TCEQ criteria, manmade features in bedrock may include water wells, sanitary sewer lines, storm sewer lines, trenches, quarries, and other cultural features that intersect bedrock and can potentially increase the rate of recharge to the subsurface.

Based on observations made across the entire study area, no manmade features in bedrock were identified.

OFFSITE FEATURES

The field reconnaissance also included inspection of neighboring properties a distance of approximately 200 feet (as practical) from all boundaries of the subject property for identification of offsite sensitive karst and manmade features that could be deemed as significant in terms of development on the study area. The following offsite features were identified:

Offsite Manmade Feature in Bedrock MB-1

Latitude: N/A
Longitude: N/A
Dimensions: unknown

Features that collectively represent offsite Feature MB-1 qualify as manmade features in bedrock. The features include any/all underground infrastructure (wet and dry lines) along N. Austin Ave. (refer to the Geologic Assessment Table in Attachment A and Figure 6 of Attachment D).

The infrastructure is installed in bedrock that presumably showed no evidence of karst features during the installation process. Therefore, it is assessed that the underground infrastructure is not significant in the potential to increase the rate of recharge to the subsurface. It is further assessed that these features will not be affected by future development on the property.

Offsite Manmade Features in Bedrock MB-2

Latitude: N/A
Longitude: N/A
Dimensions: unknown

Features that collectively represent offsite Feature MB-2 qualify as manmade features in bedrock. The features include all underground infrastructure (wet and dry lines) along N. Church Street (refer to the Geologic Assessment Table in Attachment A and Figure 6 of Attachment D).

The infrastructure is installed in bedrock that presumably showed no evidence of karst features during the installation process. Therefore, it is assessed that the underground infrastructure is not significant in the potential to increase the rate of recharge to the subsurface. It is further assessed that these features will not be affected by future development on the property.

Offsite Manmade Features in Bedrock MB-3

Latitude: N/A
Longitude: N/A
Dimensions: unknown

Features that collectively represent offsite Feature MB-3 qualify as manmade features in bedrock. The features include all underground infrastructure (wet and dry lines) along E. Spring Street (refer to the Geologic Assessment Table in Attachment A and Figure 6 of Attachment D).

The infrastructure is installed in bedrock that presumably showed no evidence of karst features during the installation process. Therefore, it is assessed that the underground infrastructure is not significant in the potential to increase the rate of recharge to the subsurface. It is further assessed that these features will not be affected by future development on the property.

POTENTIAL FOR FLUID MOVEMENT TO THE SUBSURFACE

Based on review of available information and visual observations made during the field reconnaissance, this *Geologic Assessment* presents the following observations regarding the potential for recharge of the subsurface within the study area:

- Characteristics of soils that cover the study area are the primary factors that influence potential subsurface recharge on the property. Based on the *Soil Survey of Williamson County*, the Doss silty clay soils are reported to consist of thin to moderately-thick, fine-grained soils that exhibit slow permeability. Thus, this *Geologic Assessment* assesses that percolation via soils to the subsurface is slow.
- No significant, "defined" karst recharge points with focused recharge potential were observed to be located on the study area.

ATTACHMENT D
SITE GEOLOGIC MAPS



M. TROJAN & ASSOCIATES
Environmental Consultants

P.O. Box 338
Thorndale, Texas 76577
(512) 917-3695

Scale: No Scale
Date: December 8, 2021
Project: TCEQ Geologic Assessment
MTA Project: WP-21-011

FIGURE 1
SITE LOCATION MAP
SAN GABRIEL FLATS PROPERTY
806 E. SPRING STREET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78626



2021 Aerial Photograph

M. TROJAN & ASSOCIATES
Environmental Consultants
P.O. Box 338
Thorndale, Texas 76577
(512) 917-3695

Scale: 1" = 90' (approx.)
Date: December 8, 2021
Project: TCEQ Geologic Assessment
MTA Project: WP-21-011

FIGURE 2
SITE AERIAL PHOTOGRAPH
SAN GABRIEL FLATS PROPERTY
806 E. SPRING STREET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78626

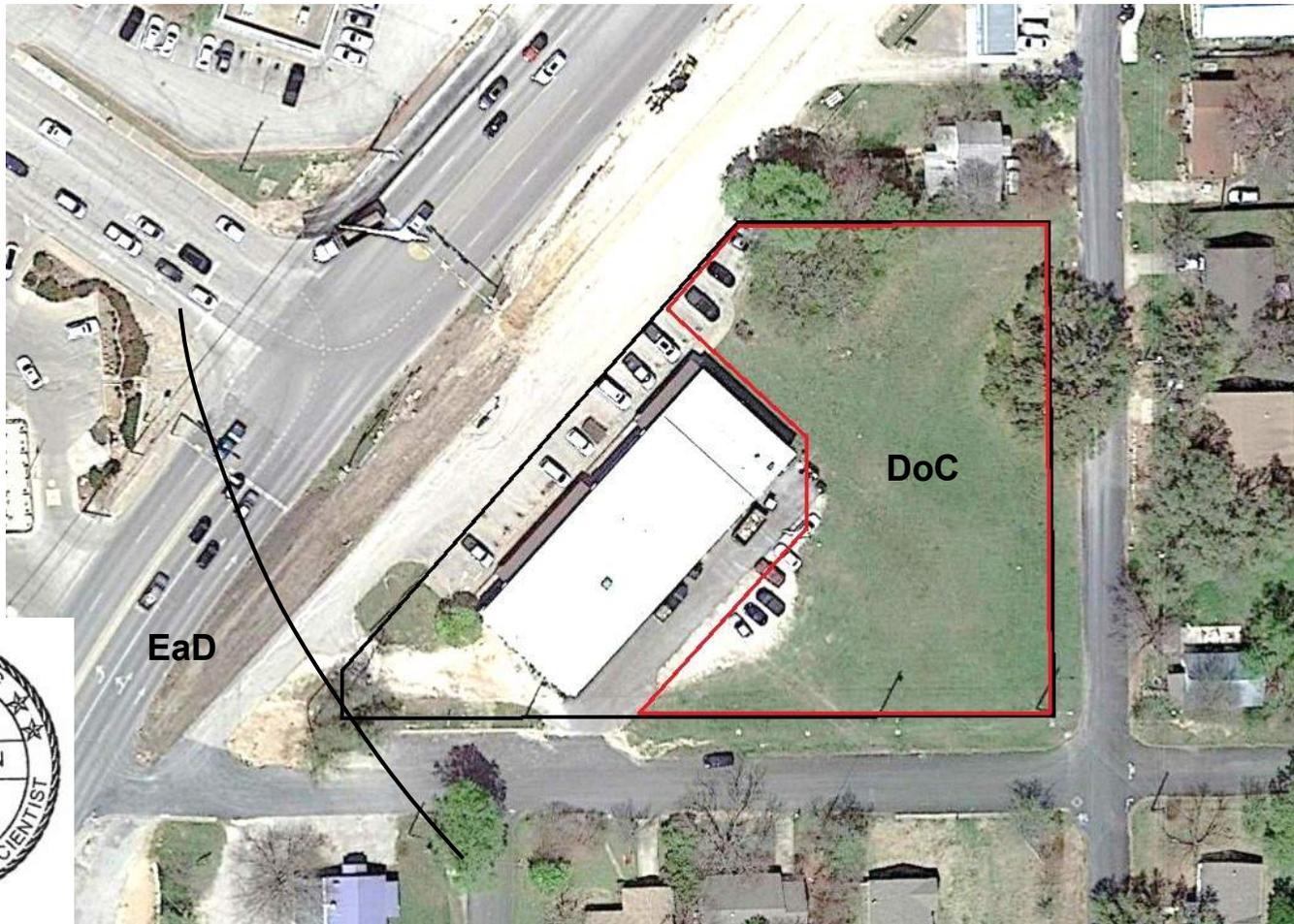


→ Stormwater Runoff

M. TROJAN & ASSOCIATES
 Environmental Consultants
 P.O. Box 338
 Thorndale, Texas 76577
 (512) 917-3695

Scale: 1" = 90' (approx.)
 Date: December 8, 2021
 Project: TCEQ Geologic Assessment
 MTA Project: WP-21-011

FIGURE 3
SURFACE WATER HYDROLOGY
 SAN GABRIEL FLATS PROPERTY
 806 E. SPRING STREET
 GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78626



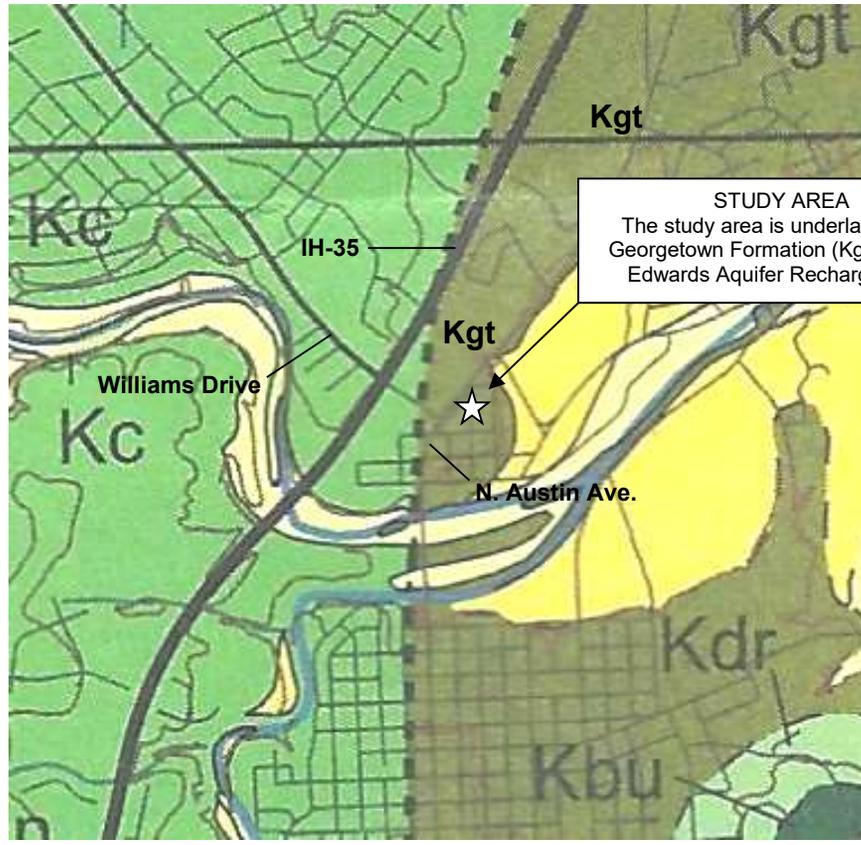
DoC = Doss silty clay, 1-5% slopes / EaD – Eckrant cobbly clay, 1-8% slopes



M. TROJAN & ASSOCIATES
 Environmental Consultants
 P.O. Box 338
 Thorndale, Texas 76577
 (512) 917-3695

Scale: 1" = 90' (approx.)
 Date: December 8, 2021
 Project: TCEQ Geologic Assessment
 MTA Project: WP-21-011

FIGURE 4
SITE SOILS MAP
 SAN GABRIEL FLATS PROPERTY
 806 E. SPRING STREET
 GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78626



STUDY AREA
 The study area is underlain by the Georgetown Formation (Kgt) and the Edwards Aquifer Recharge Zone



Kgt – Georgetown Formation

NOTES
 Subject property location is approximate
 Source: Geologic Atlas of Texas

M. TROJAN & ASSOCIATES
 Environmental Consultants
 P.O. Box 338
 Thorndale, Texas 76577
 (512) 917-3695

Scale: No Scale
 Date: December 8, 2021
 Project: TCEQ Geologic Assessment
 MTA Project: WP-21-011

FIGURE 5
GENERAL GEOLOGIC MAP
 SAN GABRIEL FLATS PROPERTY
 806 E. SPRING STREET
 GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78626

ONSITE FEATURES

No onsite features identified

**OFFSITE FEATURES
(within 200 feet)**

MB-1: Manmade features in bedrock (any/all underground infrastructure along N. Austin Ave.)

MB-2: Manmade features in bedrock (any/all underground infrastructure along N. Church Street)

MB-3: Manmade features in bedrock (any/all underground infrastructure along E. Spring Street)



The subject property is underlain by the Georgetown Formation (Kgt) and the Edwards Aquifer Recharge Zone

M. TROJAN & ASSOCIATES

Environmental Consultants

P.O. Box 338
Thorndale, Texas 76577
(512) 917-3695

Scale: 1" = 90' (approx.)
Date: December 8, 2021
Project: TCEQ Geologic Assessment
MTA Project: WP-21-011

FIGURE 6
SITE GEOLOGIC MAP
SAN GABRIEL FLATS PROPERTY
806 E. SPRING STREET
GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78626

ATTACHMENT E
SITE PHOTOGRAPHS

PHOTOGRAPHIC REPORTING DATA SHEET
[PHOTOGRAPH 1]



Project: TCEQ Geologic Assessment
Site: San Gabriel Flats Property
Location: 806 E. Spring Street
Georgetown, Williamson County, Texas 78626

Description: View of the study area/project area along N. Church Street. Photograph taken from N. Church Street facing north.

PHOTOGRAPHIC REPORTING DATA SHEET
[PHOTOGRAPH 2]



- Project:** TCEQ Geologic Assessment
Site: San Gabriel Flats Property
Location: 806 E. Spring Street
Georgetown, Williamson County, Texas 78626
- Description:** View of the study area/project area along E. Spring Street. Photograph taken from E. Spring Street facing west.

PHOTOGRAPHIC REPORTING DATA SHEET
[PHOTOGRAPH 3]



Project: TCEQ Geologic Assessment
Site: San Gabriel Flats Property
Location: 806 E. Spring Street
Georgetown, Williamson County, Texas 78626
Description: View of the existing retail building on the western half of the study area.

PHOTOGRAPHIC REPORTING DATA SHEET
[PHOTOGRAPH 4]



Project: TCEQ Geologic Assessment
Site: San Gabriel Flats Property
Location: 806 E. Spring Street
Georgetown, Williamson County, Texas 78626
Description: Typical view of the undeveloped eastern half of the study area (project area).

PHOTOGRAPHIC REPORTING DATA SHEET
[PHOTOGRAPH 5]



Project: TCEQ Geologic Assessment
Site: San Gabriel Flats Property
Location: 806 E. Spring Street
Georgetown, Williamson County, Texas 78626
Description: Second view of the undeveloped eastern half of the study area (project area).

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Antonio A. Prete, P.E.

Date: 05/10/2022

Signature of Customer/Agent:



Regulated Entity Name: San Gabriel Flats

Regulated Entity Information

1. The type of project is:

- Residential: Number of Lots: _____
- Residential: Number of Living Unit Equivalents: 9
- Commercial
- Industrial
- Other: _____

2. Total site acreage (size of property): 1.348

3. Estimated projected population: 22

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	15,208	÷ 43,560 =	0.349
Parking	16,925	÷ 43,560 =	0.389
Other paved surfaces	3,799	÷ 43,560 =	0.087
Total Impervious Cover	35,932	÷ 43,560 =	0.825

Total Impervious Cover $0.825 \div$ Total Acreage $1.348 \times 100 = 62.20\%$ Impervious Cover

5. **Attachment A - Factors Affecting Surface Water Quality.** A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.
6. Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

For Road Projects Only

Complete questions 7 - 12 if this application is exclusively for a road project.

7. Type of project:
 - TXDOT road project.
 - County road or roads built to county specifications.
 - City thoroughfare or roads to be dedicated to a municipality.
 - Street or road providing access to private driveways.
8. Type of pavement or road surface to be used:
 - Concrete
 - Asphaltic concrete pavement
 - Other: _____
9. Length of Right of Way (R.O.W.): _____ feet.
 Width of R.O.W.: _____ feet.
 $L \times W = \text{_____ Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} = \text{_____ acres.}$
10. Length of pavement area: _____ feet.
 Width of pavement area: _____ feet.
 $L \times W = \text{_____ Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} = \text{_____ acres.}$
 Pavement area _____ acres ÷ R.O.W. area _____ acres $\times 100 = \text{_____}\%$ impervious cover.
11. A rest stop will be included in this project.
 A rest stop will not be included in this project.

Water Quality Summary Impervious Cover Tables

Reference Water Quality Summary Plan Sheet of the San Gabriel Flats Site Development Plans for delineation of the drainage areas and impervious cover.

EXISTING CONDITIONS:

Table 1 - Impervious Cover Table (Existing Watershed - Drainage Area EX-1)

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	12,799	÷ 43,560 =	0.29
Parking	49,096	÷ 43,560 =	1.13
Other paved surfaces	6,407	÷ 43,560 =	0.15
Total Impervious Cover	68,254	÷ 43,560 =	1.57

Total Impervious Cover 1.57 ÷ Total Acreage 3.09 X 100 = 50.74 % Impervious Cover

Note:

Existing impervious cover predates the adoption of Water Quality Regulations in Williamson County, therefore, there is no water quality treatment for the existing watershed.

PROPOSED CONDITIONS:

Table 1 - Impervious Cover Table (Overall Watershed: WQ-1, WQ-2, & O/S-1)

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	18,407	÷ 43,560 =	0.42
Parking	54,891	÷ 43,560 =	1.26
Other paved surfaces	8,540	÷ 43,560 =	0.20
Total Impervious Cover	81,838	÷ 43,560 =	1.88

Total Impervious Cover 1.88 ÷ Total Acreage 3.09 X 100 = 60.76 % Impervious Cover

Impervious Cover Tables per Proposed Conditions Drainage Areas:

Table 1 - Impervious Cover Table (Water Quality Drainage Area WQ-1)

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	5,608	÷ 43,560 =	0.13
Parking	2,988	÷ 43,560 =	0.07
Other paved surfaces	1,902	÷ 43,560 =	0.04
Total Impervious Cover	10,498	÷ 43,560 =	0.24

Total Impervious Cover 0.24 ÷ Total Acreage 0.47 X 100 = 51.06 % Impervious Cover

Table 1 - Impervious Cover Table (Water Quality Drainage Area WQ-2)

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	0	÷ 43,560 =	0.00
Parking	0	÷ 43,560 =	0.00
Other paved surfaces	1,786	÷ 43,560 =	0.04
Total Impervious Cover	1,786	÷ 43,560 =	0.04

Total Impervious Cover 0.04 ÷ Total Acreage 0.08 X 100 = 51.25 % Impervious Cover

Table 1 - Impervious Cover Table (Off-site Drainage Area O/S-1)

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	12,799	÷ 43,560 =	0.29
Parking	51,903	÷ 43,560 =	1.19
Other paved surfaces	4,852	÷ 43,560 =	0.11
Total Impervious Cover	69,554	÷ 43,560 =	1.60

Total Impervious Cover 1.60 ÷ Total Acreage 2.52 X 100 = 63.36 % Impervious Cover

12. Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

Stormwater to be generated by the Proposed Project

13. **Attachment B - Volume and Character of Stormwater.** A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on the area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

Wastewater to be generated by the Proposed Project

14. The character and volume of wastewater is shown below:

<u>100%</u> Domestic	<u>8,338</u> Gallons/day
<u> </u> % Industrial	<u> </u> Gallons/day
<u> </u> % Commingled	<u> </u> Gallons/day
TOTAL gallons/day <u>8,338</u>	

15. Wastewater will be disposed of by:

On-Site Sewage Facility (OSSF/Septic Tank):

Attachment C - Suitability Letter from Authorized Agent. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

Sewage Collection System (Sewer Lines):

Private service laterals from the wastewater generating facilities will be connected to an existing SCS.

Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

The SCS was previously submitted on _____.

The SCS was submitted with this application.

The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

The sewage collection system will convey the wastewater to the Pecan Branch Wastewater (name) Treatment Plant. The treatment facility is:

Existing.

Proposed.

16. All private service laterals will be inspected as required in 30 TAC §213.5.

Site Plan Requirements

Items 17 – 28 must be included on the Site Plan.

17. The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = Varies'.

18. 100-year floodplain boundaries:

Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FIRM-Flood Insurance Rate Map Panel 293 of 750 Map Number 48491C0293F, effective date: December 20, 2019

19. The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, open space, etc. are shown on the plan.

The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

The wells are not in use and have been properly abandoned.

The wells are not in use and will be properly abandoned.

The wells are in use and comply with 16 TAC §76.

There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.

No sensitive geologic or manmade features were identified in the Geologic Assessment.

- Attachment D - Exception to the Required Geologic Assessment.** A request and justification for an exception to a portion of the Geologic Assessment is attached.
22. The drainage patterns and approximate slopes anticipated after major grading activities.
23. Areas of soil disturbance and areas which will not be disturbed.
24. Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
25. Locations where soil stabilization practices are expected to occur.
26. Surface waters (including wetlands).
 N/A
27. Locations where stormwater discharges to surface water or sensitive features are to occur.
 There will be no discharges to surface water or sensitive features.
28. Legal boundaries of the site are shown.

Administrative Information

29. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
30. Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

ATTACHMENT "A"

FACTORS AFFECTING WATER QUALITY

Factors that could affect the quality of surface water and ground water are the parking and use of motor vehicles on the site. This includes the emission of certain hydrocarbon based substances as well as the tracking of silt. Also, the maintenance of lawn areas could affect the quality of surface water and ground water through runoff of chemical fertilizers or pesticides.

ATTACHMENT "B"

VOLUME AND CHARACTER OF STORMWATER

It is expected that the character of surface water and ground water run-off would be consistent with a development, which is used for office buildings and parking. Constituents would include hydrocarbon based product residues, silt, pesticides, and chemicals resulting from vehicular emissions and landscape maintenance.

The expected volume of run-off was based on the Rational Method. This was calculated using "C" factors, which are based on impervious cover and the nature of surfaces over which run-off water flows. These calculations are attached directly behind this page and in the attached construction plans.

The stormwater quality for the site was determined using "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices". The results from these calculations are presented directly behind this page and in the attached construction plans.

**OVERALL DRAINAGE AREA
TSS REMOVAL CALCULATIONS**
(In Accordance with TCEQ Regulations : RG-348)

Required Load Reduction (L_M)- Total Project Area:

Eq 3.2 $L_m = 28.9 (A_N * P)$

County =

P = Average Annual Precipitation

A_{tot-prj} = Total project area included in the plan

A_{pre} = Predevelopment impervious area

A_{post} = Postdevelopment impervious area

A_N = Area of the net increase of impervious area

IC_{pre} = Fraction of impervious cover (Pre Development)

IC_{post} = Fraction of impervious cover (Post Development)

L_M = Req'd TSS removal (85% of Increase)

***85% TSS Removal Required per COGT Salamander Ordinance**

Williamson

32.0 [in]

1.35 [ac]

0.55 [ac]

0.83 [ac]

0.27 [ac]

41.02 [%]

61.20 [%]

252	[lbs]
------------	--------------



AAR
05 Jun 22



EXISTING CONDITIONS DRAINAGE TABLE (RATIONAL METHOD):

SUB-BASIN DESIGNATION	AREA [acres]	T _c [min.]	ESTIMATED IMPERV. +/- [%]				C ₁₀₀	I ₂ [in/hr]	I ₁₀ [in/hr]	I ₂₅ [in/hr]	I ₁₀₀ [in/hr]	Q ₂ [cfs]	Q ₁₀ [cfs]	Q ₂₅ [cfs]	Q ₁₀₀ [cfs]
			C ₂	C ₁₀	C ₂₅	C ₁₀₀									
EX-1	3.09	10.0	50.7	0.52	0.59	0.64	0.72	5.37	7.29	8.40	10.22	8.70	13.38	16.59	22.71
	3.09											8.70	13.38	16.59	22.71

PROPOSED CONDITIONS DRAINAGE TABLE (RATIONAL METHOD):

SUB-BASIN DESIGNATION	AREA [acres]	T _c [min.]	ESTIMATED IMPERV. +/- [%]				C ₁₀₀	I ₂ [in/hr]	I ₁₀ [in/hr]	I ₂₅ [in/hr]	I ₁₀₀ [in/hr]	Q ₂ [cfs]	Q ₁₀ [cfs]	Q ₂₅ [cfs]	Q ₁₀₀ [cfs]
			C ₂	C ₁₀	C ₂₅	C ₁₀₀									
PROP-1	0.47	5.0	51.1	0.53	0.60	0.64	0.72	6.48	8.64	9.84	11.88	1.60	2.42	2.96	4.02
O/S-1	1.11	10.0	45.9	0.50	0.57	0.61	0.69	5.37	7.29	8.40	10.22	2.99	4.61	5.73	7.87
O/S-2	1.51	10.0	74.8	0.63	0.71	0.76	0.84	5.37	7.29	8.40	10.22	5.14	7.80	9.59	12.98
	3.09											9.73	14.83	18.28	24.87

ATTACHMENT "C"

SUITABILITY LETTER FROM AUTHORIZED AGENT

There is no OSSF proposed with this project.

ATTACHMENT "D"

EXCEPTION TO THE REQUIRED GEOLOGIC ASSESSMENT

An exception to the required geologic assessment will not be made.

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Antonio A. Prete, P.E.

Date: 05/10/2022

Signature of Customer/Agent:



Regulated Entity Name: San Gabriel Flats

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

The following fuels and/or hazardous substances will be stored on the site: Gasoline

These fuels and/or hazardous substances will be stored in:

- Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

- Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
- Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
- Fuels and hazardous substances will not be stored on the site.
- 2. **Attachment A - Spill Response Actions.** A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. **Attachment B - Potential Sources of Contamination.** A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

- 5. **Attachment C - Sequence of Major Activities.** A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.
 - For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.
 - For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
- 6. Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: San Gabriel River

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

- 7. **Attachment D – Temporary Best Management Practices and Measures.** TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

- A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
 - A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
 - A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
 - A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
8. The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
- Attachment E - Request to Temporarily Seal a Feature.** A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
 - There will be no temporary sealing of naturally-occurring sensitive features on the site.
9. **Attachment F - Structural Practices.** A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.
10. **Attachment G - Drainage Area Map.** A drainage area map supporting the following requirements is attached:
- For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
 - For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
 - For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
 - There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

- There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
11. **Attachment H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
- N/A
12. **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
13. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
14. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
15. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
16. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. **Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices.** A schedule of the interim and permanent soil stabilization practices for the site is attached.

18. Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
19. Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
21. If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
22. Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

ATTACHMENT "A"

SPILL RESPONSE ACTIONS

1.4.16 Spill Prevention and Control

The objective of this section is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

(1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.

(2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

(3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

(4) Establish a continuing education program to indoctrinate new employees.

(5) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

(1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

(2) Store hazardous materials and wastes in covered containers and protect from vandalism.

(3) Place a stockpile of spill cleanup materials where it will be readily accessible.

(4) Train employees in spill prevention and cleanup.

(5) Designate responsible individuals to oversee and enforce control measures.

(6) Spills should be covered and protected from stormwater runoff during rainfall to the extent that it doesn't compromise clean up activities.

(7) Do not bury or wash spills with water.

(8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the revisions in applicable BMPs.

(9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.

(10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

(11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

(12) Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

(1) Clean up leaks and spills immediately.

(2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

(3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

(1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

(2) Use absorbent materials on small spills rather than hosing down or burying the spill.

(3) Absorbent materials should be promptly removed and disposed of properly.

(4) Follow the practice below for a minor spill:

(5) Contain the spread of the spill.

(6) Recover spilled materials.

(7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spills should be cleaned up immediately:

(1) Contain spread of the spill.

(2) Notify the project foreman immediately.

(3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.

(4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

(5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

(1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

(2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

(3) Notification should first be made by telephone and followed up with a written report.

(4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.

(5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: <https://www.tceq.texas.gov/response/serc/state-emergency-response-commission>

ATTACHMENT "B"

POTENTIAL SOURCES OF CONTAMINATION

Potential sources of contamination from this site include hydrocarbon residue, emissions from vehicles, asphaltic products used for paved surfaces and tracking silt onto paved surfaces by construction equipment.

ATTACHMENT "C"
SEQUENCE OF MAJOR ACTIVITIES

<u>Activity</u>	<u>Area</u>
Install Erosion Controls	1.09 ac
Temporary Sediment Pond Construction	-----
Clearing / Grubbing	1.09 ac (Limits of Construction)
Fill / Excavation (Grading)	1.09 ac (Limits of Construction)
Utility Installation	> +/- 0.40ac
Paving / Infrastructure	+/- 0.25 ac
Revegetation	1.09 ac (Limits of Construction)

ATTACHMENT "D"

TEMPORARY BEST MANAGEMENT PRACTICES & MEASURES

The TBMP's are to be installed prior to any site activities and will be in place for all sequenced activities. This includes the placement of temporary rock berm, inlet protection, stabilized construction entrance, concrete truck washout area, and silt fencing on the down gradient side of the site to prevent any silted run-off to water surfaces and to prevent any erosion or disturbance to vegetation.

Post construction of improvements and prior to project acceptance. The limits of disturbance shall be revegetated.

ATTACHMENT "E"

REQUEST TO TEMPORARILY SEAL A FEATURE

We are not requesting to seal a feature.

ATTACHMENT "F"

STRUCTURAL PRACTICES

This includes the placement of temporary rock berm, inlet protection, stabilized construction entrance, concrete truck washout area, and silt fencing on the down gradient side of the site to prevent any silted run-off to water surfaces and to prevent any erosion or disturbance to vegetation.

ATTACHMENT "G"

DRAINAGE AREA MAP

The drainage area map has been included as part of the construction plans, which have been submitted with this WPAP.

ATTACHMENT "H"

TEMPORARY SEDIMENT POND(S) PLANS & CALCULATIONS

There are no common drainage areas which have more than 10 acres of disturbed area. Therefore, a temporary sediment pond is not required for this project.

ATTACHMENT "I"

INSPECTION & MAINTENANCE FOR BMPs

SILT FENCES, ROCK BERMS, INLET PROTECTION,

Weekly: Accumulated silt shall be removed when it reaches a depth of 6 inches. Silt shall be disposed of in an approved site and in such a manner as to not contribute to additional siltation. Repair and replace any damaged section resulting from construction activity or other cases.

After Rainfall: Fences shall be checked for structural damage from stormwater flows immediately after a significant (≥ 0.5 inch) rainfall as soon as ground conditions make fences accessible (usually within 24 hours). Should there be prolonged rainfall, inspections should be conducted without vehicles and temporary repairs made until equipment can be brought in without major surface damage. Remove accumulated silt when depth reaches 6 inches and dispose of as indicated in Weekly maintenance.

Adjust fence configuration if necessary after rainfall event to accommodate conditions defined by stormwater flows.

STABILIZED CONSTRUCTION ENTRANCE:

Weekly: The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public roadways. If necessary, top dress with additional stone and repair and/or cleanout any measures used to trap sediment.

After Rain: Immediately after a significant rainfall (≥ 0.5 inch), as soon as ground conditions make stabilized construction entrance accessible (usually within 24 hours), the same inspection and maintenance procedures for the weekly requirements shall be performed.

CONCRETE TRUCK WASHOUT:

Weekly: Shall be installed prior to any concrete work and shall be repaired weekly or enlarged as necessary to maintain capacity for wasted concrete. Check for structural damages on plastic lining, sandbags, lathe and flagging. Repair as needed.

After Rain: Immediately after a significant rainfall (≥ 0.5 inch), as soon as ground conditions make concrete truck washout accessible (usually within 24 hours), the same inspection and maintenance procedures for the weekly requirements shall be performed.

RECORD KEEPING:

Project superintendent shall have a log for entering site inspections for both weekly and rainfall events. Results of inspections including damage and recommended repairs shall be noted, along with inspection personnel data and date of remedial action taken.

ATTACHMENT "J"

SCHEDULE OF INTERIM & PERMANENT SOIL STABILIZATION PRACTICES

Interim soil stabilization shall be instituted whenever an area has been disturbed and there is a lapse of twenty-one consecutive days when no construction activities have occurred on that location or if any area is not scheduled for final construction activities to occur later than twenty-one days after last disturbance.

Post final grading, permanent soil stabilization shall occur at the first practical opportunity after the completion of construction activities in an area (Within fourteen days). Records must be kept as to when each soil stabilization measure was instituted in each area.

Reference erosion & sedimentation notes and detail in the construction plans.

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(li), (E), and (5), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

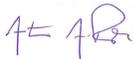
Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Antonio A. Prete, P.E.

Date: 05/10/2022

Signature of Customer/Agent



Regulated Entity Name: San Gabriel Flats

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

- Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.
 N/A
- These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.
 The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____

N/A

3. Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

N/A

4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

The site will be used for low density single-family residential development and has 20% or less impervious cover.

The site will be used for low density single-family residential development but has more than 20% impervious cover.

The site will not be used for low density single-family residential development.

5. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

Attachment A - 20% or Less Impervious Cover Waiver. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.

The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

The site will not be used for multi-family residential developments, schools, or small business sites.

6. **Attachment B - BMPs for Upgradient Stormwater.**

- A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
 - No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
 - Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.
7. **Attachment C - BMPs for On-site Stormwater.**
- A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.
 - Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.
8. **Attachment D - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.
- N/A
9. The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.
- The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.
 - Attachment E - Request to Seal Features.** A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.
10. **Attachment F - Construction Plans.** All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:
- Design calculations (TSS removal calculations)
 - TCEQ construction notes
 - All geologic features
 - All proposed structural BMP(s) plans and specifications
- N/A

11. **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan.** A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:
- Prepared and certified by the engineer designing the permanent BMPs and measures
 - Signed by the owner or responsible party
 - Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
 - A discussion of record keeping procedures
- N/A
12. **Attachment H - Pilot-Scale Field Testing Plan.** Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.
- N/A
13. **Attachment I -Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.
- N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
- N/A
15. A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.
- N/A

ATTACHMENT "A" –

20% or LESS IMPERVIOUS COVER WAIVER

This project is not seeking an impervious cover waiver.

ATTACHMENT "B" –

BMPs FOR UPGRADIENT STORMWATER

The proposed project will route stormwater originating upgradient around our site, so no BMPs for upgradient stormwater are proposed.

ATTACHMENT "C" –

BMPs FOR ON-SITE STORMWATER

The stormwater from this project will be treated by the following proposed BMPs:

Batch Detention Pond:

A proposed Batch Detention Pond will be located at the Southwest corner of the site. This pond captures 0.47 acres with an impervious cover of 0.24 acres. This pond has a TSS removal capacity of 246 lbs and has been designed to achieve the max removal capacity.

Pervious Pavers:

A total of 1,792 SF of permeable pavers (0.04 acres) will be located along the eastern property line of the site. The pervious paver sidewalk has a TSS removal capacity of 40 lbs and has been designed to achieve the max removal capacity.

An 85% TSS removal, as required by the City of Georgetown Salamander Ordinance, is achieved by capturing the runoff in the drainage basins and routing them to the ponds. It should be noted the TCEQ only requires an 80% TSS removal

ATTACHMENT "D" –
BMPs FOR SURFACE STREAMS

No surface streams are located on this project site.

ATTACHMENT "E" –
REQUEST TO SEAL FEATURES

We are not requesting to seal a feature.

ATTACHMENT "F" –
CONSTRUCTION PLANS

The constructions plans have been attached as part of this submittal.

ATTACHMENT "G" –

INSPECTION, MAINTENANCE, REPAIR, & RETROFIT PLAN

Maintenance Plan and Schedule for Best Management Practices Batch Detention Pond

Batch Detention:

Inspections:

Inspections should take place a minimum of twice a year. One inspection should take place during wet weather to determine if the basin is meeting the target detention time of 12 hours and a drawdown time of no more than 48 hours. The remaining inspections should occur between storm events so that manual operation of the valve and controller can be verified. The level sensor in the basin should be inspected and any debris or sediment in the area should be removed. The outlet structure and the trash screen should be inspected for signs of clogging. Debris and sediment should be removed from the orifice and outlet(s) as described in previous sections. Debris obstructing the valve should be removed. During each inspection, erosion areas inside and downstream of this BMP should be identified and repaired/revegetated immediately.

Mowing:

The basin, basin side-slopes, and embankment of the basin must be mowed to prevent woody growth and control weeds. A mulching mower should be used, or the grass clippings should be caught and removed. Mowing should take place at least twice a year, or more frequently if vegetation exceeds 18 inches in height. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas.

Litter & Debris Removal:

Litter and debris removal should take place at least twice a year, as part of the periodic mowing operations and inspections. Debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed.

Erosion control:

The basin side slopes and embankment all may periodically suffer from slumping and erosion. To correct these problems, corrective action, such as regrading and revegetation, may be necessary. Correction of erosion control should take place whenever required based on the periodic inspections.

Nuisance Control:

Standing water or soggy conditions may occur in the basin. Some standing water may occur after a storm event since the valve may close with 2 to 3 inches of water in the basin. Some flow into the basin may also occur between storms due to spring flow and residential water use that enters the storm sewer system. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.).

Structural Repairs & Replacement:

With each inspection, any damage to structural elements of the basin (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. An example of this type of repair can include patching of cracked concrete, sealing of voids, removal of vegetation from cracks and joints. The various inlet/outlet structures in a basin will eventually deteriorate and must be replaced.

Sediment Removal:

A properly designed batch detention basin will accumulate quantities of sediment over time. The accumulated sediment can detract from the appearance of the facility and reduce the pollutant removal performance of the facility. The sediment also tends to accumulate near the outlet structure and can interfere with the level sensor operation. Sediment shall be removed from the basin at least every 5 years, when sediment depth exceeds 6 inches, when the sediment interferes with the level sensor or when the basin does not drain within 48 hours. Care should be taken not to compromise the basin lining during maintenance.

Logic Controller:

The Logic Controller should be inspected as part of the twice yearly investigations. Verify that the external indicators (active, cycle in progress) are operating properly by turning the controller off and on, and by initiating a cycle by triggering the level sensor in the basin. The valve should be manually opened and closed using the open/close switch to verify valve operation and to assist in inspecting the valve for debris. The solar panel should be inspected and any dust or debris on the panel should be carefully removed. The controller and all other circuitry and wiring should be inspected for signs of corrosion, damage from insects, water leaks, or other damage. At the end of the inspection, the controller should be reset.

Record Keeping:

During construction the project superintendent shall have a log for entering site inspections for all regular and rainfall events. Results of inspections, including damage and any recommended remedial action, shall be noted along with inspection personnel data and date of completion of any action. The log shall be made available for review by TCEQ, if requested. "Proper" disposal of accumulated silt shall be accomplished following TCEQ and Local Authority guidelines and specifications.

Responsible Party for Maintenance: Tyler Wolf
806 E 13th St Georgetown Apartments, LLC
903 N. Austin Ave.
Georgetown, Texas 78628

Signature of Responsible Party:



Printed Name of Responsible Party:

James Tyler Wolf



HEAR
24 JAN 22

ATTACHMENT "H" –
PILOT-SCALE FIELD TESTING PLAN

Not applicable for this project. The BMP was designed using the "Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs".

ATTACHMENT "I" –
MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

There are no surface streams on this project.

Organized Sewage Collection System Application

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(c), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Regulated Entity Name: San Gabriel Flats

1. **Attachment A – SCS Engineering Design Report.** This Engineering Design Report is provided to fulfill the requirements of 30 TAC Chapter 217, including 217.10 of Subchapter A, §§217.51 – 217.70 of Subchapter C, and Subchapter D as applicable, and is required to be submitted with this SCS Application Form.

Customer Information

2. The entity and contact person responsible for providing the required engineering certification of testing for this sewage collection system upon completion (including private service connections) and every five years thereafter to the appropriate TCEQ region office pursuant to 30 TAC §213.5(c) is:

Contact Person: Tyler Wolf

Entity: 806 E 13th St Georgetown Apartments, LLC

Mailing Address: 903 N Austin Ave.

City, State: Georgetown, TX

Zip: 78628

Telephone: (512) 966-0117

Fax: N/A

Email Address: tyler@wolfinvestmentgroup.com

The appropriate regional office must be informed of any changes in this information within 30 days of the change.

3. The engineer responsible for the design of this sewage collection system is:

Contact Person: Antonio A. Prete, P.E.

Texas Licensed Professional Engineer's Number: 93759

Entity: Waeltz & Prete, Inc.

Mailing Address: 211 N. A.W. Grimes Blvd.

City, State: Round Rock, Texas

Zip: 78665

Telephone: 512-505-8953

Fax: N/A

Email Address: tony@w-pinc.com

Project Information

4. Anticipated type of development to be served (estimated future population to be served, plus adequate allowance for institutional and commercial flows):

- Residential: Number of single-family lots: _____
 Multi-family: Number of residential units: 9
 Commercial
 Industrial
 Off-site system (not associated with any development)
 Other: _____

5. The character and volume of wastewater is shown below:

100% Domestic 8,338 gallons/day
 _____% Industrial _____ gallons/day
 _____% Commingled _____ gallons/day
 Total gallons/day: 8,338

6. Existing and anticipated infiltration/inflow is 490 gallons/day. This will be addressed by: New Pipe and MH meeting the TCEQ's Regulations.

7. A Water Pollution Abatement Plan (WPAP) is required for construction of any associated commercial, industrial or residential project located on the Recharge Zone.

- The WPAP application for this development was approved by letter dated _____. A copy of the approval letter is attached.
 The WPAP application for this development was submitted to the TCEQ on (in conjunction with this application), but has not been approved.
 A WPAP application is required for an associated project, but it has not been submitted.
 There is no associated project requiring a WPAP application.

8. Pipe description:

Table 1 - Pipe Description

<i>Pipe Diameter(Inches)</i>	<i>Linear Feet (1)</i>	<i>Pipe Material (2)</i>	<i>Specifications (3)</i>
6"	± 158	PVC - SDR 26	ASTM D-3034
6"	± 20	PVC - SDR 26	ASTM D-2241

Total Linear Feet: ± 178

- (1) Linear feet - Include stub-outs and double service connections. Do not include private service laterals.
 (2) Pipe Material - If PVC, state SDR value.
 (3) Specifications - ASTM / ANSI / AWWA specification and class numbers should be included.

9. The sewage collection system will convey the wastewater to the Pecan Branch Wastewater (name) Treatment Plant. The treatment facility is:

- Existing
- Proposed

10. All components of this sewage collection system will comply with:

- The City of Georgetown standard specifications.
- Other. Specifications are attached.

11. No force main(s) and/or lift station(s) are associated with this sewage collection system.
- A force main(s) and/or lift station(s) is associated with this sewage collection system and the **Lift Station/Force Main System Application** form (TCEQ-0624) is included with this application.

Alignment

12. There are no deviations from uniform grade in this sewage collection system without manholes and with open cut construction.
13. There are no deviations from straight alignment in this sewage collection system without manholes.
- Attachment B - Justification and Calculations for Deviation in Straight Alignment without Manholes.** A justification for deviations from straight alignment in this sewage collection system without manholes with documentation from pipe manufacturer allowing pipe curvature is attached.
- For curved sewer lines, all curved sewer line notes (TCEQ-0596) are included on the construction plans for the wastewater collection system.

Manholes and Cleanouts

14. Manholes or clean-outs exist at the end of each sewer line(s). These locations are listed below: (Please attach additional sheet if necessary)

Table 2 - Manholes and Cleanouts

<i>Line</i>	<i>Shown on Sheet</i>	<i>Station</i>	<i>Manhole or Clean-out?</i>
WWL 'A'	10 Of All	1+00.00	MH
WWL 'A'	10 Of All	1+18.10	CO
WWL 'A'	10 Of All	1+51.10	CO
WWL 'A'	10 Of All	1+90.08	CO
WWL 'A'	10 Of All	1+97.15	CO
WWL 'A'	10 Of All	2+39.65	CO
WWL 'A'	10 Of All	2+77.82	CO

<i>Line</i>	<i>Shown on Sheet</i>	<i>Station</i>	<i>Manhole or Clean-out?</i>
	Of		
	Of		
	Of		

15. Manholes are installed at all Points of Curvature and Points of Termination of a sewer line.
16. The maximum spacing between manholes on this project for each pipe diameter is no greater than:

Pipe Diameter (inches)	Max. Manhole Spacing (feet)
6 - 15	500
16 - 30	800
36 - 48	1000
≥54	2000

- Attachment C – Justification for Variance from Maximum Manhole Spacing.** The maximum spacing between manholes on this project (for each pipe diameter used) is greater than listed in the table above. A justification for any variance from the maximum spacing is attached, and must include a letter from the entity which will operate and maintain the system stating that it has the capability to maintain lines with manhole spacing greater than the allowed spacing.
17. All manholes will be monolithic, cast-in-place concrete.
- The use of pre-cast manholes is requested for this project. The manufacturer's specifications and construction drawings, showing the method of sealing the joints, are attached.

Site Plan Requirements

Items 18 - 25 must be included on the Site Plan.

18. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = Varies'.
19. The Site Plan must include the sewage collection system general layout, including manholes with station numbers, and sewer pipe stub outs (if any). Site plan must be overlain by topographic contour lines, using a contour interval of not greater than ten feet and showing the area within both the five-year floodplain and the 100-year floodplain of any drainage way.
20. Lateral stub-outs:
- The location of all lateral stub-outs are shown and labeled.
- No lateral stub-outs will be installed during the construction of this sewer collection system.

21. Location of existing and proposed water lines:

- The entire water distribution system for this project is shown and labeled.
- If not shown on the Site Plan, a Utility Plan is provided showing the entire water and sewer systems.
- There will be no water lines associated with this project.

22. 100-year floodplain:

- After construction is complete, no part of this project will be in or cross a 100-year floodplain, either naturally occurring or manmade. (Do not include streets or concrete-lined channels constructed above of sewer lines.)
- After construction is complete, all sections located within the 100-year floodplain will have water-tight manholes. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 3 - 100-Year Floodplain

<i>Line</i>	<i>Sheet</i>	<i>Station</i>
	of	to

23. 5-year floodplain:

- After construction is complete, no part of this project will be in or cross a 5-year floodplain, either naturally occurring or man-made. (Do not include streets or concrete-lined channels constructed above sewer lines.)
- After construction is complete, all sections located within the 5-year floodplain will be encased in concrete or capped with concrete. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 4 - 5-Year Floodplain

<i>Line</i>	<i>Sheet</i>	<i>Station</i>
	of	to

24. Legal boundaries of the site are shown.

25. The ***final plans and technical specifications*** are submitted for the TCEQ’s review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.

Items 26 - 33 must be included on the Plan and Profile sheets.

26. All existing or proposed water line crossings and any parallel water lines within 9 feet of sewer lines are listed in the table below. These lines must have the type of pressure rated pipe to be installed shown on the plan and profile sheets. Any request for a variance from the required pressure rated piping at crossings must include a variance approval from 30 TAC Chapter 290.
- There will be no water line crossings.
- There will be no water lines within 9 feet of proposed sewer lines.

Table 5 - Water Line Crossings

<i>Line</i>	<i>Station or Closest Point</i>	<i>Crossing or Parallel</i>	<i>Horizontal Separation Distance</i>	<i>Vertical Separation Distance</i>
WWL 'A'	1+27.72	Crossing	N/A	± 2'

27. Vented Manholes:

- No part** of this sewer line is within the 100-year floodplain and vented manholes are not required by 30 TAC Chapter 217.
- A portion** of this sewer line is within the 100-year floodplain and vented manholes will be provided at less than 1500 foot intervals. These water-tight manholes are listed in the table below and labeled on the appropriate profile sheets.
- A portion** of this sewer line is within the 100-year floodplain and an alternative means of venting shall be provided at less than 1500 feet intervals. A description of the alternative means is described on the following page.
- A portion** of this sewer line is within the 100-year floodplain; however, there is no interval longer than 1500 feet located within. No vented manholes will be used.

Table 6 - Vented Manholes

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

28. Drop manholes:

- There are no drop manholes associated with this project.
- Sewer lines which enter new or existing manholes or "manhole structures" higher than 24 inches above the manhole invert are listed in the table below and labeled on the appropriate profile sheets. These lines meet the requirements of 30 TAC §217.55(l)(2)(H).

Table 7 - Drop Manholes

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

29. Sewer line stub-outs (For proposed extensions):

- The placement and markings of all sewer line stub-outs are shown and labeled.
- No sewer line stub-outs are to be installed during the construction of this sewage collection system.

30. Lateral stub-outs (For proposed private service connections):

- The placement and markings of all lateral stub-outs are shown and labeled.
- No lateral stub-outs are to be installed during the construction of this sewage collection system.

31. Minimum flow velocity (From Appendix A)

- Assuming pipes are flowing full; all slopes are designed to produce flows equal to or greater than 2.0 feet per second for this system/line.

32. Maximum flow velocity/slopes (From Appendix A)

- Assuming pipes are flowing full, all slopes are designed to produce maximum flows of less than or equal to 10 feet per second for this system/line.
- Attachment D – Calculations for Slopes for Flows Greater Than 10.0 Feet per Second.** Assuming pipes are flowing full, some slopes produce flows which are greater than 10 feet per second. These locations are listed in the table below. Calculations are attached.

Table 8 - Flows Greater Than 10 Feet per Second

<i>Line</i>	<i>Profile Sheet</i>	<i>Station to Station</i>	<i>FPS</i>	<i>% Slope</i>	<i>Erosion/Shock Protection</i>

33. Assuming pipes are flowing full, where flows are ≥ 10 feet per second, the provisions noted below have been made to protect against pipe displacement by erosion and/or shock under 30 TAC §217.53(l)(2)(B).

- Concrete encasement shown on appropriate Plan and Profile sheets for the locations listed in the table above.
- Steel-reinforced, anchored concrete baffles/retards placed every 50 feet shown on appropriate Plan and Profile sheets for the locations listed in the table above.
- N/A

Administrative Information

34. The final plans and technical specifications are submitted for TCEQ review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.
35. Standard details are shown on the detail sheets, which are dated, signed, and sealed by the Texas Licensed Professional Engineer, as listed in the table below:

Table 9 - Standard Details

<i>Standard Details</i>	<i>Shown on Sheet</i>
Lateral stub-out marking [Required]	32 of All
Manhole, showing inverts comply with 30 TAC §217.55(l)(2) [Required]	31 of All
Alternate method of joining lateral to existing SCS line for potential future connections [Required]	32 of All
Typical trench cross-sections [Required]	32 of All
Bolted manholes [Required]	33 of All
Sewer Service lateral standard details [Required]	32 of All
Clean-out at end of line [Required, if used]	N/A of N/A
Baffles or concrete encasement for shock/erosion protection [Required, if flow velocity of any section of pipe >10 fps]	N/A of N/A
Detail showing Wastewater Line/Water Line Crossing [Required, if crossings are proposed]	32 of All
Mandrel detail or specifications showing compliance with 30 TAC §217.57(b) and (c) [Required, if Flexible Pipe is used]	31 of All

Appendix A-Flow Velocity Table

Flow Velocity (Flowing Full) All gravity sewer lines on the Edwards Aquifer Recharge Zone shall be designed and constructed with hydraulic slopes sufficient to give a velocity when flowing full of not less than 2.0 feet per second, and not greater than 10 feet per second. The grades shown in the following table are based on Manning's formula and an n factor of 0.013 and shall be the minimum and maximum acceptable slopes unless provisions are made otherwise.

Table 10 - Slope Velocity

Pipe Diameter(Inches)	% Slope required for minimum flow velocity of 2.0 fps	% Slope which produces flow velocity of 10.0 fps
6	0.50	12.35
8	0.33	8.40
10	0.25	6.23
12	0.20	4.88
15	0.15	3.62
18	0.11	2.83
21	0.09	2.30
24	0.08	1.93
27	0.06	1.65
30	0.055	1.43
33	0.05	1.26
36	0.045	1.12
39	0.04	1.01
>39	*	*

*For lines larger than 39 inches in diameter, the slope may be determined by Manning's formula (as shown below) to maintain a minimum velocity greater than 2.0 feet per second when flowing full and a maximum velocity less than 10 feet per second when flowing full.

$$v = \frac{1.49}{n} \times R_h^{0.67} \times \sqrt{S}$$

Figure 1 - Manning's Formula

Where:

v = velocity (ft/sec)

n = Manning's roughness coefficient (0.013)

R_h = hydraulic radius (ft)

S = slope (ft/ft)

Attachment A: SCS Engineering Design Report

San Gabriel Flats

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Project Description:

This wastewater design report is for the support of the San Gabriel Flats project. The proposed project includes a SCS that will serve the entire development. The entire system is tied into an existing City of Georgetown wastewater system, as seen on the Site Development Plans submitted in accordance with this report.

TCEQ Chapter 217.53:

(a)

The design flows were calculated utilizing design criteria specified by the City of Georgetown. An average wastewater flow per residential connection or living unit equivalent (LUE) of 285 gallons (81.42 gallons per person per day and 3.5 persons per LUE), a minimum peaking factor of 4.0, and an infiltration rate of 750 gallons per day per acre was used in the flow calculations. This criteria is typical the domestic characteristics of the expected flow.

Building [ID]	Land Area [ac]	Land Use	Unit	LUE's/Unit	LUE	Population [people]	ADWF [gpm]	PDWF [gpm]	I&I [gpm]	PWWF [gpm]
1, 2, 3, 4, 5, & 6	0.66	Residential	9	0.7 / 1	6.3	22	1.25	5.44	0.34	5.79

Units Breakdown: Buildings 1, 2, & 3 are 2-story and have two dwelling units (1 per floor) : 6 total units
 Buildings 4, 5, & 6 are 1-story and have one dwelling unit : + 3 total units
Total Units for Project : 9 units

Equations: ADWF (F) = (X gallons/person/day x No. of LUEs x 3.5 person)/1440
 PDWF = {[18+ (0.0206 x F)^{0.5}] / [4 + (0.0206 x F)^{0.5}]} x F
 I&I = (750gpd/ac x Area)
 PWWF = PDWF + I&I

(b)

The proposed wastewater lines are 6-inch PVC SDR 26 which meets ASTM D 3034 or D 2241 specifications. The slope of proposed sewage collection system is 2.66%. The type of flow is domestic, and the pipe selection is based on the City of Georgetown's specification & TCEQ's requirements.

(c)

The pipe joints will also be PVC SDR 26 with a rubber gasket bell configuration meeting ASTM D3212, D2444, F1336, and F610.

(d)

The system pipes and manholes are no closer than nine feet laterally from domestic water lines and no closer than one foot vertically at any transverse crossing. Wastewater lines that cross a public water line (within nine feet), above or below, will be constructed of PVC SDR 26 ASTM D2241 (150 psi), one joint of wastewater line will be

centered at the crossing.

(e)

Lateral connections will utilize pre-manufactured fittings made of SDR 26 PVC meeting the same ASTM standards.

(f)

There are no bores proposed on this site.

(g)

PVC pipe is unaffected by fluids and gases generated by domestic wastewater flow. In addition, PVC is unaffected by corrosive soils.

(h)

We do not anticipate odor control to be problematic and no different than any other newly constructed collection system using PVC gasketed joints that are buried.

(i)

There are no geologic faults that were identified in the geologic assessment as can be seen in the Geologic Assessment provided at the time of submittal.

(j)

As stated above the lines slope is 2.66%. The hydraulic capacity (determined by Manning's Equation) for a 6-inch line at 2.66% slope at full flow capacity is 410.72 gpm with a velocity of 4.66 feet per second.

WWL 'A' has total PWWF of 5.79 gpm, which is well under the line's capacity and no surcharges are expected.

The system's design requirements as outlined by the City of Georgetown are within the design parameters outlined in Figure: 30 TAC 217.32(a)(3), Table B.1 and the expected organic loading is characteristic of domestic loading.

(k)

(1) The design life of PVC pipe is widely accepted within the industry to be in excess of 100 years.

(2)(3) Pipe Stiffness Calculations: **Reference attached spread sheet for 6" Flexible Pipe Design.**

(l)

See slope and velocity discussion above which assumed a Manning's $n = 0.013$.

(m)

The alignments of pipe are shown in the construction plans and have uniform grades between manholes, straight alignments with no curvature, and no pipe deflections.

(n)

There are no inverted siphons or sag pipes.

(o)

There are no bridged sections of pipe.

TCEQ Chapter 217.54:

(a)

Pipe embedment shall be as specified by the City of Georgetown Specifications and shall be Class I or II. If

trenching encounters significant fractures, fault zones, caves or solution cavities, all trenching will cease within 50 feet of the feature and a geologist will be contacted. Specific feature closure details are part of the construction plans to be used once the geologist has contacted TCEQ and permission has been granted to seal the feature.

(b)
Compaction shall meet the City of Georgetown Specifications.

(c)(d)
The envelope size and trench width is depicted by a standard City of Georgetown detail found in the construction plans and meets TCEQ criteria.

TCEQ Chapter 217.55:

(a)
Manholes have been placed at points of alignment, grade, and size change, and at all pipe intersections.

(b)
There are no future extensions or future use stubs as shown in the wastewater plan.

(c)
Cleanouts placed at the end of a line will include watertight plugs.

(d)
All installations will be in accordance with the City of Georgetown specifications and meet all TCEQ requirements.

(e)
All manholes in this project will be either monolithically poured or prefabricated constructed to withstand all anticipated loads.

(f)
All adjustment rings utilized will follow the City of Georgetown specifications and meet all TCEQ requirements.

(g)
The spacing distance for manholes complies with the TCEQ requirements.

(h)
N/A

(i)
There are no manholes located in a stream bed.

(j)
All manholes are a standard 4' in diameter.

(k)
Manholes, covers and bases shall meet all TCEQ criteria in this section, see details in construction plans.

(l)
The inclusion of steps is prohibited.

(m)
The inclusion of steps is prohibited.

(n)

N/A

(o)

All cleanouts used have a diameter equal to the connecting system.

TCEQ Chapter 217.57 and 217.58:

All testing required in these chapters shall be performed to the specifications listed within these chapters, see Organized Sewage Collection System General Construction Notes in the construction plans.

TCEQ Chapters 217.56 and 217.59 – 217.71 do not apply to this project.

Flexible 6" PVC (SDR-26) Pipe Design

Live Load Analysis: 30 TAC 217.53(k)(2)(A)

T62 For the purposes of this application, the minimum depth of burial for gravity sanitary sewer pipe, from the ground surface to the crown of the pipe (H) is 2 feet. Does the submitted design comply with this minimum H?

Yes

T63 If all pipe proposed for this project will be installed at a burial depth of greater than or equal to 3.0 feet and the pipe will not be subjected to live loads greater than 18 kip axle, assume that the pressure due to live load $L_1=0$ and skip to T68. If a value of H greater than or equal to 2 feet and less than 3 feet is proposed for any portions of the gravity sanitary sewer pipeline or if the pipe will be subjected to live loads greater than 18 kip axle, calculations which quantify what the L_1 on the pipe will be must be provided:

Live Load = **0** [psi]

T64 Indicate minimum H: **4** [ft]

T65 Indicate maximum anticipated L_1 as determined in T63: **0** [psi]

T66 Are all proposed flexible pipe materials capable of supporting this L_1 ? **Yes**

T67 Indicate source of maximum L_1 : **Uni-Bell's "Handbook of PVC Pipe"**
(H20 Load at 2.5' of cover)

Buckling Analysis: 30 TAC 217.53(k)(2)(B)

T68 Calculate allowable and predicted buckling pressure. Predicted and allowable buckling pressures must be calculated for each size of pipe and type of flexible pipe material. For the purposes of this application form, the buckling analysis must be performed using the method outlined below. The method of calculating allowable buckling pressure provided below is only valid for lines which are installed at depths of $2 \text{ ft} < H < 80 \text{ ft}$.

q_a = Allowable buckling pressure, (psi)
Water buoyancy factor. If $h_w = 0$, $R_w = 1$. If $0 < h_w < h$

R_w = (groundwater elevation is between the top of the pipe and the ground surface), calculate R_w with Equation 2.

B' = Empirical coefficient of elastic support
Moment of inertia of the pipe wall cross section per linear inch of pipe, $\text{inch}^4 / \text{lineal inch} = \text{inch}^3$. For solid wall pipe, I can be calculated with equation 4. If the pipe used is not solid wall pipe (for example a pipe with a ribbed cross section), the proper moment of inertia formula must be obtained from the manufacturer.

I =

h = Height of soil surface above the top of pipe = **192** [in]

H = Depth of burial from ground surface to crown of pipe = **16** [ft]

h_w = Height of water surface above top of pipe in inches (groundwater el.), = **0** [in]

E_b = Modulus of soil reaction for the bedding material = **700** [psi]

E = Modulus of elasticity of the pipe material = **500,000** [psi]

t = Pipe structural wall thickness = **0.18** [in]

D = Mean pipe diameter = **6** [in]

a) Calculate allowable buckling pressure as follows:

(1)	$q_a = 0.4 * [32 * R_w * B' * E_b * (E * I / D^3)]^{0.5}$	=	40.9 [psi]
(2)	$R_w = 1 - 0.33 * (h_w / h) =$	=	1.00
(3)	$B' = 1 / (1 + 4 * e^{-0.65H})$	=	0.41
(4)	$I = (t^3 / 12)$	=	4.860E-04 [in ⁴ /in]

b) Calculate pressure applied to pipe under installed conditions

q_p = pressure applied to pipe under installed conditions (psi)
 W_c = vertical soil load on the pipe per unit length in pounds per linear inch (lb/in)
 γ_w = 0.0361 pounds per cubic inch (pci), specific weight of water
 γ_s = specific weight of soil = 120 [pcf]
 L_1 = live load as determined in T63 = 0 [psi]

(5)	$q_p = \gamma_w * h_w + R_w * (W_c / D) + L_1$	=	15.56
(6)	$W_c = \gamma_s * H * (D + 1) / 144 =$	=	93.33

T69 Report q_a and q_p for each pipe diameter proposed and for each type of pipe material proposed:

Pipe Diameter:	6	[in]	Pipe Material:	PVC
q_a :	40.9	[psi]	q_p :	15.6 [psi]

T70 If $q_a > q_p$, specified pipe is acceptable for the proposed installation. If $q_a < q_p$, the wall thickness of the pipe must be increased and/or a pipe with a larger modulus of elasticity (E) must be used. Make the appropriate modifications and repeat the buckling analysis, showing that for the upgraded pipe, $q_a > q_p$. Does all the pipe proposed for this project meet these requirements?

Yes

Wall Crushing: 30 TAC 217.53 (k)(2)(D)

T71 If no concrete encased flexible pipe is proposed for the submitted project, skip to T73. If any flexible pipe will be installed in rigid encasement (e.g. concrete), calculate the maximum depth that the pipe can be buried before wall crushing (or failure by ring compression) will occur using the method outlined below. It should be noted that cement stabilized sand or soil is not considered a rigid encasement for purposes of TCEQ review.

		=	N/A
H =	Depth of burial in feet (ft) from ground surface to crown of pipe	=	
D_o =	Outside pipe diameter	=	0 [in]
P_c =	Compressive stress or hydrostatic design basis (HDB). For typical PVC pipe assume 4,000 psi. For any other pipe material the HDB must be supplied by the pipe manufacturer.	=	4,000 [psi]
A =	Surface area of the pipe wall	=	0.0 [in ² /ft]
24 =	Conversions and coefficients	=	
(7)	$H = (24 * P_c * A) / (\gamma_s * D_o) =$	=	N/A [ft]

T72 Will all pipe installations proposed for this project have an H less than or equal to the maximum allowable H calculated in T71 and greater than or equal to 2 feet? Report maximum allowable H, (H_a), and the maximum H which is proposed, (H_p), for each proposed pipe diameter and each type of flexible pipe material.

H_a :	N/A	H_p :	N/A
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Installation Temperature Effects:

T73 If flexible pipe will be installed under favorable ambient temperature conditions, skip to T74. If flexible pipe will be installed under very high or low ambient temperature conditions, please indicate provisions for handling which will protect the pipe and ensure an adequate installation:

Location in submittal:

Plan Sheet: N/A Specifications page: N/A Item No.: N/A

Tensile Strength:

T74 The project specifications need to indicate minimum allowable tensile strength in psi for each flexible pipe material. If PVC pipe is proposed, specify cell class:

Pipe Material: PVC Tensile Strength: 7,000 psi Cell Class (PVC only): 12454-B

Location in submittal:

Plan Sheet: C-5 Specifications page: N/A Item No.: N/A

Strain:

T75 Are the conditions of this installation such that strain-related failure will not be a problem? If any proposed flexible pipe material is considered to be susceptible to strain-related failure at less than 5% long-term deflection provide analysis for predicted strain due to hoop stress and bending strain. If strain-related failure will not be a problem for the pipe installation proposed in this project, skip to T76.

No

Deflection Analysis: 30 TAC 217.53(k)(2)(F)

T76 Indicate E_b (modulus of soil reaction for the bedding material) in psi. If E_b is greater than 750 psi, justification must be provided. = **700** [psi]

How was E_b determined or estimated?

A value of 700 psi is widely used when the sidefill is compacted to within 90% proctor density. This percentage is specified for the pipe embedment on this project, using Class I or II soils.

T77 Indicate E'_n (modulus of soil reaction for the in-situ soil): = **1000** [psi]

How was E'_n determined or estimated?

Uni-Bell Handbook of PVC Pipe, 3rd Edition-Table 7.3

T78 Based on T76 and T77, above, calculate the ratio of bedding modulus to soil modulus:

$E_b/E'_n =$ **0.70** If $E_b/E'_n < 1.25$, assume zeta = 1.0

If this ratio is greater than 1.25, a zeta factor must be calculated by completing T79 and T80, where zeta is a factor which corrects for the effect of in-situ soil on pipe stability. If the ratio of bedding modulus to soil modulus is less than or equal to 1.25, assume zeta = 1.0 and skip to T80.

T79 Where native soil is significantly weaker than bedding material, or where predicted deflection approaches 5%, the effect of native soil must be quantified using Leonhardt's Zeta factor. Zeta must be determined for each diameter of pipe and corresponding trench width. estimated graphically or calculated directly. If zeta is estimated graphically, identify the source for Zeta may be tables, figures, etc.... (including page numbers and table numbers or figure numbers for each source) which were used to estimate zeta. To calculate zeta directly use the formulas in T79(b), below. The calculations which are done to determine the zeta factors for the different pipe diameters must be included with this submittal.

(a) Sources: **N/A**

(b) Calculations:

f = Pipe/trench width coefficient	=	N/A
b = Trench width	=	18 [in]
d_a = Pipe diameter	=	6 [in]
E_b = Modulus of soil reaction for the bedding material	=	700 [psi]
E'_n = Modulus of soil reaction for the in-situ soil	=	1000 [psi]
(8) $\text{zeta} = 1.44 / (f + (1.44 - f) * (E_b / E'_n)) =$	=	N/A
(9) $f = (b / d_a - 1) / [1.154 + 0.444 * (b / d_a - 1)]$	=	N/A

T80 For each size of pipe, report zeta factor determined in T78 or T79:

Pipe Diameter [in]: 6 Trench Width [in]: 18 Zeta: 1.0

T81 Determine pipe stiffness (P_s) in psi. P_s can be determined either by parallel plate test at 5% deflection, based on manufacturer's data or national reference standards; or, calculated using either equation 10 or equation 11. As an example, the minimum pipe stiffness at 5% deflection for PVC pipe less than 15 inches in diameter meeting ASTM D 3034, is 46 psi for SDR-35 and 115 psi SDR 26. If equation 11 is used, the ring stiffness constant (RSC) is provided by the pipe manufacturer. Show calculations, or provide proper references, for each size of pipe and for each flexible pipe material.

E = Modulus of elasticity of the pipe material	=	500,000 [psi]
Moment of inertia of the pipe wall cross section per linear inch of pipe, $\text{inch}^4/\text{lineal inch} = \text{inch}^3$. For a solid pipe, I can be calculated with equation 4. If the pipe used is not solid wall pipe (for example a pipe with a ribbed cross section), the proper moment of inertia formula must be obtained from the manufacturer.	=	4.86E-04 [in^4/in]
D = mean pipe diameter	=	6 [in]
r = mean radius	=	3 [in]
RSC = Ring Stiffness Constant	=	0
(10) $P_s = (E * I) / (0.149 * r^3)$	=	60.4 [psi]
or		
(11) $P_s = 0.80 * RSC * (8.337 / D)$	=	N/A [psi]

T82 Report P_s , for each pipe size and each type of flexible pipe material as determined in T81.

Pipe Diameter [in]: 6 Pipe Material: PVC $P_{s [psi]}$: 60

T83 Because the terms in the denominator of the modified Iowa formula (Equation 13) are added, it is theoretically possible to have zero pipe stiffness ($P_s = 0$) and still predict flexible pipe deflections less than 5%. In order to ensure that the stiffness being provided to the installation has a reasonable contribution from pipe stiffness, and does not rely solely on the stiffness provided by the soil stiffness factor (SSF), the ratio of P_s/SSF must be calculated. If $P_s/\text{SSF} < 0.15$, T81 and T82 must be repeated such that a higher stiffness pipe is chosen for each portion of the project where $P_s/\text{SSF} < 0.15$. The P_s/SSF ratio(s) must then be recalculated for the new higher stiffness pipe. This process must be repeated until $P_s/\text{SSF} > 0.15$ exists for all proposed pipe sizes and for all types of flexible pipe materials.

P_s = Pipe stiffness	=	60.4 [psi]
------------------------	---	------------

E_b = Modulus of soil reaction for the bedding material = 700 [psi]
 $zeta$ = 1.0, or a value calculated with the method in T79 = 1.0
 SSF = Soil stiffness factor ($0.061 * zeta * E_b$) = 42.7 [psi]

$$(12) \frac{P_s}{SSF} = \frac{P_s}{0.061 * zeta * E_b} > 0.15 = \boxed{1.41}$$

T84 Indicate the final values calculated for Ps/SSF for each diameter of pipe and each pipe material:

Pipe Diameter [in]: 6 Pipe Material: PVC $P_s/SSF =$ 1.41

T85 Do all proposed pipe sizes and flexible pipe materials have a pipe stiffness to soil stiffness factor ratio of greater than or equal to 0.15?

Yes

T86 Calculate and report predicted deflection. Predicted deflection must be calculated for each size of pipe and type of flexible pipe material. For the purposes of this application form, predicted deflection must be calculated using the method outlined below. Show calculations and report calculated maximum deflection for each size of pipe and type of flexible pipe material. Maximum allowable deflection in installed lines is 5%, as determined by the deflection analysis and verified by a mandrel test conforming to T89. Some conservatism should be employed in determining allowable predicted deflections. This conservatism is necessary to allow for variability in the quality of installation.

$\Delta Y/D$ (%) = Predicted % vertical deflection under load.

ΔY = Change in vertical pipe diameter under load

D = Undeformed mean pipe diameter (in) = 6 [in]

K = Bedding angle constant. Assumed to be 0.110 unless otherwise justified = 0.110

γ_s = Unit weight of soil (pcf). γ_s less than 120 pcf must be justified = 120 [pcf]

H = Depth of burial (ft) from ground surface to crown of pipe = 16 [ft]

L_p = Prism load (psi). If prism load is calculated using Marston's load formula, or other formulas less conservative than the one provided above, the load should be multiplied by a deflection lag factor $DI = 1.5$ to account for long-term deflection of the pipe as the bedding consolidates

$$(13) \Delta Y/D (\%) = \frac{K * (L_p + L_1) * 100}{(0.149 * P_s) + (0.061 * zeta * E_b)} = \boxed{2.8} [\%]$$

$$(14) L_p = (\gamma_s * H) / 144 = 13.3 [\text{psi}]$$

- If the predicted % $\Delta Y/D$ for any proposed pipe size or material is over 5%, the proposed flexible pipe design cannot be approved by the TCEQ. Appropriate design modifications must be made and the analysis must be repeated until a deflection of less than or equal to 5% is predicted.
- If a zeta value of 1.0 was assumed as a result of T78, and the predicted deflection for any size or type of pipe is determined to be between 4% and 5%, the deflection analysis must be repeated. Repeat the deflection analysis by performing all the same calculations. The difference will be that instead of using an assumed zeta factor of 1.0, the zeta factor must be calculated as outlined in T79. If the predicted deflection is determined to be above 5% after the deflection analysis is repeated, this flexible pipe design cannot be approved by the TCEQ. Appropriate design modifications must be made and the analysis must be repeated until a deflection of less than or equal to 5% is predicted.

- If the predicted deflection, for a particular pipe, using the deflection analysis method detailed above, is less than or equal to 4%, and a zeta factor of 1.0 was assumed as a result of T78, that particular pipe is assumed to comply with the TCEQ's requirements for deflection analysis and can therefore be approved.
- If the predicted deflection, for a particular pipe, using the deflection analysis method detailed above, is between 4% and 5%, and the zeta factor which was used in the analysis was determined using the method in T79, that particular pipe is assumed to comply with the TCEQ's requirements for deflection analysis and can therefore be approved.

Pipe Diameter [in]	Type of Pipe Material	P _s [psi]	Zeta Factor Assumed or Calculated	E _b [psi]	% Deflection
6	PVC	60.4	1.0	700	2.8

T88 Do all pipes proposed for this project have a maximum predicted deflection of 5.0%?

Yes



Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I _____ Tyler Wolf _____
Print Name

_____ Owner _____
Title - Owner/President/Other

of _____ 806 E 13th St Apartments, LLC _____
Corporation/Partnership/Entity Name

have authorized _____ Antonio A. Prete, P.E. _____
Print Name of Agent/Engineer

of _____ Waeltz & Prete, Inc. _____
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.
4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.
5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Tyler Wolf
Applicant's Signature

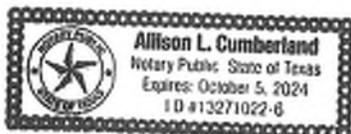
12-28-21
Date

THE STATE OF Texas §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Tyler Wolf known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 28th day of December, 2021



ac
NOTARY PUBLIC

Allison L. Cumberland
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 10-5-24

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: San Gabriel Flats

Regulated Entity Location: 806 E. Spring St.

Name of Customer: 806 E 13th St Georgetown Apartments, LLC

Contact Person: Tyler Wolf

Phone: (512) 966-0117

Customer Reference Number (if issued):CN _____

Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

Hays

Travis

Williamson

San Antonio Regional Office (3362)

Bexar

Medina

Uvalde

Comal

Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment.** This payment is being submitted to:

Austin Regional Office

San Antonio Regional Office

Mailed to: TCEQ - Cashier

Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

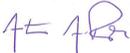
Site Location (Check All That Apply):

Recharge Zone

Contributing Zone

Transition Zone

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	1.348 Acres	\$ 4,000.00
Sewage Collection System	198 L.F.	\$ 650.00
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: 

Date: 05/10/2022

Application Fee Schedule

Texas Commission on Environmental Quality

Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

<i>Project</i>	<i>Project Area in Acres</i>	<i>Fee</i>
One Single Family Residential Dwelling	< 5	\$650
Multiple Single Family Residential and Parks	< 5	\$1,500
	5 < 10	\$3,000
	10 < 40	\$4,000
	40 < 100	\$6,500
	100 < 500	\$8,000
	≥ 500	\$10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1	\$3,000
	1 < 5	\$4,000
	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$10,000

Organized Sewage Collection Systems and Modifications

<i>Project</i>	<i>Cost per Linear Foot</i>	<i>Minimum Fee- Maximum Fee</i>
Sewage Collection Systems	\$0.50	\$650 - \$6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

<i>Project</i>	<i>Cost per Tank or Piping System</i>	<i>Minimum Fee- Maximum Fee</i>
Underground and Aboveground Storage Tank Facility	\$650	\$650 - \$6,500

Exception Requests

<i>Project</i>	<i>Fee</i>
Exception Request	\$500

Extension of Time Requests

<i>Project</i>	<i>Fee</i>
Extension of Time Request	\$150



TCEQ Core Data Form

TCEQ Use Only

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided)	
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application)	
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other
2. Attachments Describe Any Attachments: (ex. Title V Application, Waste Transporter Application, etc.)	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	WPAP & SCS
3. Customer Reference Number (if issued)	4. Regulated Entity Reference Number (if issued)
CN	RN

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy)	
6. Customer Role (Proposed or Actual) - as it relates to the Regulated Entity listed on this form. Please check only one of the following:	
<input checked="" type="checkbox"/> Owner	<input type="checkbox"/> Operator
<input type="checkbox"/> Occupational Licensee	<input type="checkbox"/> Responsible Party
<input type="checkbox"/> Owner & Operator	<input type="checkbox"/> Voluntary Cleanup Applicant
<input type="checkbox"/> Other:	
7. General Customer Information	
<input checked="" type="checkbox"/> New Customer	<input type="checkbox"/> Update to Customer Information
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State)	<input type="checkbox"/> Change in Regulated Entity Ownership
<input type="checkbox"/> No Change**	
**If "No Change" and Section I is complete, skip to Section III - Regulated Entity Information.	
8. Type of Customer:	
<input checked="" type="checkbox"/> Corporation	<input type="checkbox"/> Individual
<input type="checkbox"/> City Government	<input type="checkbox"/> County Government
<input type="checkbox"/> Other Government	<input type="checkbox"/> General Partnership
<input type="checkbox"/> Federal Government	<input type="checkbox"/> Limited Partnership
<input type="checkbox"/> State Government	<input type="checkbox"/> Other:
9. Customer Legal Name (if an individual, print last name first: ex: Doe, John)	
806 E 13th St Georgetown Apartments, LLC	
10. Mailing Address:	
903 N. Austin Ave.	
City	Georgetown
State	TX
ZIP	78628 78626
ZIP + 4	
11. Country Mailing Information (if outside USA)	
12. E-Mail Address (if applicable)	
tyler@wolfinvestmentgroup.com	
13. Telephone Number	
(512) 966-0117	
14. Extension or Code	
15. Fax Number (if applicable)	
16. Federal Tax ID (9 digits)	
81-4258886	
17. TX State Franchise Tax ID (11 digits)	
32061883750	
18. DUNS Number (if applicable)	
19. TX SOS Filing Number (if applicable)	
20. Number of Employees	
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher	
21. Independently Owned and Operated?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

SECTION III: Regulated Entity Information

22. General Regulated Entity Information (If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)	
<input checked="" type="checkbox"/> New Regulated Entity	<input type="checkbox"/> Update to Regulated Entity Name
<input type="checkbox"/> Update to Regulated Entity Information	<input type="checkbox"/> No Change** (See below)
**If "NO CHANGE" is checked and Section I is complete, skip to Section IV, Preparer Information.	
23. Regulated Entity Name (name of the site where the regulated action is taking place)	
San Gabriel Flats	

24. Street Address of the Regulated Entity: <i>(No P.O. Boxes)</i>	806 E. Spring St.						
	City	Georgetown	State	TX	ZIP	78626	ZIP + 4
25. Mailing Address:	903 N. Austin Ave.						
	City	Georgetown	State	TX	ZIP	78628 <i>78626</i>	ZIP + 4
26. E-Mail Address:	tyler@wolfinvestmentgroup.com						
27. Telephone Number	28. Extension or Code		29. Fax Number <i>(if applicable)</i>				
(512) 966-0117			() -				
30. Primary SIC Code (4 digits)	31. Secondary SIC Code (4 digits)	32. Primary NAICS Code (5 or 6 digits)		33. Secondary NAICS Code (5 or 6 digits)			
6514	7021	531110					
34. What is the Primary Business of this entity? <i>(Please do not repeat the SIC or NAICS description.)</i>							
Managing of a multi-family residential site; all buildings are one or two dwelling units.							

Questions 34 – 37 address geographic location. Please refer to the instructions for applicability.

35. Description to Physical Location:	The site is located at 806 E. Spring, Georgetown, TX 78626. This property is located at the northwest corner of the intersection of E. Spring St. and N. Church St.						
36. Nearest City	County		State		Nearest ZIP Code		
Georgetown	Williamson		TX		78626		
37. Latitude (N) In Decimal:	30.648590			38. Longitude (W) In Decimal:	-97.676519		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		
30°	38'	54.9"	97°	40'	35.5"		

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form or the updates may not be made. If your Program is not listed, check other and write it in. See the Core Data Form instructions for additional guidance.

<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Industrial Hazardous Waste	<input type="checkbox"/> Municipal Solid Waste
<input type="checkbox"/> New Source Review – Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS	<input type="checkbox"/> Sludge
<input type="checkbox"/> Stormwater	<input type="checkbox"/> Title V – Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil	<input type="checkbox"/> Utilities
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

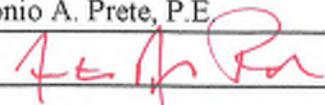
SECTION IV: Preparer Information

40. Name:	Antonio A. Prete, P.E.		41. Title:	President
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
(512) 505-8953	11	() -	tony@w-pinc.com	

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 9 and/or as required for the updates to the ID numbers identified in field 39.

(See the Core Data Form instructions for more information on who should sign this form.)

Company:	Waeltz & Prete, Inc.	Job Title:	Principal
Name <i>(In Print)</i> :	Antonio A. Prete, P.E.	Phone:	(512) 505-8953
Signature:		Date:	24 Jan 22

SITE PLAN IMPROVEMENTS FOR: SAN GABRIEL FLATS

SHEET INDEX

Sheet Number	Sheet Title
C-1	COVERSHEET
C-2	GENERAL NOTES
C-3	TCEQ NOTES (1 OF 2)
C-4	TCEQ NOTES (2 OF 2)
C-5	PLAT
C-6	EXISTING CONDITIONS & DEMOLITION PLAN
C-7	SITE & DIMENSIONAL CONTROL PLAN
C-8	ESC & TREE PROTECTION PLAN
A1.00	ARCHITECTURAL ELEVATIONS (1 OF 3)
A2.00	ARCHITECTURAL ELEVATIONS (2 OF 3)
A3.00	ARCHITECTURAL ELEVATIONS (3 OF 3)
L1	LANDSCAPE PLAN (1 OF 2)
L2	LANDSCAPE PLAN (2 OF 2)
C-9	WATER PLAN
C-10	WASTEWATER PLAN
C-11	WASTEWATER PROFILE
C-12	STORM SEWER PLAN
C-13	GRADING PLAN
C-14	OVERALL DRAINAGE AREA MAP
C-15	WATER QUALITY SUMMARY
C-16	WQ TSS REMOVAL CALCULATIONS
C-17	POND PLAN
C-18	POND SECTIONS
C-19	POND DETAILS (1 OF 2)
C-20	POND DETAILS (2 OF 2)
C-21	POND CALCULATIONS
C-22	PAVING, SIGNAGE, & STRIPING PLAN
C-23	ESC DETAILS (1 OF 2)
C-24	ESC DETAILS (2 OF 2)
C-25	SITE DETAILS (1 OF 4)
C-26	SITE DETAILS (2 OF 4)
C-27	SITE DETAILS (3 OF 4)
C-28	SITE DETAILS (4 OF 4)
C-29	WATER DETAILS (1 OF 2)
C-30	WATER DETAILS (2 OF 2)
C-31	WASTEWATER DETAILS (1 OF 3)
C-32	WASTEWATER DETAILS (2 OF 3)
C-33	WASTEWATER DETAILS (3 OF 3)
C-34	STORM DETAILS

DESIGN PROFESSIONALS:

<p>CIVIL ENGINEER/ APPLICANT:</p> <p>ANTONIO A. PRETE, P.E. WAELTZ & PRETE, INC. 211 N. A.W. GRIMES, BLVD. ROUND ROCK, TX 78665 PH: (512) 505-8953 EMAIL: tony@w-pinc.com WEBSITE: w-pinc.com</p>	<p>ARCHITECT:</p> <p>SHAWN F. HOOD SHAWN F. HOOD DESIGN, LLC 812 MAIN STREET GEORGETOWN, TX 78626 PH: (512) 751-9864 EMAIL: shawnhood@shawnhood.com WEBSITE: shawnhood.com</p>	<p>LANDSCAPE ARCHITECT:</p> <p>BRADLEY T. JONES, PLA ECOLAND DESIGN GROUP 2800 IH 35, SUITE 170 AUSTIN, TEXAS 78704 PH: (859) 556-0313 EMAIL: bjones@ecolanddesigngroup.com WEBSITE: ecolanddesigngroup.com</p>
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**LOTS 1-2, & 7-8 BLOCK 12 (0.6612 AC) &
LOTS 3-3, 5-6, & 8 BLOCK 19 (0.6868 AC)
NORTH GEORGETOWN ADDITION**

**806 E. SPRING STREET &
901 N. AUSTIN AVENUE
GEORGETOWN, TEXAS 78626**

**NOVEMBER, 2021
COGT PROJ. NO.: 2021-86-SDP**

SITE DATA:

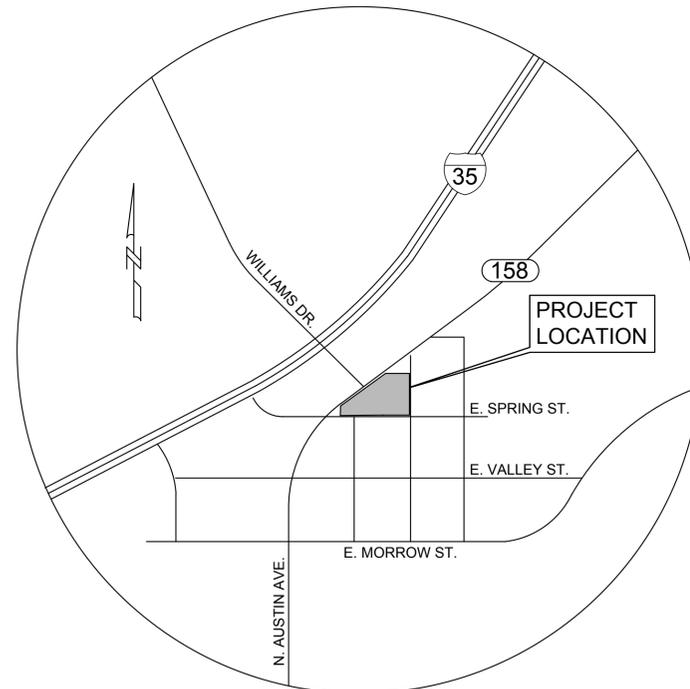
SITE AREA:	1.348 AC (±58,719 SF)
EX. IMPERVIOUS COVER: (24,089 SF)	0.55 AC (41.02%)
TOTAL IMPERVIOUS COVER POST PROJECT: (35,932 SF)	0.83 AC (61.20%)
LIMITS OF CONSTRUCTION (47,465 SF):	1.09 AC

UTILITY CONTACTS

UTILITY SERVICE	PROVIDER	PHONE NUMBER	ADDRESS	WEBSITE
ELECTRIC	CITY OF GEORGETOWN	930-2572	300 INDUSTRIAL AVE. #1	georgetown.org
WATER	CITY OF GEORGETOWN	930-2572	300 INDUSTRIAL AVE. #1	georgetown.org
WASTEWATER	CITY OF GEORGETOWN	930-2572	300 INDUSTRIAL AVE. #1	georgetown.org
NATURAL GAS	ATMOS	415-8426	3110 N. IH 35	atmos.com

NOTES:

- THESE PLANS ARE NOT TO BE CONSIDERED FINAL FOR CONSTRUCTION UNTIL ACCEPTED BY THE CITY. CHANGES MAY BE REQUIRED PRIOR TO APPROVAL.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- THERE ARE NO AREAS WITHIN THE BOUNDARIES OF THIS PROPERTY IN THE 100 YEAR FLOODPLAIN AS DEFINED BY FIRM MAP NUMBER 48491C0293F, EFFECTIVE DATE OF DECEMBER 20, 2019.
- THE COGT GENERAL SITE DEVELOPMENT PLAN NOTES HAVE BEEN INCLUDED IN SHEET C-2.



LOCATION MAP
SCALE: 1" = 500'



STATE OF TEXAS

COUNTY OF WILLIAMSON

I, ANTONIO A. PRETE, P.E., DO HEREBY CERTIFY THAT THE PUBLIC WORKS AND DRAINAGE IMPROVEMENTS DESCRIBED HEREIN HAVE BEEN DESIGNED IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORMWATER DRAINAGE POLICY ADOPTED BY THE CITY OF GEORGETOWN, TEXAS.



ANTONIO A. PRETE, P.E.
STATE OF TEXAS #93759

03 Jun 22
DATE

2021-86-SDP

JOB NO.: 147-001

SITE DATA:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF GEORGETOWN MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

LEGAL DESCRIPTION:
LOTS 1-2, 7-8 BLOCK 12 (0.6612 AC.) GEORGETOWN NORTH ADDITION

ZONING DISTRICT:
LOW DENSITY MULTIFAMILY (MF-1)

BENCHMARK:
PK NAIL SET ON SOUTH END OF CONCRETE HEADWALL 50' WEST OF THE SOUTHWEST CORNER OF THE FOX AUTO BUILDING.
ELEV = 718.02'

OWNER:

806 E 13th ST GEORGETOWN
APARTMENTS, LLC
414 INDIGO LN
GEORGETOWN, TEXAS 78628
PH: (512) 966-0117
EMAIL: tyler@wolfinvestmentgroup.com
WEBSITE: wolfrealestateteam.com

ENGINEER:



WAELTZ & PRETE, INC.
CIVIL ENGINEERS
211 N.A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

REVISIONS:

No.	Date	Revision	ACC.	DATE

Texas Commission on Environmental Quality
Organized Sewage Collection System
General Construction Notes
TCEQ-0596 (Rev. July 15, 2015)

- This Organized Sewage Collection System (SCS) must be constructed in accordance with 30 Texas Administrative Code (TAC) §213.5(c), the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules and any local government standard specifications.
- All contractors conducting regulated activities associated with this proposed regulated project must be provided with copies of the SCS plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors must be required to keep on-site copies of the plan and the approval letter.
- A written notice of construction must be submitted to the presiding TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
 - the name of the approved project;
 - the activity start date; and
 - the contact information of the prime contractor.
- Any modification to the activities described in the referenced SCS application following the date of approval may require the submittal of an SCS application to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval.
- Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. These controls must remain in place until the disturbed areas have been permanently stabilized.
- If any sensitive features are discovered during the wastewater line trenching activities, all regulated activities near the sensitive feature must be suspended immediately. The applicant must immediately notify the appropriate regional office of the TCEQ of the feature discovered. A geologist's assessment of the location and extent of the feature discovered must be reported to that regional office in writing and the applicant must submit a plan for ensuring the structural integrity of the sewer line or for modifying the proposed collection system alignment around the feature. The regulated activities near the sensitive feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality while maintaining the structural integrity of the line.
- Sewer lines located within or crossing the 5-year floodplain of a drainage way will be protected from inundation and stream velocities which could cause erosion and scouring of backfill. The trench must be capped with concrete to prevent scouring of backfill, or the sewer lines must be encased in concrete. All concrete shall have a minimum thickness of 6 inches.
- Blasting procedures for protection of existing sewer lines and other utilities will be in accordance with the National Fire Protection Association criteria. Sand is not allowed as bedding or backfill in trenches that have been blasted. If any existing sewer lines are damaged, the lines must be repaired and retested.
- All manholes constructed or rehabilitated on this project must have watertight size on size resilient connectors allowing for differential settlement. If manholes are constructed within the 100-year floodplain, the cover must have a gasket and be bolted to the ring. Where gasketed manhole covers are required for more than three manholes in sequence or for more than 1500 feet, alternate means of venting will be provided. Bricks are not an acceptable construction material for any portion of the manhole.

The diameter of the manholes must be a minimum of four feet and the manhole for entry must have a minimum clear opening diameter of 30 inches. These dimensions and other details showing compliance with the commission's rules concerning manholes and sewer line/manhole inverts described in 30 TAC §217.55 are included on Plan Sheets 20, 21 & 22 of 73.

It is suggested that entrance into manholes in excess of four feet deep be accomplished by means of a portable ladder. The inclusion of steps in a manhole is prohibited.
- Where water lines and new sewer line are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC §217.53(d) (Pipe Design) and 30 TAC §290.44(e) (Water Distribution).
- Where sewers lines deviate from straight alignment and uniform grade all curvature of sewer pipe must be achieved by the following procedure which is recommended by the pipe manufacturer: N/A

- If pipe flexure is proposed, the following method of preventing deflection of the joint must be used: N/A

Specific care must be taken to ensure that the joint is placed in the center of the trench and properly bedded in accordance with 30 TAC §217.54.

- New sewage collection system lines must be constructed with stub outs for the connection of anticipated extensions. The location of such stub outs must be marked on the ground such that their location can be easily determined at the time of connection of the extensions. Such stub outs must be manufactured wyes or tees that are compatible in size and material with both the sewer line and the extension. At the time of original construction, new stub-outs must be constructed sufficiently to extend beyond the end of the street pavement. All stub-outs must be sealed with a manufactured cap to prevent leakage. Extensions that were not anticipated at the time of original construction or that are to be connected to an existing sewer line not furnished with stub outs must be connected using a manufactured saddle and in accordance with accepted plumbing techniques.

If no stub-out is present an alternate method of joining laterals is shown in the detail on Plan Sheet 62 of 73. (For potential future laterals).

The private service lateral stub-outs must be installed as shown on the plan and profile sheets on Plan Sheets 20, 21 & 22 of 73 and marked after backfilling as shown in the detail on Plan Sheet 62 of 73.

- Trenching, bedding and backfill must conform with 30 TAC §217.54. The bedding and backfill for flexible pipe must comply with the standards of ASTM D-2321, Classes IA, IB, II or III. Rigid pipe bedding must comply with the requirements of ASTM C 12 (ANSI A 106.2) classes A, B or C.
- Sewer lines must be tested from manhole to manhole. When a new sewer line is connected to an existing stub or clean-out, it must be tested from existing manhole to new manhole. If a stub or clean-out is used at the end of the proposed sewer line, no private service attachments may be connected between the last manhole and the cleanout unless it can be certified as conforming with the provisions of 30 TAC §213.5(c)(3)(E).
- All sewer lines must be tested in accordance with 30 TAC §217.57. The engineer must retain copies of all test results which must be made available to the executive director upon request. The engineer must certify in writing that all wastewater lines have passed all required testing to the appropriate regional office within 30 days of test completion and prior to use of the new collection system. Testing method will be:
 - For a collection system pipe that will transport wastewater by gravity flow, the design must specify an infiltration and exfiltration test or a low-pressure air test. A test must conform to the following requirements:
 - Low Pressure Air Test.**
A low pressure air test must follow the procedures described in American Society For Testing And Materials (ASTM) C-828, ASTM C-924, or ASTM F-1417 or other procedure approved by the executive director, except as to testing times as required in Table C.3 in subparagraph (C) of this paragraph or Equation C.3 in subparagraph (B)(ii) of this paragraph.
For sections of collection system pipe less than 36 inch average inside diameter, the following procedure must apply, unless a pipe is to be tested as required by paragraph (2) of this subsection.
A pipe must be pressurized to 3.5 pounds per square inch (psi) greater than the pressure exerted by groundwater above the pipe. Once the pressure is stabilized, the minimum time allowable for the pressure to drop from 3.5 psi gauge to 2.5 psi gauge is computed from the following equation:

Equation C.3

Where:

T = time for pressure to drop 1.0 pound per square inch gauge in seconds
K = 0.000419 X D X L, but not less than 1.0
D = average inside pipe diameter in inches
L = length of line of same size being tested, in feet
Q = rate of loss, 0.0015 cubic feet per minute per square foot internal surface

(C) Since a K value of less than 1.0 may not be used, the minimum testing time for each pipe diameter is shown in the following Table C.3:

Pipe Diameter (inches)	Minimum Time (seconds)	Maximum Length for Minimum Time (feet)	Time for Longer Length (seconds/foot)
6	340	398	0.8550
8	454	298	1.5200
10	567	239	2.3740
12	680	199	3.4190
15	850	159	5.3420
18	1020	133	7.6930
21	1190	114	10.4710
24	1360	100	13.6760
27	1530	88	17.3090
30	1700	80	21.3690
33	1870	72	25.8560

- An owner may stop a test if no pressure loss has occurred during the first 25% of the calculated testing time.
- If any pressure loss or leakage has occurred during the first 25% of a testing period, then the test must continue for the entire test duration as outlined above or until failure.
- Wastewater collection system pipes with a 27 inch or larger average inside diameter may be air tested at each joint instead of following the procedure outlined in this section.
- A testing procedure for pipe with an inside diameter greater than 33 inches must be approved by the executive director.
- (2) Infiltration/Exfiltration Test.**
 - The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of pipe per 24 hours at a minimum test head of 2.0 feet above the crown of a pipe at an upstream manhole.
 - An owner shall use an infiltration test in lieu of an exfiltration test when pipes are installed below the groundwater level.
 - The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two feet above the crown of a pipe at an upstream manhole, or at least two feet above existing groundwater level, whichever is greater.
 - For construction within a 25-year flood plain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of pipe per 24 hours at the same minimum test head as in subparagraph (C) of this paragraph.
 - If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, an owner shall undertake remedial action in order to reduce the infiltration or exfiltration to an amount within the limits specified. An owner shall retest a pipe following a remediation action.
- If a gravity collection pipe is composed of flexible pipe, deflection testing is also required. The following procedures must be followed:
 - For a collection pipe with inside diameter less than 27 inches, deflection measurement requires a rigid mandrel.
 - Mandrel Sizing.**
A rigid mandrel must have an outside diameter (OD) not less than 95% of the base inside diameter (ID) or average ID of a pipe, as specified in the appropriate standard by the STMs, American Water Works Association, UNI-BELL, or American National Standards Institute, or any related appendix.
If a mandrel sizing diameter is not specified in the appropriate standard, the mandrel must have an OD equal to 95% of the ID of a pipe. In this case, the ID of the pipe, for the purpose of determining the OD of the mandrel, must equal be the average outside diameter minus two minimum wall thicknesses for OD controlled pipe and the average inside diameter for ID controlled pipe.
All dimensions must meet the appropriate standard.
 - Mandrel Design.**
A rigid mandrel must be constructed of a metal or a rigid plastic material that can withstand 200 psi without being deformed.
A mandrel must have nine or more odd number of runners or legs.
A barrel section length must equal at least 75% of the inside diameter of a pipe.
Each size mandrel must use a separate proving ring.
- Method Options.**
An adjustable or flexible mandrel is prohibited. A test may not use television inspection as a substitute for a deflection test.

If requested, the executive director may approve the use of a deflectometer or a mandrel with removable legs or runners on a case-by-case basis.

- For a gravity collection system pipe with an inside diameter 27 inches and greater, other test methods may be used to determine vertical deflection.
 - A deflection test method must be accurate to within plus or minus 0.2% deflection.
 - An owner shall not conduct a deflection test until at least 30 days after the final backfill.
 - Gravity collection system pipe deflection must not exceed five percent (5%).
 - If a pipe section fails a deflection test, an owner shall correct the problem and conduct a second test after the final backfill has been in place at least 30 days.
- All manholes must pass a leakage test. An owner shall test each manhole (after assembly and backfilling) for leakage, separate and independent of the collection system pipes, by hydrostatic exfiltration testing, vacuum testing, or other method approved by the executive director.
 - Hydrostatic Testing.
 - The maximum leakage for hydrostatic testing or any alternative test methods is 0.025 gallons per foot diameter per foot of manhole depth per hour.
 - To perform a hydrostatic exfiltration test, an owner shall seal all wastewater pipes coming into a manhole with an internal pipe plug, fill the manhole with water, and maintain the test for at least one hour.
 - A test for concrete manholes may use a 24-hour wetting period before testing to allow saturation of the concrete.
 - Vacuum Testing.
 - To perform a vacuum test, an owner shall plug all lift holes and exterior joints with a non-shrink grout and plug all pipes entering a manhole. No grout must be placed in horizontal joints before testing.
 - Stub-outs, manhole boots, and pipe plugs must be secured to prevent movement while a vacuum is drawn.
 - An owner shall use a minimum 60 inch/lb torque wrench to tighten the external clamps that secure a test cover to the top of a manhole.
 - A test head must be placed at the inside of the top of a cone section, and the seal inflated in accordance with the manufacturer's recommendations.
 - There must be a vacuum of 10 inches of mercury inside a manhole to perform a valid test.
 - A test does not begin until after the vacuum pump is off.
 - A manhole passes the test if after 2.0 minutes and with all valves closed, the vacuum is at least 9.0 inches of mercury.

- All private service laterals must be inspected and certified in accordance with 30 TAC §213.5(c)(3)(I). After installation of and, prior to covering and connecting a private service lateral to an existing organized sewage collection system, a Texas Licensed Professional Engineer, Texas Registered Sanitarian, or appropriate city inspector must visually inspect the private service lateral and the connection to the sewage collection system, and certify that it is constructed in conformity with the applicable provisions of this section. The owner of the collection system must maintain such certifications for five years and forward copies to the appropriate regional office upon request. Connections may only be made to an approved sewage collection system.

Austin Regional Office 12100 Park 35 Circle, Bldg A Austin, Texas 78753-1808 Phone (512) 339-2929 Fax (512) 339-3795	San Antonio Regional Office 14250 Judson Road San Antonio, Texas 78233-4480 Phone (210) 490-3096 Fax (210) 545-4329
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THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.



WAELTZ & PRETE, INC.
CIVIL ENGINEERS

211 N. A.W. GRIMES BLVD.
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308



APR 22
03 Jun 22

PROJECT:

SAN GABRIEL FLATS

806 E. SPRING ST

CLIENT:

806 E 13th ST
GEORGETOWN
APARTMENTS, LLC

DESIGNED: JBL APPROVED: AAP
DRAWN: JBL DATE: 8/3/2022

NO.	DATE	REVISIONS	RECORD				

SHEET TITLE:

TCEQ NOTES
(1 OF 2)

PROJECT NO.:
147-001

COGT PROJECT NO.:
2021-86-SDP

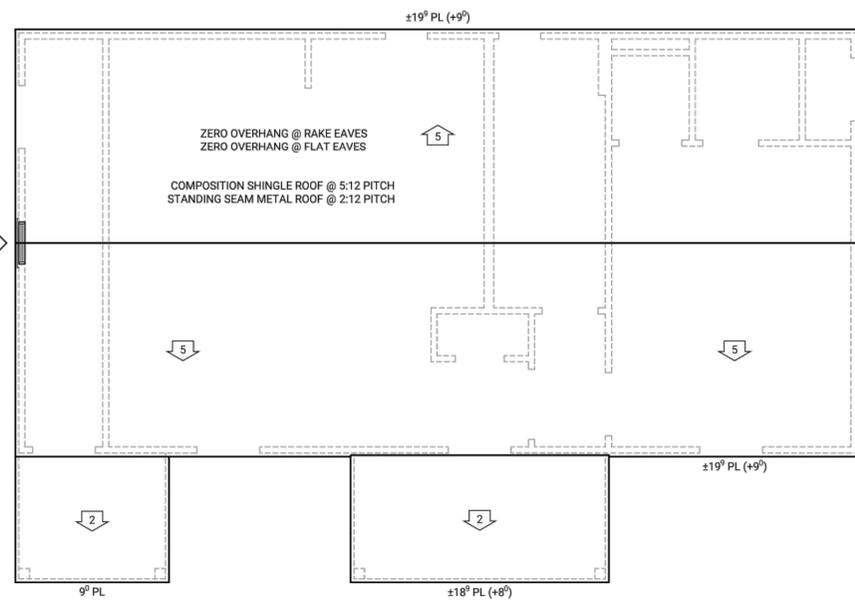
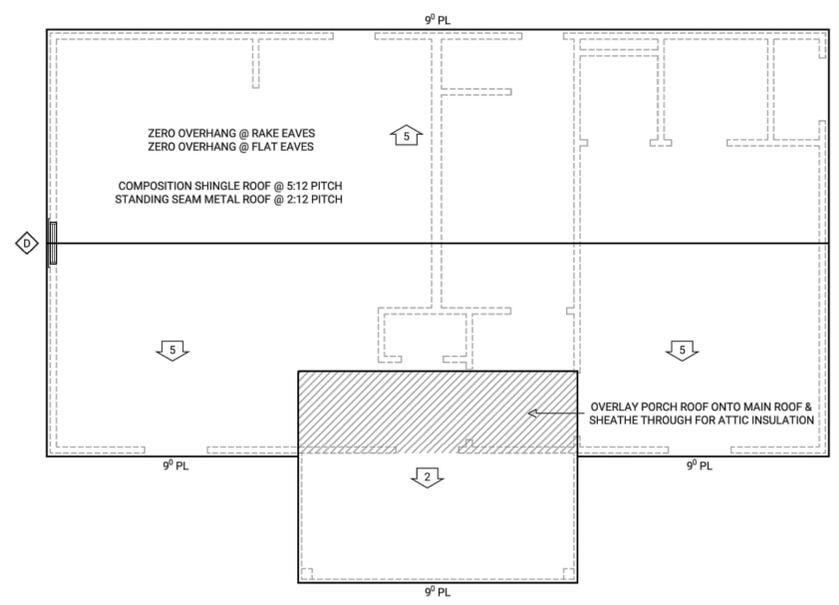
SHEET NO.:

C-3

TYPE A

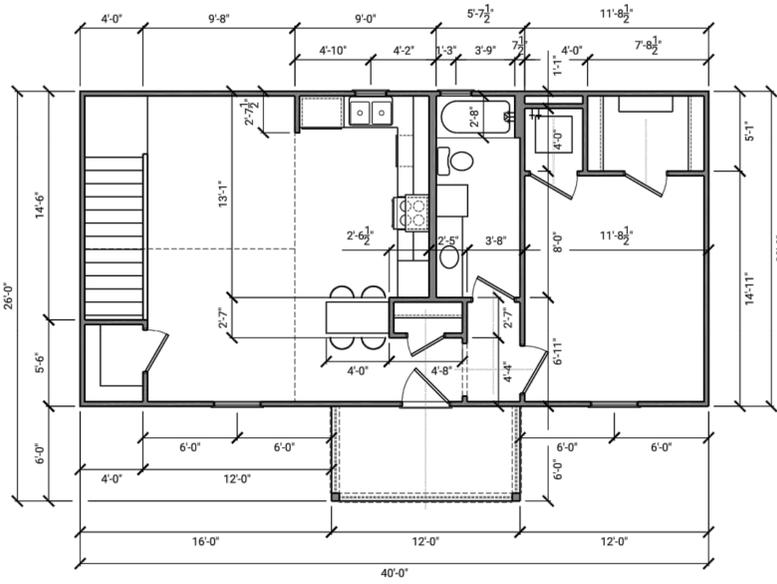
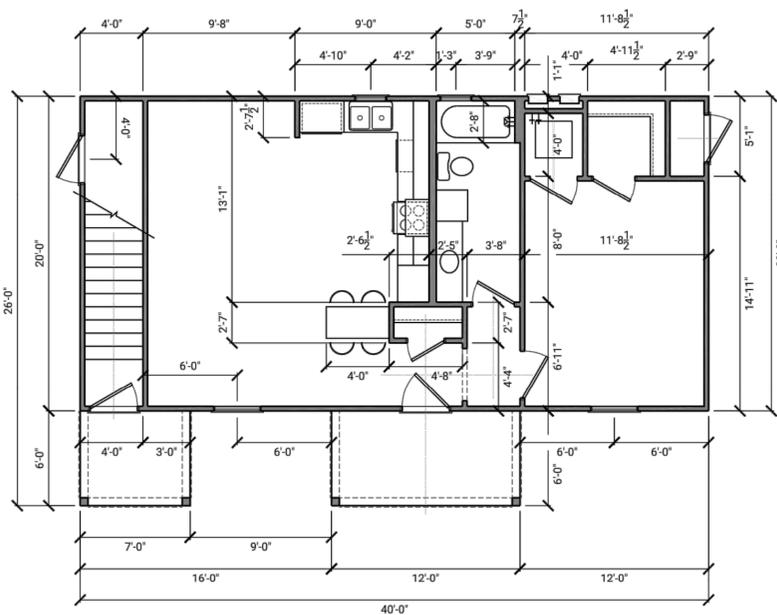
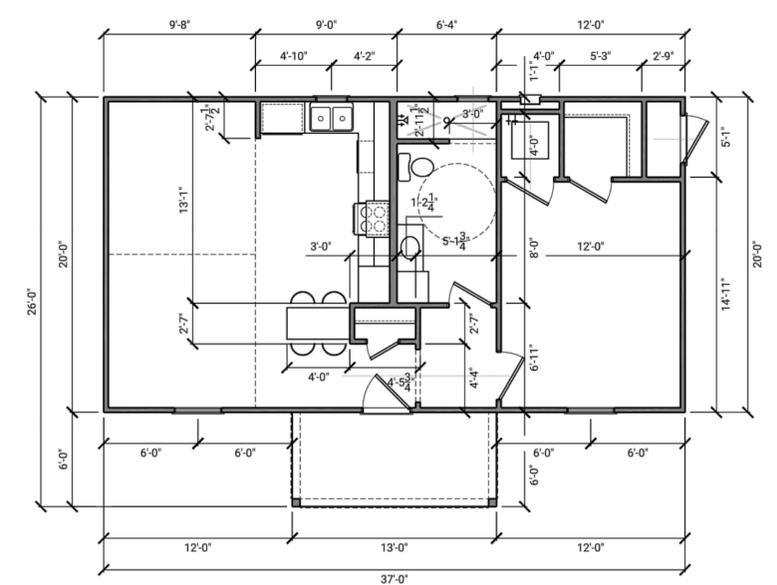
TYPE B : GROUND LEVEL

TYPE B : UPPER LEVEL



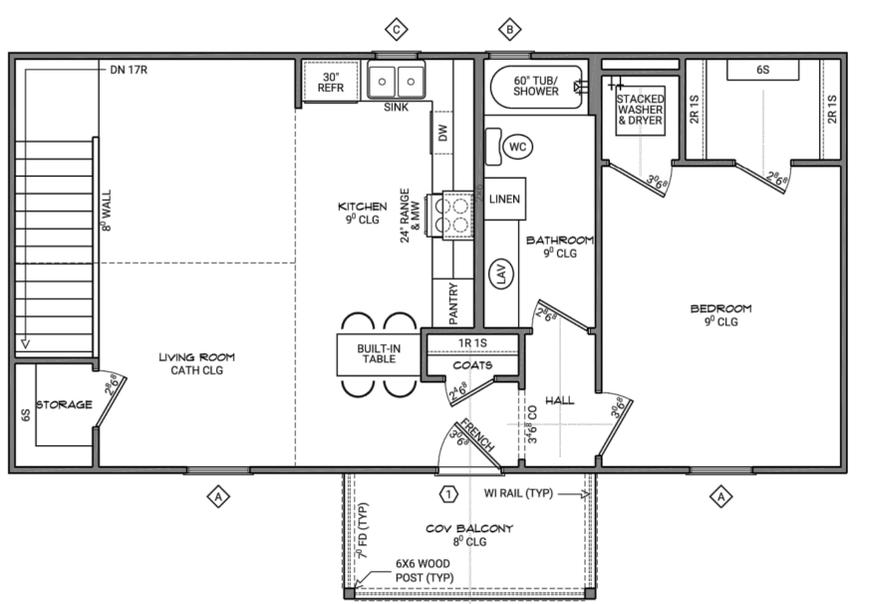
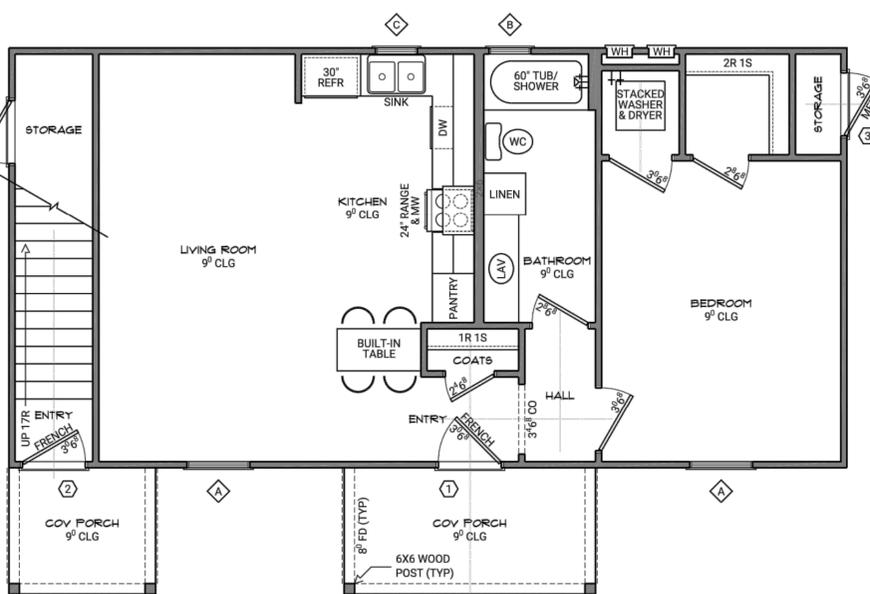
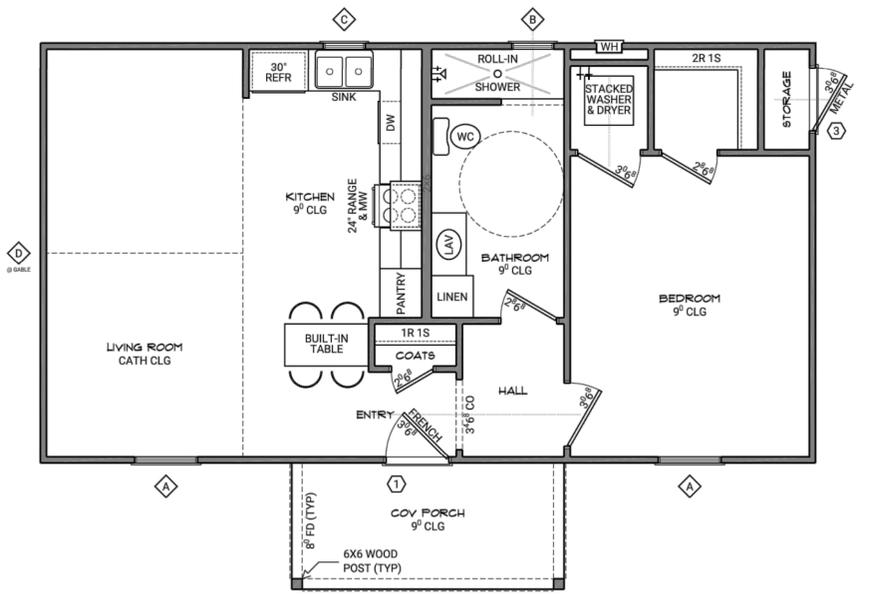
ROOF PLANS

SCALE: 1/4" = 1'-0"



DIMENSIONED FLOOR PLANS

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



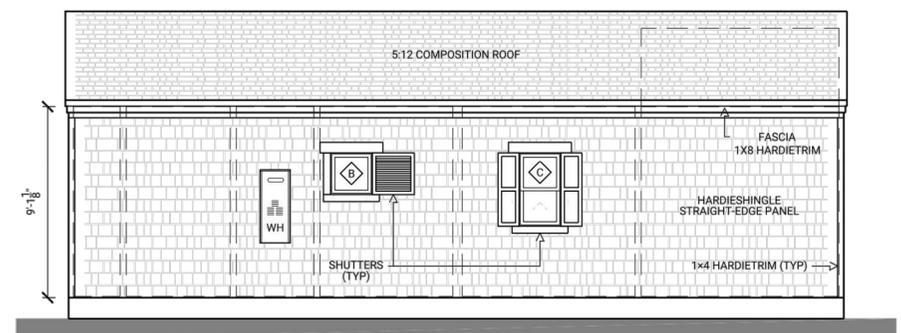
FLOOR PLANS

SCALE: 1/4" = 1'-0"

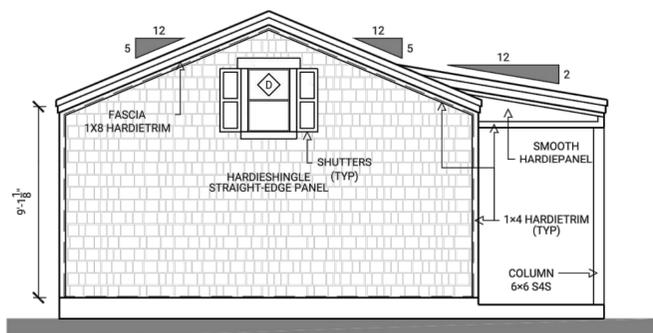
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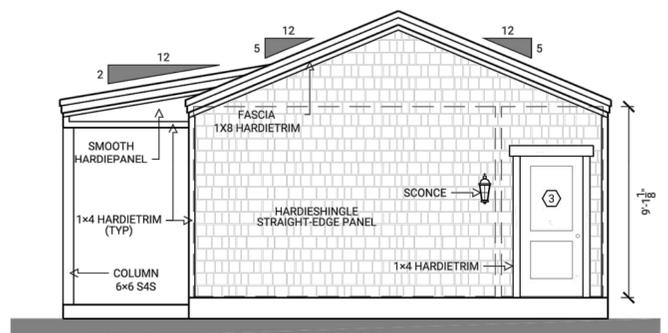
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REAR



LEFT

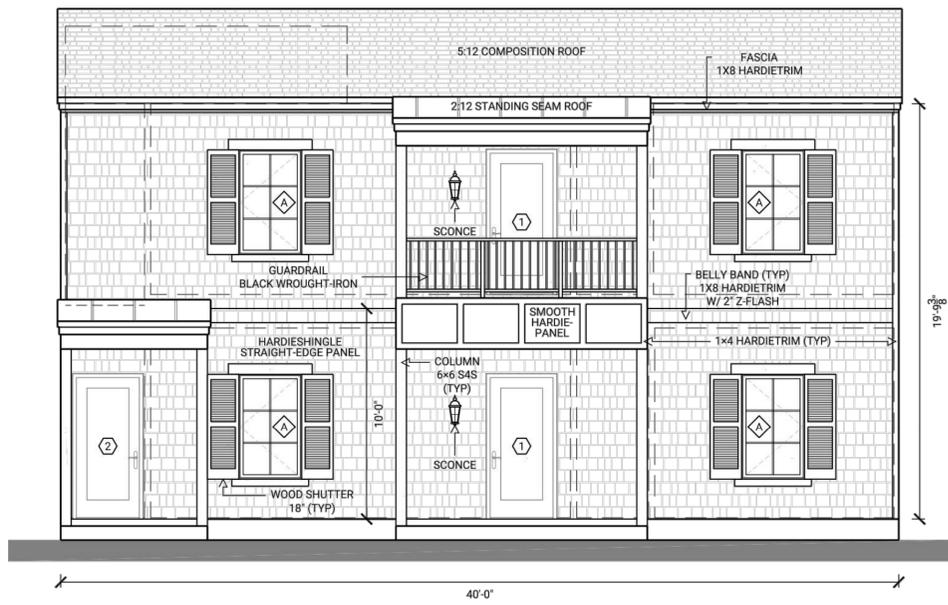


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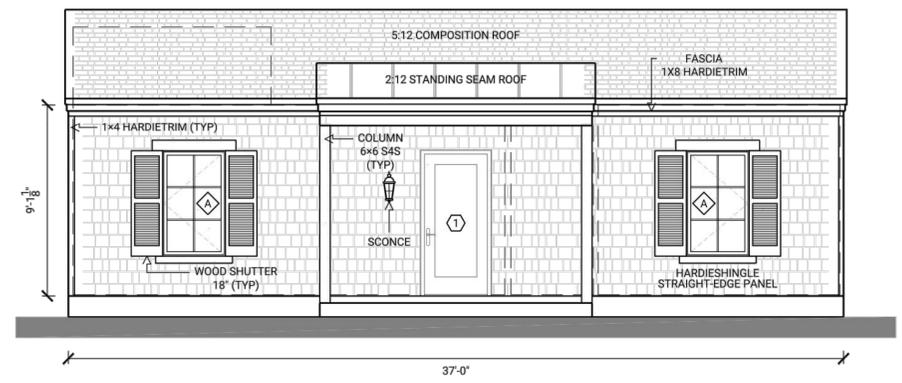
TYPE A ELEVATIONS
 SCALE: 1/4" = 1'-0"

COGT UDC SECT 7.03.050

- APPLICABILITY
- ALL WALLS LESS THAN 20'-0" IN HEIGHT
 - 2. BUILDING ARTICULATION
 - TOTAL BUILDING LESS THAN 60'-0" LENGTH
 - 3. ARCHITECTURAL FEATURES
 - DECORATIVE SHUTTERS @ ALL WINDOWS
 - DECORATIVE LIGHTING @ ALL DOORS
 - VARIOUS SIZE CORD. PORCHES W/ METAL ROOF
 - BALCONY W/ WROUGHT-IRON RAILING @ TWO-STORY UNITS
 - 1x8 ACCENT TRIM BAND @ BELT-LINE OF 2-STORY UNITS

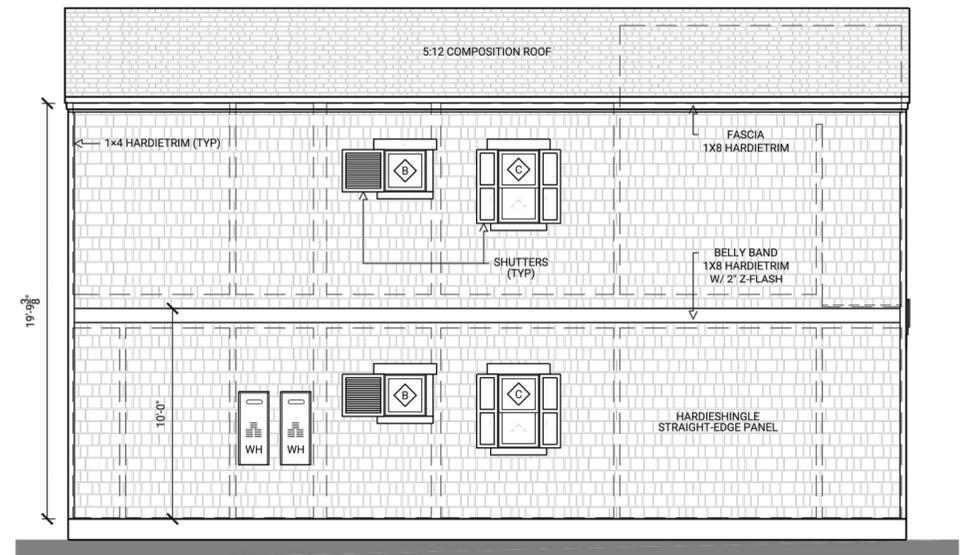


TYPE B

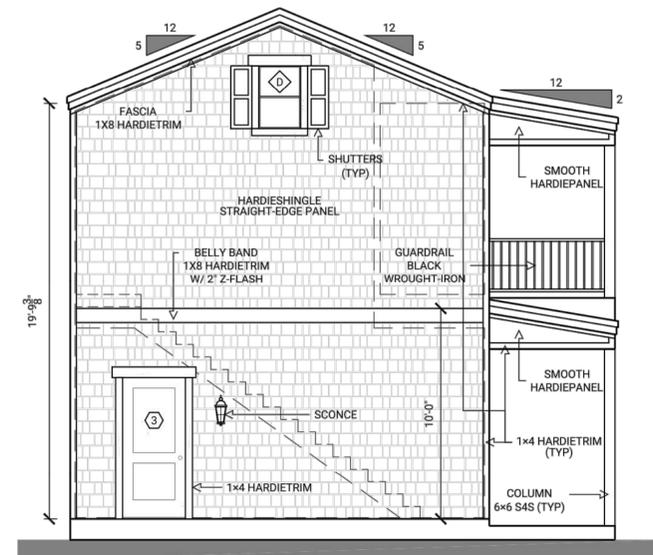


TYPE A

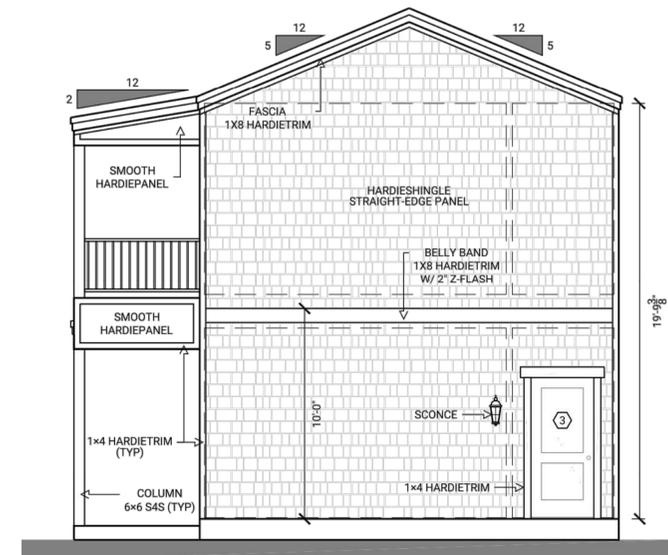
FRONT ELEVATIONS
 SCALE: 1/4" = 1'-0"



REAR



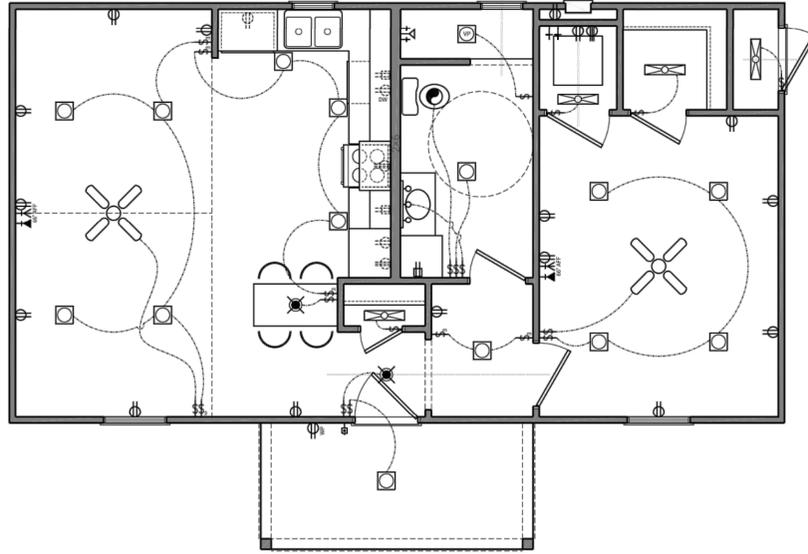
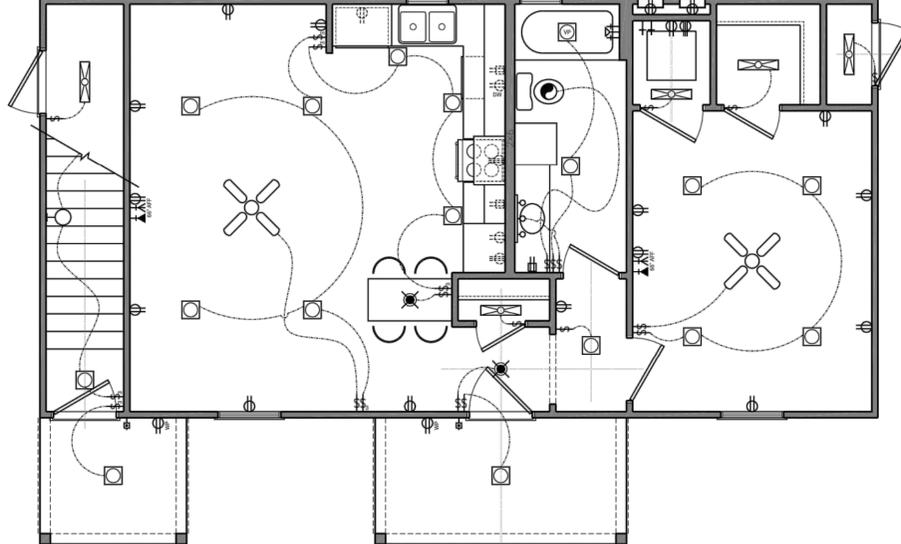
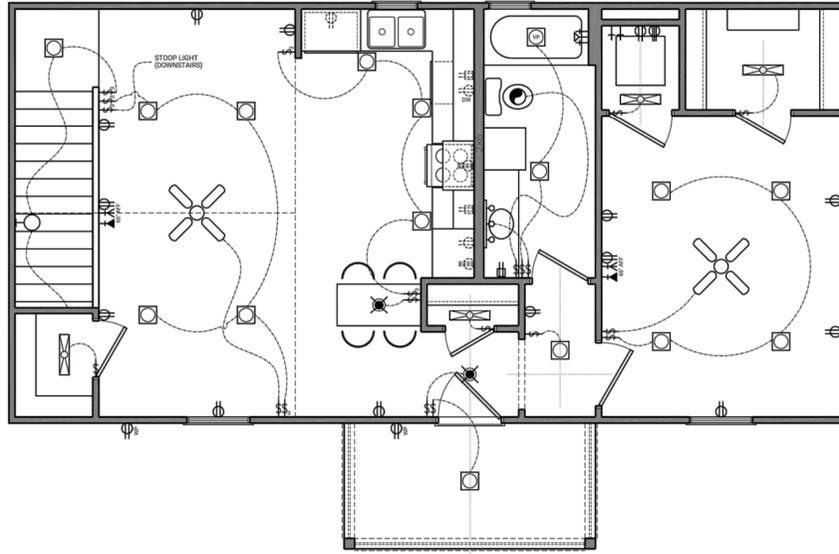
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RIGHT

TYPE B ELEVATIONS
 SCALE: 1/4" = 1'-0"

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ELECTRICAL PLANS

SCALE: 1/4" = 1'-0"

TYPE B : UPPER LEVEL

TYPE B : GROUND LEVEL

TYPE A

PROJECT NO: 00000
ISSUE DATE: 2022/05/02

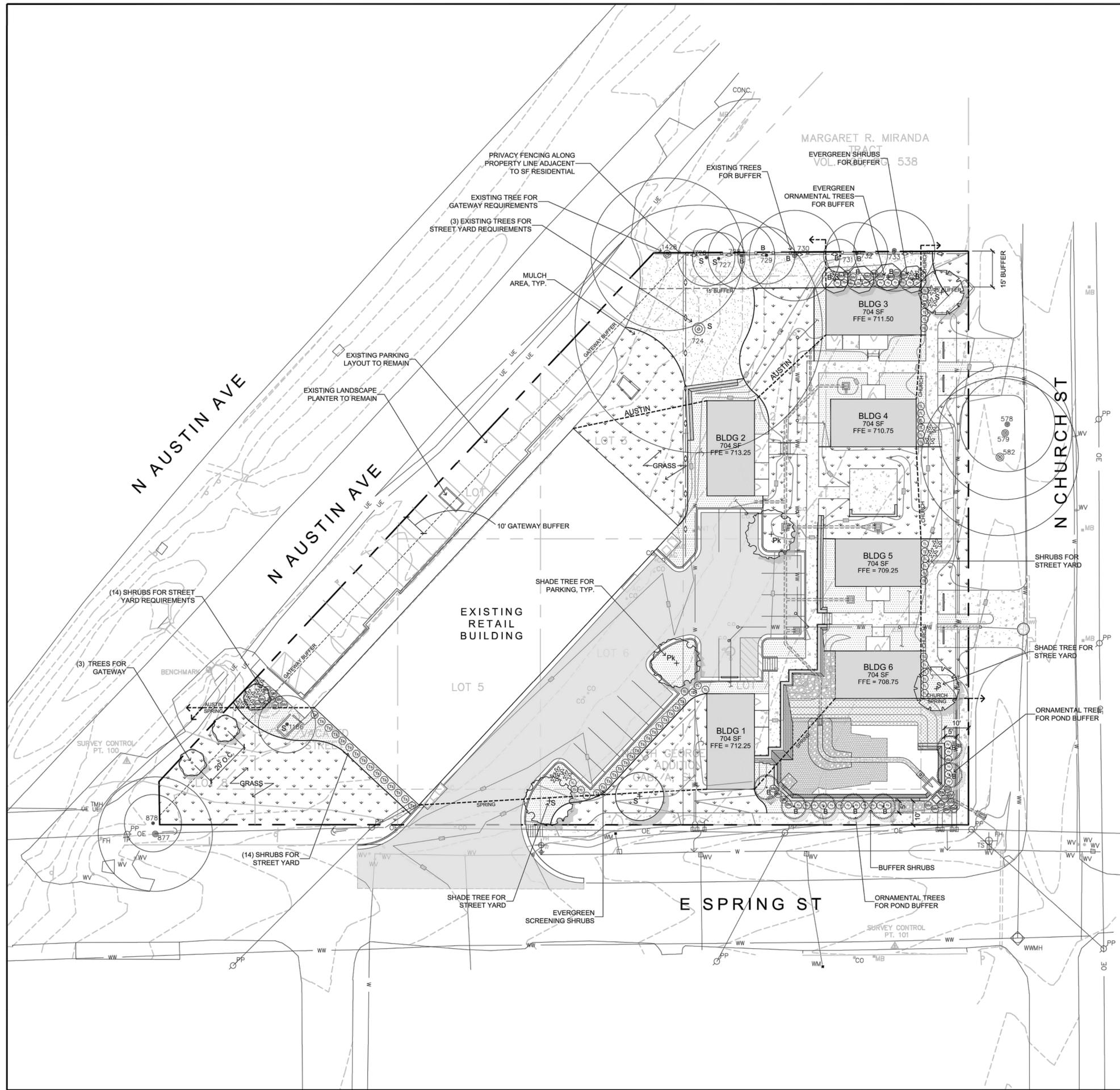
DESIGNED BY
Shawn F. Hood • DESIGN • PLANNING
• CONSULTATION
512.251.9864 www.shawnhood.com 812 Main Street Georgetown TX 78626



806 E 13th St Apts LLC

San Gabriel Flats

E1.00



SHADE TREES								
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	DECIDUOUS/EVERGREEN	MATURE SIZE	NOTES
(+)	2	Ulmus crassifolia	Cedar Elm	3" Cal.	L	D	25-60' H 25-35' W	8' Ht. min.
(+)	1	Quercus virginiana	Live Oak	3" Cal.	L-VL	E	20-40' H 50'+ W	8' Ht. min.
(+)	3	Quercus muehlenbergii	Chinquapin Oak	3" Cal.	M	D	30-60' H 30-40' W	8' Ht. min.

DOWNTOWN GATEWAY TREES								
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	DECIDUOUS/EVERGREEN	MATURE SIZE	NOTES
(+)	3	Lagerstroemia indica	Crape Myrtle	3" Cal.	L-M	D	4-30' H 10-20' W	8' Ht. min.

ORNAMENTAL TREES								
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	DECIDUOUS/EVERGREEN	MATURE SIZE	NOTES
(+)	7	Sophora secundiflora	Texas Mountain Laurel	2" Cal.	L	E	10-20' H 8-12' W	6' Ht. min.
(+)	4	Ilex vomitoria	Tree Yaupon	2" Cal.	L-M	E	15-25' H 10-15' W	6' Ht. min.

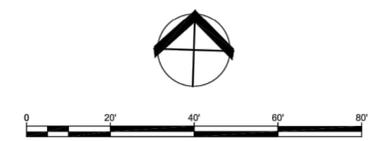
SHRUBS								
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	DECIDUOUS/EVERGREEN	MATURE SIZE	NOTES
(P)	30	Opuntia coccinifera	Spineless Prickly Pear	#5	L	E	3-4' H 3-4' W	24" ht.
(BM)	32	Muhlenbergia lindheimeri	Big Muhly	#5	M-L	E	3-5' H 3-4' W	24" ht.
(A)	17	Agave americana	Agave, Century Plant	#5	VL	E	6' H 8-10' W	24" ht.
(TL)	28	Lantana horrida	Texas Lantana	#5	VL	D	2-5' H 4-5' W	24" ht.
(TS)	31	Leucophyllum frutescens	Texas Sage	#5	L	E	4-5' H 4-5' W	24" ht.

NOTE: NO SHRUB SPECIES SHALL EXCEED 25% OF THE TOTAL QUANTITY OF SHRUBS

MISCELLANEOUS			
QUANTITY	CALLOUT	DESCRIPTION	% OFF LAND. AREA
+/- 12,320	(Grass symbol)	SF Tiffny 419 Bermuda grass, Solid Sod free of weeds / Native Seed Hydro mix to be selected	56%
+/- 3,510	(Mulch symbol)	SF 4" depth dark hardwood mulch. All planting areas	16%
+/- 240	(Rock symbol)	SF 4" depth Texas River Rock, 2-3" diameter	1%
+/- 6,073	(Gravel symbol)	SF 3" depth, 1/2" Diameter Limestone Gravel	27%

LEGEND		
SYMBOL	COMMON NAME	SIZE AND CONDITION
RP	Replacement Tree	Tree to count toward site mitigation requirements
PK	Parking Lot Tree	Tree to count toward Parking requirements
B	Buffer Tree	Tree to count toward Landscape Buffer requirements
S	Street Yard Tree	Tree to count toward Street Yard requirements
GT	Gateway Tree	Tree to count toward Scenic Gateway requirements
P	Protected Tree	Existing Tree 12" or larger
HT	Heritage Tree	Existing Tree 26" or larger
R	Removed Tree	Existing Tree to be Removed
NP	Not Protected	Existing Trees under 12"
C	Credit Tree	Existing Tree that counts towards a landscape requirement

TREE LIST							
TAG #	SPECIES	SIZE	NOTES	PROTECTED 12-25.9"	PROTECTED 26"+	HERITAGE 26"+	NOT PROTECTED
578	LIVE OAK	20					
579	LIVE OAK	28	HERITAGE				
582	LIVE OAK	33	HERITAGE				
724	LIVE OAK	52	HERITAGE				
726	HACKBERRY	12					
727	PECAN	11					
728	HACKBERRY	14					
729	HACKBERRY	12					
730	LIVE OAK	19	MULTI				
731	HACKBERRY	7					
732	HACKBERRY	13					
733	HACKBERRY	17					
877	CEDAR ELM	21					
878	CEDAR ELM	12					
1166	PEAR	12					
1428	HACKBERRY	32	MULTI				
CALIPER INCHES REMOVED				0	0	0	0
MITIGATION % REQUIRED				40%	200%	300%	0%
MITIGATION INCHES REQUIRED				0	0	0	0
TOTAL INCHES REQUIRED							



REVISIONS Description
 Date

SAN GABRIEL FLATS
905 N AUSTIN AVE, GEORGETOWN, TEXAS 78626
LANDSCAPE SUBMITTAL PLAN
 DATE: 05-17-22
 SCALE: 1" = 20'-0"

 Sheet:
L1 of L2
 JOB#: E156-09
 2021-86-SDP

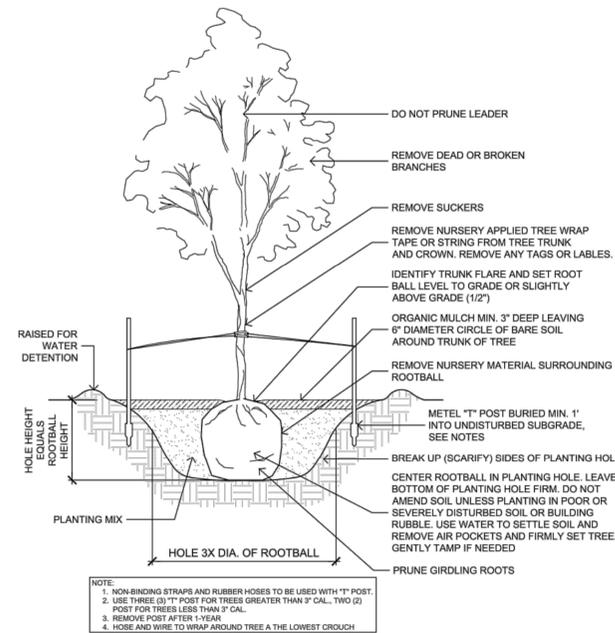
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LANDSCAPE CONSTRUCTION NOTES

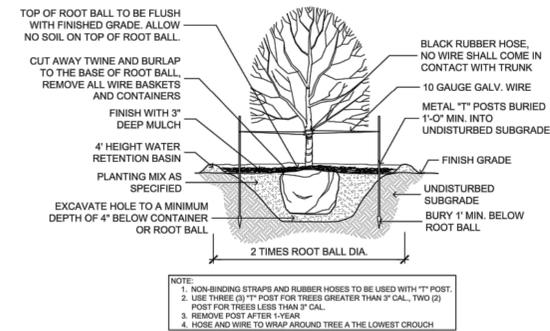
1. Contractor shall provide all labor and materials necessary to complete the work shown on the plants.
2. All proposed landscaping is to be installed as per local city ordinances and codes. Notify owner's representative and landscape architect of any discrepancies prior to construction.
3. All plant material shall comply with plant size per container as stated by the American Association of Nurseryman.
4. Plants are subject to inspection and approval by the landscape architect. Plants required for the site may be inspected and tagged at growing site before delivery.
5. Groundcover bed preparation shall be 2 inches of planting mix tilled 8 inches into bed areas.
6. Shrubs and trees shall be pocket planted. Excavate planting hole 1-1½ times the width and height of the root ball. Backfill with ½ planting mix, ½ native soil and ½ sandy loam.
7. Grading shall provide positive drainage away from buildings and other structures. Fine grade for positive drainage to prevent ponding.
8. Quantities provided in the plant list are for general use only, contractor is responsible for verification of all plant quantities.
9. Contractor is responsible for quality workmanship, superintendence and scheduling of work.
10. Contractor is responsible for removal of trash and job safety conditions.
11. Contractor to provide (1) year warranty on all plant material.
12. Pre and Post-construction fertilization is required for existing trees that will be or have been disturbed by construction activities including disturbance of the critical zone. Fertilizers must be phosphate free.

LANDSCAPE ORDINANCE NOTES

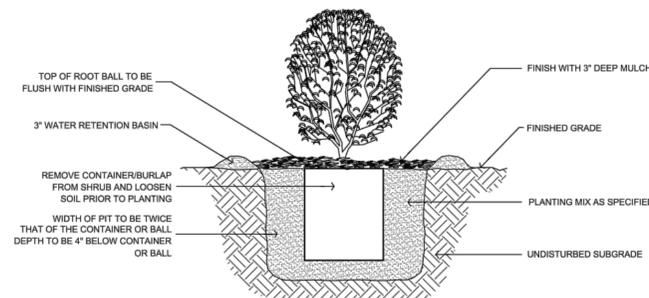
1. A separate irrigation plan shall be provided at the time of application for a building permit.
2. Maintenance: the current owner and subsequent owners of the landscape property, or the manager or agent of the owner, shall be responsible for the maintenance of all landscaped areas and materials, required bufferyards areas and materials, and required screening materials. Said areas must be maintained so as to present a healthy, neat and orderly appearance at all times and shall be kept free of refuse and debris. Maintenance will include replacement of all dead plant material if that material was used to meet the requirements of the UDC. All such plants shall be replaced within six months of notification, or by the next planting season, whichever comes first. A property / homeowners association may assume responsibility for the maintenance of common areas.
3. Fully automatic irrigation system to be provided on site. Shrub beds to have drip irrigation. Proposed trees to receive bubbler systems.



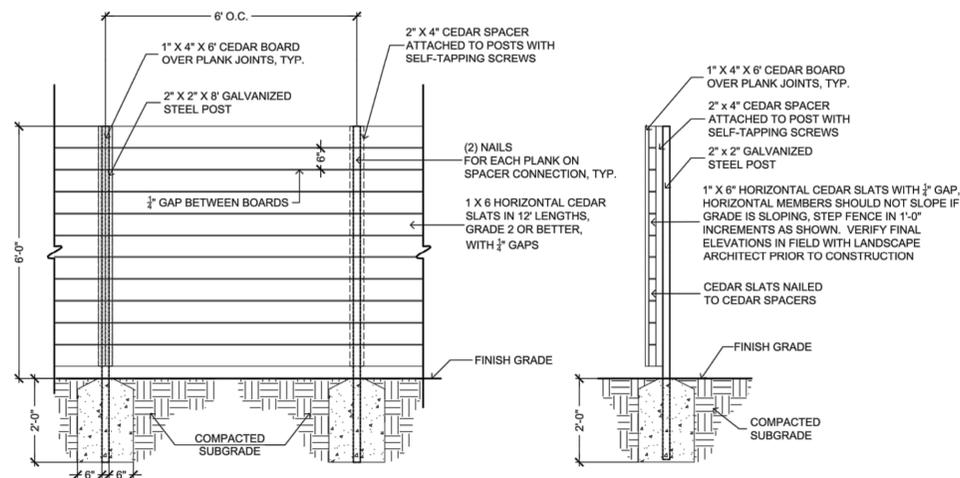
A TREE PLANTING DETAIL SECTION SCALE: N.T.S.



B ORNAMENTAL TREE PLANTING DETAIL SECTION SCALE: N.T.S.



C SHRUB PLANTING DETAIL SECTION SCALE: N.T.S.



D HORIZONTAL PRIVACY FENCE SECTION SCALE: 1/2" = 1'-0"

LANDSCAPE SUMMARY TABLE										
	Landscape Area Req'd	Landscape Area Proposed	Shrubs Required	Shrubs Proposed	Evergreen Shrubs Required	Evergreen Shrubs Proposed	Evergreen Ornamental Trees Required	Evergreen Ornamental Trees Proposed	Shade Trees Required	Shade Trees Proposed
Gateway Overlay District Landscaping - Downtown Gateway (304 I.f. / 3,040 sf)	2,432 s.f. (80%)	891 s.f. (29%)	5	0					5	3
Minus area or plantings that can be credited towards Street Yard Landscaping			14						0	
Minus <20" Landscape Credit Trees Counted									0	
Minus 20"+ Landscape Credit Trees Counted x2									1 (2)	
TOTAL	2,432 s.f.	891 s.f.	0	0					3	3
Street Yard Landscaping - N AUSTIN AVE (10,767 s.f.)	2,153 s.f.	5,013 s.f.	12	14					4	0
Minus <20" Landscape Credit Trees Counted									2	
Minus 20"+ Landscape Credit Trees Counted x2									1	
TOTAL	2,153 s.f.	5,013 s.f.	12	14					0	0
Street Yard Landscaping - E SPRING ST (9,846 s.f.)	1,969 s.f.	5,642 s.f.	12	15					4	3
Minus <20" Landscape Credit Trees Counted									1	
Minus 20"+ Landscape Credit Trees Counted x2									0	
TOTAL	1,969 s.f.	5,642 s.f.	12	15					3	3
Street Yard Landscaping - N CHURCH ST (3,864 s.f.)	773 s.f.	1,308 s.f.	5	30					2	2
Minus <20" Landscape Credit Trees Counted									0	
Minus 20"+ Landscape Credit Trees Counted x2									0	
TOTAL	773 s.f.	1,308 s.f.	5	30					2	2
Parking Lot Landscaping - Section 8.04.040 (25 SY & 15 NSY)	650 s.f.	2,030 s.f.							4	2
Minus area or plantings that can be credited towards Street Yard Landscaping									1	
Minus <20" Landscape Credit Trees Counted									1	
Minus 20"+ Landscape Credit Trees Counted x2									1	
TOTAL	650 s.f.	2,030 s.f.							0	2
'Medium' Level Bufferyard Landscaping Section 8.04.060 - Adj. to RS DST. (138 I.f.)					22	29	6	4	3	0
Minus <20" Landscape Credit Trees Counted							2		3	
Minus 20"+ Landscape Credit Trees Counted x2							0		0	
TOTAL					22	29	4	4	0	0
Screening - Section 8.04.060					N/A	21				
TOTAL						21				
GRAND TOTAL	7,977 s.f.	14,884 s.f.	29	59	22	50	4	4	8	8

REVISIONS Description



SAN GABRIEL FLATS
905 N AUSTIN AVE, GEORGETOWN, TEXAS 78626
LANDSCAPE SUBMITTAL: NOTES & DETAILS

DATE: 05-17-22
 SCALE: AS SHOWN



Sheet:
L2 of L2
 JOB#: E156-09
 2021-86-SDP



WAELTZ & PRETE, INC.
CIVIL ENGINEERS
 211 N. A.W. GRIMES BLVD.
 ROUND ROCK, TX. 78665
 PH (512) 505-8953
 FIRM TX. REG. #F-10308



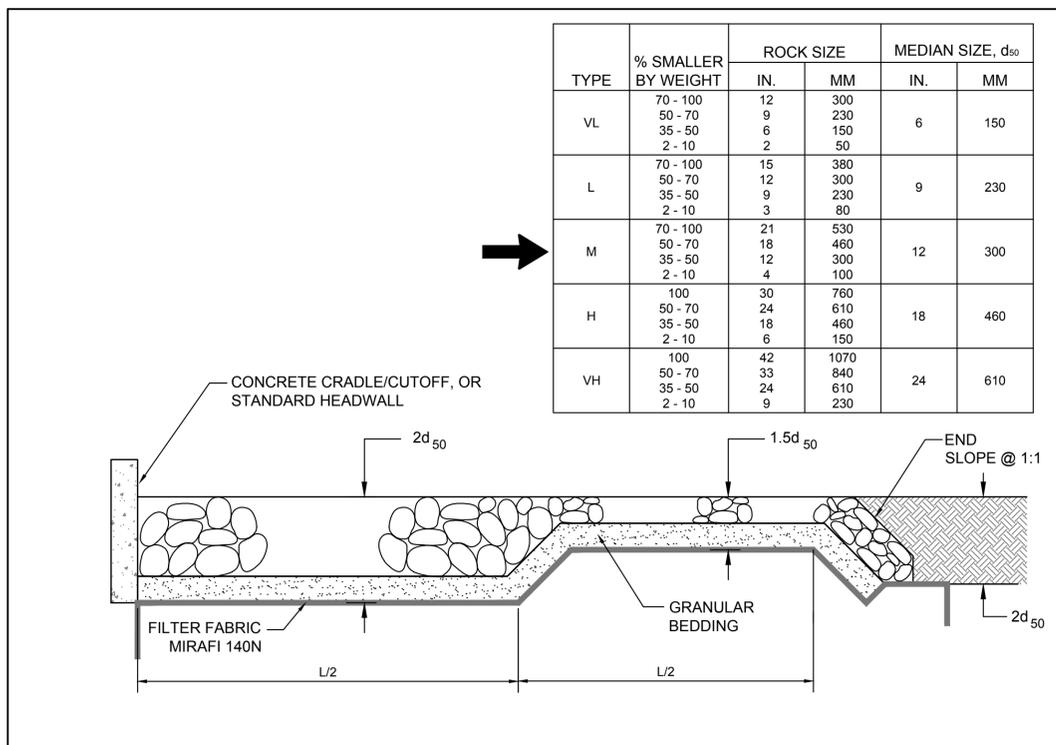
PROJECT:
SAN GABRIEL FLATS
 806 E. SPRING ST
 CLIENT:
**806 E 13th ST
 GEORGETOWN
 APARTMENTS, LLC**

DESIGNED: JBL APPROVED: AAP
 DRAWN: JBL DATE: 8/3/2022

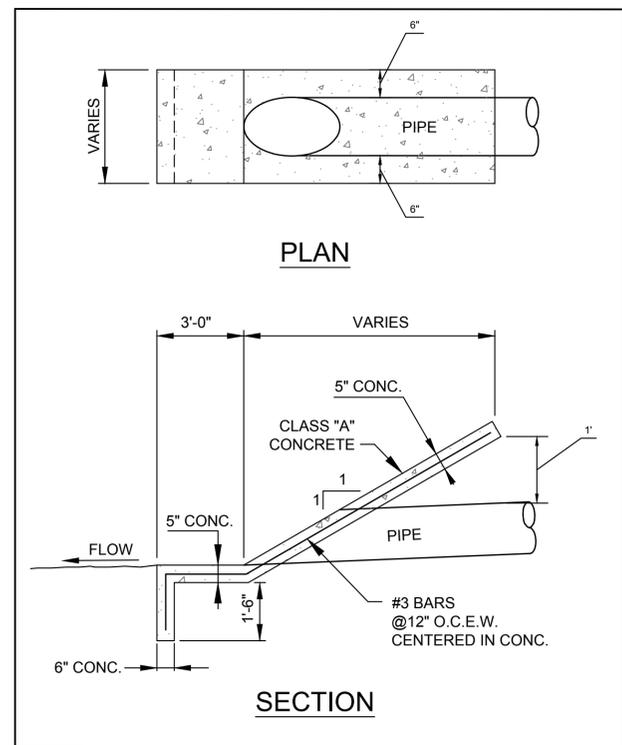
RECORD	
REVISIONS	
DATE	
NO.	

STORM DETAILS

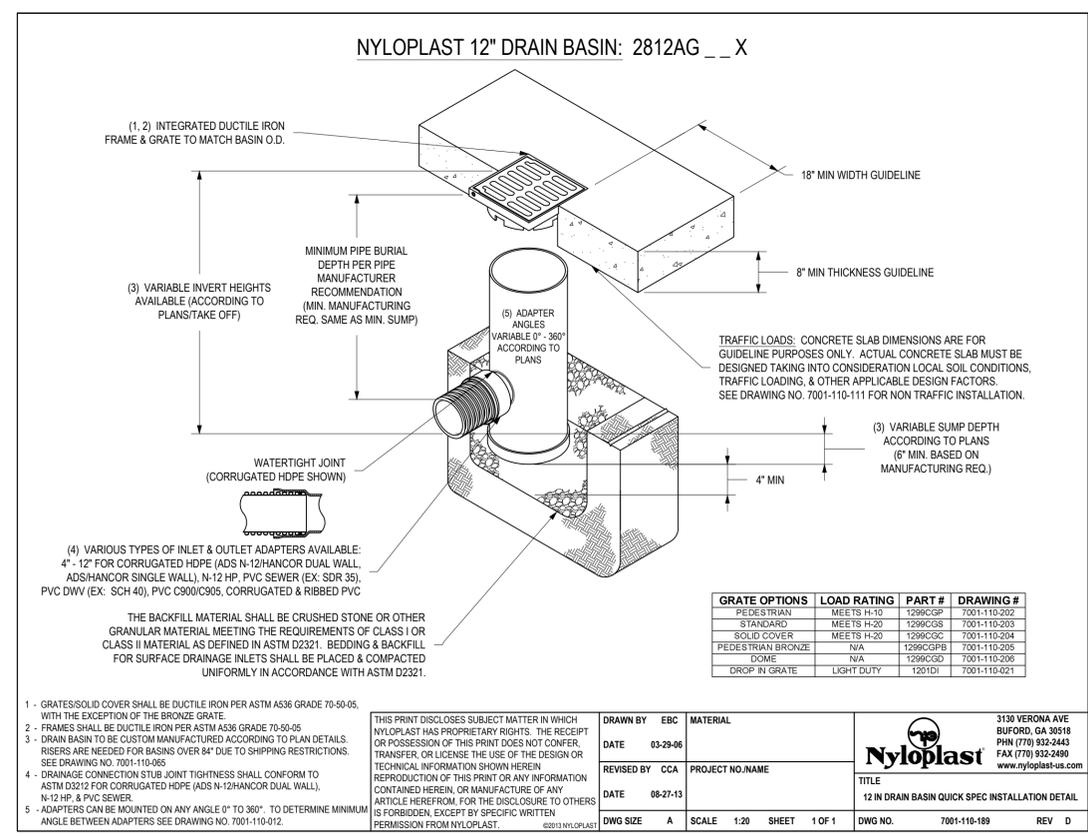
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 SHEET NO.: **C-34**



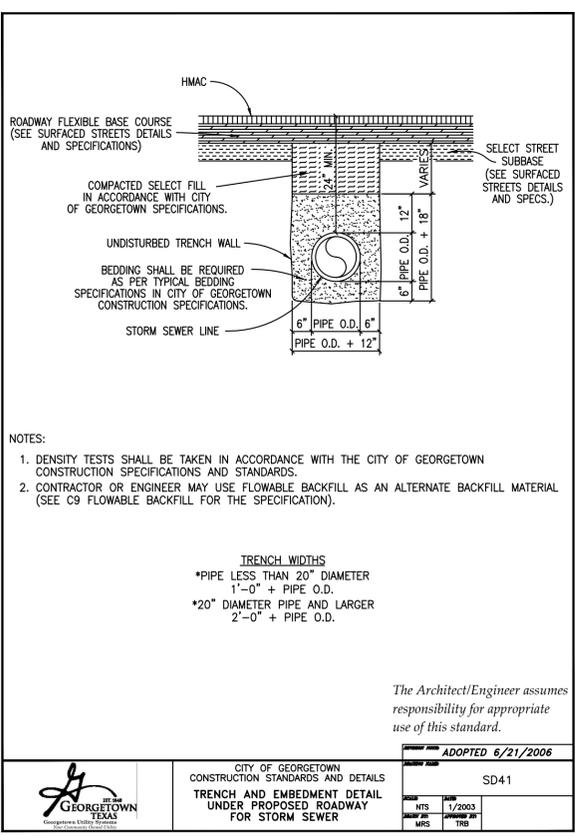
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NTS



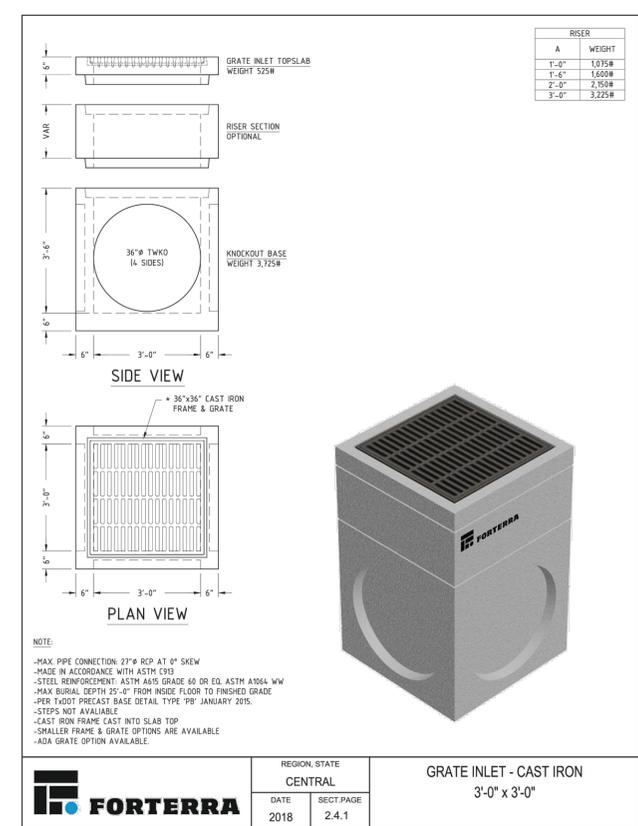
CONCRETE HEADWALL (3:1)
NTS



NYLOPLAST 12" DRAIN
NTS



TRENCH AND BEDDING DETAIL UNDER PROPOSED ROADWAY
NTS



3'x3' GI DETAIL
NTS