JAB ENGINEERING, LLC.
4500 Williams Dr., Ste. 212-121
Georgetown, TX 78633
512-779-7414
josh.baran@jabeng.com

Water Pollution Abatement Plan

Application for

Golf Ranch

at

100 Cantera Way

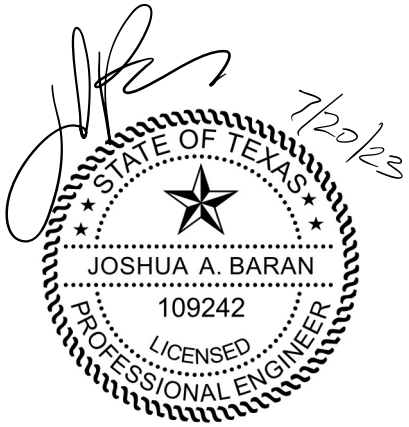
Georgetown, Williamson County, Texas 78628

Prepared by:

JAB Engineering, LLC.

TBPE Firm No. F-14076

July 20, 2023



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I. Edwards Aquifer Application Cover Page

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: Golf Ranch						2. Regulated Entity No.:			
3. Customer Name: The Golf Ranch, LLC						4. Customer No.:			
5. Project Type: (Please circle/check one)	New		Modification			Extension		Exception	
6. Plan Type: (Please circle/check one)	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residential		Non-residential			8. Site (acres):			4.260
9. Application Fee:	$4,000		10. Permanent BMP(s):			Batch Detention			
11. SCS (Linear Ft.):	0		12. AST/UST (No. Tanks):			0			
13. County:	Williamson		14. Watershed:			Middle Fork 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.)	__	__	_1_
Region (1 req.)	__	__	_1_
County(ies)	__	__	_1_
Groundwater Conservation District(s)	__Edwards Aquifer Authority __Barton Springs/ Edwards Aquifer __Hays Trinity __Plum Creek	__Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	__Austin __Buda __Dripping Springs __Kyle __Mountain City __San Marcos __Wimberley __Woodcreek	__Austin __Bee Cave __Pflugerville __Rollingwood __Round Rock __Sunset Valley __West Lake Hills	__Austin __Cedar Park __Florence _1_Georgetown __Jerrell __Leander __Liberty Hill __Pflugerville __Round Rock

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)	__	__	__	__	__
Region (1 req.)	__	__	__	__	__
County(ies)	__	__	__	__	__
Groundwater Conservation District(s)	__ Edwards Aquifer Authority __Trinity-Glen Rose	__Edwards Aquifer Authority	__Kinney	__EAA __Medina	__EAA __Uvalde
City(ies) Jurisdiction	__Castle Hills __Fair Oaks Ranch __Helotes __Hill Country Village __Hollywood Park __San Antonio (SAWS) __Shavano Park	__Bulverde __Fair Oaks Ranch __Garden Ridge __New Braunfels __Schertz	NA	__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. JOSHUA A BARAN Print Name of Customer/Authorized Agent Signature of Customer/Authorized Agent Date: 7/20/23

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):	

II. Geologic Assessment

Narrative Description of Site-Specific Geology for an Approximately 4.25-Acre Tract Located at 100 Cantera (The Golf Ranch) in Georgetown, Williamson County, Texas

Prepared for:

JAB Engineering, LLC

Prepared by:

Cambrian Environmental

May 6, 2024

NARRATIVE DESCRIPTION OF SITE-SPECIFIC GEOLOGY FOR AN APPROXIMATELY 4.25-ACRE TRACT LOCATED AT 100 CANTERA (THE GOLF RANCH) IN GEORGETOWN, WILLIAMSON COUNTY, TEXAS

Prepared for:

JAB Engineering, LLC.
4500 Williams Drive
Suite 212-121
Georgetown, Texas 78633

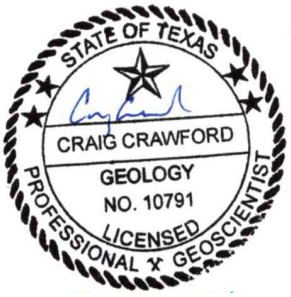
Prepared by:

Craig Crawford, P.G.

Cambrian Environmental
4422 Pack Saddle Pass
Suite 204
Austin, Texas 78745

TX Geoscience Firm Registration #50484

As a licensed professional geoscientist I attest that the contents of this report are complete and accurate to the best of my knowledge.



May 6, 2024

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

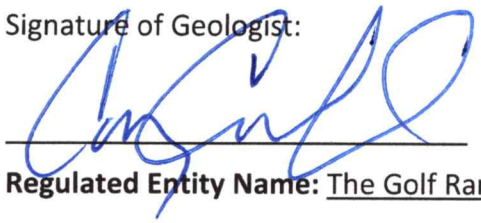
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Craig Crawford, PG Telephone: 512.705.5541

Date: 6 May 2024 Fax: _____

Representing: Cambrian Environmental (TBPG # 50484) (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: The Golf Ranch LLC

Project Information

1. Date(s) Geologic Assessment was performed: 16 December 2022
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☐ Transition Zone
   - ☐ 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.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Eckrant (EeB)	D	< 2

** 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. The minimum scale is 1": 400'

   Applicant's Site Plan Scale: 1" = 40'
   Site Geologic Map Scale: 1" = 40'
   Site Soils Map Scale (if more than 1 soil type): 1" = 100'

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.

NARRATIVE DESCRIPTION OF SITE-SPECIFIC GEOLOGY FOR AN APPROXIMATELY 4.25-ACRE TRACT LOCATED AT 100 CANTERA (THE GOLF RANCH) IN GEORGETOWN, WILLIAMSON COUNTY, TEXAS

INTRODUCTION

This narrative Geologic Assessment accompanies the Texas Commission on Environmental Quality (TCEQ) Geologic Assessment Form TCEQ-0585 completed for the approximately 4.25-acre tract located at 100 Cantera in Georgetown, Williamson County, Texas (see Site Location Map). The tract is located on the north side of State Highway 29, approximately 4 miles west of IH 35. At the time of the pedestrian survey the property consisted of a section of undeveloped acreage, with a commercial building under construction within the southern portion of the parcel.

METHODOLOGY

A Cambrian Environmental Registered Professional Geoscientist (License #10791) conducted a field survey for a Geologic Assessment on the 26th of April 2024. The pedestrian survey was completed by walking parallel transects spaced approximately 50 feet apart as directed by the TCEQ in the *Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (Rev. 10-01-04). Closer spacing was used where vegetation inhibited clear observation. All potential karst features, including depressions, holes, and animal burrows, were carefully examined for evidence of subsurface extent. A number of techniques were used for this effort, including probing with a digging implement to determine the thickness and consistency of fill material and feeling for the presence of air flow, which may indicate the presence of a sub-surface void space. Other techniques included making observations of any notable characteristics of the feature site such as the presence of various types of vegetation or a semi-circular burrow mound produced by the activities of small mammals. We also conducted due diligence activities as called for under the City of Georgetown Edwards Aquifer Recharge Zone Water Quality Ordinance.

Cambrian was also provided with a previously completed Geologic Assessment report for review that was completed in 2008 (by Kenneth Crider of Steger & Bizzell). The 2008 report covered a larger area, but did not indicate findings of any manmade or karst features on the portion covered in this Geologic Assessment. Additionally, Cambrian reviewed all available cave and karst literature available in the vicinity of the tract that is covered by this assessment.

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 _____ (#) 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.

RESULTS

Soils

Soils mapped on the property consist of the Eckrant extremely stony clay (EeB) series soils[1] (see Site Soils Map). The Eckrant series soils are within the "D" classification of the hydrologic soil groups. Type "D" soils have a very slow infiltration rate (very high runoff potential) when thoroughly wet. Typically, Eckrant soils have an extremely stony, very dark gray clay surface layer about 11 inches thick. The underlying material is indurated limestone bedrock.

Geology

The bedrock lithology underlying the site consists of the Edwards Limestone ("Ked", see Site Geologic Map). The geology of the property has been mapped most recently at a useful scale by Collins (2005) and we find his interpretation of the geology to be generally accurate.[2] Additionally, the project site is located entirely within the Edwards Aquifer Recharge Zone.

Recharge into the aquifer primarily occurs in areas where the Edwards Group and upper confining units are exposed at the surface. Most recharge is from direct infiltration via precipitation and streamflow loss. Recharge occurs predominantly along secondary porosity features such as faults, fractures, and karst features (caves, solution cavities, sinkholes, etc.). Karst features are commonly formed along joints, fractures, and bedding plane surfaces in the Edwards Group. No faults are mapped within the project area, and none were directly observed during the pedestrian survey.

Feature Descriptions

No geologic or man-made features were identified during the pedestrian survey. A review of the Texas Water Development Board's online Groundwater Data Viewer did not produce any results for any existing wells located on this property.

Site Hydrogeologic Assessment

In the absence of discrete recharge features, the likelihood of significant recharge occurring within the project site and contributing to the main body of the aquifer is thought to be low. No recharge features were identified during the geologic assessment during the pedestrian survey. Should any recharge or sensitive karst features be discovered during construction, they should be reported to TCEQ to determine the appropriate mitigation measures.

During Cambrian's review of available karst literature and reports, one cave is known to be present just south of this tract, with the cave entrance being approximately 200 feet away from the southern boundary of this tract. Limited information was available in the records search, although a set of

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[1] United States Department of Agriculture, Natural Resource Conservation Service. Online Web Soil Survey, Williamson County, Texas. http://websoilsurvey.sc.egov.usda.gov/

[2] Collins, E.W., 2005, Geologic Map of the West Half of the Taylor 30x60 Quadrangle: Central Texas Urban Corridor, Encompassing Round Rock, Georgetown, Salado, Briggs, Liberty Hill, and Leander. Bureau of Economic Geology, The University of Texas at Austin. Austin, Texas 78713-8924.

coordinates and a simple name of "Moe Property Cave" were found. It is unknown to Cambrian what the dimensions of the cave are, and a map of the cave was not available. At some point in the past, possibly during the previously conducted Geologic Assessment in 2008, a buffer was established for this nearby cave. A small portion of that buffer encroaches into the project area (see Site Geologic Map). Based on topography, surface runoff appears to drain to the north, and does not drain towards the offsite cave.

City of Georgetown Salamander Ordinance

No springs or streams were identified on the property during the pedestrian survey, and therefore no occupied site protection, or spring or stream buffer protection measures will be required for the property. No 100-year (or 1%) floodplain is present on this site. All regulated activities within the recharge zone must follow water quality best management practices, and development of the property will need to comply with the water quality protection measures as outlined in Section 8 of the Ordinance.

Stratigraphic Column

*Gray shaded areas represent lithologies underlying the project area.

Period	Group	Stratigraphic Unit	Hydrologic Unit	Maximum Thickness (Feet)
Quaternary to Tertiary		Stream and river alluvium (Qal)	Overlying Units	70
		Terrace alluvium (Qt)		
		Older alluvium (QTa)		
Upper Cretaceous (Gulf Series)	Taylor	Taylor Clay (Ktl)	Confining Units	300
	Austin	Austin Chalk (Kau)		400
	Eagle Ford	Eagle Ford Shale (Kef)		60
	Washita	Buda Limestone (Kbu)		20
		Del Rio Clay (Kdr)		60
Lower Cretaceous (Comanche Series)	Fredericksburg	Georgetown Limestone (Kgt)	Edwards Aquifer	100
		Edwards Limestone (Ked)		120
		Comanche Peak Formation (Kc)		50
	Trinity	Walnut Formation (Kw)	Confining Unit	140
		Upper Glen Rose Limestone (Kgru)	Upper Trinity Aquifer	200

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: 4.25-Acre Tract - 100 Cantera (Golf Ranch)

LOCATION			FEATURE CHARACTERISTICS											EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
No geologic or man-made features were identified on the property																				

* DATUM: WGS84

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Date 6 May 2024

Sheet 1 of 1

TCEQ-0585-Table (Rev. 10-01-04)

Photo 1. View of the tract.

Photo 2. View of the tract.

Photo 3. View of the tract.

Photo 4. View of the tract.

Photo 5. View of the tract.

Photo 6. View of the tract.

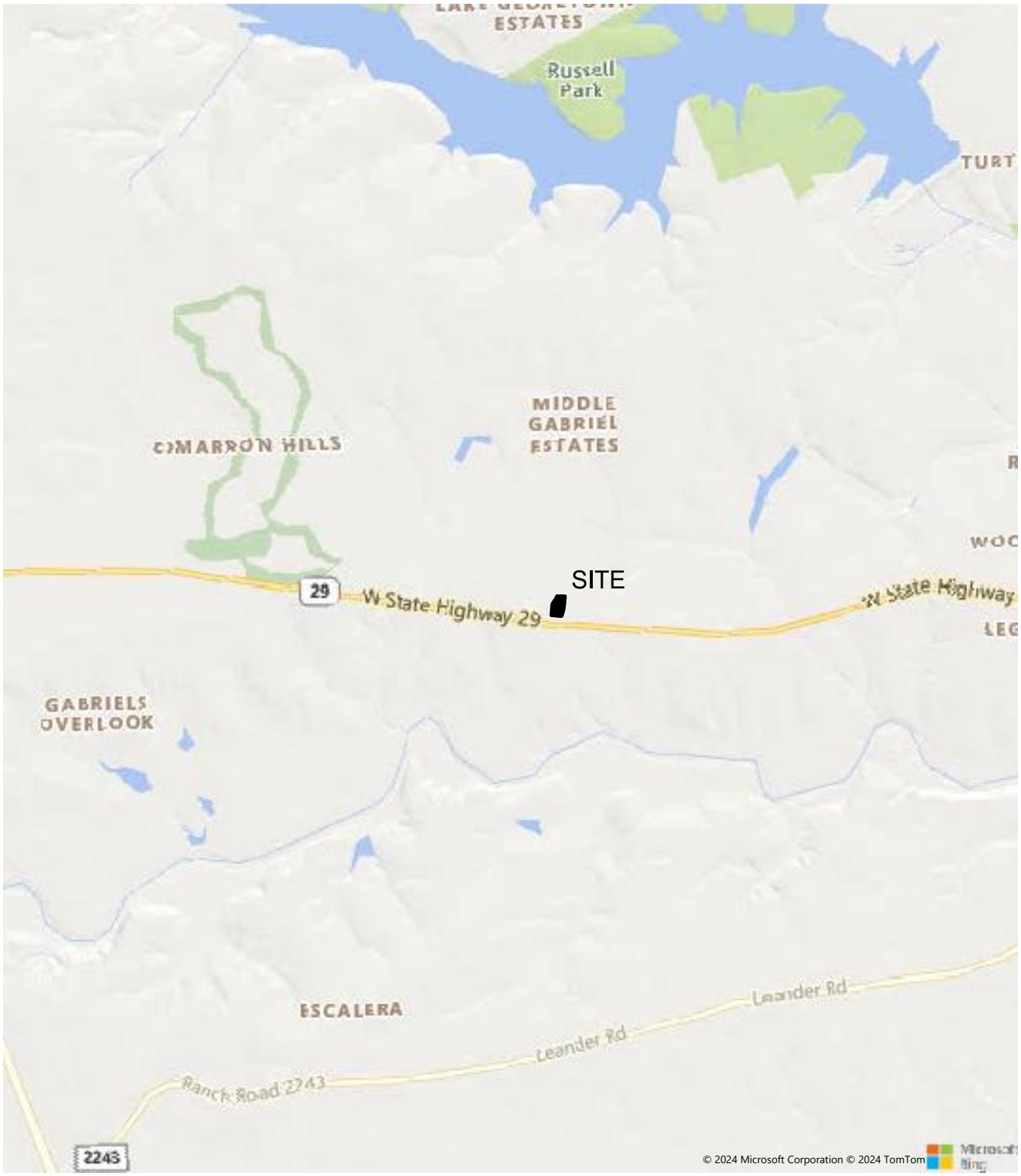

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FIGURE 1 - SITE LOCATION MAP

GOLF RANCH
100 CANTERA WAY
GEORGETOWN, TEXAS 78626

SCALE: 1"=100'

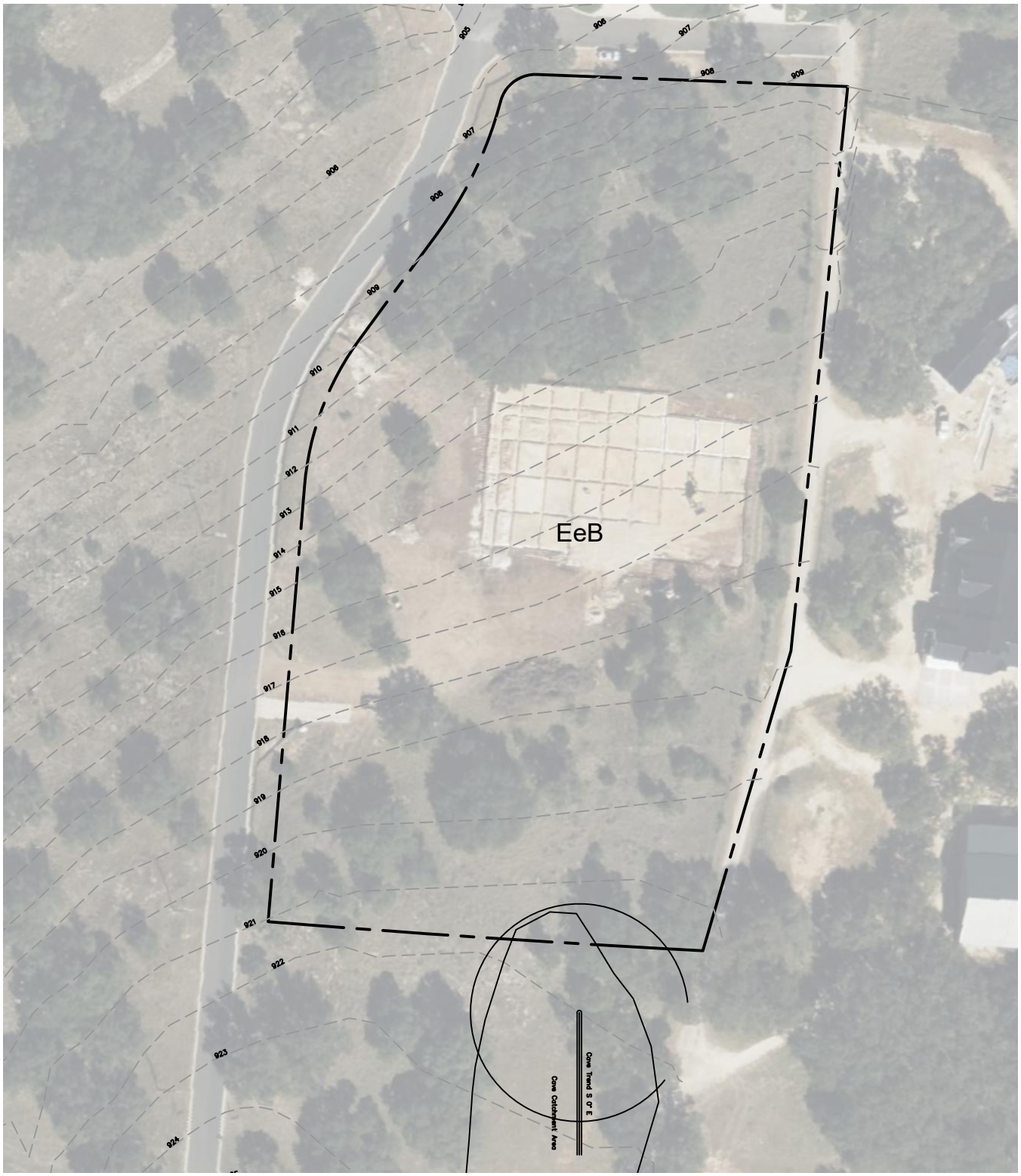

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FIGURE 2 - SITE SOILS MAP

GOLF RANCH
100 CANTERA WAY
GEORGETOWN, TEXAS 78626

SCALE: 1"=100'

EDWARDS AQUIFER
RECHARGE ZONE

EDWARDS
LIMESTONE
(Ked)

Cove Trend S 0° E

Cove Catchment Area

N

0' 20' 40' 60' 80'

STATE OF TEXAS
CRAIG CRAWFORD
GEOLOGY
NO. 10791
LICENSED
PROFESSIONAL GEOSCIENTIST

No.	Date	Revisions	App.

GOLF RANCH

100 CANTERA WAY
GEORGETOWN, TEXAS 78626

SITE GEOLOGY MAP

Project No.:	21010
Issued:	04/23/2024
Drawn By:	JAB
Checked By:	JAB

Sheet ____ OF ____

III. General Information Form

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: Joshua A. Baran

Date: 10/21/2021

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: Golf Ranch
2. County: Williamson
3. Stream Basin: Middle Fork San Gabriel River
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☒ WPAP
   ☐ SCS
   ☐ Modification
   ☐ AST
   ☐ UST
   ☐ Exception Request

7. Customer (Applicant):

   Contact Person: Loralee St. John
   Entity: The Golf Ranch, LLC
   Mailing Address: 100 Cantera Way
   City, State: Georgetown, TX Zip: 78628
   Telephone: 512-863-4573 FAX: _____
   Email Address: golfranchshop@verizon.net

8. Agent/Representative (If any):

   Contact Person: Joshua A. Baran
   Entity: JAB Engineering, LLC
   Mailing Address: 4500 Williams Drive, Ste. 212-121
   City, State: Georgetown, TX Zip: 78633
   Telephone: 512-779-7414 FAX: _____
   Email Address: josh.baran@jabeng.com

9. Project Location:

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

    North side of Highway 29 at the East of the intersection with Cantera Way

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: 11/1/2023

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: Construction activities started on this project

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

Attachment B

USGS Map

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

LEANDER NE QUADRANGLE
TEXAS-WILLIAMSON CO.
7.5-MINUTE SERIES

CONTRIBUTING ZONE

RECHARGE ZONE

RECHARGE ZONE

CONTRIBUTING ZONE

PROJECT SITE

LEANDER

GEORGETOWN

Rocky Hollow
Ox Hollow
Bullion Hollow
Walnut Spring Hollow
Camp Spring Hollow
Taylor Ray Hollow
Sycamore Hollow
Spring Hogg Hollow
Cedar Hollow

Britts Crosswind Airport
Hilde-Griff Field
Rocky Hollow Cem
Fore Cem
Bullion Cem
Hunt Cem
Anderson Cem
Sawyer Cem

Anderson Br
Cowan Cr
Jennings Br
Stowers Br
North Fork San Gabriel River
San Gabriel River Goodwater Loop
Middle Fork San Gabriel River
N Fork Lake

BON WINDE RD
CO RD 255
CO RD 248
PVT RD 902
WINDMILL RANCH RD
RONALD W REAGAN BLVD
JENNINGS BRANCH
LIVE OAK TRL
FARRIS RANCH RD
MUSTANG WAY
DAWN DR
CHRISTINE LN
CO RD 255A
CO RD 289
BIG VALLEY SPR
S VALLEY DR
INDIAN SPRINGS RD
CO RD 247
RANCH RD 2338
CO RD 245
PEDERNALES FALLS DR
NAVAJO TRL
CHEROKEE TRL
YOUNG RANCH RD
NECHES TRL
WICHITA TRL
COUNCIL RD
VISTA LN
GABRIEL WOODS DR
RANCH RD 2338
E RIDGEWOOD RD
TIMBERLINE RD
SUNSET RIDGE
OAKLAND RD
MEADOW DR
STANDING OAK DR
FOUR T RANCH RD
VALLEY VIEW RD
N LAKE RD
KING REA
KING REA SPR
CO RD 255
SEBASTIAN LN
JOSHUA DR
DAKOTA DR
SUNSET RD
W RIDGEWOOD RD
REDBIRD TRL
WOODLAND PARK
WILLIAMS DR
FM 3405
BUOY DR
HARBOR DR
WOODCREST RD
REEF LN
MARBELLA WAY
RELTOBRE DR
CO RD 256
CO RD 257
CO RD 258
CO RD 261
CR 261
LANDONS WAY
TWIN SPRINGS RD
ALYSSA DR
STARLIGHT TRL
DIAMOND TRL
HIGHLAND SPRING LN
MARQUESA TRL
CO RD 262
ROBERTS CIR
SILVERSTONE DR
JIM HOGG PARK RD
FOUNTAINWOOD DR
GOLDRIDGE DR
LLZ LN
LIVE OAK
RED OAK
ROCK HOUSE DR
GREENLEAF DR
SUNNY LN
SUNSET RIDGE DR
SAN GABRIEL OAKS DR
RONALD REAGAN
CRAIGEN RD
DILLO TRL
TOWER RD
PVT RD 907
HUNTERS POINT DR
DEER FIELD DR
WALNUT SPRINGS RD
RUSSELL PARK RD
PARK RD 8
CO RD 259
CO RD 263
CO RD 266
CO RD 267
CO RD 268
KAUFFMAN LOOP
VIA DE SIENNA
OAK PLAZA DR
GABRIELS LOOP
PARK PLACE DR
INDIE VW DR
OAK MEADOW DR
OLD CREEKSIDE RD
FALCON LN
GOLDEN EAGLE LN
N HOOT OWL LN
KINGFISHER LN
KINGS ELDER LN
LARK ST
RIVER RUN
SANTA RITA BLVD
PEGGY DR
CROSS CREEK LN
CROSS CREEK RD
LIGHTNING RANCH RD
LOST OAK COVE
CEDAR HOLLOW RD
WIND RIDGE COVE
OAK HAVEN CIR
LOST RIVER RD
RANCHO BUENO DR
BLUE QUAIL DR
EAGLE POINT DR
CROCKETT GARDENS RD
W CIMARRON HILLS TRL
GOODNIGHT DR
GREEN LEAF LN
E CIMARRON HILLS TRL
INDIGO LN
VISTA HEIGHTS RD
CHAPARRAL CIR
WAKCROSS DR
ESTANCIA WAY
HARRISON LN
W LAKE PKWY

97°52'30"
97°45'
30°45'
30°42'30"
30°40'
30°37'30"
50'
47'30"
40'
3 070 000 FEET
3 100 000 FEET
10 240 000 FEET
10 210 000 FEET
3402000mN
3389000mN
6 08 000mE
6 19 000mE
3402
3401
3400 PV PU
3399
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3390
3389

Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid: Universal Transverse Mercator, Zone 14R
10 000-foot ticks: Texas Coordinate System of 1983 (central zone)

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, July 2014
Roads..... U.S. Census Bureau, 2014 - 2015
Names.....GNIS, 2015
Hydrography.....National Hydrography Dataset, 2014
Contours.....National Elevation Dataset, 2004
Boundaries.....Multiple sources; see metadata file 1972 - 2015

Wetlands.....FWS National Wetlands Inventory 1977 - 2014

MN 4° 6' 73 MILS
GN 0° 36' 11 MILS
UTM GRID AND 2016 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
PV / PU
Grid Zone Designation
14R

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.19

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Mahomet
2 Florence
3 Cobbs Cavern
4 Liberty Hill
5 Georgetown
6 Nameless
7 Leander
8 Round Rock
ADJOINING QUADRANGLES

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

LEANDER NE, TX
2016

NSN 7643016399682
NGA REF NO. USGSX24K25239

U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

USGS science for a changing world

The National Map US Topo

GEORGETOWN QUADRANGLE
TEXAS-WILLIAMSON CO.
7.5-MINUTE SERIES

RECHARGE ZONE

TRANSITION ZONE

Sun City
Serenada
Berrys Creek
Georgetown Springs
Russell Crossing
North Georgetown
GEORGETOWN
Landry Airport
Georgetown Municipal Airport
Bar 3 Ranch Airport
Lake Georgetown
Berry Springs
Railroad Produce Depot
Georgetown Light and Water Works
Belford Historic District
University Avenue Elm Street Historic District

Berry Cr
Dry Berry Cr
Smiley Br
Pecan Br
Smith Br
W Fork Smith Br
N Fork San Gabriel River
San Gabriel River
Middle Fork San Gabriel River

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid: Universal Transverse Mercator, Zone 14R
10 000-foot ticks: Texas Coordinate System of 1983 (central zone)

Imagery.....NAIP, May 2010
Roads.....©2006-2012 TomTom
Names.....GNIS, 2012
Hydrography.....National Hydrography Dataset, 2010
Contours.....National Elevation Dataset, 2004
Boundaries.....Census, IBWC, IBC, USGS, 1972 - 2012

MN 4° 20′ 77 MILS
GN 0° 40′ 12 MILS
UTM GRID AND 2013 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
PV / PU
Grid Zone Designation 14R

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 MILES 1
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.7

TEXAS
QUADRANGLE LOCATION

Florence	Cobbs Cavern	Jarrell
Leander NE	Georgetown	Weir
Leander	Round Rock	Hutto

ADJOINING 7.5' QUADRANGLES

ROAD CLASSIFICATION
Interstate Route
US Route
Ramp
State Route
Local Road
4WD
Interstate Route
US Route
State Route

GEORGETOWN, TX
2013

Attachment C

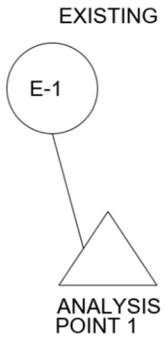
PROJECT DESCRIPTION

INTRODUCTION
The proposed development known as Golf Ranch (the "development"), located at 100 Cantera Way, Williamson County, Texas 78628 will be constructed on 4.26 acres, and being Lots 8, 9, & 10 of the Final Plat 4400 West LLC Subdivision, a Subdivision in Williamson County, Texas in 2011085915 PRWCT.

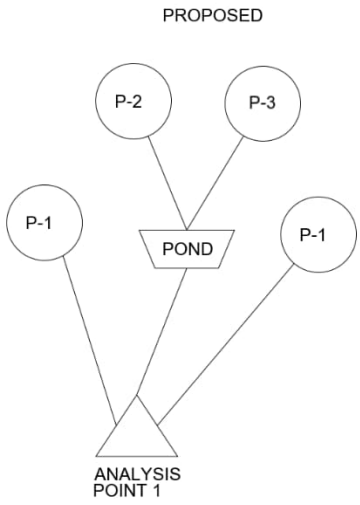
ACCESS
Access will be taken from Cantera Way.

STORMWATER DRAINAGE

EXISTING CONDITIONS
The existing property consists of a single drainage area. The drainage area discharges toward the northwest property corner and onto the adjoining property owner north by sheet flow and shallow concentrated flow. A summary of the existing area features can be found in the area listing of the existing drainage calculations.



PROPOSED DEVELOPMENT
The development will convey stormwater runoff by surface drainage to the same location as the existing discharges. The offsite area will be routed around the proposed impervious cover areas and bypass the proposed pond. Impervious cover areas will be routed to a splitter box and outfall to water quality and detention. The peak discharge of the two areas is reduced from the existing discharge rates.



DRAINAGE SUMMARY
Utilizing the SCS method for comparison of the existing vs. proposed conditions yielded a decrease in peak discharge to both drainage areas.

ANALYSIS POINT 1 (CFS)				
Condition	**2-year**	**10-year**	**25-year**	**100-year**
Existing	11.0	21.4	27.3	36.4
Developed	11.0	20.9	26.7	35.0

The design of the drainage minimizes any effects on the natural and traditional character of the land and waterways; therefore, no adverse effects to the environment are anticipated due to the development.

WATER QUALITY
The development is proposing a Batch Detention BMP.

WATER AND WASTEWATER
Water will be connected to the City of Georgetown services for fire suppression. Domestic water will be from the existing Georgetown water meter connection. Wastewater service is by OSSF.

SEDIMENTATION / EROSION CONTROL / TREE SURVEY
All sedimentation / erosion controls are required and will be in accordance with the City of Georgetown and TCEQ.

CRITICAL ENVIRONMENTAL FEATURES
There are no CEF's per the include GA.

IV. Water Pollution Abatement Plan

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: Joshua A. Baran

Date: 10/21/2021

Signature of Customer/Agent:

Regulated Entity Name: Golf Ranch

Regulated Entity Information

1. The type of project is:

   ☐ Residential: Number of Lots:_____
   ☐ Residential: Number of Living Unit Equivalents:_____
   ☒ Commercial
   ☐ Industrial
   ☐ Other:_____

2. Total site acreage (size of property):4.260

3. Estimated projected population:40

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	22,500	÷ 43,560 =	0.517
Parking	23,119	÷ 43,560 =	0.531
Other paved surfaces	2,070	÷ 43,560 =	0.048
Total Impervious Cover	47689	÷ 43,560 =	1.095

Total Impervious Cover 1.095 ÷ Total Acreage 4.260 X 100 = 25.70% 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 x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.

Width of pavement area: _____ feet.
L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

11. ☐ A rest stop will be included in this project.

☐ A rest stop will not be included in this project.

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:

100% Domestic	3,000 Gallons/day
_____% Industrial	_____ Gallons/day
_____% Commingled	_____ Gallons/day
TOTAL gallons/day 3,000	

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 _____ (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" = 40'.

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): FEMA Panel No. 48491C0275E, dated September 26, 2008

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 Surface Water Quality

*Potential Sources of Contamination associated with this project:

1. Oil and Grease: from runoff pollutants associated with paved driving surfaces, especially around the areas of fueling operations
2. Trash and debris: from customers at the retail / convenience center
3. Construction Phase Pollutants: hydraulic fluid, machine oil, and sediment

ATTACHMENT B

PROJECT DESCRIPTION

INTRODUCTION
The proposed development known as Golf Ranch (the "development"), located at 100 Cantera Way, Williamson County, Texas 78628 will be constructed on 4.26 acres, and being Lots 8, 9, & 10 of the Final Plat 4400 West LLC Subdivision, a Subdivision in Williamson County, Texas in 2011085915 PRWCT.

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Access will be taken from Cantera Way.

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EXISTING CONDITIONS
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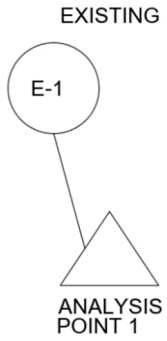

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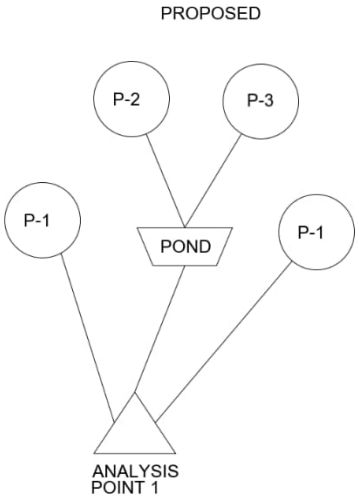

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WATER QUALITY
The development is proposing a Batch Detention BMP.

WATER AND WASTEWATER
Water will be connected to the City of Georgetown services for fire suppression. Domestic water will be from the existing Georgetown water meter connection. Wastewater service is by OSSF.

SEDIMENTATION / EROSION CONTROL / TREE SURVEY
All sedimentation / erosion controls are required and will be in accordance with the City of Georgetown and TCEQ.

CRITICAL ENVIRONMENTAL FEATURES
There are no CEF's per the include GA.

ATTACHMENT C

Suitability Letter from Authorized Agent

Department of Infrastructure
County Engineer's Office
3151 SE Inner Loop, Ste B
Georgetown, TX 78626
T: 512.943.3330
F: 512.943.3335

J. Terron Evertson, PE, DR, CFM

WILLIAMSON COUNTY
1848

May 3, 2024

The Golf Ranch, LLC
611 N. Austin Ave.
Georgetown, Texas 78626

RE: 106 Cantera Way, Georgetown, TX 78626
S10187 – 4400 West LLC Subdivision, Block 1, Lot 8, 1.16 Acres
S10187 – 4400 West LLC Subdivision, Block 1, Lot 9, 1.18 Acres
S10187 – 4400 West LLC Subdivision, Block 1, Lot 10, 1.92 Acres

The above referenced property is located within the Edwards Aquifer Recharge Zone.

Based on the surrounding subdivisions and the soil survey for Williamson County and planning material received, this office is able to determine that the soil and site conditions of this lot is suitable to allow the use of on-site sewage facilities (OSSF). It should be noted that this office has not actually studied the physical properties of this site. Site specific conditions such as OSSF setbacks, recharge features, drainage, soil conditions, etc…, will need taken into account in planning any OSSF.

These OSSF's will have to be designed by a professional engineer or a registered sanitarian. An Edwards Aquifer protection plan shall be approved by the appropriate TCEQ regional office before an authorization to construct an OSSF may be issued. The owner will be required to inform each prospective buyer, lessee or renter of the following in writing:

- That an authorization to construct shall be required before an OSSF can be constructed in the subdivision;
- That a notice of approval shall be required for the operation of an OSSF;
- Whether an application for a water pollution abatement plan as defined in Chapter 213 has been made, whether it has been approved and if any restrictions or conditions have been placed on the approval.

If this office can be of further assistance, please do not hesitate to call.

Sincerely,

D. E. McPeters

Douglas McPeters, OS 8626
Williamson County - OSSF

OS 8626

V. Temporary Stormwater Section

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.

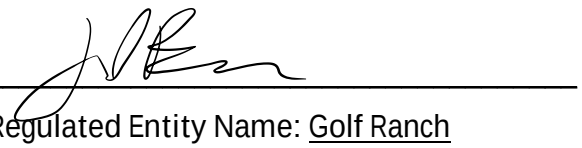
Signature

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: Joshua A. Baran

Date: 10/21/2021

Signature of Customer/Agent:



Regulated Entity Name: Golf Ranch

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: _____

   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: Middle Fork 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

Spills will be prevented utilizing Best Management Practices previously described such as proper material storage, handling, and disposal practices. However, despite such efforts, a spill may occur on site. If a spill occurs, the following procedures will be utilized.

- ***Stop the spill, if possible.*** This can include shutting off power to a pump, righting an overturned container, or plugging a hole in a damaged container.

- ***Contain the spill, safely.*** Spill containment can be accomplished using a variety of materials and methods such as the use of absorbents (i.e. sawdust, Oil Dri, rags, soil, polypropylene pads or booms, etc.) to dike the area around the spill, or placing a leaking container inside one which is not leaking. Spill containment should only be attempted if it is safe to do so. Proper safety equipment such as gloves and eye protection should be used as directed on the Material Safety Data Sheet for the spilled material.

- ***Report the spill, if necessary.*** Certain quantities of hazardous or toxic materials such as pesticides, paint thinners, gasoline, etc. are required by Federal Law to be reported to the National Response Center (NRC) at 1-800-424-8802 as soon as you have knowledge of the spill. Since most of the quantities which require reporting to the NRC are larger than that found on a typical construction site, spill reporting to the State or Local authorities is more likely. When in doubt, report the spill.

<u>The reporting requirements which may aggly to the sites covered in this SW3P are:</u>

Texas Commission on Environmental Quality (TCEQ)
1-800-832-8224

TCEQ requires reportinq of spills of 25 qallons or qreater, especially those which miqht impact a waterway.

- ***Clean the spill up, properly.*** Spill clean up should be performed in accordance with applicable regulations or according to the manufacturer's recommendations on the Material Safety Data Sheet. In most cases, proper spill clean up is to use a dry method such as absorbing the spill and containerize for disposal via a licensed disposal company. For non-hazardous and non-toxic materials this may be through your solid waste disposal service with prior approval.

- ***Fill in table on next page.***

The SW3P must be modified within 14 days of a release to provide a description of the spill, the circumstances leading to the spill, and the date of the spill. Spill clean-up materials, methods, and additional Best Management Practices addressing spill prevention should also be included.

Spill Date	Material Spilled	Amount of spill (in gallons)	Circumstance of Spill (what caused the spill)	Corrective Action	Correction Date & Sign-off

ATTACHMENT B

Potential Sources of Contamination

*Potential Sources of Contamination associated with this project:

1. Oil and Grease: from runoff pollutants associated with paved driving surfaces, especially around the areas of fueling operations
2. Trash and debris: from customers at the retail / convenience center
3. Construction Phase Pollutants: hydraulic fluid, machine oil, and sediment

ATTACHMENT C

Sequence of Major Activities

1. Install construction fencing, stabilized construction entrance, erosion controls, and tree protection fencing per approved erosion and sedimentation control/tree protection plan. (Area Disturbed = 0.1 acres)
2. The contractor shall arrange and coordinate acceptable meeting times for an on-site pre-construction meeting with the Owner, Project Engineer, relevant contractors, and the City Environmental Inspector. The Environmental Inspector shall be contacted 72 hours prior to the required on-site preconstruction meeting.
3. Begin site clearing/demolition. Silt Fence and SCE must be installed prior and maintained during operations. (Area Disturbed = 4.48 acres)
4. Rough grade the site in accordance with plans and specifications. Silt Fence and SCE must be maintained during operations. (Area Disturbed = 2.5 acres)
5. Install utility improvements. Silt Fence and SCE must be maintained during operations. (Area Disturbed = 0.05 acres)
6. Construct Pond structure. Silt Fence and SCE must be maintained during operations. (Area Disturbed = 0.15 acres)
7. Construct building. Silt Fence and SCE must be maintained during operations.
8. Complete final grading, drainage, and pavement. Silt Fence and SCE must be maintained during operations. (Area Disturbed = 4.48 acres)
9. Hydromulch or sod all disturbed areas per landscape plan and general site cleanup. Silt Fence and SCE must be maintained during operations.
10. Final clearing of erosion and sedimentation controls and storm drain structures.
11. Project engineer inspects job and submits the Engineer's Concurrence Letter.
12. City Environmental inspector visits site and issues certificate of acceptance only if all construction is in substantial conformance to the plans.

Total Disturbed Area = 4.48 acres

*Note: Areas identified above in the sequence of construction may overlap and should not be totaled.

ATTACHMENT D

Temporary Best Management Practices and Measures

- Silt Fence – Approximately 440 linear feet of silt fence will be installed along the property line prior to the start of demolition or construction activities. The silt fence will prevent total suspended solids from leaving the site via sheet flow.

- Concrete Washout Area – One concrete washout container will be used.

ATTACHMENT F

Structural Practices

Upgradient flows will be routed to bypass the proposed BMP through a proposed diversion channel. The flows from the bypassed areas are mitigated by additional storage of the proposed development areas. See drainage area maps for specific flow calculations. All on-site drainage during construction will flow through the proposed temporary BMP's.

ATTACHMENT G

DRAINAGE AREA MAPS (EXISTING AND PROPOSED)

(REFER TO CONSTRUCTION PLANS UNDER SEPARATE COVER FOR FULL SIZE COPIES)

ATTACHMENT I
INSPECTION AND MAINTENANCE FOR BMPs

PROJECT NAME: **Golf Ranch**
ADDRESS: **100 Cantera Way**
CITY, STATE: **Georgetown, TX**

SILT FENCE

- Inspections: Inspections shall be made weekly or after each rainfall event and repair or replacement shall be made promptly as needed.
- Sediment Removal: Accumulated silt shall be removed when it reaches a depth of 150mm (6 inches). The silt shall be disposed of on an approved site and in such a manner that will not contribute to additional siltation.

Silt fence shall be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.

CONCRETE WASHOUT AREAS

- When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of.
- Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of.
- Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

Disposal of accumulated silt shall be accomplished following Texas Commission on Environmental Quality guidelines and specifications.

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information.

Responsible Party: The Golf Ranch LLC
Mailing Address: 100 Cantera Way
City, State: Georgetown, TX Zip: 78628
Telephone: (512) 863-4573 Fax: ______

Signature of Responsible Party [illegible] Date 10-18-21

ATTACHMENT J

Schedule of Interim and Permanent Soil Stabilization Practices

Interim stabilization shall be achieved through the temporary erosion controls. All disturbed pervious space shall receive permanent hydromulch or sod after final grading.

VI. Permanent Stormwater Section

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)(Ii), (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.

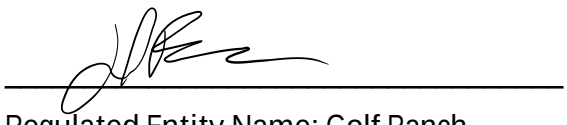
Signature

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: Joshua A. Baran

Date: 10/21/2021

Signature of Customer/Agent



Regulated Entity Name: Golf Ranch

Permanent Best Management Practices (BMPs)

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

1. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

   ☐ N/A

2. ☒ 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 B

BMPs FOR UPGRADIENT STORMWATER

Upgradient flows will be routed to bypass the proposed BMP through a proposed diversion channel. The flows from the bypassed areas are mitigated by additional storage of the proposed development areas. See drainage area maps for specific flow calculations.

ATTACHMENT C

BMPS FOR ON-SITE STORMWATER

INTRODUCTION

The proposed development known as Golf Ranch (the "development"), located at 100 Cantera Way, Williamson County, Texas 78628 will be constructed on 4.26 acres, and being Lots 8, 9, & 10 of the Final Plat 4400 West LLC Subdivision, a Subdivision in Williamson County, Texas in 2011085915 PRWCT.

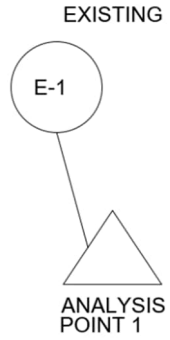
ACCESS

Access will be taken from Cantera Way.

STORMWATER DRAINAGE

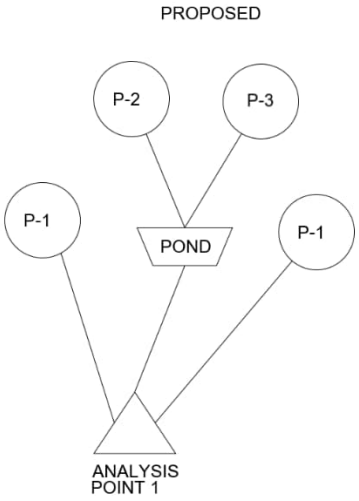
EXISTING CONDITIONS

The existing property consists of a single drainage area. The drainage area discharges toward the northwest property corner and onto the adjoining property owner north by sheet flow and shallow concentrated flow. A summary of the existing area features can be found in the area listing of the existing drainage calculations.



PROPOSED DEVELOPMENT

The development will convey stormwater runoff by surface drainage to the same location as the existing discharges. The offsite area will be routed around the proposed impervious cover areas and bypass the proposed pond. Impervious cover areas will be routed to a splitter box and outfall to water quality and detention. The peak discharge of the two areas is reduced from the existing discharge rates.



DRAINAGE SUMMARY
Utilizing the SCS method for comparison of the existing vs. proposed conditions yielded a decrease in peak discharge to both drainage areas.

ANALYSIS POINT 1 (CFS)				
Condition	**2-year**	**10-year**	**25-year**	**100-year**
Existing	11.0	21.4	27.3	36.4
Developed	11.0	20.9	26.7	35.0

The design of the drainage minimizes any effects on the natural and traditional character of the land and waterways; therefore, no adverse effects to the environment are anticipated due to the development.

WATER QUALITY
Water Quality will be address by the proposed Batch Detention BMP.

WATER AND WASTEWATER
Water will be connected to the City of Georgetown services for fire suppression. Domestic water will be from the existing Georgetown water meter connection. Wastewater service is by OSSF.

SEDIMENTATION / EROSION CONTROL / TREE SURVEY
All sedimentation / erosion controls are required and will be in accordance with the City of Georgetown and TCEQ.

CRITICAL ENVIRONMENTAL FEATURES
There are no CEF's per the include GA.

ATTACHMENT F

Construction Plans

(UNDER SEPARATE COVER)

STORMWATER PERMIT (2021-27-SWP)

GOLF RANCH

AT

100 CANTERA WAY
GEORGETOWN, TX 78626

OWNER/ DEVELOPER:

GOLF RANCH
100 CANTERA WAY
GEORGETOWN, TX 78626
[TEL] (512) 863-4573
NO WEBSITE

SURVEYOR:

STEGER BIZZELL
1978 S. AUSTIN AVE
GEORGETOWN, TX 78626
[TEL] (512) 930-9412
STEGERBIZZELL.COM

UTILITY SERVICE PROVIDERS:

SANITARY SEWER (OSSF)
3151 SE INNER LOOP, STE. B
GEORGETOWN, TEXAS 78626
[TEL] (512) 943-3330
WWW.WILCO.ORG/OSSF

WATER
CITY OF GEORGETOWN
300-1 INDUSTRIAL AVE.
GEORGETOWN, TEXAS 78626
[TEL] (512) 930-2572
WWW.GEORGETOWN.ORG

ELECTRIC
PEDERNALES ELECTRIC COOP
PO BOX 1
JOHNSON CITY, TEXAS 78636
[TEL] (877) 372-0391
WWW.PEC.COOP

CIVIL ENGINEER/ APPLICANT

JAB ENGINEERING, LLC.
4500 WILLIAMS DRIVE, SUITE 212-121
GEORGETOWN, TEXAS 78633
[TEL] (512) 779-7414
NO WEBSITE

LEGAL DESCRIPTION:

4.26 ACRE TRACT OF LAND BEING LOTS 8, 9, & 10 OF THE FINAL PLAT 4400 WEST LLC SUBDIVISION, A SUBDIVISION IN WILLIAMSON COUNTY, TEXAS, ACCORDING TO THE MAP OR PLAT RECORDED UNDER DOCUMENT NUMBER 2011085915 OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS.

FLOODPLAIN NOTE:

THE SUBJECT TRACT IS SHOWN TO BE IN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AS IDENTIFIED BY THE FLOOD INSURANCE RATE MAP NO. 48491C0275E, DATED SEPTEMBER 26, 2008 (WILLIAMSON COUNTY AND INCORPORATED AREAS).

ZONING NOTE:

THIS SITE IS LOCATED WITHIN THE EXTRA TERRITORIAL JURISDICTION OF THE CITY OF GEORGETOWN.

PROPOSED USE:

RETAIL, BEING ONE NEW BUILDING

SHEET INDEX:

SITE PLAN NOTES:

1. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER, AND SUCCESSORS TO THE CURRENT PROPERTY OWNER, TO ENSURE THE SUBJECT PROPERTY AND ANY IMPROVEMENTS ARE MAINTAINED IN CONFORMANCE WITH THIS SITE DEVELOPMENT PERMIT.
2. THIS DEVELOPMENT SHALL COMPLY WITH ALL STANDARDS OF THE UNIFIED DEVELOPMENT CODE (UDC), THE CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL, THE DEVELOPMENT MANUAL AND ALL OTHER APPLICABLE CITY STANDARDS.
3. THIS SITE PLAN SHALL MEET THE UDC STORMWATER REQUIREMENTS.
4. ALL SIGNAGE REQUIRES A SEPARATE APPLICATION AND APPROVAL FROM THE INSPECTION SERVICES DEPARTMENT. NO SIGNAGE IS APPROVED WITH THE SITE PLAN.
5. SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH THE UDC.
6. DRIVEWAYS WILL REQUIRE APPROVAL BY THE DEVELOPMENT ENGINEER OF THE CITY OF GEORGETOWN.
7. FIRE FLOW REQUIREMENTS OF 1,500 GALLONS PER MINUTE ARE BEING MET BY THIS PLAN.
8. ANY HERITAGE TREE AS NOTED ON THIS SITE PLAN IS SUBJECT, IN PERPETUITY, TO THE MAINTENANCE, CARE, PRUNING AND REMOVAL REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE.
9. THESE PLANS WERE PREPARED, SEALED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE, BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR CONSTRUCTION OF THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS AND CODES.
10. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
11. THE PROPERTY SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN.
12. WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC UTILITY LINES SHALL BE LOCATED ALONG THE STREET AND WITHIN THE SITE. WHERE EXISTING OVERHEAD INFRASTRUCTURE IS TO BE RELOCATED, IT SHALL BE RE-INSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER.
13. A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER QUALITY REGULATIONS, WAS COMPLETED ON FEBRUARY 18, 2015. ANY SPRINGS AND STREAMS AS IDENTIFIED IN THE GEOLOGIC ASSESSMENT ARE SHOWN HEREIN.

ITE Code	Land Use Description	Independent Variable	No. of Units	Avg Rate or Eq	Trip Rates: Daily Rate	AM Rate	PM Rate	Total Trips: Daily Trips	AM Trips	PM Trips	AM Trips In	AM Trips Out	PM Trips In	PM Trips Out
861	Sporting Goods Superstore	1,000 Sq Ft	22.5	Avg	29.80	1.26	3.10	671	28	70	14	14	35	35
							Totals	671	28	70	14	14	35	35

INITIAL SUBMITTAL DATE:

AUGUST 23, 2021

RE-SUBMITTAL DATE:

SITE INFORMATION

ZONING	ETJ
PROPOSED USE	RETAIL
BUILDING (SQUARE FEET)	22,500 SF
PARKING PROVIDED (SPACES)	
STANDARD	49 SPACES
HANDICAP / VAN ACCESSIBLE	4 SPACES
TOTAL	53 SPACES
SITE DATA	
AREA (ACRES)	4.26 AC
AREA (SQUARE FEET)	185,555 SF

IMPERVIOUS COVER CALCULATIONS

TOTAL AREA	4.26 AC
TOTAL IMPERVIOUS AREA ALLOWED (70%)	129,889 SF
BUILDING IMPERVIOUS COVER	22,500 SF
SIDEWALK IMPERVIOUS COVER	2,070 SF
PAVEMENT IMPERVIOUS COVER	23,119 SF
TOTAL IMPERVIOUS AREA PROPOSED (34.8%)	47,689 SF

No.	Date	Revisions	App.

JAB Engineering, LLC
(F-14076)
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GOLF RANCH
100 CANTERA WAY
GEORGETOWN, TEXAS 78626

COVER

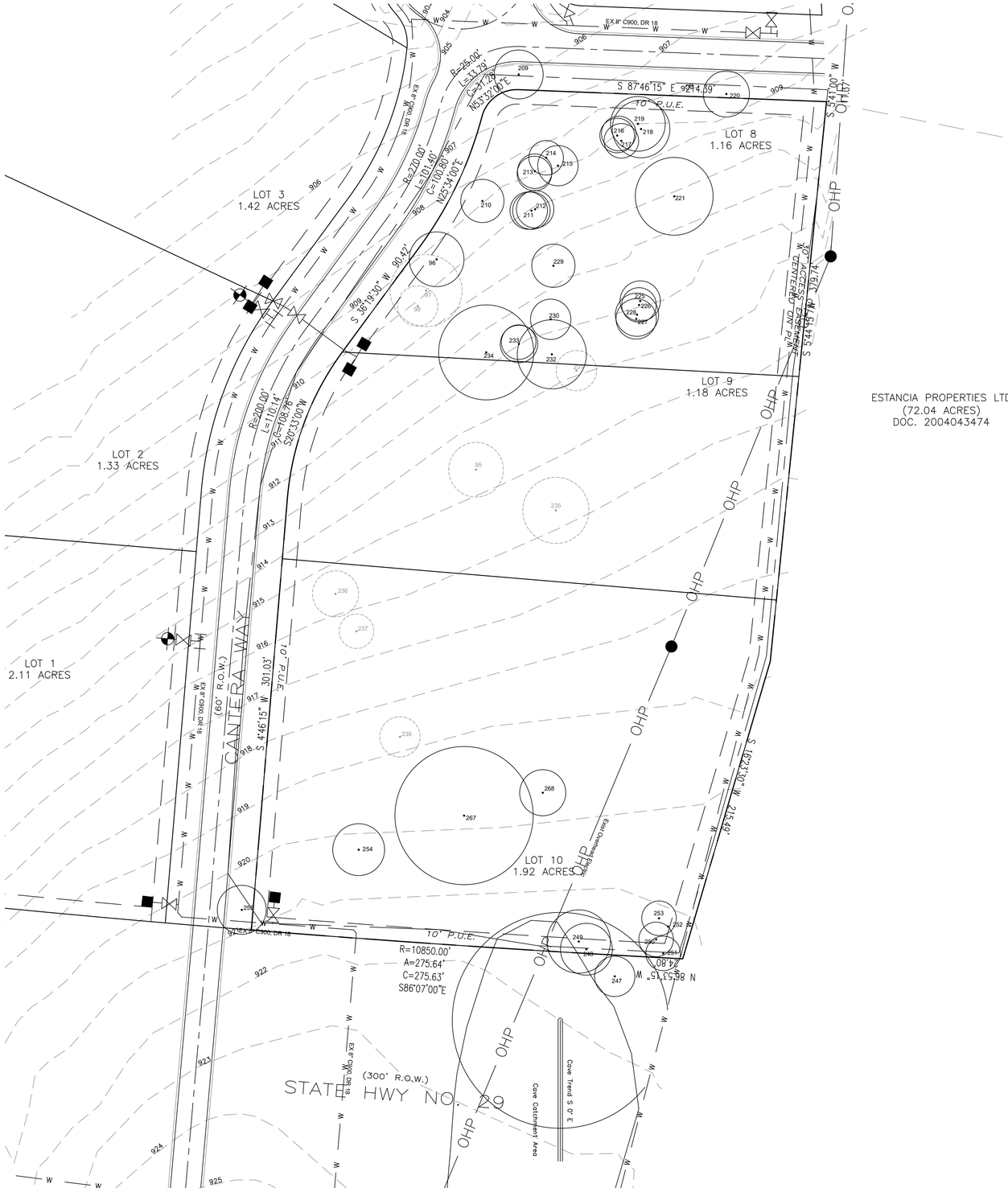
STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER
01/05/23

Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.01

Sheet 1 OF 20

2021-27-SWP



LEGEND:

- PROPERTY LINE
- LOT LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING OVERHEAD ELECTRIC LINE
- PROPOSED FIRE LANE
- PROPOSED SCREEN FENCE
- LIMITS OF CONSTRUCTION (L.O.C.)
- ACCESSIBLE ROUTE
- EXISTING HERITAGE TREE DRIP LINE

N

0' 20' 40' 60' 80'

No.	Date	Revisions	App.

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GOLF RANCH

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GEORGETOWN, TEXAS 78626

EXISTING SURVEY & DEMO PLAN

STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER
01/05/23

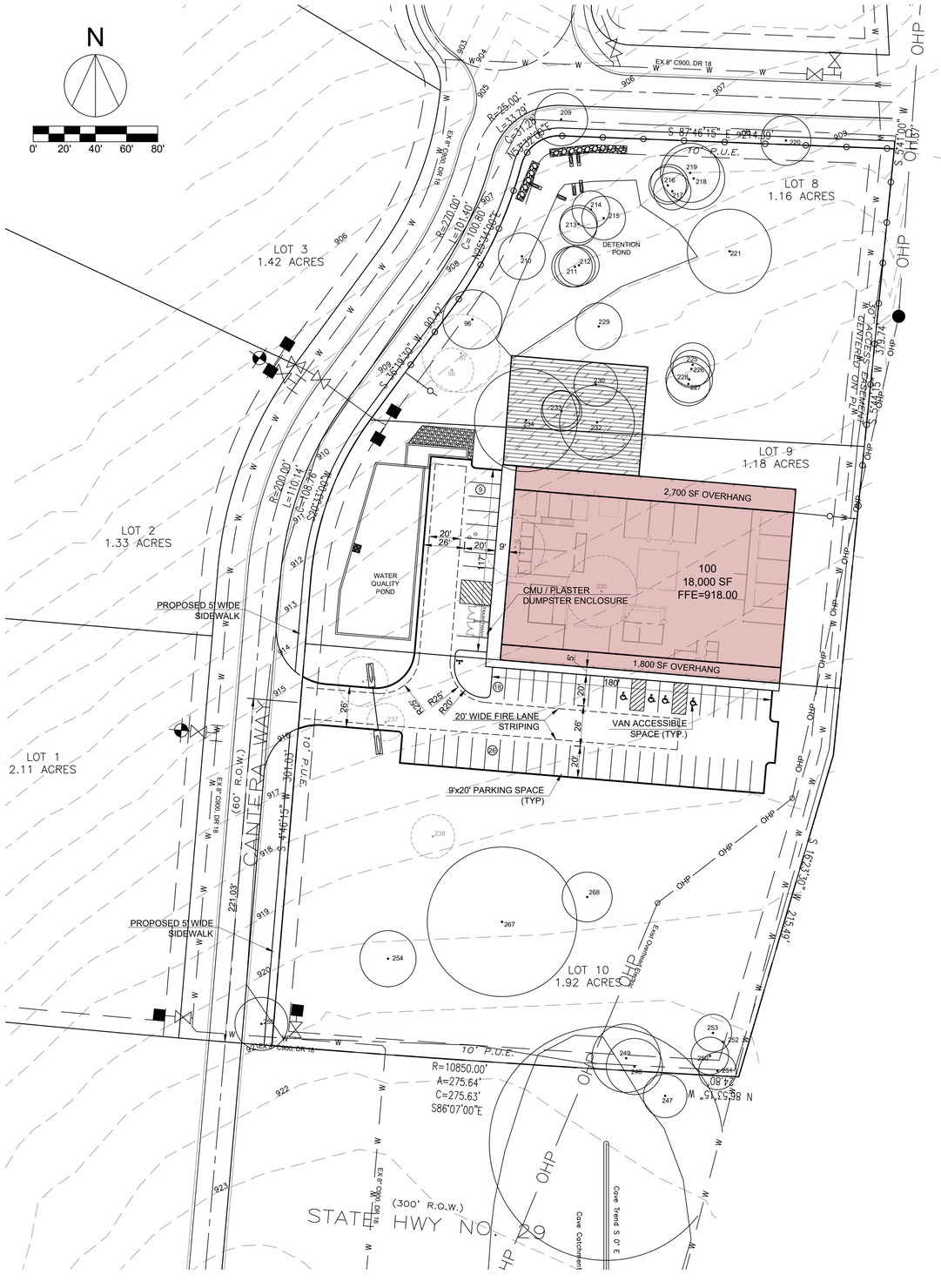
Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.02

Sheet 2 OF 20

2021-27-SWP

Texas 811



NOTES:

1. WATER SERVICE TO BE PROVIDED BY THE CITY OF GEORGETOWN. WASTEWATER TO BE PRIVATE OSSF.
2. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 14'-0" VERTICAL CLEARANCE AND MAXIMUM SLOPE OF 15% IN ANY DIRECTION.
3. ALL PARKING SPACES SHALL HAVE A 7'-0" VERTICAL CLEARANCE.
4. EVERY HANDICAP ACCESSIBLE PARKING SPOT SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN THE UBC, 3108(C) AND ANSI A1171-1986-4.6.2. (SEE DETAIL). REFER TO ARCHITECTURAL ADA SHEET FOR MORE INFORMATION.
5. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
6. SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP.
7. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 INCHES.
8. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50. 5' X 5' LANDINGS ARE REQUIRED AT ALL CHANGES IN DIRECTION. LANDINGS SHALL NOT HAVE A SLOPE OF GREATER THAN 1:50 IN ANY DIRECTION.
9. GROUND SURFACES ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM, AND SLIP RESISTANT.
10. REFER TO DETAILS FOR PAVEMENT SECTIONS.
11. FIRE LANES SHALL BE MARKED BY LANES OF TRAFFIC PAINT A MINIMUM OF 6 INCHES IN WIDTH TO SHOW THE BOUNDARIES OF THE LANE. THE WORDS "NO PARKING FIRE LANE TOW-A-WAY ZONE" SHALL APPEAR IN 4" WHITE LETTERS NO GREATER THAN 35 FEET APART. THESE WORDS SHALL BE MARKED WITHIN THE RED STRIPE. FIRE LANE STRIPING SHALL BE CONTINUOUS THROUGHOUT. CURB FACING SHALL BE USED WHERE AVAILABLE. WHERE THERE IS NOT CURB, LAY DOWN STRIPING SHALL BE USED.
12. CONTRACTOR SHALL SAW CUT AND REMOVE 1' OF EXISTING PAVEMENT AND PROVIDE A SMOOTH TRANSITION FROM EXISTING PAVEMENT TO PROPOSED PAVEMENT. COORDINATE CONSTRUCTION WITHIN THE ROW WITH TXDOT PER THE DRIVEWAY PERMIT.
13. EDGE LINES PAINTED SINGLE WHITE SOLID LINE/4" WITH INSIDE STRIPING PAINTED SINGLE WHITE SOLID LINE/4" AT 30" O.C. 45 DEGREES TO EDGE LINES.
14. SITE SURVEY, PROVIDED BY OTHERS, DOES NOT INCLUDE A REFERENCE TO TEMPORARY OR PERMANENT BENCHMARKS NEAR THE SITE. CONTRACTOR SHALL VERIFY EXISTING TOPOGRAPHY AND THE LOCATION/ELEVATION OF THE SITE IMPROVEMENTS PRIOR TO STARTING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF DISCREPANCIES ARE DISCOVERED.
15. SPRINKLER DRAWINGS MUST BE APPROVED BY ONE OF THE APPROVED THIRD-PARTY FIRMS.

LEGEND:

- PROPERTY LINE
- LOT LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING OVERHEAD ELECTRIC LINE
- PROPOSED FIRE LANE
- PROPOSED SCREEN FENCE
- LIMITS OF CONSTRUCTION (L.O.C.)
- ACCESSIBLE ROUTE
- EXISTING HERITAGE TREE DRIP LINE

SITE INFORMATION

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GOLF RANCH

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DIMENSIONAL SITE PLAN

STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER
01/05/23

Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.03

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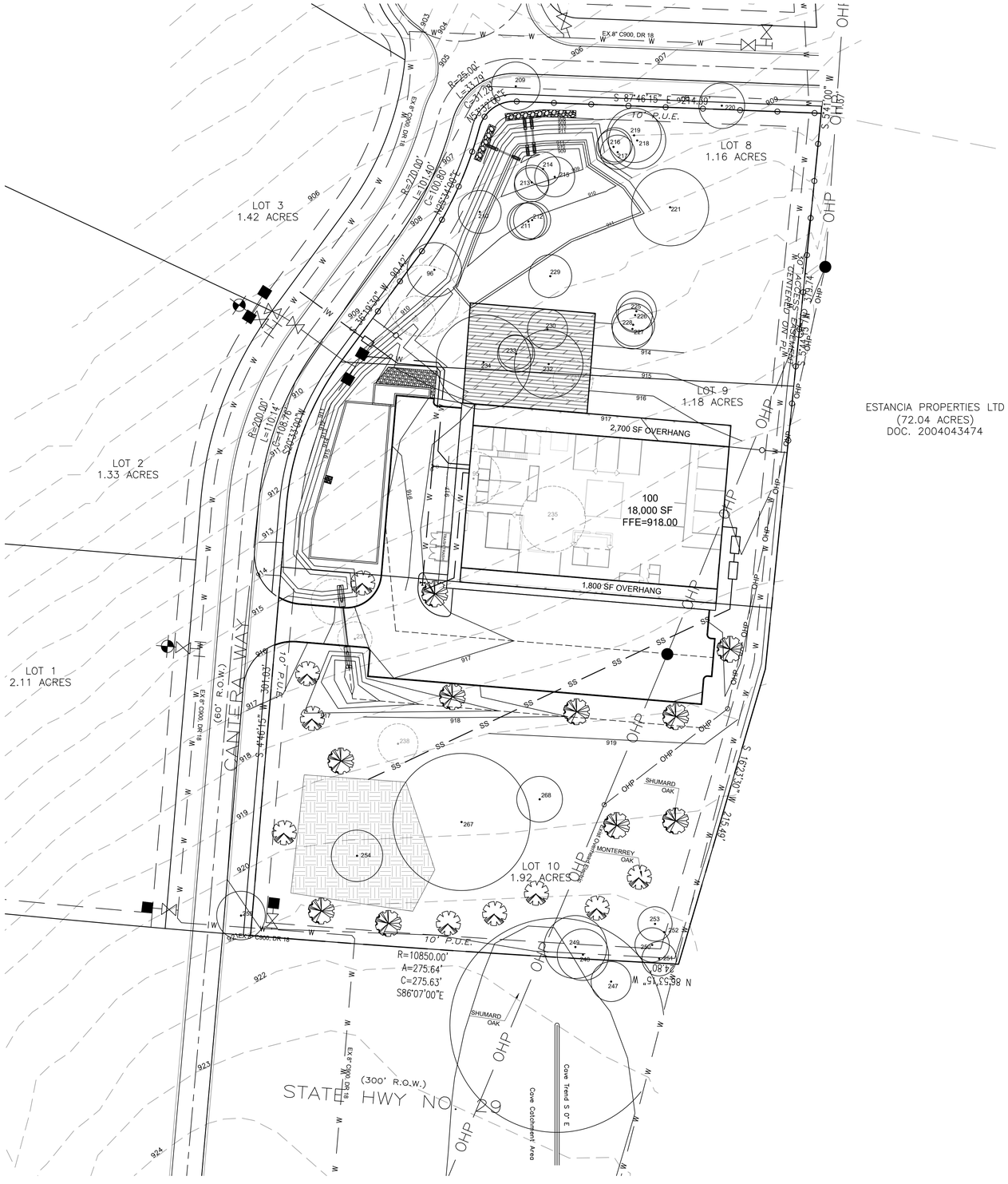
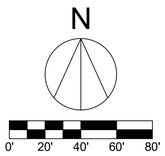
2021-27-SWP

Texas 811





REQUIRED PROTECTED TREE PRESERVATION PERCENTAGE (UDC SEC. 8.02.030.E)
Percentage of Protected Trees that must be retained on site (not applicable to residential subdivisions or Heritage Trees)

Project Acreage: 4.26
Total number of Protected Trees existing on-site: 38
Average number of Protected trees per acre: 8.9
Applicable Required Protected Tree Preservation percentage: 30%
Number of existing protected trees to remain on-site: 12

OWED MITIGATION FOR PROTECTED REMOVALS
Total diameter inches of Removed Protected trees: 137"
Overall protected tree mitigation inches owed: 54.8"

CREDIT TREES - ON-SITE PLANTED TREES
Inches of shade trees planted on-site: 57"

CREDIT TREES - ON-SITE EXISTING TREES (6-11" TREES ONLY)
Inches of credit trees to remain: 0"

SOIL AERATION & SUPPLEMENTAL NUTRIENTS CREDIT - UP TO 30%
Not used

OWED MITIGATION FOR HERITAGE TREE REMOVALS
None removed

CASH PAYOUT
0"

LEGEND:

- PROPERTY LINE
- LOT LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING OVERHEAD ELECTRIC LINE
- PROPOSED TREE PROTECTION FENCE
- TREE DRIP LINE (TO REMAIN)
- TREE DRIP LINE (TO BE REMOVED)
- NEW 3" DIA. TREE

P = PROTECTED
HT = HERITAGE TREE
R = REMOVAL OF PROTECTED TREE
C = CREDIT TREES TO REMAIN

PLANT SCHEDULE

Qty / SF	Botanical Name	Common Name	Size	Water Use	Deciduous / Evergreen	Mature Size (H x W)	Notes
SHADE / EVERGREEN TREES							
10	Quercus shumardii	Shumard Oak	3" cal.	L	Deciduous	30' x 50'	65 gal container, 11'-12' ht., 4' sprd.
9	Quercus polymorpha	Monterrey Oak	3" cal.	VL	Evergreen	40' x 60'	container grown, 11'-12' ht., 4' sprd.
SHRUBS / GRASSES / PERENINAL / AGAVE / CACTUS							
VINES / GROUNDCOVER							

PROTECTED TREE MITIGATION	KEY	TREE No.	SIZE (INDIVIDUAL TRUNKS)	TRUNK #1	TRUNK #2	HALF CRITICAL ROOT ZONE (IN FEET)	SPECIES
19	R	95	19	19		9.5	LIVE OAK
	P	96	19	19		9.5	LIVE OAK
25	R	97	25	25		12.5	LIVE OAK
14	R	98	14	14		7	LIVE OAK
	P	209	17	17		8.5	LIVE OAK
	P	210	15	15		7.5	LIVE OAK
	P	211	19.5	13	13	9.75	LIVE OAK
	P	212	13	13		6.5	LIVE OAK
	P	213	18	12	12	9	LIVE OAK
	P	214	12	12		6	LIVE OAK
	P	215	14	14		7	LIVE OAK
	P	216	18	12	12	9	LIVE OAK
	P	217	12	12		6	LIVE OAK
	P	218	20	20		10	LIVE OAK
	P	219	19	19		9.5	LIVE OAK
	P	220	16	16		8	LIVE OAK
	HT	221	27	27		13.5	LIVE OAK
	P	225	14	14		7	LIVE OAK
	P	226	12	12		6	LIVE OAK
	P	227	15	15		7.5	LIVE OAK
	P	228	14	14		7	LIVE OAK
	P	229	15	15		7.5	LIVE OAK
	P	230	14	14		7	LIVE OAK
14	R	231	14	14		7	LIVE OAK
	P	232	24	24		12	LIVE OAK
	P	233	19	13	12	9.5	LIVE OAK
	HT	234	33	33		16.5	LIVE OAK
23	R	235	23	23		11.5	LIVE OAK
16	R	236	16	16		8	LIVE OAK
12	R	237	12	12		6	LIVE OAK
14	R	238	14	14		7	LIVE OAK
	P	247	14	14		7	ELM
	P	248	18	18		9	LIVE OAK
	P	249	22	22		11	LIVE OAK
	P	250	12	12		6	LIVE OAK
	P	251	12	12		6	LIVE OAK
	P	252	12	12		6	LIVE OAK
	P	253	12	12		6	LIVE OAK
	P	254	18	18		9	LIVE OAK
	P	255	17	17		8.5	LIVE OAK

137 TOTAL DIAMETER INCHES OF REMOVED PROTECTED TREES
54.8 OVERALL PROTECTED TREE MITIGATION INCHES OWED (40%)

No.	Date	Revisions	App.

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GOLF RANCH

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GEORGETOWN, TEXAS 78626

TREE PRESERVATION PLAN

01/05/23
STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER

Project No.: 21010
Issued: 01/05/2023
Drawn By: JAB
Checked By: JAB

C.04

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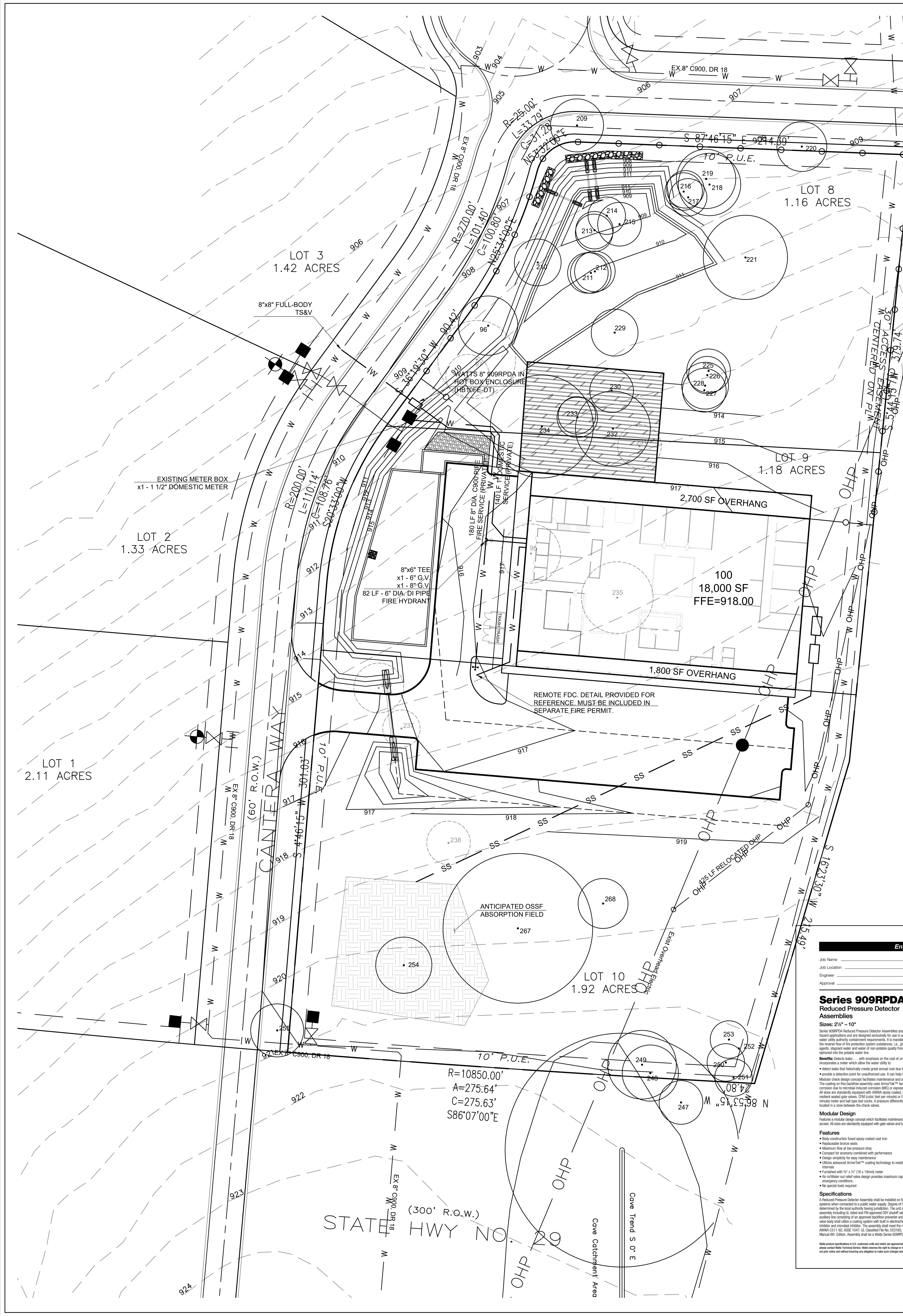
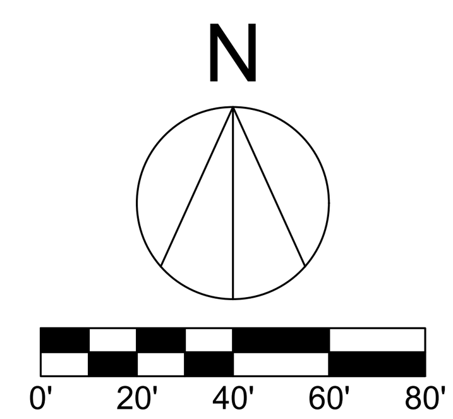
2021-27-SWP





NOTES:

1. WATER AND WASTEWATER SERVICE TO BE PROVIDED BY THE CITY OF GEORGETOWN.
2. CONTRACTOR TO COORDINATE WITH MEP PLANS AT ALL UTILITY STUB OUTS.
3. CONTRACTOR TO ENSURE NO FIRE HYDRANTS, METERS OR VALVES ARE PLACED IN SIDEWALKS.
4. UNLESS OTHERWISE NOTED, ALL WATER LINES 4" - 12" IN DIAMETER SHALL BE C900 PVC PIPE. WATER LINES LESS THAN 4" IN DIAMETER SHALL BE SCH 40 PVC PIPE.
5. ALL WASTEWATER PIPE SHALL BE SDR-26 PVC PIPE.
6. CONTRACTOR TO COORDINATE AND INSTALL NECESSARY IRRIGATION, ELECTRICAL AND TELECOMMUNICATIONS SLEEVES PRIOR TO PLACEMENT OF PAVEMENT.
7. ALL BENDS, TEES, REDUCERS AND GATE VALVES SHALL BE RESTRAINED PER CITY OF GEORGETOWN STANDARDS.
8. MINIMUM CLEARANCE BETWEEN WATER AND SANITARY SEWER LINES SHALL COMPLY WITH TCEQ REQUIREMENTS.
9. REFER TO SITE PLAN FOR UTILITY EASEMENT LOCATIONS.
10. CONTRACTOR SHALL COORDINATE LIGHT POLE LOCATIONS AND SLEEVING FOR ELECTRICAL SERVICE WITH MEP.
11. COORDINATE LOCATION, SIZE AND TYPE OF LIGHTING WITH MEP AND BUILDING PLANS.
12. CONTRACTOR SHALL ADJUST ALL VISIBLE UTILITY FEATURES TO FINISHED GRADE AS NEEDED AT NO ADDITIONAL COST TO OWNER.

LEGEND:

PROPERTY LINE
LOT LINE
EASEMENT LINE
EXISTING EDGE OF PAVEMENT
EXISTING OVERHEAD ELECTRIC LINE
PROPOSED WATER LINE (W)
PROPOSED SANITARY SEWER LINE (SS)
PROPOSED STORM SEWER
PROPOSED SCREEN FENCE
LIMITS OF CONSTRUCTION (L.O.C.)
EXISTING HERITAGE TREE DRIP LINE

FIRE NOTES:
The city uses the seasonal low pressure of the pressure plain that service this site, the adjusted pressure will need to be used for designing (size) of the underground fire line as well as the designing of the sprinkler system. This will require a fire flow test to be conducted.

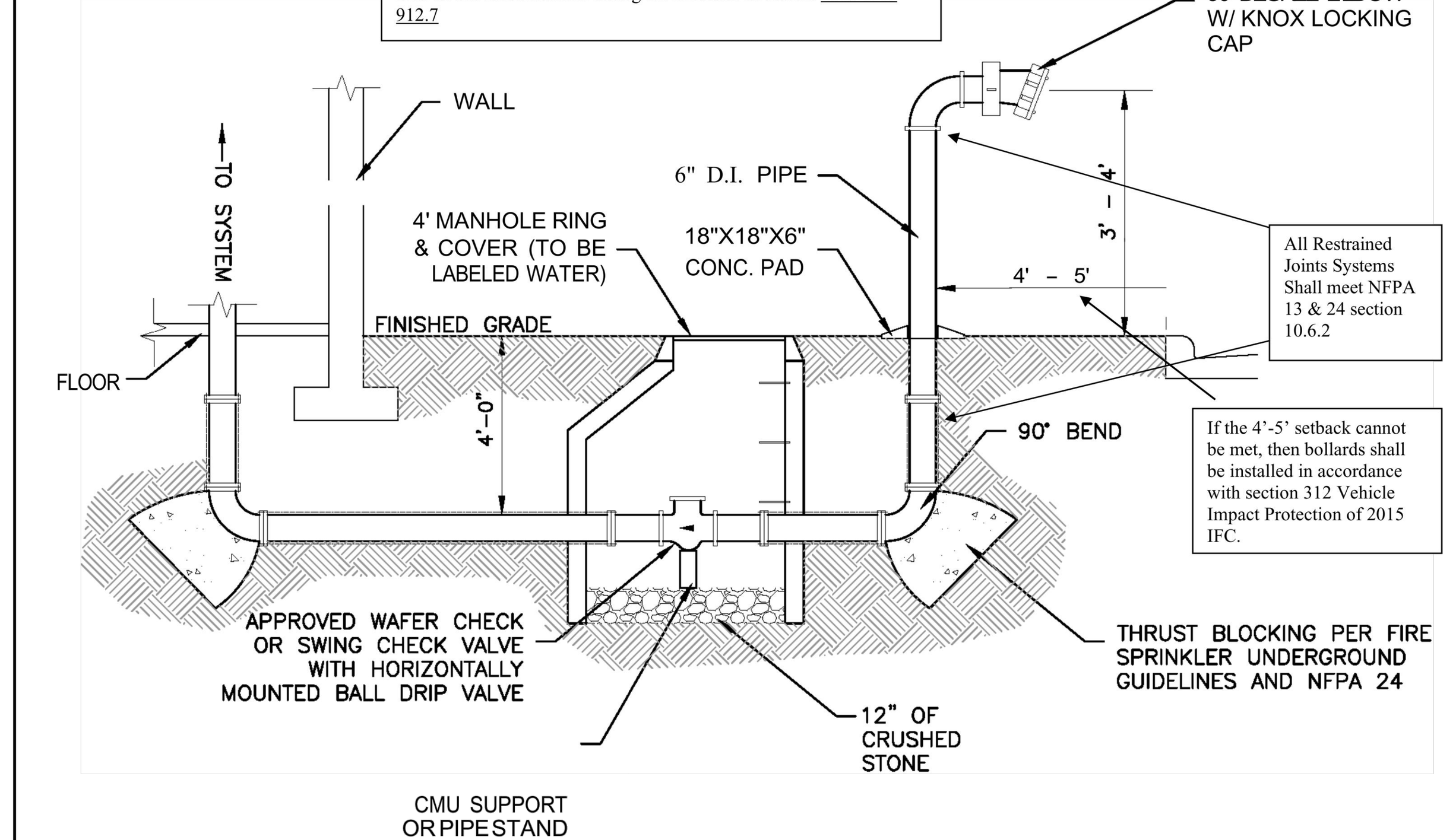
The direction for setting up the fire flow test can be found at www.fire.georgetown.org on the site there should be a tab to select for fire flow test procedures. This link will explain the entire testing procedures.

THE FIRE CODE, SECTION LA- 507.5.7 CITY OF GEORGETOWN FIRE HYDRANT COLOR CODE SYSTEM, IS HEREBY ADDED TO READ AS FOLLOWS:
LA-507.5.7 CITY OF GEORGETOWN FIRE HYDRANT COLOR CODE SYSTEM. PRIVATE FIRE HYDRANT MAINTENANCE SHALL BE IN ACCORDANCE WITH NFPA 291.

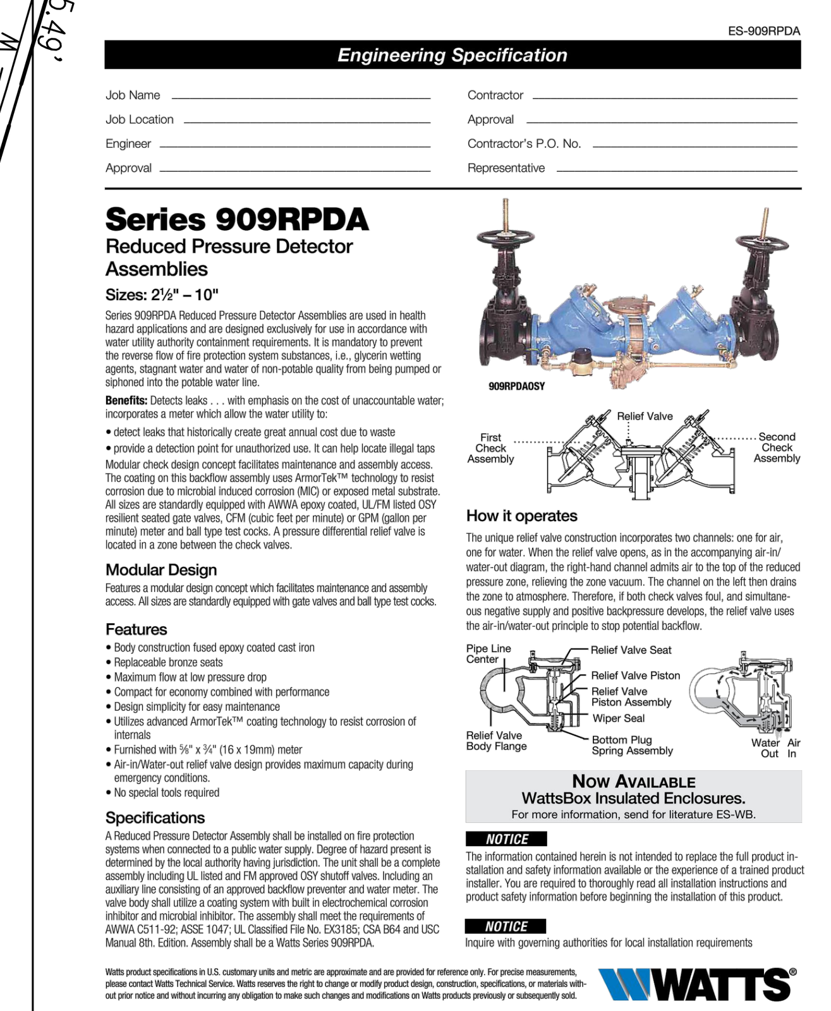
A. ALL PRIVATE HYDRANT BARRELS WILL BE PAINTED RED WITH THE BONNET PAINTED USING THE HYDRANT FLOW STANDARD IN PARAGRAPH C OF THIS SECTION TO INDICATE FLOW. IT WILL BE THE CUSTOMER'S RESPONSIBILITY TO TEST AND MAINTAIN THEIR PRIVATE FIRE HYDRANT(S).
B. ALL PRIVATE FIRE HYDRANTS SHOULD BE INSPECTED, MAINTAINED, AND FLOW TESTED ANNUALLY, AND COLOR CODED TO INDICATE THE EXPECTED FIRE FLOW FROM THE HYDRANT DURING NORMAL OPERATION. SUCH COLOR APPLIED TO THE FIRE HYDRANT BY PAINTING THE BONNET THE APPROPRIATE COLOR FOR THE EXPECTED FLOW CONDITION.
C. HYDRANT FLOW CODING STANDARDS. PUBLIC HYDRANTS BARRELS WILL BE PAINTED SILVER, THE HYDRANTS WILL BE FLOW TESTED, AND THE BONNET PAINTED USING THE HYDRANT FLOW STANDARD IN AS FOLLOWS:
   FLOW COLOR
   GREATER THAN 1500 GPM BLUE
   1000- 1500 GPM GREEN
   500-999 GPM ORANGE
   LESS THAN 500 GPM RED
   NOT WORKING BLACK OR BAGGED
D. AT THE CONCLUSION OF CONSTRUCTION FIRE HYDRANTS SHALL BE FLOW TESTED AND COLOR CODED IN ACCORDANCE WITH CITY'S STANDARDS, AND RESULTS SHALL BE EMAILED TO THE FIRE DEPARTMENT. IFC- LA-507.5.7 FIRE HYDRANT SYSTEMS.

Per State Fire Marshall's Office an RME-G or U License is required in order to work on Private Fire Mains and Their Appurtenances (NFPA 24)

All Fire Department Connections (FDCs) shall be marked as approved by the Fire Code Official. Two red street lane reflectors (stimsonite model 88AB or similar) shall be installed six inches from centerline of the fire apparatus access roadway on the side closest to the FDC. Markers shall be parallel to the FDC having the reflective ends of the street markers facing the direction of traffic. 2015 IFC 912.7



FIRE DEPARTMENT CONNECTION
NOT TO SCALE



ES-909RPDA

Engineering Specification

Job Name ____ Contractor ____
Job Location ____ Approval ____
Engineer ____ Contractor's P.O. No. ____
Approval ____ Representative ____

Series 909RPDA
Reduced Pressure Detector Assemblies
Sizes: 2½" – 10"

Series 909RPDA Reduced Pressure Detector Assemblies are used in health hazard applications and are designed exclusively for use in accordance with water utility authority containment requirements. It is mandatory to prevent the reverse flow of fire protection system substances, i.e., glycerin wetting agents, stagnant water and water of non-potable quality from being pumped or siphoned into the potable water line.

Benefits: Detects leaks . . . with emphasis on the cost of unaccountable water; incorporates a meter which allow the water utility to:
- detect leaks that historically create great annual cost due to waste
- provide a detection point for unauthorized use. It can help locate illegal taps

Modular check design concept facilitates maintenance and assembly access. The coating on this backflow assembly uses ArmorTek™ technology to resist corrosion due to microbial induced corrosion (MIC) or exposed metal substrate. All sizes are standardly equipped with AWWA epoxy coated, UL/FM listed OSY resilient seated gate valves, CFM (cubic feet per minute) or GPM (gallon per minute) meter and ball type test cocks. A pressure differential relief valve is located in a zone between the check valves.

909RPDAOSY

First Check Assembly · Relief Valve · Second Check Assembly

Modular Design
Features a modular design concept which facilitates maintenance and assembly access. All sizes are standardly equipped with gate valves and ball type test cocks.

Features
- Body construction fused epoxy coated cast iron
- Replaceable bronze seats
- Maximum flow at low pressure drop
- Compact for economy combined with performance
- Design simplicity for easy maintenance
- Utilizes advanced ArmorTek™ coating technology to resist corrosion of internals
- Furnished with ⅜" x ¾" (16 x 19mm) meter
- Air-in/Water-out relief valve design provides maximum capacity during emergency conditions.
- No special tools required

How it operates
The unique relief valve construction incorporates two channels: one for air, one for water. When the relief valve opens, as in the accompanying air-in/water-out diagram, the right-hand channel admits air to the top of the reduced pressure zone, relieving the zone vacuum. The channel on the left then drains the zone to atmosphere. Therefore, if both check valves foul, and simultaneous negative supply and positive backpressure develops, the relief valve uses the air-in/water-out principle to stop potential backflow.

Pipe Line Center · Relief Valve Body Flange · Relief Valve Seat · Relief Valve Piston · Relief Valve Piston Assembly · Wiper Seal · Bottom Plug Spring Assembly · Water Out · Air In

Specifications
A Reduced Pressure Detector Assembly shall be installed on fire protection systems when connected to a public water supply. Degree of hazard present is determined by the local authority having jurisdiction. The unit shall be a complete assembly including UL listed and FM approved OSY shutoff valves. Including an auxiliary line consisting of an approved backflow preventer and water meter. The valve body shall utilize a coating system with built in electrochemical corrosion inhibitor and microbial inhibitor. The assembly shall meet the requirements of AWWA C511-92; ASSE 1047; UL Classified File No. EX3185; CSA B64 and USC Manual 8th. Edition. Assembly shall be a Watts Series 909RPDA.

Now Available
WattsBox Insulated Enclosures.
For more information, send for literature ES-WB.

NOTICE
The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

NOTICE
Inquire with governing authorities for local installation requirements

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

WATTS

Models
Suffix:
OSY – UL/FM outside stem and yoke resilient seated gate valves
CFM – cubic feet per minute meter
GPM – gallons per minute meter
LF – less shutoff valves

Materials
Discs: Rubber
Body: Epoxy coated cast iron
Seat and Disc Holder: Bronze
Trim: Stainless steel
Test Cocks: Bronze

Pressure — Temperature
Temperature Range: 33°F – 140°F (0.5°C – 60°C) continuous
Maximum Working Pressure: 175psi (12.1 bar)

Standards
AWWA C511-92; CSA B64
USC Manual for Cross-connection Control, 8th Edition

Approvals
ASSE 1047 · UL · FM Approved
Approved by the foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

Series 909AG AIR GAPS
When installing a drain line, use Series 909 air gaps on Model 909 backflow preventers.

Iron Body Model	Ordering Code	Series/Sizes	A in.	A mm	B in.	B mm	C in.	C mm	Weight lbs	Weight kgs
909AG-F	0881378	1¼" – 3" 009/909; 1¼" – 2" 009 M1; 2" 009 M2	4⅜"	111	6¾	171	2	51	3.25	1.47
909AG-K	0881385	4" – 6" 909 8" – 10" 909 M1	6⅜"	162	9⅝	244	3	76	6.25	2.83
909AG-M	0881387	8" – 10" 909	7⅜"	187	11¼	286	4	102	15.50	7.03

Dimensions — Weights

NOTE: Piping for 3" 909 will start from #1 gate valve and connect at #2 check valve.

SIZE in.	A in.	A mm	C in.	C mm	D in.	D mm	D1 in.	D1 mm	E, E1 in.	E, E1 mm	G in.	G mm	L in.	L mm	R in.	R mm	T in.	T mm	T1 in.	T1 mm	WEIGHT lbs.	WEIGHT kgs.
2½	41⅞	1070	16⅜	416	5¼	133	4½	114	12	305	7	178	26⅛	664	14	356	9	229	7⅝	194	230	104
3	42⅛	1070	18⅞	479	5¼	133	4½	114	12	305	7	178	26⅛	664	14	356	9	229	7⅝	194	230	104
4	55⅛	1400	22¾	578	6	152	5⅞	149	17	432	9½	241	37	940	15	381	13⅝	346	11¾	299	470	213
6	65½	1664	30⅛	765	6	152	6	152	20¾	527	14½	368	45	1130	16	406	13⅝	346	11¾	299	798	362
8	78½	1994	37¾	959	9¾	248	8⅝	219	26	660	18½	470	55¼	1403	17	432	18½	470	16⅜	416	1456	660
10	93⅝	2378	45¾	1162	9¾	248	8⅝	219	32	813	21½	546	67½	1715	18	457	18½	470	16⅜	416	2230	1012

2

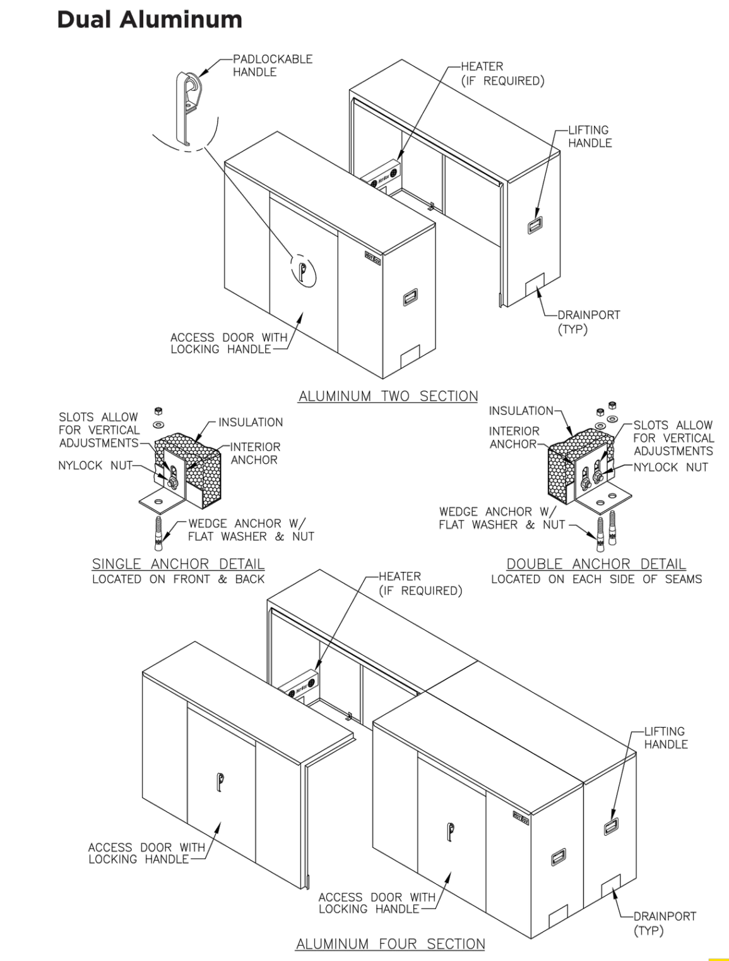
Dual Aluminum
Wider design for dual or tandem installations. Doors on both sides of the enclosure improve access. Key benefits include (see page 51 for finish and color options):

- **Quick & Easy Installation -** Modular design with a maximum of 4 tongue and groove sections.
- **Easy Access -** Lightweight removable doors can easily be removed by one person.
- **Peace of Mind -** ASSE 1060 certification ensures that requirements for structural strength, drainage capacity, material construction, equipment access, and functional design are met.
- **Superior Freeze Protection -** Insulation will not sag or delaminate from the walls due to the strong chemical bond between the aluminum and insulation. Wall-mounted heaters are installed above the discharge point to provide better long-term performance and safety.

For unheated units, replace the "H" in the part# with an "L". Pad size=inside Dimensions + 12".

Catalog Part Number	Model Number	Inside Width (in)	Inside Length (in)	Inside Height (in)	Heater(s)	Sections	Weight #
HA055074057	HB3E-D	55	74	57.5	(2) 1000W	2	223
HA055085057	HB3E-DS	55	85	57.5	(2) 1000W	2	239
HA067090050	HB4N-D	67	90	50.5	(2) 1500W	2	251
HA067090057	HB4E-D	67	90	57.5	(2) 1500W	2	270
HA067102050	HB4N-DS	67	102	50.5	(2) 1500W	2	275
HA067102057	HB4E-DS	67	102	57.5	(2) 1500W	2	291
HA071105053	HB6N-D	71	105	53	(2) 1500W	4	338
HA071105064	HB6E-D	71	105	64	(2) 1500W	4	375
HA071125053	HB6N-DS	71	125	53	(2) 1500W	4	373
HA071125064	HB6E-DS	71	125	64	(2) 1500W	4	415
HA083123058	HB8N-D	83	123	58	(2) 1900W	4	452
HA083123074	HB8E-D	83	123	74	(2) 1900W	4	519
HA083145058	HB8N-DS	83	145	58	(2) 1900W	4	491
HA083145074	HB8E-DS	83	145	74	(2) 1000W (2) 1500W	4	564
HA087144065	HB10N-D	87	144	65	(2) 1500W (1) 1900W	4	571
HA087144085	HB10E-D	87	144	85	(4) 1500W	4	674
HA087172065	HB10N-DS	87	172	65	(2) 1500W (1) 1900W	4	651
HA087172085	HB10E-DS	87	172	85	(4) 1500W	4	766
HA038060043	HB3FN-D	38	60	43	(1) 1500W	2	145
HA038060048	HB3FN-DT	38	60	48	(1) 1500W	2	155
HA038080043	HB3FE-D	38	80	43	(1) 1500W	2	194
HA038080048	HB3FE-DT	38	80	48	(1) 1500W	2	200
HA040066045	HB4FN-D	40	66	45	(1) 1500W	2	159
HA040066051	HB4FN-DT	40	66	51	(1) 1500W	2	171
HA040085045	HB4FE-D	40	85	45	(1) 1900W	2	207
HA040085051	HB4FE-DT	40	85	51	(1) 1900W	2	222
HA045082051	HB6FN-D	45	82	51	(2) 1000W	2	229
HA045082062	HB6FN-DT	45	82	62	(2) 1000W	2	256
HA045106051	HB6FE-D	45	106	51	(2) 1000W	2	260
HA045106062	HB6FE-DT	45	106	62	(1) 1000W (1) 1500W	2	296
HA051096054	HB8FN-D	51	96	54.5	(1) 1000W (1) 1500W	2	269
HA051096067	HB8FN-DT	51	96	67	(2) 1500W	2	307
HA051124054	HB8FE-D	51	124	54.5	(2) 1500W	4	325
HA051124067	HB8FE-DT	51	124	67	(1) 1500W (1) 1900W	4	366
HA054112059	HB10FN-D	54	112	59.5	(2) 1500W	2	317
HA054112075	HB10FN-DT	54	112	75	(1) 1500W (1) 1900W	2	365
HA054153059	HB10FE-D	54	153	59.5	(2) 1900W	4	394
HA054153075	HB10FE-DT	54	153	75	(2) 1900W	4	453

22 Hubbell Utility Solutions



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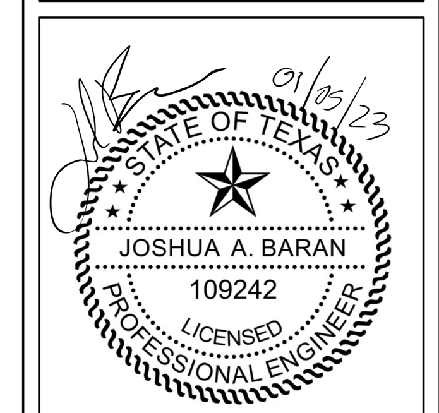
UTILITY PLAN



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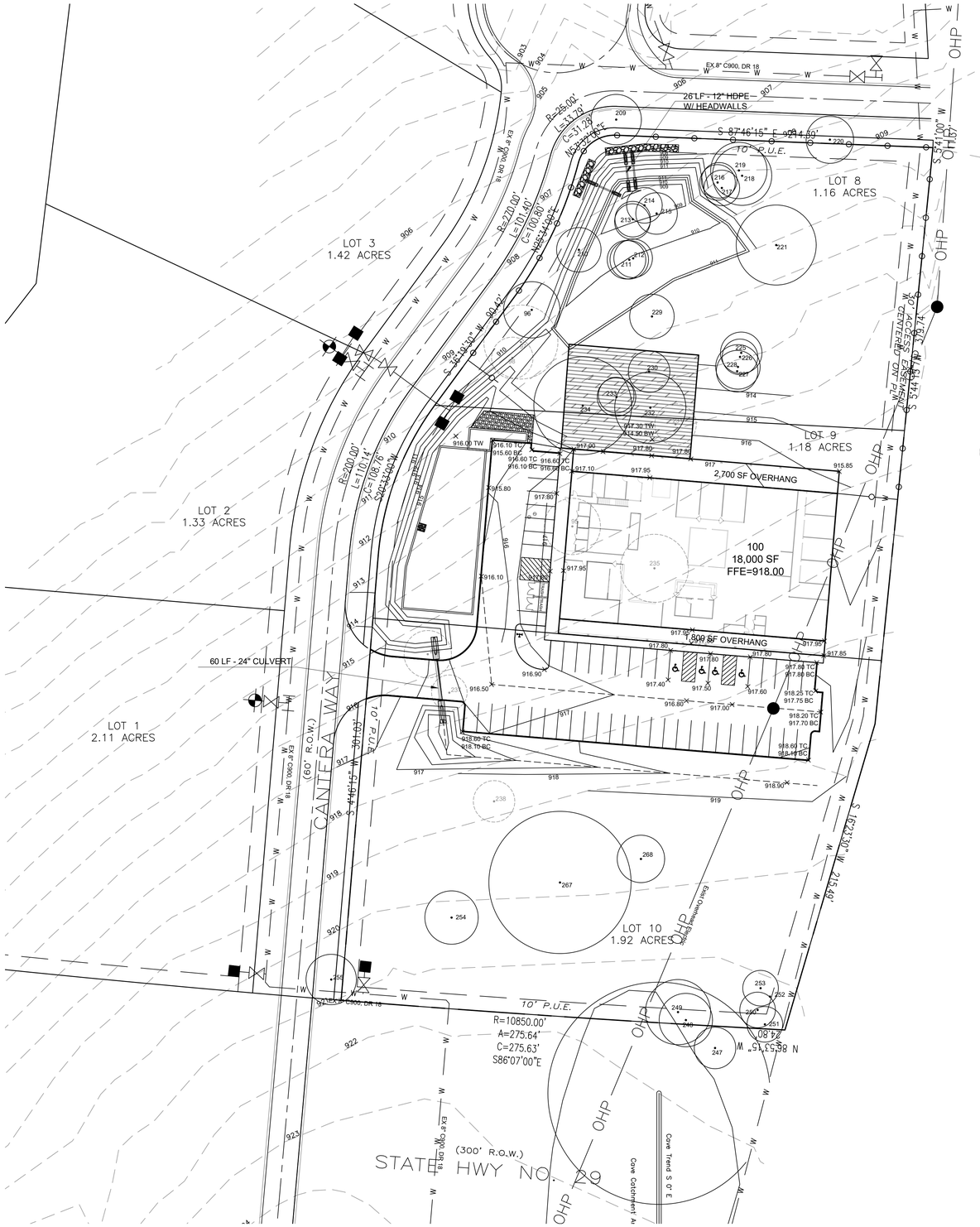

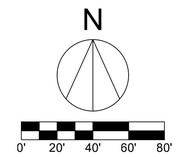

LEGEND:

PROPERTY LINE	
LOT LINE	
EXISTING EDGE OF PAVEMENT	
PROPOSED SWALE	
PROPOSED HIGH POINT	
EXISTING MAJOR CONTOUR	785
EXISTING MINOR CONTOUR	786
PROPOSED MAJOR CONTOUR	785
PROPOSED MINOR CONTOUR	786
PROPOSED RETAINING WALL	
EXISTING HERITAGE TREE DRIP LINE	
TOP OF PAVEMENT	TP
TOP OF GRATE	TG
TOP OF SIDEWALK	TS
FINISHED GRADE	FG
BOTTOM OF WALL	BW
TOP OF WALL	TW
TOP OF CURB	TC
BOTTOM OF CURB	BC

NOTES:

1. SLOPES ON ACCESSIBLE RAMPS MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP.
2. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP IS 30 INCHES.
3. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50.
4. 5' X 5' LANDINGS ARE REQUIRED AT ALL CHANGES IN DIRECTION. LANDINGS SHALL NOT HAVE A SLOPE OF GREATER THAN 1:50 IN ANY DIRECTION.
5. GROUND SURFACES ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM, AND SLIP RESISTANT.
6. CONTRACTOR TO MATCH EXISTING GRADE, GUTTER, AND ASPHALT WHEN TYING INTO EXISTING ROADWAYS.
7. CONTRACTOR TO COORDINATE GRADES WITH ARCHITECTURAL PLANS.
8. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATION AND TO INLETS.
9. CONCRETE PAVEMENT TO HAVE MINIMUM 0.5% SLOPE IN ALL AREAS. NO PONDING IS ALLOWED IN THE PARKING AREA.
10. ELEVATIONS SHOWN OUTSIDE OF PAVEMENT ARE FINISHED GRADES INCLUDING ANY TOPSOIL, GRASS, ETC.
11. ELEVATIONS SHOWN WITHIN PAVEMENT ARE TO GUTTER ELEVATION UNLESS OTHERWISE NOTED.
12. THE EXCAVATION CONTRACTOR SHALL TAKE INTO ACCOUNT THE REQUIREMENTS FOR COMPACTED BASE AND CONCRETE THICKNESS AS CALLED FOR ON THE FOUNDATION PLAN. ALL ELEVATIONS SHOWN ARE TO FINISHED GRADE.
13. SIDEWALK LOCATED ADJACENT TO BUILDING SHALL SLOPE A MINIMUM OF 1% AWAY FROM THE BUILDING.
14. LANDSCAPE AREAS DIRECTLY ADJACENT TO THE BUILDING SHALL SLOPE A MINIMUM OF 1% AWAY FROM THE BUILDING.
15. SITE SURVEY, PROVIDED BY OTHERS, DOES NOT INCLUDE A REFERENCE TO TEMPORARY OR PERMANENT BENCHMARKS NEAR THE SITE. CONTRACTOR SHALL VERIFY EXISTING TOPOGRAPHY AND THE LOCATION/ELEVATION OF THE SITE IMPROVEMENTS PRIOR TO STARTING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF DISCREPANCIES ARE DISCOVERED.
16. CONTRACTOR SHALL ADJUST ALL VISIBLE UTILITY STRUCTURES TO FINISHED GRADE AS NEEDED AT NO ADDITIONAL COST TO OWNER.

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GRADING PLAN

STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER
01/05/23

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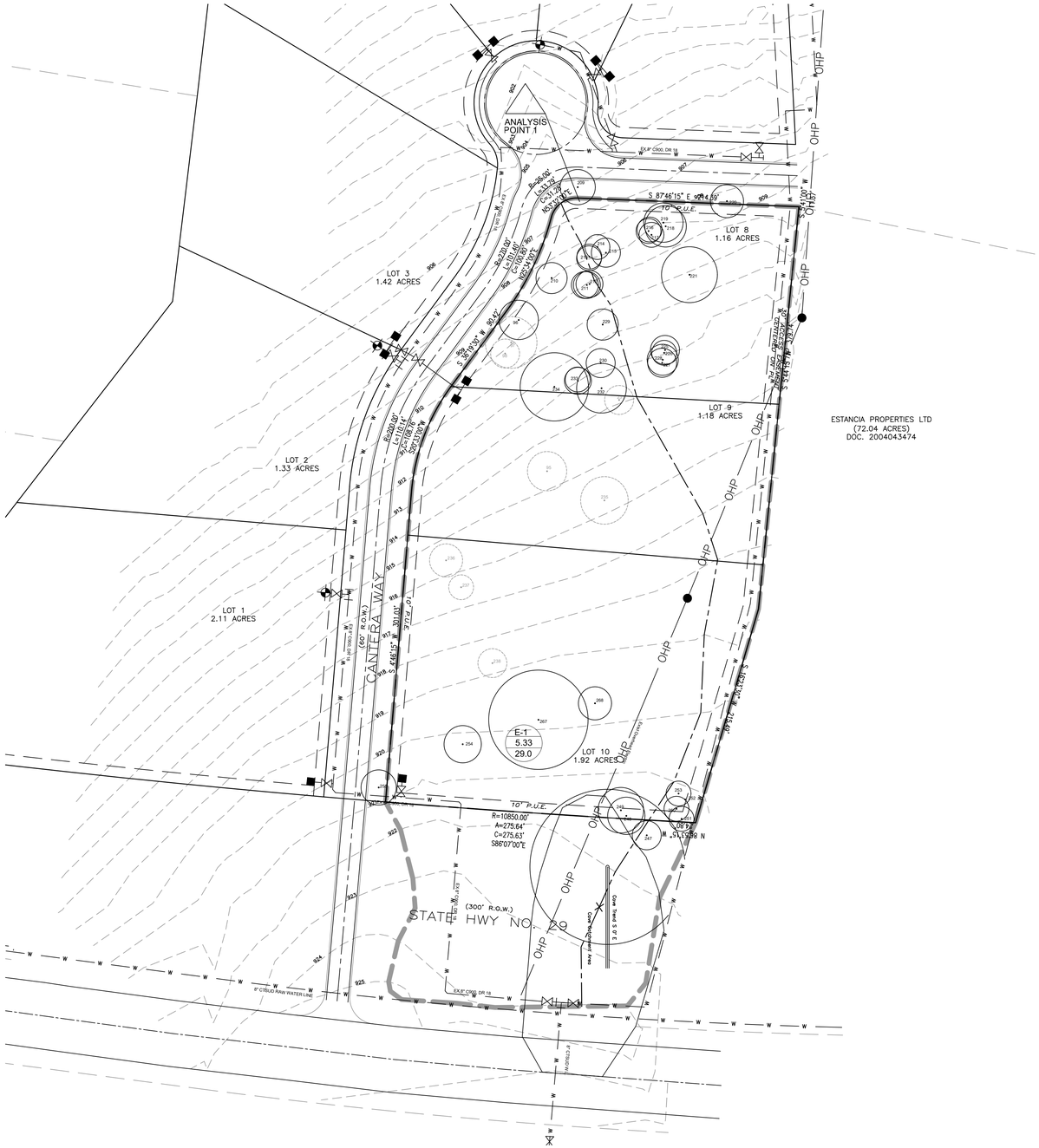

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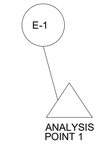

LEGEND:

PROPERTY LINE	
LOT LINE	
EXISTING EDGE OF PAVEMENT	
EXISTING MAJOR CONTOUR	105
EXISTING MINOR CONTOUR	104
EXISTING DRAINAGE AREA BOUNDARY	
FLOW ARROW	
DRAINAGE AREA TAG	E-1 / 5.59 / 33.6 — DRAINAGE AREA, ACREAGE, X - YEAR FLOW

NOTES:
1. REFER TO ENGINEERING REPORT FOR SUPPORTING CALCULATIONS.
2. THIS SHEET IS USED SOLELY FOR THE PURPOSE OF DETENTION POND AND WATER QUALITY DESIGN, NOT FOR CONSTRUCTION.

N

0' 30' 60' 90' 120'

EXISTING DRAINAGE SUMMARY

Area ID	DA (ac.)	DA (mi^2.)	TC(min.)	Lag (min)	CN	Q_2(cfs)	Q_{10}(cfs)	Q_{25}(cfs)	Q_{100}(cfs)
E-1	5.33	0.0083	14.8	8.9	82	11.0	21.4	27.3	36.4
Total	5.33	0.0083		Total Peak Flow		11.0	21.4	27.3	36.4

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EXISTING DRAINAGE AREA MAP

STATE OF TEXAS
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01/05/23

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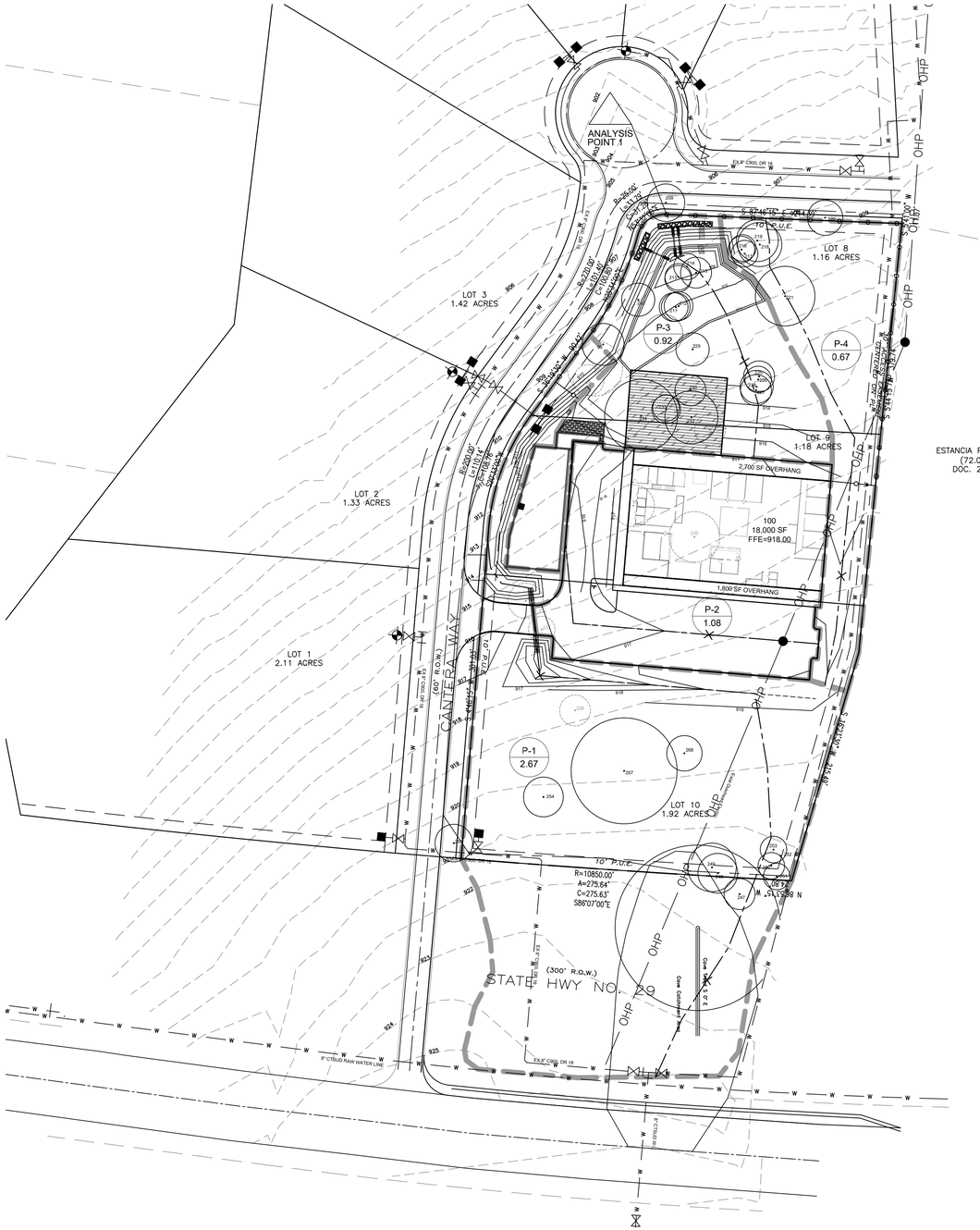
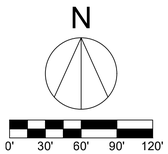
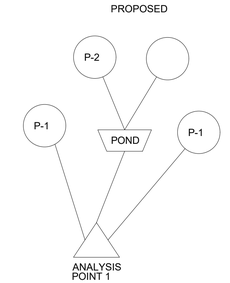




LEGEND:

- PROPERTY LINE
- LOT LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING MAJOR CONTOUR 105
- EXISTING MINOR CONTOUR 104
- PROPOSED MAJOR CONTOUR 115
- PROPOSED MINOR CONTOUR 114
- SUBBASIN WATERSHED BOUNDARY
- PRPOSED SWALE
- FLOW ARROW
- DRAINAGE AREA TAG (P-1 / 5.59): DRAINAGE AREA, ACREAGE, X - YEAR FLOW



P-3

EXISTING DRAINAGE SUMMARY

Area ID	DA (ac.)	DA (mi^2.)	TC(min.)	Lag (min)	CN	Q_2(cfs)	Q_{10}(cfs)	Q_{25}(cfs)	Q_{100}(cfs)
E-1	5.33	0.0083	14.8	8.9	82	11.0	21.4	27.3	36.4
Total	5.33	0.0083			Total Peak Flow	11.0	21.4	27.3	36.4

PROPOSED DRAINAGE SUMMARY

Area ID	DA (ac.)	DA (mi^2.)	TC(min.)	Lag (min)	CN	Q_2(cfs)	Q_{10}(cfs)	Q_{25}(cfs)	Q_{100}(cfs)
P-1	2.67	0.0042	13.9	8.3	80	5.0	10.2	13.2	17.8
P-2	1.08	0.0017	10.0	6.0	98	5.1	7.1	8.3	10.1
P-3	0.92	0.0014	10.0	6.0	80	1.9	3.8	5.0	6.7
P-4	0.67	0.0010	13.4	8.0	79	1.2	2.5	3.3	4.4
Total	5.34	0.0083			Total Peak Flow	11.0	20.9	26.7	35.0

ANALYSIS POINT 1 (CFS) ROUTED FLOWS

Condition	2-year	10-year	25-year	100-year
Existing	11.0	21.4	27.3	36.4
Developed	11.0	20.9	26.7	35.0

CN CALCULATIONS						IMPERVIOUS SUMMARY					
Area ID	Area acres	Area sq. mi.	Soil Group %	Weighted CN	CN Description	Total (sf)	Pavement	Buildings	% Imp	Pervious	% Pervious
E-1	5.33	0.0083281	100% Group D	82	(79) Woods/Grass Combination--Good	232,223	-	-	0.0%	232,223	100%
P-1	2.67	0.0041719	100% Group D	79	(79) Woods/Grass Combination--Good (98) Impervious	116,090	1,294	-	1.1%	114,796	99%
P-2	1.08	0.0016875	100% Group D	98	(80) Good Condition Open Space (98) Impervious	46,928	23,843	22,500	98.8%	585	1%
P-3	0.92	0.0014375	100% Group D	80	(80) Good Condition Open Space (98) Impervious	40,027	-	-	0.0%	40,027	100%
P-4	0.67	0.0010469	100% Group D	79	(79) Woods/Grass Combination--Good	29,225	-	-	0.0%	29,225	100%

NOTES:
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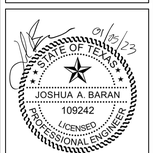
PROPOSED DRAINAGE AREA MAP



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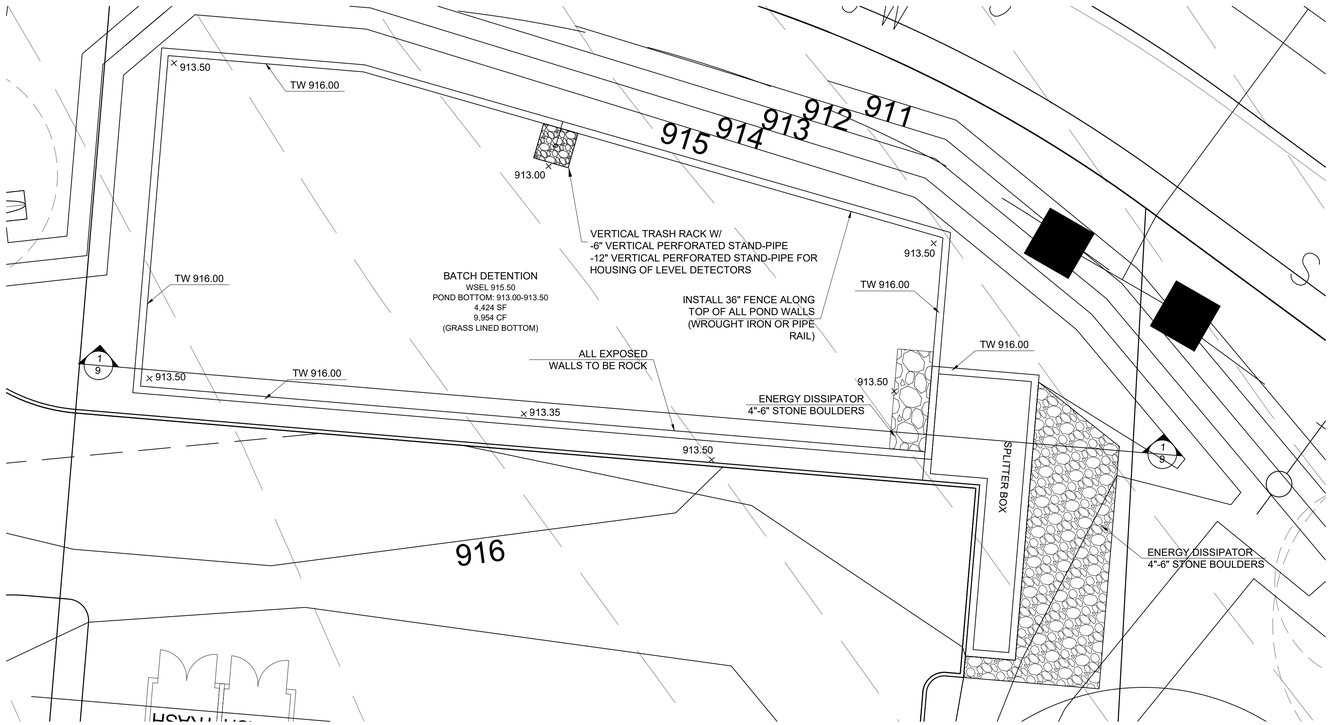
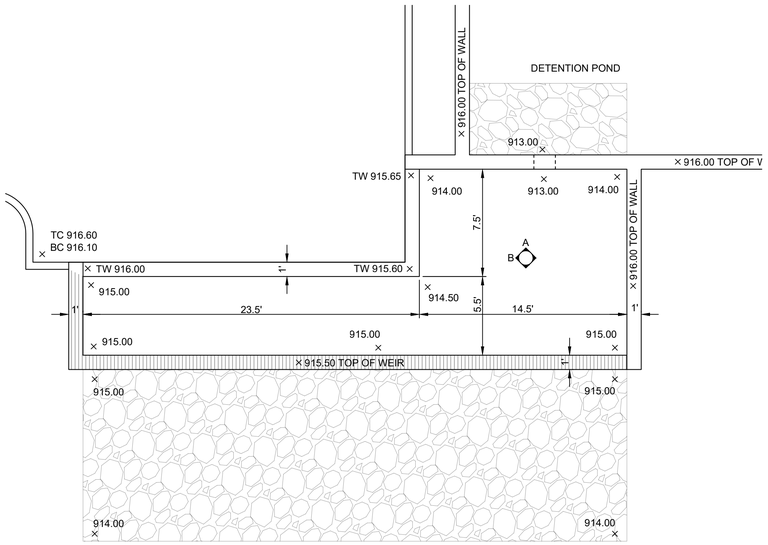


WATER QUALITY POND PLAN

SCALE: 1"=10'

LEGEND:

- PROPERTY LINE
- LOT LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMENT
- PROPOSED RETAINING WALL
- EXISTING HERITAGE TREE DRIP LINE



SPLITTER BOX PLAN

SCALE: 1"=5'

POND STORAGE-DISCHARGE TABLE:

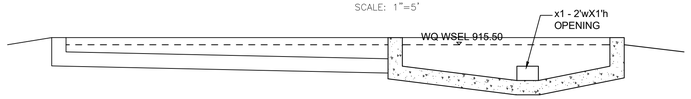
ELEVATION (FEET)	SURFACE AREA (SQ. FT.)	CUMULATIVE VOLUME (CUBIC FT.)
913.00	0	
913.50	4,424	1,106
914.00	4,424	3,318
914.50	4,424	5,530
915.00	4,424	7,742
915.50	4,424	9,954 (WQ ELEVATION)
916.00	4,424	12,166

25-year Peak Flow Rate to Control (Q25)	13.2	cfs
100-year Peak Flow Rate to Control (Q100)	17.8	cfs
Pond Freeboard Elevation	916.00	ft msl
Water Quality Elevation	915.50	ft msl
Elevation of Splitter/Overflow Weir (min WQ elev.)	915.50	ft msl

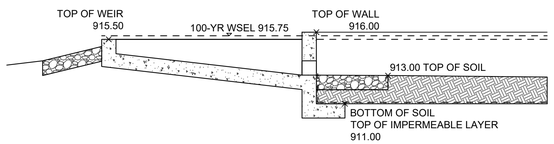
	REQUIRED	PROPOSED
Length of Splitter Weir	43.0 ft	43.5 ft
Required Head to Pass Q100 (1 ft max)	0.25 ft	0.247 ft
Pond Freeboard Provided to Pass Q100 (0.25 ft min)	0.25 ft	0.50 ft

SPLITTER OPENING CALCULATION

Elevation of Opening =	913.50
Width of Opening =	2
Height of Opening =	1
Number of Openings =	1
Area =	2
Head =	2.00
Q =	14.07
Q (25) =	13.2 cfs



ELEVATION A



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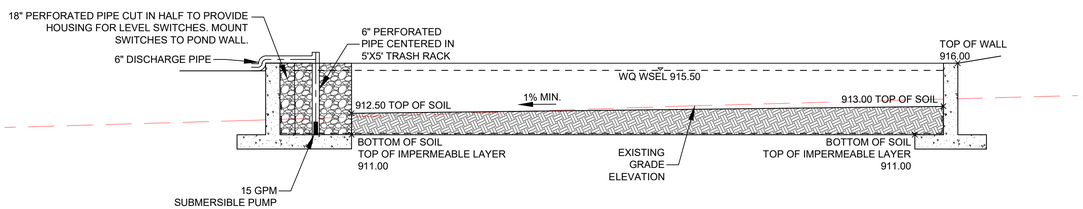
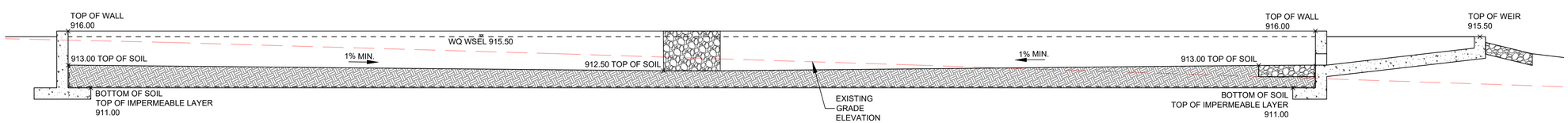


SECTION 1

SCALE: N.T.S.



SECTION 2

SCALE: N.T.S.

No.	Date	Revisions	App.

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Georgetown, TX 78633
512-779-7414 (p)
josh.baran@jabeng.com

GOLF RANCH

100 CANTERA WAY
GEORGETOWN, TEXAS 78626

WATER QUALITY PLAN

STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER
01/05/23

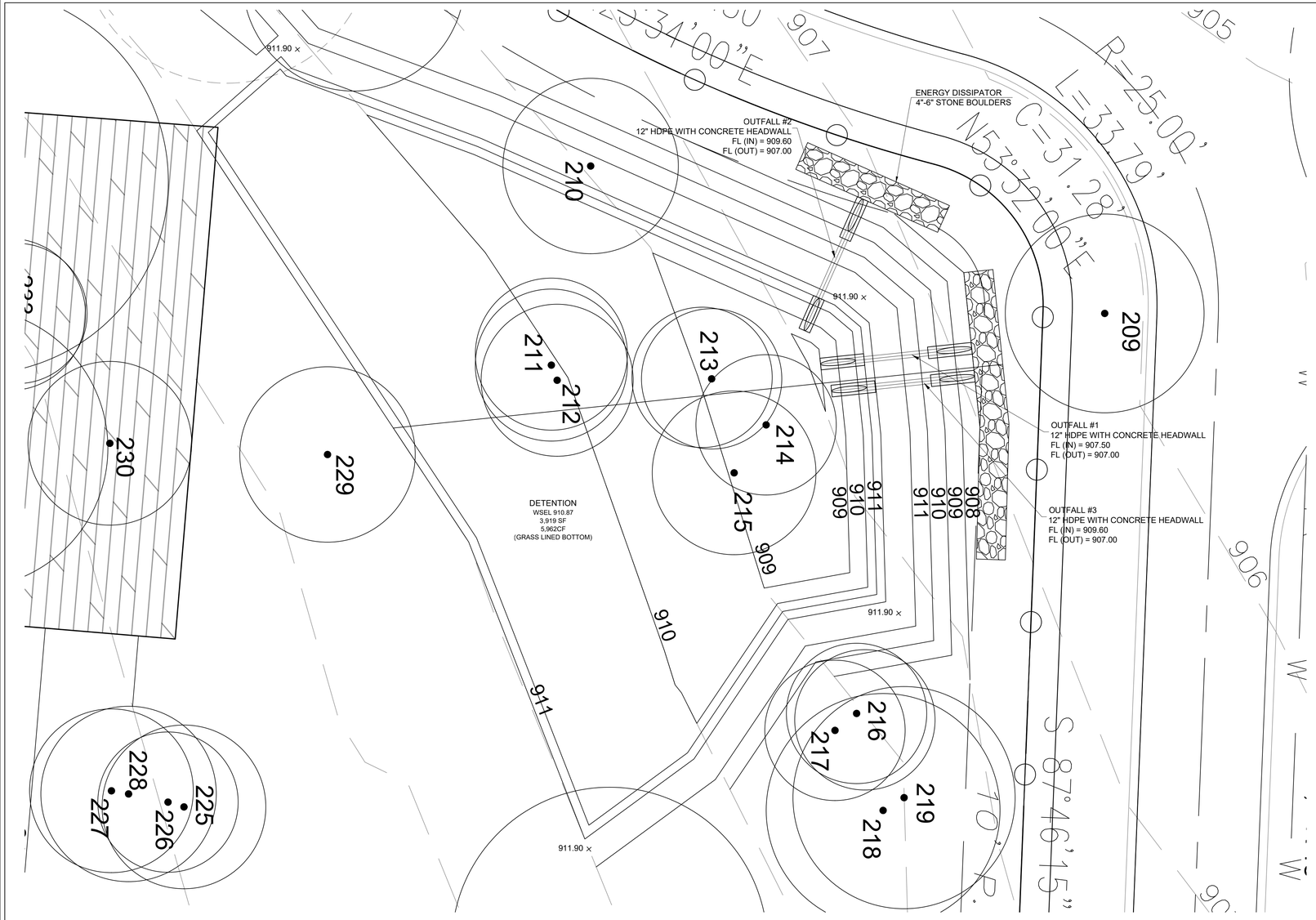
Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.09

Sheet 9 OF 20

2021-27-SWP

Texas 811



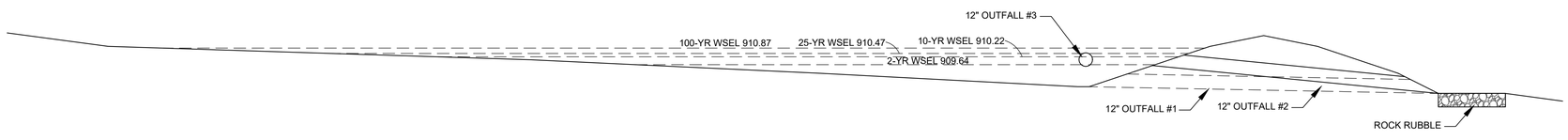
DETENTION POND PLAN

SCALE: 1"=10'

POND STORAGE-DISCHARGE TABLE:

ELEVATION (FEET)	SURFACE AREA (SQ. FT.)	CUMULATIVE VOLUME (CUBIC FT.)
907.50	0	
908.00	21	5
909.00	1,058	545
909.64	2,553	1,702 (2-YEAR)
910.00	3,390	2,769
910.22	3,521	3,516 (10-YEAR)
910.47	3,672	4,416 (25-YEAR)
910.87	3,919	5,962 (100-YEAR)
911.00	3,995	6,461
912.00	4,600	7,990

NOTE THAT WATER QUALITY POND IS ASSUMED FULL FOR DETENTION / STORMWATER ROUTING CALCULATIONS.



SECTION 2

SCALE: N.T.S.

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WATER QUALITY PLAN

STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER
01/05/23

Project No.:	21010
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2021-27-SWP

Texas 811

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Golf Ranch
Date Prepared: 4/12/2022

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
TSS Removal Required =	85	Percent
Total project area included in plan * =	4.26	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	1.09	acres
Total post-development impervious cover fraction * =	0.26	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	1014	lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 1

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = A-1

Total drainage basin/outfall area =	1.08	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.06	acres
Post-development impervious fraction within drainage basin/outfall area =	0.99	
$L_{M\ THIS\ BASIN}$ =	985	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention
Removal efficiency = 91 percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	1.08	acres
A_I =	1.06	acres
A_P =	0.01	acres
L_R =	1072	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ = 1014 lbs.

F = 0.95

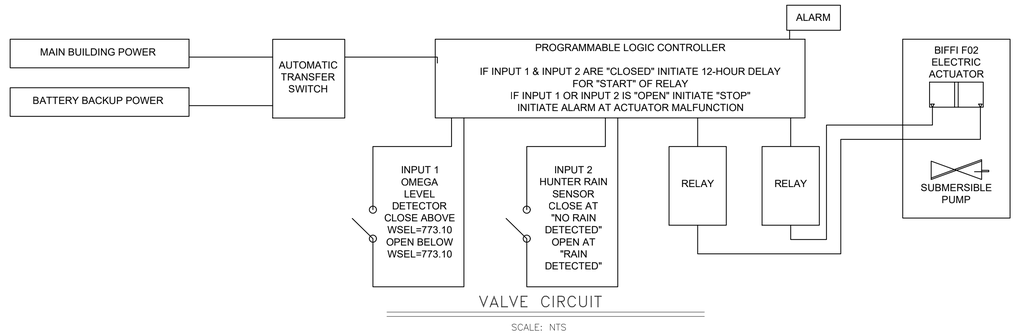
6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth =	2.60	inches
Post Development Runoff Coefficient =	0.81	
On-site Water Quality Volume =	8197	cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	1639	
Total Capture Volume (required water quality volume(s) x 1.20) =	9837	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.



VALVE CIRCUIT

SCALE: NTS

CONTROLLER NOTES:
1. DUAL SENSOR LEVEL CONTROLLER - OMEGA MODEL LVCN-130 OR APPROVED EQUAL.
2. ALARM MODULE SHALL BE REQUIRED. PROVIDE OMEGA DMD1080 SERIES WITH CONNECTED VISUAL ALARM. MOUNT ALARM TO OUTSIDE OF BUILDING FACING POND. VISUAL ALARM SHALL INITIATE AT VALVE MALFUNCTION. ALARM TO BE EDWARDS SIGNALING HORN OR APPROVED EQUAL.
3. SUBMERSIBLE PUMP TO PROVIDE 15 GPM. ACTUATOR TO BE IN "NORMALLY CLOSED" POSITION.
4. ELECTRIC ACTUATOR TO BE BIFFI MODEL F02 ELECTRIC ACTUATOR OR APPROVED EQUAL.
5. LEVEL SWITCHES TO BE OMEGA HEAVY DUTY SIDE-MOUNTED. MOUNT SWITCHES TO SIDE WALL AS SHOW ON PLAN AND PROFILE. PROTECT SWITCH CONTROLLERS WITH HALF OF PERFORATED PVC PIPE GROUTED TO SIDE WALL.
6. PROVIDE BATTERY BACKUP SYSTEM WITH PHOTOCELL MOUNTED TO BUILDING.
7. LOGIC CONTROLLER TO BE OMEGA OR SIMILAR.

No.	Date	Revisions	App.

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GOLF RANCH
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TCEQ CALCULATIONS

01/05/23
STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER

Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.11

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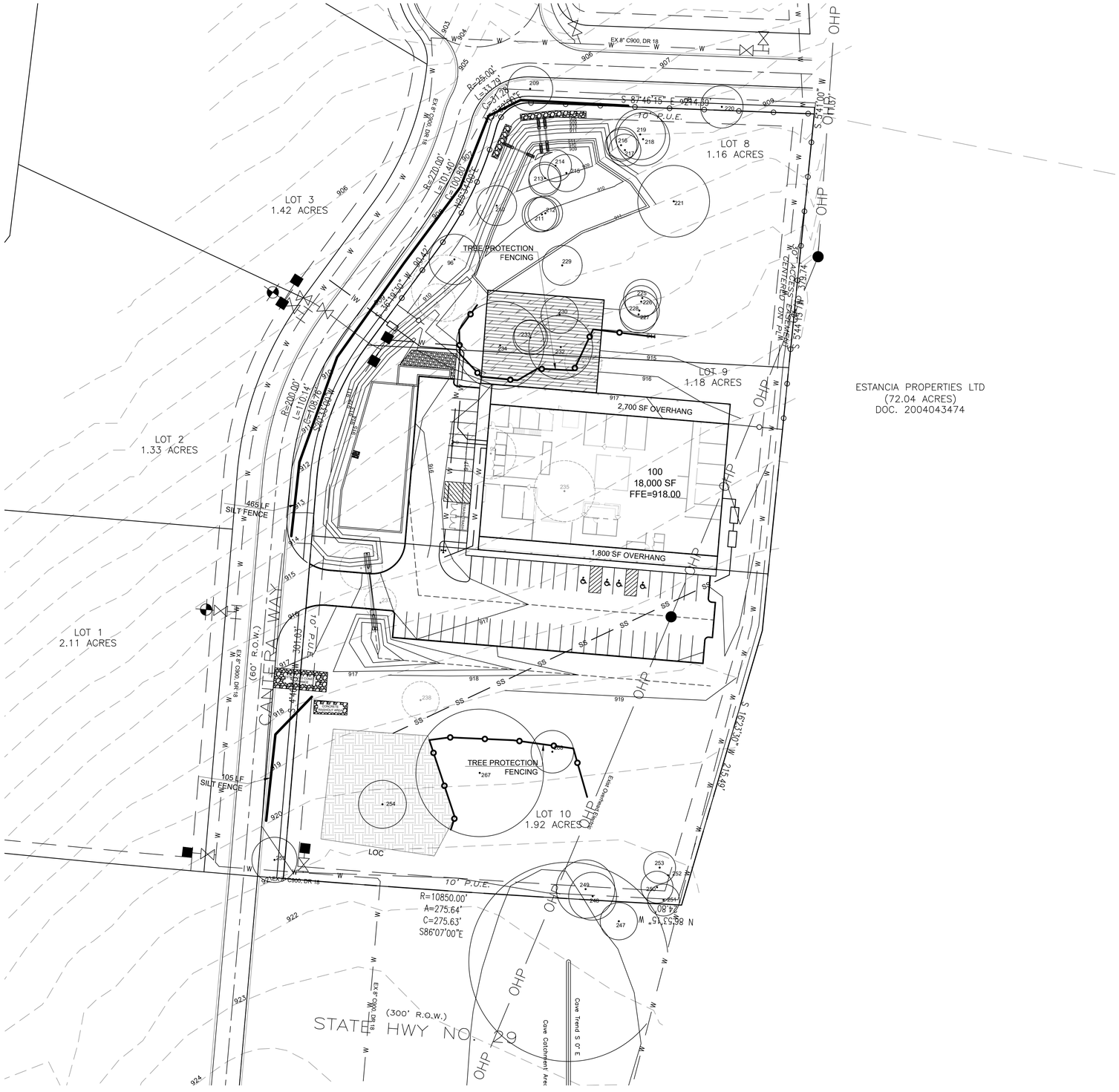
2021-27-SWP

Texas 811



LEGEND:

- PROPERTY LINE
- LOT LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING MAJOR CONTOUR (105)
- EXISTING MINOR CONTOUR (104)
- PROPOSED MAJOR CONTOUR (115)
- PROPOSED MINOR CONTOUR (114)
- PROPOSED HIGH POINT
- PROPOSED SILT FENCE
- PROPOSED ROCK BERM
- PROPOSED INLET PROTECTION
- PROPOSED TREE PROTECTION
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE/EXIT

EROSION CONTROL QUANTITIES		
SILT FENCE	620	LF
STABILIZED CONSTRUCTION ENTRANCE	1	EA
LIMITS OF CONSTRUCTION	4.48	AC

NOTES:
1. CONTRACTOR IS RESPONSIBLE FOR DEWATERING OF WORK AREAS. WHEN REQUIRED CONTRACTOR SHALL DEWATER EXCAVATED AREAS USING A CITY METHOD (I.E. SILT FENCE, HAY BALE DIKE, ROCK BERM, ETC.)
2. CONTRACTOR SHALL PROVIDE TEMPORARY STAGING AND SPOILS AREA AS NEEDED AND PROVIDE ADDITIONAL SILT FENCE ALONG THE DOWNSTREAM SIDE OF THESE AREAS THROUGHOUT CONSTRUCTION.
3. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
4. CITY INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/ SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY RULES AND REGULATIONS.
5. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY REQUIREMENTS, OR AS DIRECTED BY THE CITY INSPECTOR.

N

0' 20' 40' 60' 80'

No.	Date	Revisions	App.

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GOLF RANCH

100 CANTERA WAY
GEORGETOWN, TEXAS 78626

EROSION / SEDIMENTATION CONTROL PLAN

STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER
01/05/23

Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.12

Sheet 12 OF 20

2021-27-SWP

Texas 811

GENERAL NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, AS APPLIES, WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF GEORGETOWN MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

2. CONTRACTOR SHALL CALL THE ONE CALL CENTER (811) FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W.

3. CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION AT LEAST 24 HOURS PRIOR TO INSTALLATION OF ANY DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET R.O.W. THE METHOD OF PLACEMENT AND COMPACTION OF BACKFILL IN THE CITY'S R.O.W. MUST BE APPROVED PRIOR TO THE START OF BACKFILL OPERATIONS.

4. FOR SLOPES OR TRENCHES GREATER THAN FIVE (5) FEET IN DEPTH, ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE. INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 EAST 6TH STREET, AUSTIN, TEXAS.

5. ALL SITE WORK SHALL COMPLY WITH ENVIRONMENTAL REQUIREMENTS SET FORTH IN THE CITY OF GEORGETOWN CODES AND REGULATIONS.

6. DEVELOPER INFORMATION.

   A. OWNER: GOLF RANCH
      ADDRESS: 100 CANTERA WAY
      GEORGETOWN, TEXAS 78626
      PHONE NO. (512) 863-4573

   B. DEVELOPER: GOLF RANCH
      ADDRESS: 100 CANTERA WAY
      GEORGETOWN, TEXAS 78626
      PHONE NO. (512) 863-4573

   C. OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS.
      JAB ENGINEERING, LLC
      ATTN.: JOSHUA A. BARAN, P.E.
      PHONE NO.: (512) 779-7414

   D. PERSON OR FIRM RESPONSIBLE FOR EROSION & SEDIMENTATION CONTROL MAINTENANCE.
      OWNER: GOLF RANCH
      ADDRESS: 100 CANTERA WAY
      GEORGETOWN, TEXAS 78626
      PHONE NO. (512) 863-4573

7. ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF GEORGETOWN STANDARD SPECIFICATIONS, AS AMENDED BY SPECIAL PROVISION. CURRENT AT THE TIME OF BIDDING.

8. CONTRACTOR TO TAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF THESE CONSTRUCTION OPERATIONS TO BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

9. CONTRACTOR TO GIVE NOTICE TO ALL AUTHORIZED INSPECTORS. SUPERINTENDENTS OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION PERMITS THAT CAN ONLY BE ISSUED TO THE CONTRACTOR HAVE BEEN OBTAINED BY THE CONTRACTOR AT ITS EXPENSE PRIOR TO COMMENCEMENT OF WORK.

10. CONTRACTOR TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING EXCESS AND WASTE MATERIAL. INCLUDING METHODS OF HANDLING AND DISPOSAL.

11. CONTRACTOR TO COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.

12. LOCATION OF EXISTING UTILITIES SHOWN ON PLANS WAS COMPILED FROM RECORD INFORMATION. NO WARRANTY IS IMPLIED AS TO THE ACTUAL LOCATION OF EXISTING UTILITIES.

13. WHEN UNLOCATED OR INCORRECTLY LOCATED UNDERGROUND PIPING, OR A BREAK LOCATED IN THE LINE, OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED DURING SITE WORK OPERATIONS, NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICES IN OPERATION.

14. CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS, AND PROJECT ENGINEERING REFERENCE POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS AT NO ADDITIONAL COST TO OWNER.

15. CONTRACTOR TO CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES. (NO SEPARATE PAY)

16. THROUGHOUT THE CONSTRUCTION, AND AT THE COMPLETION OF CONSTRUCTION. THE CONTRACTOR TO ENSURE THAT DRAINAGE OF STORM WATER RUNOFF IS NOT BLOCKED.

17. THESE PLANS, PREPARED BY JAB ENGINEERING, LLC DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF JAB ENGINEERING REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR IS TO PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY HOUSE BILLS 662 AND 665 ENACTED BY THE TEXAS LEGISLATURE IN THE 70TH LEGISLATURE, REGULAR SESSION.

18. TRAFFIC CONTROLS TO BE CONTRACTOR'S RESPONSIBILITY AND INSTALLED IN ACCORDANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CENTRAL DEVICES (TMUTCD).

19. CONTRACTOR TO EXERCISE CAUTION DURING CONSTRUCTION NEAR AND AROUND GAS LINES. NOTIFY GAS COMPANY 24 HOURS PRIOR TO CONSTRUCTION.

20. NO BLASTING IS ALLOWED ON THIS PROJECT.

21. BURNING IS NOT ALLOWED ON THIS PROJECT.

22. MAKE CONNECTION BETWEEN NEW AND EXISTING ASPHALT STREETS BY REMOVING EXISTING ASPHALT FROM END BACK UNTIL FULL DEPTH BASE AND HMAC ARE ENCOUNTERED AND HMAC APPEARS TO BE IN SOUND CONDITION. PROVIDE EXPANSION JOINT AND DOWELS WHERE CONNECTING EXISTING CURB TO NEW CURB.

23. A CURB LAYDOWN IS REQUIRED AT ALL POINTS WHERE THE PROPOSED SIDEWALK INTERSECTS THE CURB.

24. UNLESS OCCURRING AT AN EXPANSION JOINT, MAKE CONNECTION BETWEEN NEW AND EXISTING SIDEWALK BY EXPOSING AND CLEANING A ONE-FOOT LENGTH OF WELDED WIRE REINFORCEMENT AND LAPPING NEW REINFORCEMENT ONTO THIS LENGTH.

25. CONCRETE FOR SITE WORK, OTHER THAN CONCRETE PAVEMENT AND STRUCTURES, TO BE CLASS "A" (5 SACK, 3000 PSI @ 28-DAYS) AND ALL REINFORCING STEEL TO BE ASTM A615 60, UNLESS OTHERWISE NOTED. REFER TO GEOTECHNICAL REPORT AND ARCHITECTURAL DRAWINGS FOR PAVEMENT STRUCTURAL SPECIFICATIONS.

26. TREE SURVEY, CONTOURS, AND BENCHMARK INFORMATION SUPPLIED BY OTHERS. ACTUAL LOCATION OF TREES AND ELEVATION OF NATURAL GROUND ON THE PROJECT SITE MAY VARY FROM WHAT IS DEPICTED ON THE PLAN SHEETS. JAB ENGINEERING, LLC IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION REGARDING SURVEYS OR BENCHMARK LOCATIONS.

27. BENCHMARKS ARE AS FOLLOWS: SEE SITE PLAN

28. DEMOLITION PERMITS (IF NEEDED) ARE TO BE OBTAINED BY THE CONTRACTOR AT THEIR EXPENSE.

29. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL INVESTIGATION REPORT FOR THIS SITE FOR SUBSURFACE INFORMATION REGARDING THIS PROJECT. AT ITS EXPENSE THE CONTRACTOR IS ENCOURAGED TO MAKE ADDITIONAL SUBSURFACE INVESTIGATIONS.

30. UTILITY RELOCATIONS REQUIRED BY CONSTRUCTION SHALL BE PERFORMED BY THE APPROXIMATE UTILITY COMPANY. ANY RELOCATIONS OR TEMPORARY BRACING NOT DEEMED NECESSARY BY THE ENGINEER, BUT DESIRED FOR CONVENIENCE BY THE CONTRACTOR, SHALL BE PERFORMED BY THE APPROPRIATE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.

TEXAS ONE CALL	1-800-245-4545
PEDERNALES ELECTRIC COOP	512-219-2602
SUDDENLINK	877-694-9474
CITY OF GEORGETOWN	512-930-2572

31. CONTRACTOR TO FIELD VERIFY LOCATION AND FLOWLINES OF EXISTING UTILITIES PRIOR TO INSTALLATION OF PROPOSED UTILITY. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

32. PUMPING OF STORMWATER FROM EXCAVATIONS IS PROHIBITED UNLESS THE STORMWATER IS DISCHARGED TO ENCOURAGE SHEET/OVERLAND FLOW. ADDITIONAL EROSION AND SEDIMENTATION CONTROLS MAY BE REQUIRED, AT NO ADDITIONAL COST TO THE OWNER.

33. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS ONE SQUARE FOOT IN TOTAL AREA, BLOWS AIR FROM WITHIN THE SUBSTRATE, AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IMMEDIATELY CONTACT A CITY OF GEORGETOWN INSPECTOR FOR FURTHER INVESTIGATION.

CONSTRUCTION SEQUENCING:

1. INSTALL CONSTRUCTION FENCING, STABILIZED CONSTRUCTION ENTRANCE, EROSION CONTROLS AND TREE PROTECTION FENCING PER APPROVED EROSION AND SEDIMENTATION CONTROL/TREE PROTECTION PLAN.
2. THE CONTRACTOR SHALL ARRANGE AND COORDINATE ACCEPTABLE MEETING TIMES FOR AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE OWNER, PROJECT ENGINEER, RELEVANT CONTRACTORS, RELEVANT UTILITY REPRESENTATIVES, AND THE CITY ENGINEER/INSPECTOR.
3. BEGIN SITE CLEARING/DEMOLITION.
4. ROUGH GRADE SITE AND PONDS IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.
5. INSTALL UTILITY IMPROVEMENTS.
6. CONSTRUCT BUILDING FOUNDATIONS.
7. CONSTRUCT ALL-WEATHER DRIVING SURFACE.
8. CONSTRUCT BUILDING(S).
9. COMPLETE GRADING, DRAINAGE AND PAVING.
10. HYDROMULCH OR SOD ALL DISTURBED AREAS AND CLEAN UP SITE.
11. FINAL CLEARING OF EROSION AND SEDIMENTATION CONTROLS AND STORM DRAIN STRUCTURES.
12. CITY VISITS SITE AND ISSUES CERTIFICATE OF ACCEPTANCE ONLY IF ALL CONSTRUCTION IS IN SUBSTANTIAL CONFORMANCE TO THE PLANS.

TEMPORARY E&S NOTES:

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION). SEE CONSTRUCTION DETAILS SHEET FOR EROSION/SEDIMENTATION CONTROL DETAILS.
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL/TREE PROTECTION PLAN. NO EROSION CONTROLS SHALL BE PLACED BEYOND THE PROPERTY LINES OF THE SITE UNLESS WRITTEN PERMISSION HAS BEEN OBTAINED FROM ADJACENT PROPERTY OWNERS.
3. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
4. ANY DIRT, MUD, ROCKS, DEBRIS, ETC., THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREET SHALL BE CLEANED UP IMMEDIATELY.
5. THE CODE ENFORCEMENT OFFICER, CITY ENGINEER OR DESIGNATED CITY INSPECTOR HAS THE AUTHORITY TO REQUIRE ADDITIONAL EROSION/SEDIMENTATION CONTROLS OR TREE PROTECTION BEFORE OR DURING CONSTRUCTION.

PERMANENT EROSION AND SEDIMENTATION NOTES:

1. EROSION CONTROL MATTING IS REQUIRED ON ALL DISTURBED AREA THAT HAVE A FINISHED GRADE IN EXCESS OF 3:1.
2. ALL DISTURBED AREAS ON THE ENTIRE PROJECT (SUCH AS AREAS THAT HAVE BEEN DRIVEN ON, GRADED, USED FOR STORAGE OF ANYTHING AND ARE NOT IN THE EXACT CONDITION THAT EXISTED PRIOR TO CONSTRUCTION) SHALL HAVE A MINIMUM OF THREE (3) INCHES OF TOPSOIL PLACED PRIOR TO REVEGETATION.
3. TOPSOIL SHALL BE CLEAN, FRIABLE, FERTILE SOIL WITH A RELATIVELY HIGH EROSION RESISTANCE, FREE OF OBJECTIONABLE MATERIALS INCLUDING ROOTS AND ROCKS LARGER THAN ONE (1) INCH. TOPSOIL SHALL NOT CONTAIN CALICHE OR LIMESTONE. TOPSOIL SHALL BE READILY ABLE TO SUPPORT THE GROWTH OF PLANTING, SEEDING AND SODDING, AS ACCEPTED BY THE CITY.
4. THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE APPLIED OVER AREAS DISTURBED BY CONSTRUCTION AS DIRECTED BY THE LANDSCAPE ARCHITECT.

PERMANENT VEGETATIVE STABILIZATION: (OR AS SPECIFIED BY THE LANDSCAPE PLANS):

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING IS CONSIDERED TO BE TEMPORARY STABILIZATION ONLY. IF COOL SEASON COVER CROPS EXIST WHERE PERMANENT VEGETATIVE STABILIZATION IS DESIRED, THE GRASSES SHALL BE MOWED TO A HEIGHT OF LESS THAN ONE- HALF (1/2) INCH AND THE AREA SHALL BE RE- SEEDED IN ACCORDANCE WITH 2, BELOW.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE HULLED BERMUDA AT A RATE OF 1 POUND PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION. BERMUDA GRASS IS A WARM SEASON GRASS AND IS CONSIDERED PERMANENT EROSION CONTROL.
   A. BERMUDA SOD 5' OUTSIDE THE BUILDINGS AND BERMUDA HYDROMULCH ALL AREAS DISTURBED BY CONSTRUCTION.
   B. BIO-SWALE AREAS SHALL BE A NATIVE SEED BIO-SWALE MIX OR AN OVERSEED WITH ANNUAL RYE, IF REQUIRED.
   C. FERTILIZER SHALL BE WATER SOLUBLE WITH AN ANALYSIS OF 15-15-15 TO BE APPLIED ONCE AT PLANTING AND ONCE DURING THE PERIOD OF ESTABLISHMENT AT A RATE OF 1/2 POUNDS PER 1000 SF.
   D. IF NO PERMENANT IRRIGATION IS ANTICIPATED. WATERING WILL BE PERFORMED BY A WATER TRUCK, AS NEEDED.
   E. HYDROMULCH SHALL COMPLY WITH TABLE 2, BELOW.
   F. PERMANENT EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN TO AT LEAST 1 1/2 INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.

TABLE 2: HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
BONDED FIBER MATRIX (BFM)	80% ORGANIC 10% DEFIBRATED FIBERS TACKIFIER	6 MONTHS	ON SLOPES UP TO 2:1 AND EROSIVE SOIL CONDITIONS	2500 TO 4000 LBS PER ACRE (SEE MANUFACTURES RECOMMENDATIONS)
FIBER REINFORCED MATRIX (BFM)	65% ORGANIC DEFIBRATED FIBERS 25% REINFORCING FIBERS OR LESS 10% TACKIFIER	UP TO 12 MONTHS	ON SLOPES UP TO 1:1 AND EROSIVE SOIL CONDITIONS	3000 TO 41500 LBS PER ACRE (SEE MANUFACTURES RECOMMENDATIONS)

ELECTRIC NOTES:

1. ELECTRIC PROVIDER HAS THE RIGHT TO PRUNE AND/OR REMOVE TREES, SHRUBBERY AND OTHER OBSTRUCTIONS ON THE EXTENT NECESSARY TO KEEP THE EASEMENTS CLEAR. ELECTRIC PROVIDER WILL PERFORM ALL TREE WORK IN COMPLIANCE WITH CITY REQUIREMENTS.
2. THE OWNER/DEVELOPER OF THIS SUBDIVISION/LOT SHALL PROVIDE ELECTRIC PROVIDER WITH ANY EASEMENT AND/OR ACCESS REQUIRED, IN ADDITION TO THOSE INDICATED. FOR THE INSTALLATION AND ONGOING MAINTENANCE OF OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES.
3. THE OWNER SHALL BE RESPONSIBLE FOR ANY INSTALLATION OF TEMPORARY EROSION CONTROL, REVEGETATION AND TREE PROTECTION. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR ANY TREE PRUNING AND TREE REMOVAL THAT IS WITHIN TEN FEET OF THE CENTER LINE OF THE OVERHEAD ELECTRICAL FACILITIES DESIGNED TO PROVIDE ELECTRIC SERVICE TO THIS PROJECT. ALL ELECTRIC WORK SHALL ALSO BE INCLUDED WITHIN THE LIMITS OF CONSTRUCTION FOR THIS PROJECT.
4. THE OWNER OF THE PROPERTY IS RESPONSIBLE FOR MAINTAINING CLEARANCES REQUIRED BY THE NATIONAL ELECTRIC SAFETY CODE, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS, ELECTRIC PROVIDER REGULATIONS AND TEXAS STATE LAWS PERTAINING TO CLEARANCE WHEN WORKING IN CLOSE PROXIMITY TO OVERHEAD LINES AND EQUIPMENT. ELECTRIC PROVIDER WILL NOT RENDER ELECTRIC SERVICE UNLESS REQUIRED CLEARANCES ARE MAINTAINED. ALL COSTS INCURRED BECAUSE OF FAILURE TO COMPLY WITH THE REQUIRED CLEARANCE WILL BE CHARGED TO THE OWNER.

FIRE DEPARTMENT NOTES:

1. APPROVAL OF THIS SITE PLAN DOES NOT IMPLY APPROVAL TO INSTALL UNDERGROUND FIRE LINES. PRIOR TO INSTALLATION OF UNDERGROUND FIRE LINES, A SEPARATE PERMIT SHALL BE SUBMITTED, UNDER GROUND FIRE LINE SUPPLY.
2. PROTECTION WILL BE PROVIDED IN ACCORDANCE WITH THE CITY OF GEORGETOWN REQUIREMENTS WHEN REQUIRED. BACKFLOW PROTECTION WILL BE INSTALLED IN ACCORDANCE WITH THE DETAIL PROVIDED IN THE UTILITY DRAWINGS.
3. ALL PRIVATE FIRE LINES AND WHAT THEY PROVIDE SERVICE TO WILL BE INSTALLED IN ACCORDANCE WITH NFPA 24 INSTILLATION OF PRIVATE SERVICE MAINS AND THEIR APPURTENANCES.
4. ALL TEES, PLUGS, CAPS, BENDS, REDUCERS, VALVES SHALL BE RESTRAINED AGAINST MOVEMENT. THRUST BLOCKING AND JOINT RESTRAINED WILL BE INSTALLED IN ACCORDANCE WITH NFPA 24.
5. ALL UNDERGROUND SHALL REMAIN UNCOVERED UNTIL A VISUAL INSPECTION IS CONDUCTED BY THE GEORGETOWN FIRE MARSHAL'S OFFICE (FMO). ALL JOINT RESTRAINTS AND THRUST BLOCKING SHALL BE UNCOVERED FOR VISUAL INSPECTION.
6. ALL UNDERGROUND SHALL BE FLUSHED PER THE REQUIREMENTS OF NFPA STANDARD 24 AND WITNESSED BY GEORGETOWN FMO.
7. ALL UNDERGROUND SHALL PASS A HYDROSTATIC TEST WITNESSED BY GEORGETOWN FMO. ALL JOINTS SHALL BE UNCOVERED FOR HYDROSTATIC TESTING. ALL PIPING AND ATTACHMENTS SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE TESTED AT 200 PSI. OR 50 PSI MORE THAN THE SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE + OR - 5 PSI FOR 2 HOURS.
8. FENCES, LANDSCAPING, AND OTHER ITEMS WILL NOT BE INSTALLED WITHIN 3 FT, AND WHERE THEY WILL OBSTRUCT THE VISIBILITY OR ACCESS TO HYDRANTS, OR REMOTE FDCS.
9. LICENSE REQUIREMENTS OF EITHER RME-U OR G. WHEN CONNECTING BY UNDERGROUND TO THE WATER PURVEYOR'S MAIN FROM THE POINT OF CONNECTION OR VALVE WHERE THE PRIMARY PURPOSE OF WATER IS FOR FIRE PROTECTION SPRINKLER SYSTEM.
10. A SEPARATE PERMIT IS REQUIRED FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES.

WATER AND WASTEWATER UTILITY NOTES:

1. THE CITY OF GEORGETOWN IS THE WATER AND WASTEWATER SERVICE PROVIDER FOR THIS DEVELOPMENT. A PRECONSTRUCTION MEETING WITH THE WATER AND WASTEWATER SERVICE PROVIDER SHALL BE HELD PRIOR TO COMMENCEMENT OF CONSTRUCTION TO SCHEDULE INSPECTION OF INSTALLATION OF WATER/WASTEWATER FACILITIES. WATER FACILITIES WILL BE INSPECTED UP TO, AND INCLUDING, THE WATER METER AND/OR FIRE HYDRANTS. THE CONTACT NUMBER FOR THE CITY OF GEORGETOWN IS (512) 930-2572.
2. THE WATER AND WASTEWATER SERVICE PROVIDER STANDARD CONSTRUCTION SPECIFICATIONS CURRENT AT THE TIME OF BIDDING SHALL GOVERN MATERIAL AND METHODS USED TO DO THIS WORK.
3. THE WATER AND WASTEWATER SERVICE PROVIDER SHALL BE CONTACTED AT LEAST 48 HOURS BEFORE CONNECTING TO EXISTING WATER AND WASTEWATER FACILITIES.
4. CONTRACTOR SHALL CONTACT THE WATER AND WASTEWATER SERVICE PROVIDER FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION. IN ADVANCE OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS.
5. NO OTHER UTILITY SERVICE/APPURTENANCES SHALL BE PLACED NEAR THE PROPERTY LINE, OR OTHER ASSIGNED LOCATION DESIGNATED FOR WATER AND WASTEWATER UTILITY SERVICE THAT WOULD INTERFERE WITH THE WATER AND/OR WASTEWATER SERVICES.
6. THE SEPARATION DISTANCE BETWEEN WATER MAINS, WASTEWATER MAINS, AND OTHER UTILITIES SHALL COMPLY WITH TCEQ RULES OR HAVE A VARIANCE APPROVED BY TCEQ BEFORE SUBMITTING PIPING ASSIGNMENTS TO THE WATER AND WASTEWATER SERVICE PROVIDER.
7. ALL MATERIAL TESTS, INCLUDING SOIL DENSITY TESTS AND RELATED SOIL ANALYSIS, SHALL BE ACCOMPLISHED BY AN INDEPENDENT LABORATORY FUNDED BY THE DEVELOPER IN ACCORDANCE WITH WATER AND WASTEWATER SERVICE PROVIDER STANDARDS.
8. PRESSURE TAPS SHALL BE IN ACCORDANCE WITH WATER AND WASTEWATER SERVICE PROVIDER STANDARDS. CONTRACTOR SHALL PERFORM ALL WORK AND SHALL FURNISH ALL MATERIALS NEEDED TO MAKE THE CONNECTION. CONTRACTOR SHALL SCHEDULE ALL SUCH CONNECTIONS IN ADVANCE AND SUCH SCHEDULE MUST BE APPROVED BY THE WATER AND WASTEWATER SERVICE PROVIDER BEFORE BEGINNING THE WORK. AT LEAST 48 HOURS NOTICE SHALL BE GIVEN TO THE WATER AND WASTEWATER SERVICE PROVIDER PRIOR TO MAKING THE CONNECTION, AND A REPRESENTATIVE FROM THE WATER AND WASTEWATER SERVICE PROVIDER SHALL BE PRESENT WHEN THE CONNECTION IS MADE. "SIZE ON SIZE" TAPS WILL NOT BE PERMITTED, UNLESS MADE BY USE OF AN APPROVED FULL CIRCLE-GASKETED TAPPING SLEEVE. CONCRETE BLOCKING SHALL BE PLACED BEHIND AND UNDER ALL TAP SLEEVES 24 HOURS PRIOR TO MAKING THE WET TAP.
9. THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH WATER AND WASTEWATER SERVICE PROVIDER STANDARDS.
10. FIRE HYDRANT SHALL BE SET IN ACCORDANCE WITH WATER AND WASTEWATER SERVICE PROVIDER STANDARDS AND SHALL BE APPROVED BY THE FIRE DEPARTMENT OR OTHER APPROPRIATE PARTY PRIOR TO INSTALLATION.
11. WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH WATER AND WASTEWATER SERVICE PROVIDER STANDARDS.
12. GRAVITY SANITARY SEWER MAIN TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE WATER AND WASTEWATER SERVICE PROVIDER STANDARDS.
13. CONTRACTOR SHALL HAVE ALL NECESSARY EROSION AND SEDIMENTATION CONTROLS IN PLACE PRIOR TO COMMENCING WATER/WASTEWATER FACILITY CONSTRUCTION.

CITY OF GEORGETOWN GENERAL NOTES:

1. THESE CONSTRUCTION PLANS WERE PREPARED, SEALED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR CONSTRUCTION OF THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS AND CODES.
2. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT OF THE CITY.
3. THE SITE CONSTRUCTION PLANS SHALL MEET ALL REQUIREMENTS OF THE APPROVED SITE PLAN.
4. WASTEWATER MAINS AND SERVICE LINES SHALL BE SDR 26 PVC.
5. WASTEWATER MAINS SHALL BE INSTALLED WITHOUT HORIZONTAL OR VERTICAL BENDS.
6. MAXIMUM DISTANCE BETWEEN WASTEWATER MANHOLES IS 500 FEET.
7. WASTEWATER MAINS SHALL BE LOW PRESSURE AIR TESTED AND MANDREL TESTED BY THE CONTRACTOR ACCORDING TO THE CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.
8. WASTEWATER MANHOLES SHALL BE VACUUM TESTED AND COATED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.
9. WASTEWATER MAINS SHALL BE CAMERA TESTED BY THE CONTRACTOR AND SUBMITTED TO THE CITY ON DVD FORMAT PRIOR TO PAVING THE STREETS.
10. PRIVATE WATER SYSTEM FIRE LINES SHALL BE TESTED BY THE CONTRACTOR TO 200 PSI FOR 2 HOURS.
11. PRIVATE WATER SYSTEM FIRE LINES SHALL BE DUCTILE IRON PIPING FROM THE WATER MAIN TO THE BUILDING SPRINKLER SYSTEM, AND 200 PSI C900 PVC FOR ALL OTHERS.
12. PUBLIC WATER SYSTEM MAINS SHALL BE 150 PSI C900 PVC AND TESTED BY THE CONTRACTOR AT 150 PSI FOR 4 HOURS.
13. ALL BENDS AND CHANGES IN DIRECTION ON WATER MAINS SHALL BE RESTRAINED AND THRUST BLOCKED.
14. LONG FIRE HYDRANT LEADS SHALL BE RESTRAINED.
15. ALL WATER LINES ARE TO BE BACTERIA TESTED BY THE CONTRACTOR ACCORDING TO THE CITY STANDARDS AND SPECIFICATIONS.
16. WATER AND SEWER MAIN CROSSINGS SHALL MEET ALL REQUIREMENTS OF THE TCEQ AND THE CITY.
17. FLEXIBLE BASE MATERIAL FOR PUBLIC STREETS SHALL BE TXDOT TYPE A GRADE 1.
18. HOT MIX ASPHALTIC CONCRETE PAVEMENT SHALL BE TYPE D UNLESS OTHERWISE SPECIFIED AND SHALL BE A MINIMUM OF 2 INCHES THICK ON PUBLIC STREETS AND ROADWAYS.
19. ALL SIDEWALK RAMPS ARE TO BE INSTALLED WITH THE PUBLIC INFRASTRUCTURE.
20. A MAINTENANCE BOND IS REQUIRED TO BE SUBMITTED TO THE CITY PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS. THIS BOND SHALL BE ESTABLISHED FOR 1 YEAR IN THE AMOUNT OF 25% OF THE COST OF THE PUBLIC IMPROVEMENTS AND SHALL FOLLOW THE CITY FORMAT.
21. RECORD DRAWINGS OF THE PUBLIC IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER PRIOR TO ACCEPTANCE OF THE PROJECT. THESE DRAWINGS SHALL BE ON MYLAR OR ON TIFF OR PDF (300P DPI). IF A DISK IS SUBMITTED, A BOND SET SHALL BE INCLUDED WITH THE DISK.

No.	Date	Revisions	App.

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GENERAL NOTES

STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER
01/05/23

Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.13

Sheet 13 OF 20

2021-27-SWP

Texas 811

Texas Commission on Environmental Quality
Water Pollution Abatement Plan
General Construction Notes

Edwards Aquifer Protection Program Construction Notes - Legal Disclaimer

The following/listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director (ED), nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code (TAC), Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following/listed "construction notes" restricts the powers of the ED, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, TAC, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the ED's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, TAC § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following/listed "construction notes" in no way represent an approved exception by the ED to any part of Title 30 TAC, Chapters 213 and 217, or any other TCEQ applicable regulation

1. A written notice of construction must be submitted to the 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.

2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.

3. If any sensitive feature(s) (caves, solution cavity, sink hole, etc.) is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. Construction activities may not be resumed until the TCEQ has reviewed and approved the appropriate protective measures in order to protect any sensitive feature and the Edwards Aquifer from potentially adverse impacts to water quality.

4. No temporary or permanent hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.

5. 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 approved plans and manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.

6. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.

7. Sediment must be removed from the sediment traps or sedimentation basins not later than when it occupies 50% of the basin's design capacity.

8. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.

9. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.

10. If portions of the site will have a temporary or permanent cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.

11. The following records shall be maintained and made available to the TCEQ 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.

12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

    A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;

    B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;

    C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office
12100 Park 35 Circle, Building 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

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

TCEQ-0592 (Rev. July 15, 2015)

No.	Date	Revisions	App.

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TCEQ NOTES

STATE OF TEXAS
JOSHUA A. BARAN
109242
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01/05/23

Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

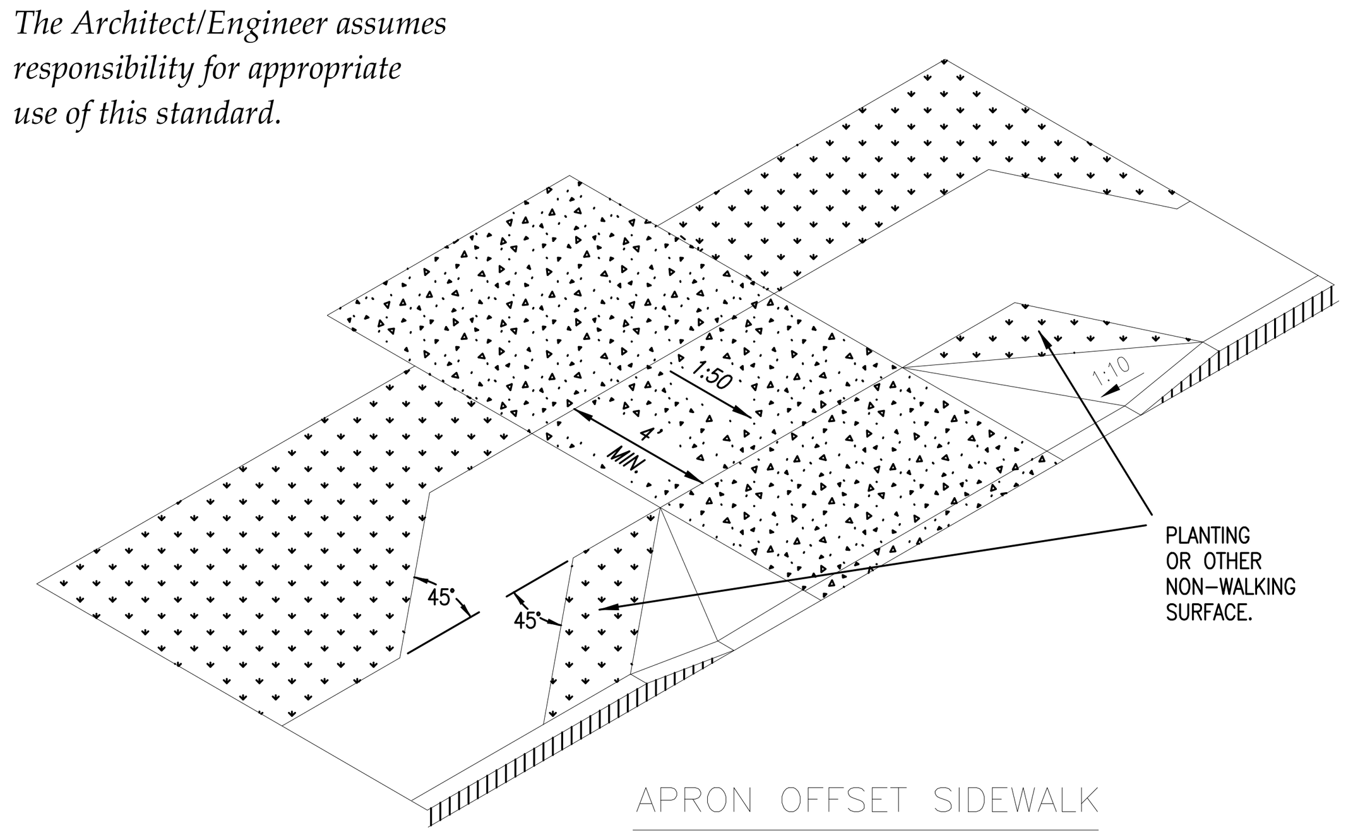
C.14

Sheet 14 OF 20

2021-27-SWP

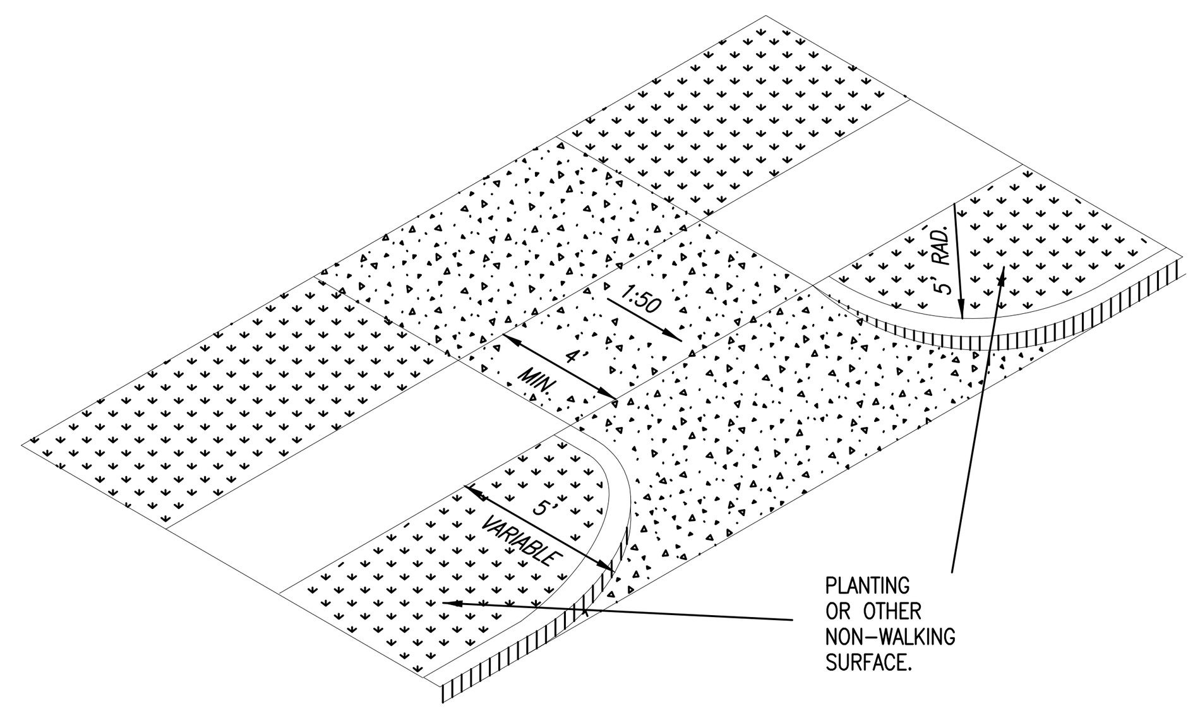
Texas 811

The Architect/Engineer assumes responsibility for appropriate use of this standard.



APRON OFFSET SIDEWALK

TYPE 12



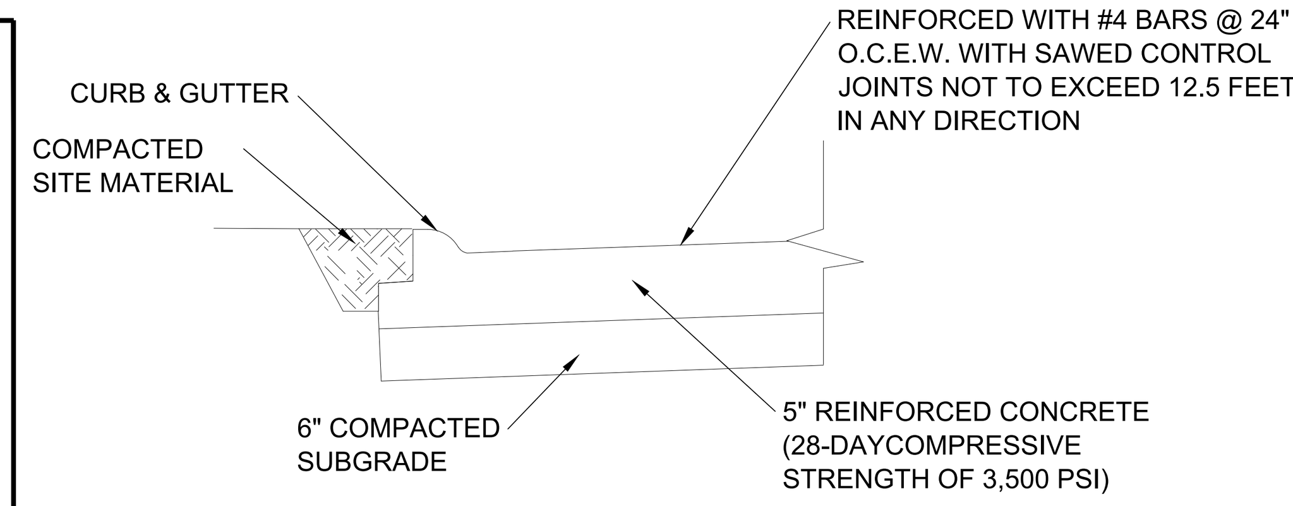
SETBACK SIDEWALK

TYPE 13

GEORGETOWN TEXAS EST. 1848
Georgetown Utility Systems
Your Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

REVISION NOTE:
DRAWING NAME:
SCALE: DATE:
DRAWN BY: APPROVED BY:



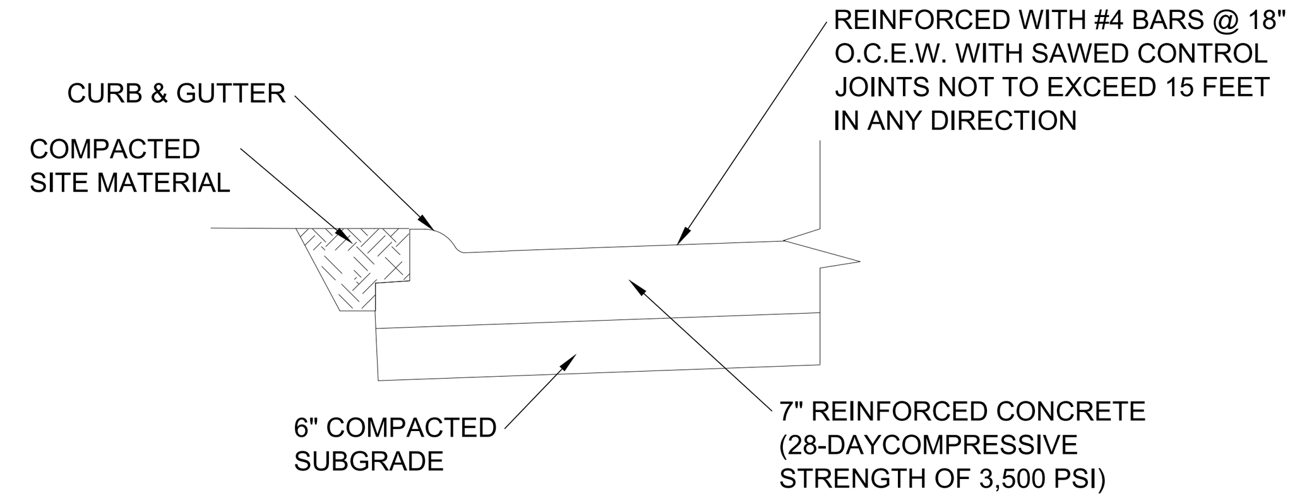
MEDIUM DUTY CONCRETE PAVEMENT

GEOTECHNICAL PAVEMENT RECOMMENDATIONS SHALL TAKE PRECEDENT OVER ABOVE PAVEMENT SECTION.

* THE MATERIALS AND PROPERTIES OF CONCRETE SHALL MEET APPLICABLE REQUIREMENTS IN THE ACI MANUAL OF CONCRETE PRACTICE.
NOTE: THE CONTRACTOR SHALL REFERENCE THE MEP AND LANDSCAPE PLANS FOR THE SIZE AND LOCATIONS OF PROPOSED ELECTRIC, TELEPHONE, CABLE CONDUITS, AND IRRIGATION SLEEVES.

PAVING SECTIONS

SCALE: N.T.S.



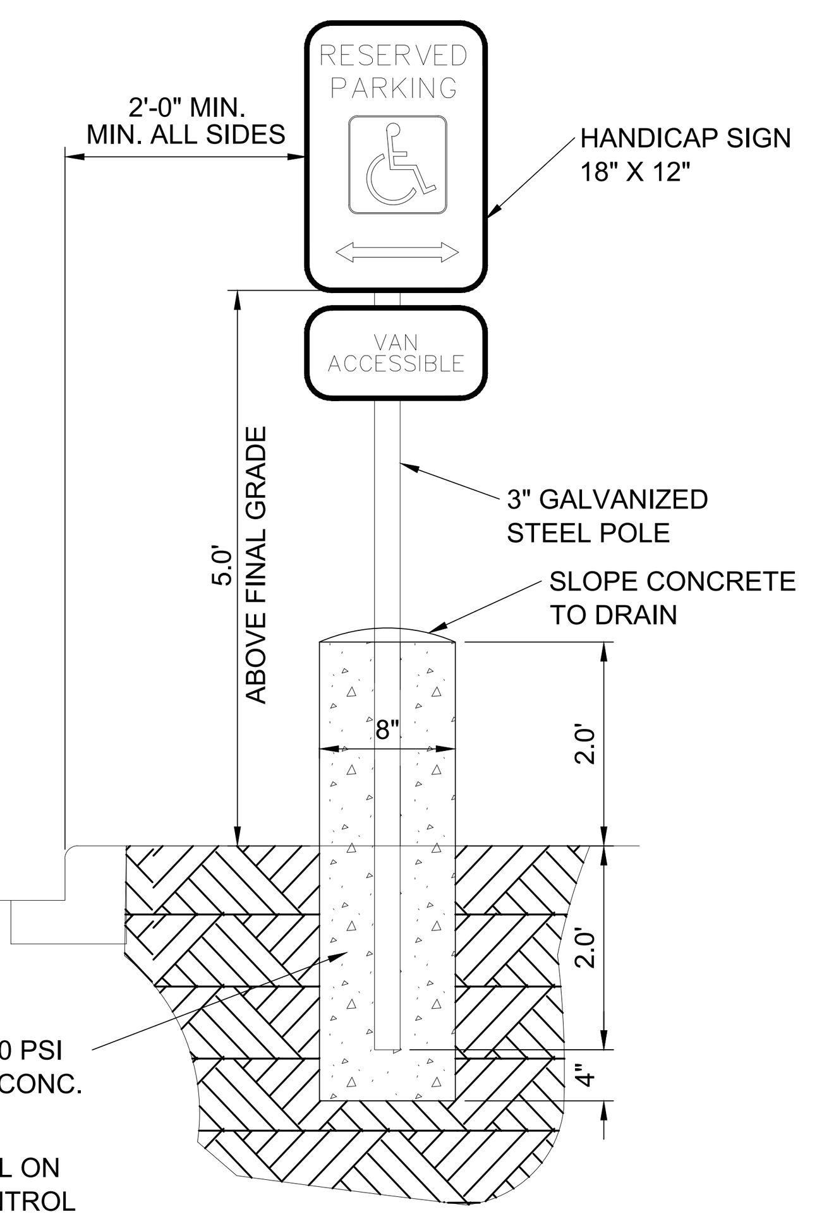
HEAVY DUTY CONCRETE PAVEMENT

GEOTECHNICAL PAVEMENT RECOMMENDATIONS SHALL TAKE PRECEDENT OVER ABOVE PAVEMENT SECTION.

* THE MATERIALS AND PROPERTIES OF CONCRETE SHALL MEET APPLICABLE REQUIREMENTS IN THE ACI MANUAL OF CONCRETE PRACTICE.
NOTE: THE CONTRACTOR SHALL REFERENCE THE MEP AND LANDSCAPE PLANS FOR THE SIZE AND LOCATIONS OF PROPOSED ELECTRIC, TELEPHONE, CABLE CONDUITS, AND IRRIGATION SLEEVES.

PAVING SECTIONS

SCALE: N.T.S.



NOTES:

1. REFERENCE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

2. PROVIDE "FINE" SIGN WHEN REQUIRED BY MUNICIPALITY.

HANDICAP SIGN DETAIL

SCALE: N.T.S.

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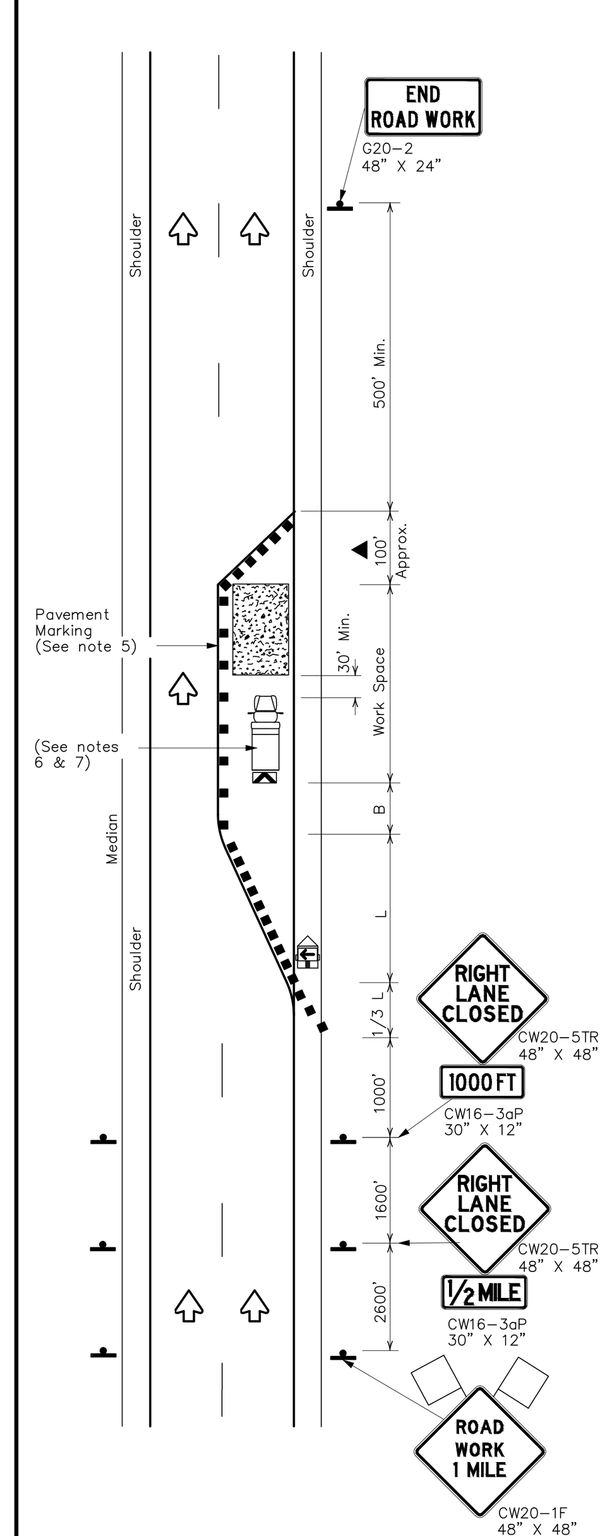
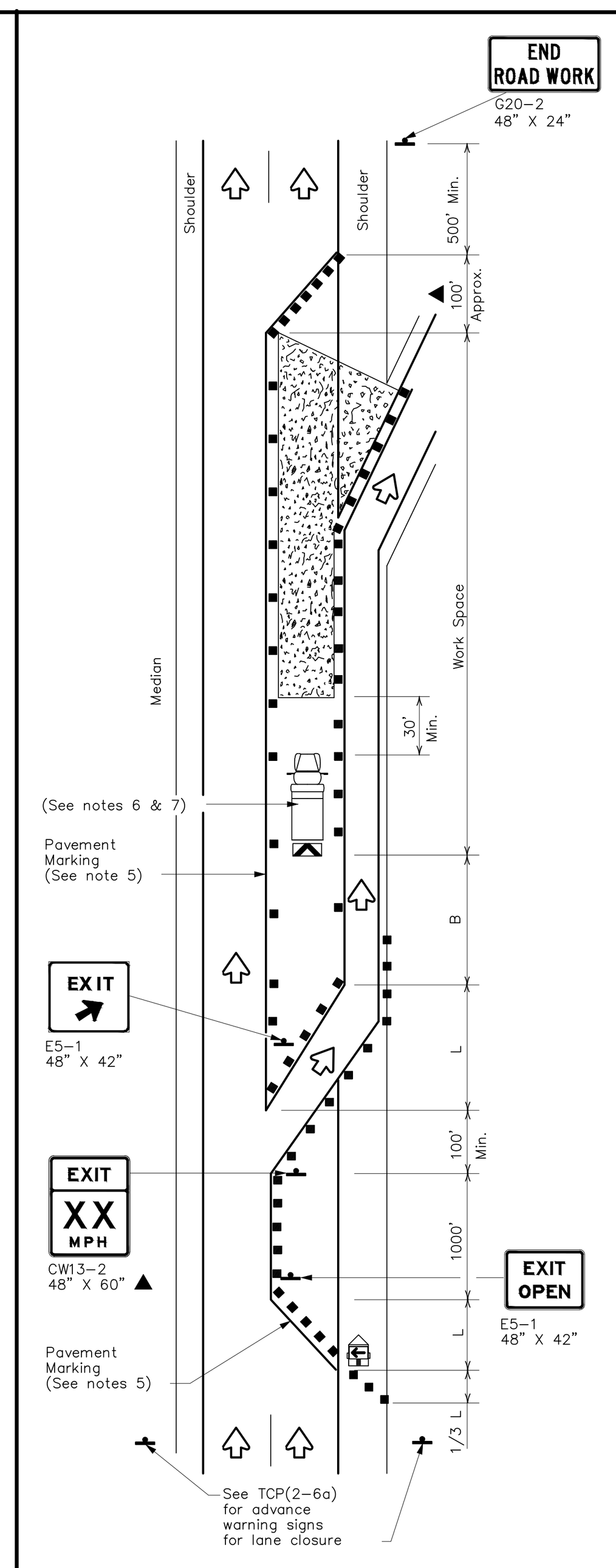


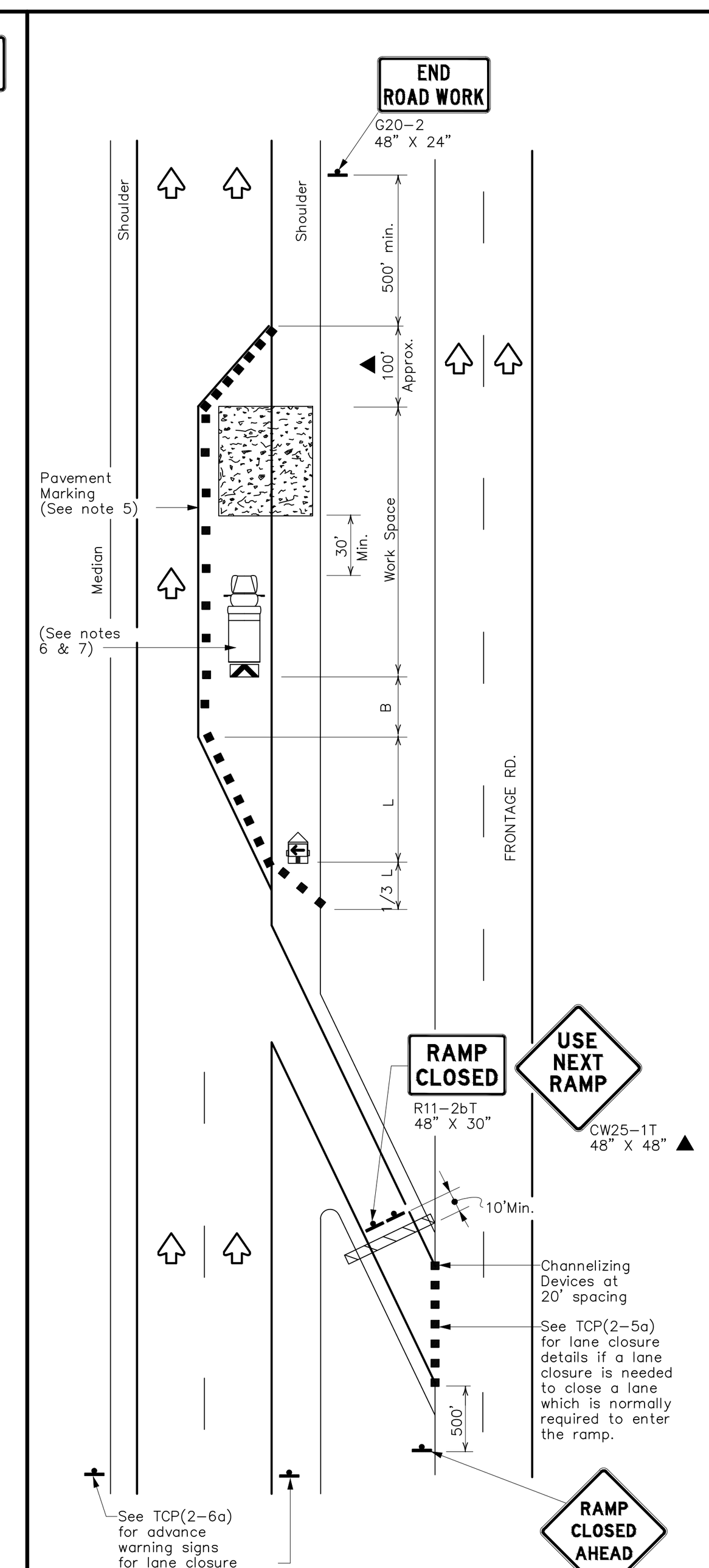
TCP (2-6a)

ONE LANE CLOSURE



TCP (2-6b)

LANE CLOSURE NEAR EXIT RAMPS



TCP (2-6c)

LANE CLOSURE NEAR ENTRANCE RAMPS

DATE:
FILE:

LEGEND			
▨	Type 3 Barricade	■ ■	Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
			✓	✓

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Channelizing devices used to close lanes may be supplemented with the Chevron Alignment Sign placed on every other channelizing device. Chevrons may be attached to plastic drums as per BC Standards.
4. Channelizing devices used along the work space or along tangent sections may be supplemented with vertical panels (VP) placed on everyother channelizing device. If night time conditions make it difficult to see at least two VPs, the VPs may be placed on each channelizing device.
5. The placement of pavement markings may be omitted on Intermediate-term stationary work zones with the approval of the Engineer.
6. Shadow Vehicle with TMA and high intensity rotating, flashing,oscillating or strobe lights. Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
7. Additional Shadow Vehicles with TMAs may be positioned in each closed lane, on the shoulder or off the paved surface, next to those shown in order to protect a wider work space.

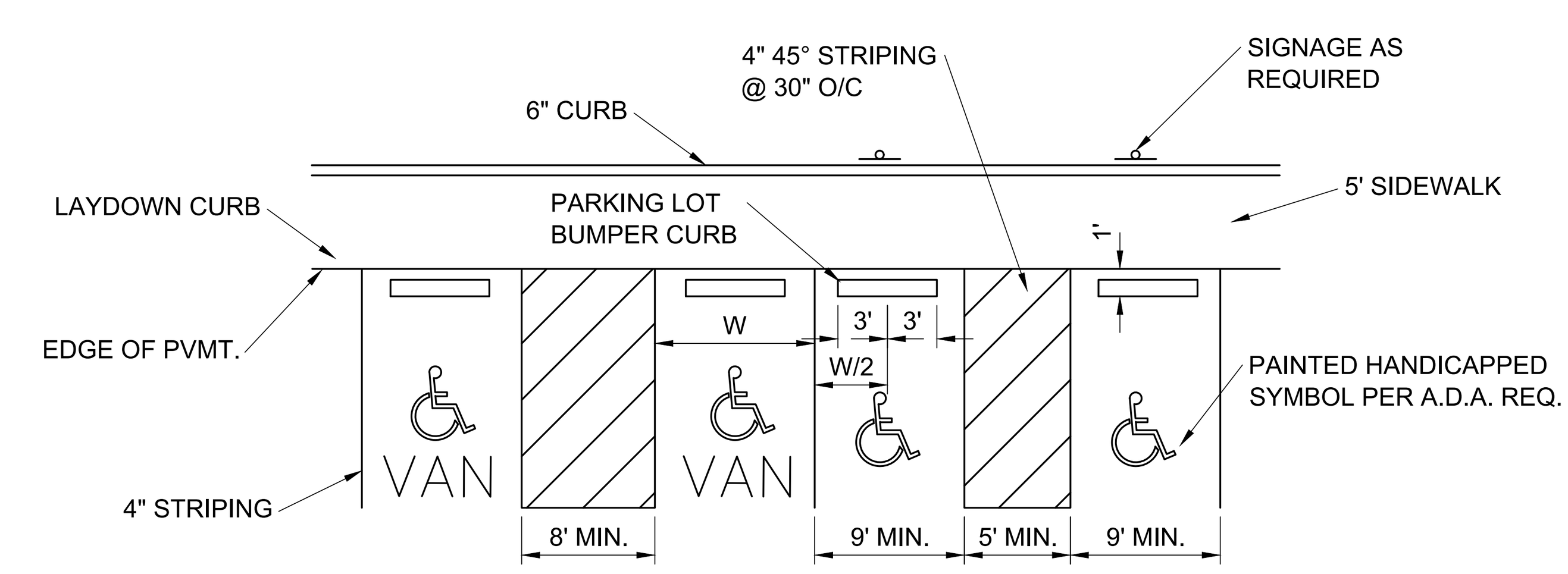
For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC CONTROL PLAN
LANE CLOSURES ON
DIVIDED HIGHWAYS

TCP(2-6)-12

©TxDOT December 1985 | DN: TXDOT | CK: TXDOT | DW: TXDOT | CK: TXDOT
REVISIONS: 2-94 2-12, 8-95, 1-97, 4-98
CONT | SECT | JOB | HIGHWAY
DIST | COUNTY | SHEET NO.
166



NOTE: PAINT STRIPING TO BE WHITE

ADA PARKING SPACE DETAIL (TYP.)

SCALE: N.T.S.

No.	Date	Revisions	App.

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DETAILS

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JOSHUA A. BARAN
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LICENSED
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[illegible] 01/05/23

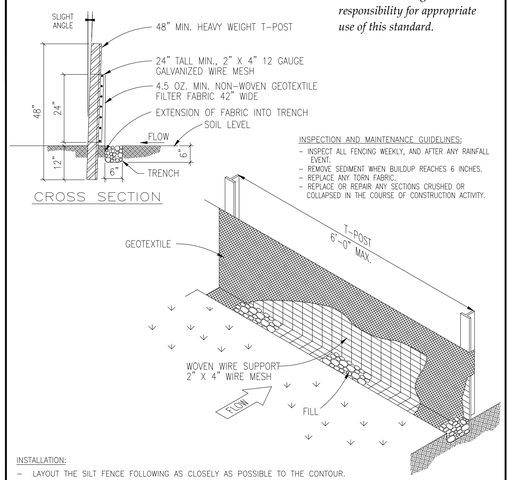
Project No.: 21010
Issued: 01/05/2023
Drawn By: JAB
Checked By: JAB

C.15

Sheet 15 OF 20

2021-27-SWP

The Architect/Engineer assumes responsibility for appropriate use of this standard.



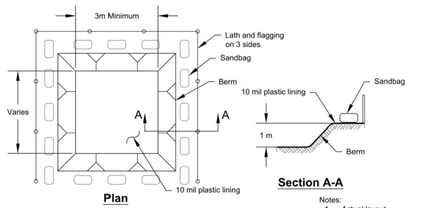
INSPECTION AND MAINTENANCE GUIDELINES:

- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
- REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
- REPLACE ANY TORN FABRIC.
- REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY.

INSTALLATION:

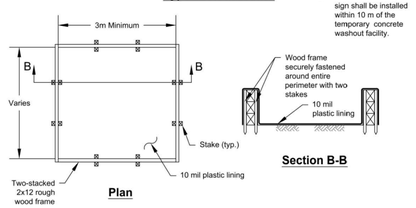
- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS, PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY T-POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW.
- ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE T-POST WITH 11 1/2 GAUGE GALVANIZED T-POST CLIPS. THE TOP OF THE WIRE TO BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND TIED AT LEAST 6 TIMES WITH HOG RINGS.
- THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1".
- ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").
- GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
- SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

REVISION NOTE:	06/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	DRAWING NAME: EC02
SILT FENCE DETAIL	SCALE: / DATE:
	DRAWN BY: / APPROVED BY:



Type "Below Grade"

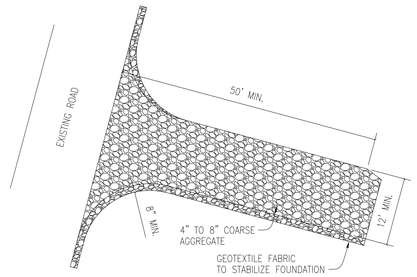
Notes:
1. Actual layout determined in the field.
2. A concrete washout sign shall be installed within 10 m of the temporary concrete washout facility.

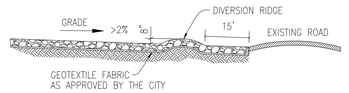


Type "Above Grade" with Wood Planks

NOT TO SCALE

CONCRETE WASHOUT





INSTALLATION:

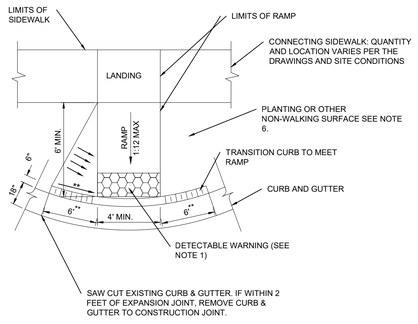
- CLEAR THE AREA OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- GRADE THE AREA FOR THE ENTRANCE TO FLOW BACK ON TO THE CONSTRUCTION SITE. RUNOFF FROM THE STABILIZED CONSTRUCTION
- PLACE GEOTEXTILE FABRIC AS APPROVED BY THE CITY.
- PLACE ROCK AS APPROVED BY THE CITY.

INSPECTIONS AND MAINTENANCE GUIDELINES:

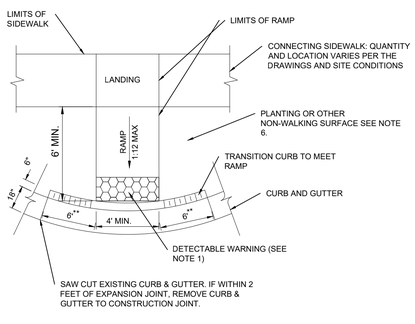
- THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
- WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

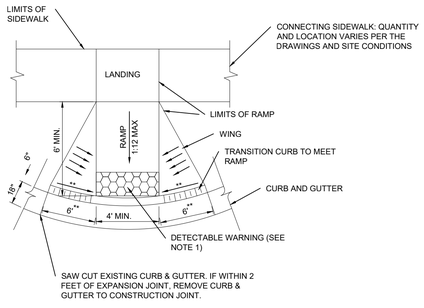
REVISION NOTE:	06/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	DRAWING NAME: EC06
STABILIZED CONSTRUCTION ENTRANCE	SCALE: / DATE:
	DRAWN BY: / APPROVED BY:



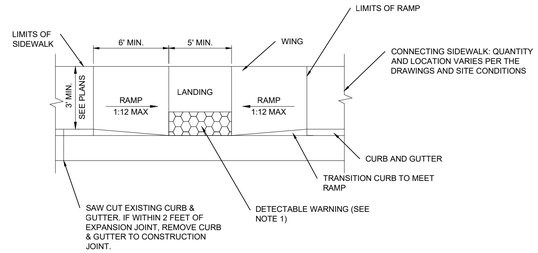
TYPE 3 CURB RAMP



TYPE 4 CURB RAMP



TYPE 1 CURB RAMP



TYPE 2 CURB RAMP

SIDEWALK CURB RAMP WITH DETECTABLE WARNING

SCALE: N.T.S.

FOR PRIVATE USE ONLY - DETAIL SHALL NOT BE USED IN THE ROW OR EASEMENT AREAS

CURB RAMP GENERAL NOTES:

1. CURB RAMPS MUST CONTAIN A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES COMPLYING WITH THE LATEST REVISION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS).
2. AREA OF RAMP TO INCLUDE CONTRASTING COLOR DOES NOT HAVE TO INCLUDE THE WINGS, UNLESS THE WINGS ARE PART OF THE WALKING SURFACE.
3. TYPICAL SIDEWALK WIDTHS AND CURB RADII SHOWN FOR ILLUSTRATION REFER TO TRANSPORTATION MANUAL FOR SIDEWALK WIDTHS AND RADII.
4. REFER TO PLANS FOR RAMP CONFIGURATIONS AND LOCATIONS.
5. ** 1:10 MAX
6. SLOPE OF LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.

No.	Date	Revisions	App.

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GOLF RANCH

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GEORGETOWN, TEXAS 78626

DETAILS

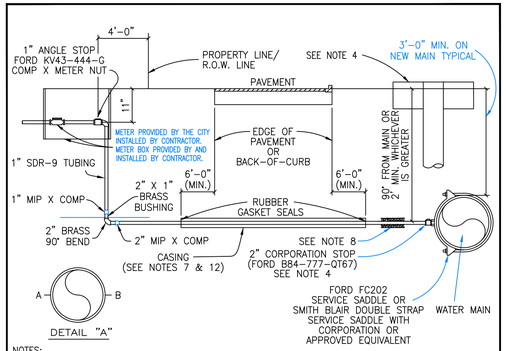
Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.16

Sheet 16 OF 20

2021-27-SWP

Texas 811



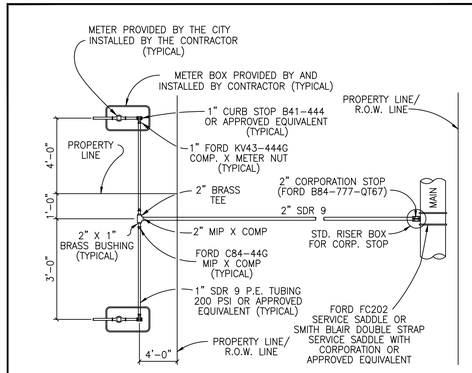
NOTES:

1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET AND AT THE CENTERLINE AS SHOWN ON DETAIL "A".
2. WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE.
3. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR-9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
4. ROTATE THE CORPORATION STOP SO THAT THE OPERATING NUT IS ACTUATED FROM THE VERTICAL POSITION RATHER THAN THE HORIZONTAL. SEE STD. RISER FOR CORP. STOP DETAIL, (DWG # W08).
5. SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO CORPORATION STOP WITH NO FITTINGS IN BETWEEN.
6. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.
7. CASING REQUIRED FOR ALL PAVEMENT CROSSINGS. 4" SDR-26 REQUIRED FOR OPEN-CUT. STEEL CASING PIPE REQUIRED FOR JACK AND BORE. LIMITS OF CASING SHOULD EXTEND SIX FEET BEYOND THE EDGE OF PAVEMENT OR BACK-OF-CURB.
8. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. METER BOX TO BE CAPABLE OF HOUSING ITRON AUTOMATIC METER READING DEVICE. USE DFW-PLASTICS, INC. PART NO. 1200.SBAMR OR APPROVED EQUAL.
11. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY. SEE DETAIL W23.
12. CASING SHALL EXTEND OUT TO WITHIN 4' INSIDE OF THE R.O.W. LINE, ON BOTH SIDES.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL WATER SERVICE-ELEVATION

REVISION NOTE: ADOPTED 01/23/2013 | DRAWING NAME: W03 | SCALE: NTS | DATE: 1/2013 | DRAWN BY: – | APPROVED BY: MH

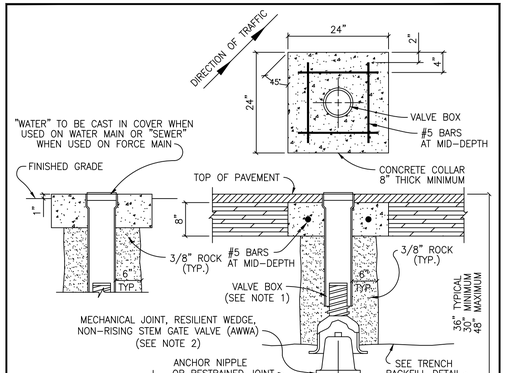


NOTES:

1. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR-9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
2. ANGLE STOP SHALL BE 1" MINIMUM.
3. 1" ANGLE STOPS WITH 3/4" VALVES SHALL NOT BE PERMITTED.
4. MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN 4 METERS PER SERVICE AND SERVICE LINES LARGER THAN 2" IN DIAMETER SHALL BE HANDLED ON AN INDIVIDUAL BASIS.
5. ANGLE STOPS 1 1/2" AND 2" IN SIZE SHALL BE PROVIDED WITH BOTH A LOCKING CAP AND METER FLANGE.
6. ANGLE STOPS SHALL BE INSTALLED 8" BELOW FINISHED GRADE AND MARKED WITH A 2" X 2" X 48" TREATED WOOD STAKE, PAINTED BLUE.
7. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
8. CASING REQUIREMENTS FOR SERVICE LINES CROSSING ROADWAYS SEE DETAIL W-03 NOTE #7.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
DOUBLE WATER SERVICE PLAN

REVISION NOTE: ADOPTED 01/23/2013 | DRAWING NAME: W05 | SCALE: NTS | DATE: 1/2013 | DRAWN BY: – | APPROVED BY: MH



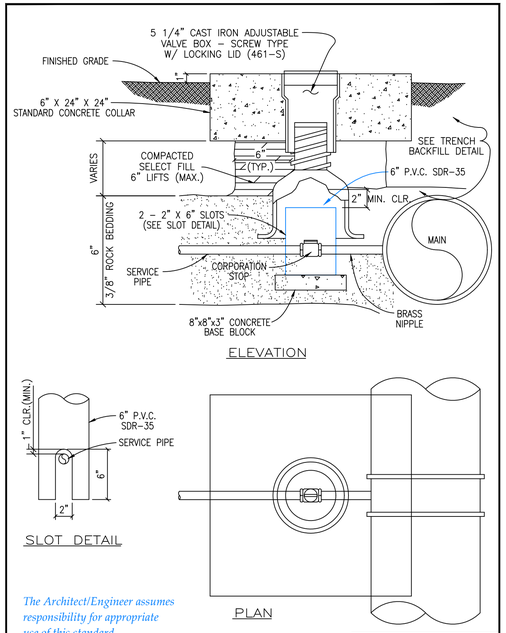
NOTES:

1. VALVE BOX SHALL BE 5 1/4" CAST IRON ADJUSTABLE HAVING AN ADJUSTABLE RANGE OF + OR – 6 INCHES FROM INSTALLED FINISH GRADE.
2. ACCEPTABLE GATE VALVES ARE:
   A. AMERICAN FLOW CONTROL – SERIES 2500
   B. MUELLER – 2360 SERIES
   C. CLOW

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL VALVE SETTING

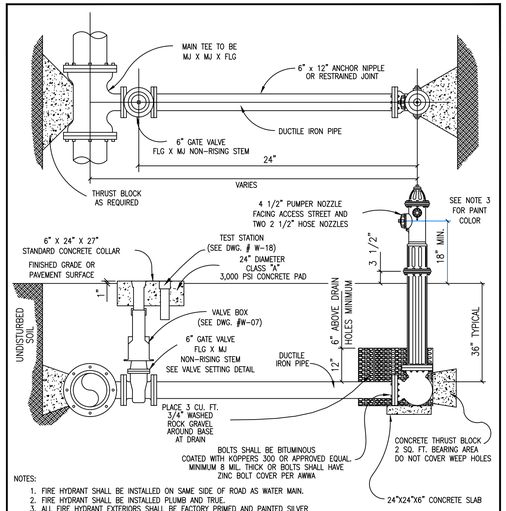
REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: W07 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD RISER BOX FOR CORPORATION STOP

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: W08 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



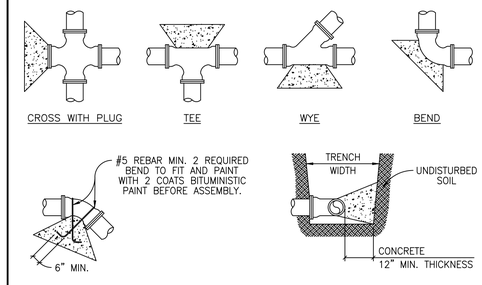
NOTES:

1. FIRE HYDRANT SHALL BE INSTALLED ON SAME SIDE OF ROAD AS WATER MAIN.
2. FIRE HYDRANT SHALL BE INSTALLED PLUMB AND TRUE.
3. ALL FIRE HYDRANT EXTERIORS SHALL BE FACTORY PRIMED AND PAINTED SILVER USING A HIGH GRADE ENAMEL.
4. HEEL AND THRUST BLOCKS TO REST IN UNDISTURBED SOIL.
5. THE ONLY FIRE HYDRANTS ACCEPTABLE ARE:
   A. KENNEDY – K81
   B. AMERICAN DARLING – B84B
   C. CLOW MEDALLION
6. DOUBLE BLUE REFLECTOR "HYE-LITES" BRAND, MANUFACTURED BY PAVEMENT MARKERS INC. TO BE INSTALLED AT CENTERLINE OF STREET PERPENDICULAR TO HYDRANT.
7. ALL METALLIC PIPES AND FITTINGS SHALL BE WRAPPED WITH 8 MILL. POLYETHELENE FILM.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL FIRE HYDRANT INSTALLATION

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: W10 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



ALL THRUST BLOCKS SHALL BE FORMED. LAID FORMS SHALL BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO THE POURING OF CONCRETE AND SHALL ALSO BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO COVERING. TYPICAL LOCATIONS WHICH REQUIRE CONCRETE REACTION (THRUST) BLOCKS, FOR PRESSURE MAINS FOUR INCHES (4") AND GREATER, CONCRETE SHALL HAVE 2,500 P.S.I. MINIMUM STRENGTH AT TWENTY EIGHT (28) DAYS AND BEAR AGAINST UNDISTURBED STABLE SOILS, AREA OF CONTACT SHALL BE GOVERNED BY PIPE SIZE, MAXIMUM PRESSURE IN PIPE, AND BEARING CAPACITY OF SOIL. PROTECT FITTINGS, BOLTS, ETC. BY COVERING WITH VISQUEEN OR OTHER ACCEPTABLE MATERIAL. CONCRETE SHALL BE A MINIMUM OF TWELVE INCHES (12") THICK.

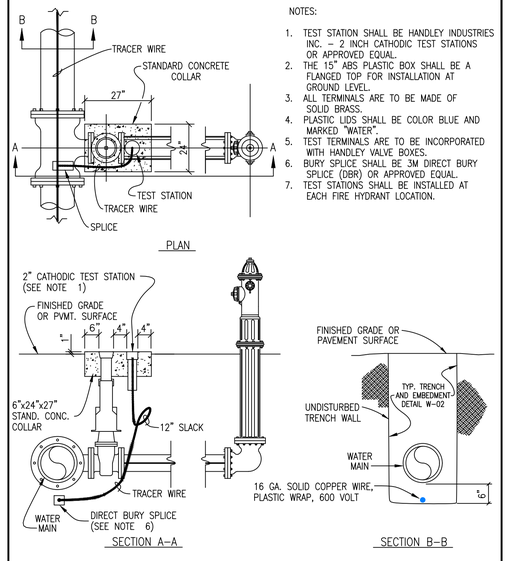
PIPE SIZE	THRUST BLOCK AREA REQUIRED	PIPE SIZE	THRUST BLOCK AREA REQUIRED	REMARKS
4"	2.0 SQ. FT.	18"	30.0 SQ. FT.	VALUES ARE FOR 90° BENDS, BASED ON 2000 P.S.F. SAFE BEARING LOAD AND PIPE PRESSURE OF 150 P.S.I. PLUS 33% SAFETY FACTOR FOR OTHER SOILS AND PRESSURES, THE AREA REQUIRED IS IN DIRECT PROPORTION.
6"	4.0 SQ. FT.	20"	37.0 SQ. FT.	
8"	6.6 SQ. FT.	24"	53.0 SQ. FT.	
10"	10.0 SQ. FT.	27"	80.0 SQ. FT.	
12"	14.0 SQ. FT.	30"	98.0 SQ. FT.	
14"	18.0 SQ. FT.	36"	127.0 SQ. FT.	
16"	24.0 SQ. FT.			

* THE ENGINEER OF RECORD SHALL CALCULATE THE SIZE OF THE DEADMAN REQUIRED AS WELL AS ANY INSTALLATION WHICH IS NOT COVERED BY THE ABOVE.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL THRUST BLOCKS FOR WATER AND FORCE MAIN

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: W11 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



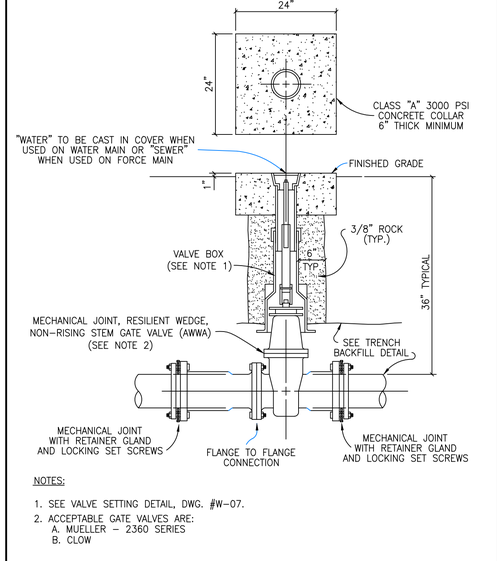
NOTES:

1. TEST STATION SHALL BE HANDLEY INDUSTRIES INC. – 2 INCH CATHODIC TEST STATIONS OR APPROVED EQUAL.
2. THE 15" ABS PLASTIC BOX SHALL BE A FLANGED TOP FOR INSTALLATION AT GROUND LEVEL.
3. ALL TERMINALS ARE TO BE MADE OF SOLID BRASS.
4. PLASTIC LIDS SHALL BE COLOR BLUE AND MARKED "WATER".
5. TEST TERMINALS ARE TO BE INCORPORATED WITH HANDLEY VALVE BOXES.
6. BURY SPLICE SHALL BE 3M DIRECT BURY SPLICE (DBR) OR APPROVED EQUAL.
7. TEST STATIONS SHALL BE INSTALLED AT EACH FIRE HYDRANT LOCATION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRACER WIRE INSTALLATION AND TEST STATION LOCATION

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: W18 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. SEE VALVE SETTING DETAIL, DWG. #W-07.
2. ACCEPTABLE GATE VALVES ARE:
   A. MUELLER – 2360 SERIES
   B. CLOW

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
INLINE VALVE INSTALLATION

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: W21 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

No.	Date	Revisions	App.

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GEORGETOWN, TEXAS 78626

DETAILS

01/05/23
STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER

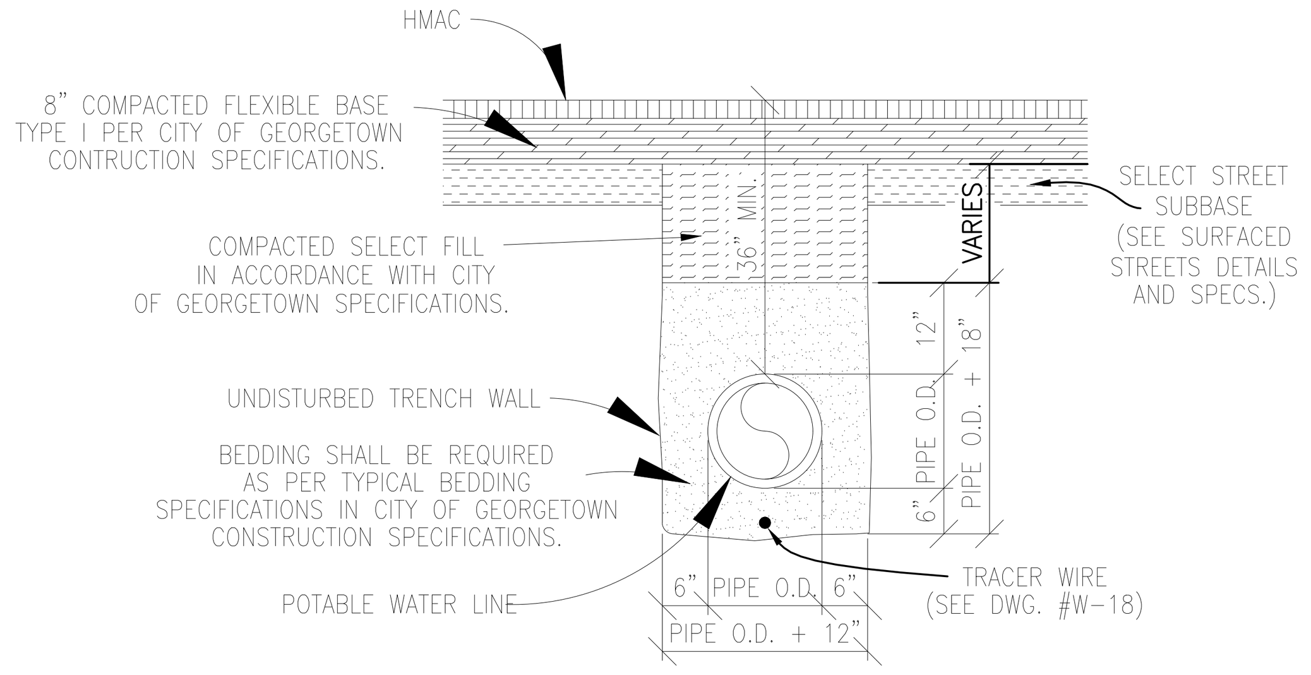
Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.17

Sheet 17 OF 20

2021-27-SWP

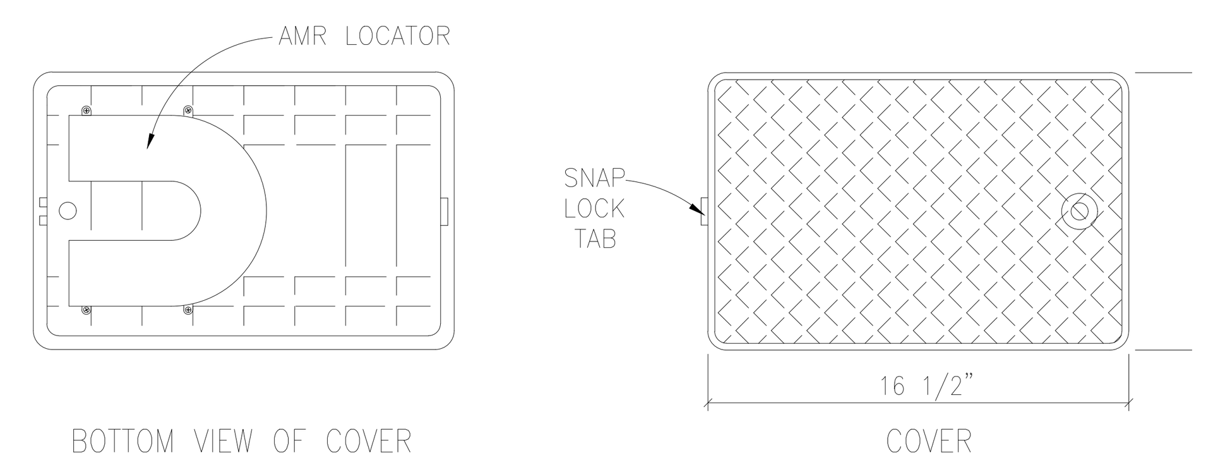
Texas 811



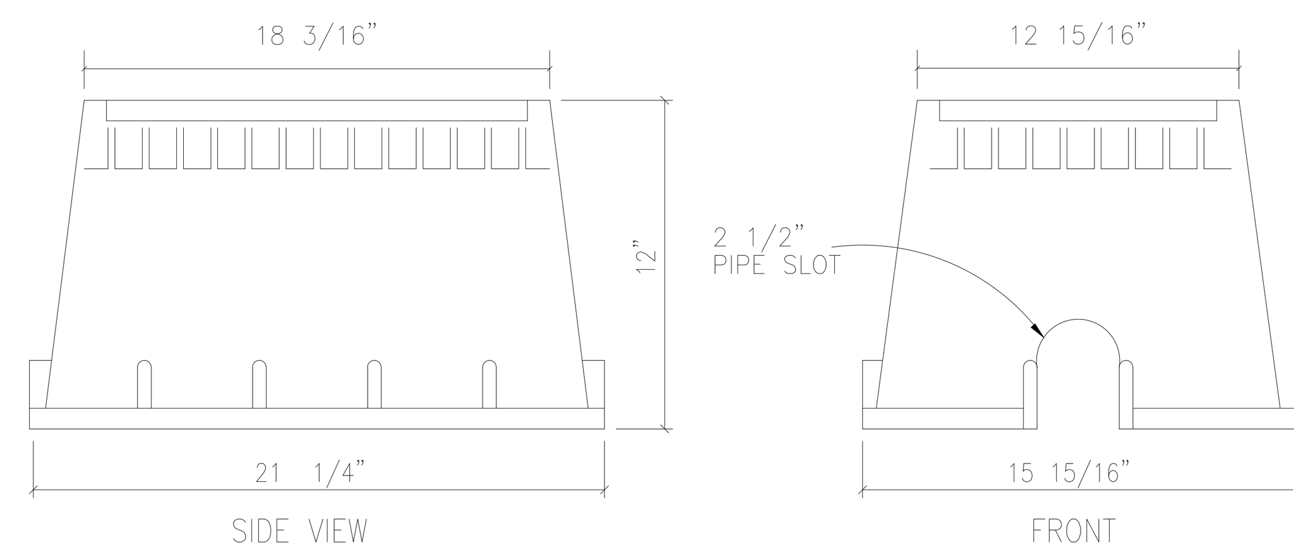
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

NOTES:
1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS EST. 1848 Georgetown Utility Systems Your Community Owned Utility
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY
DRAWING NAME: W22
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB

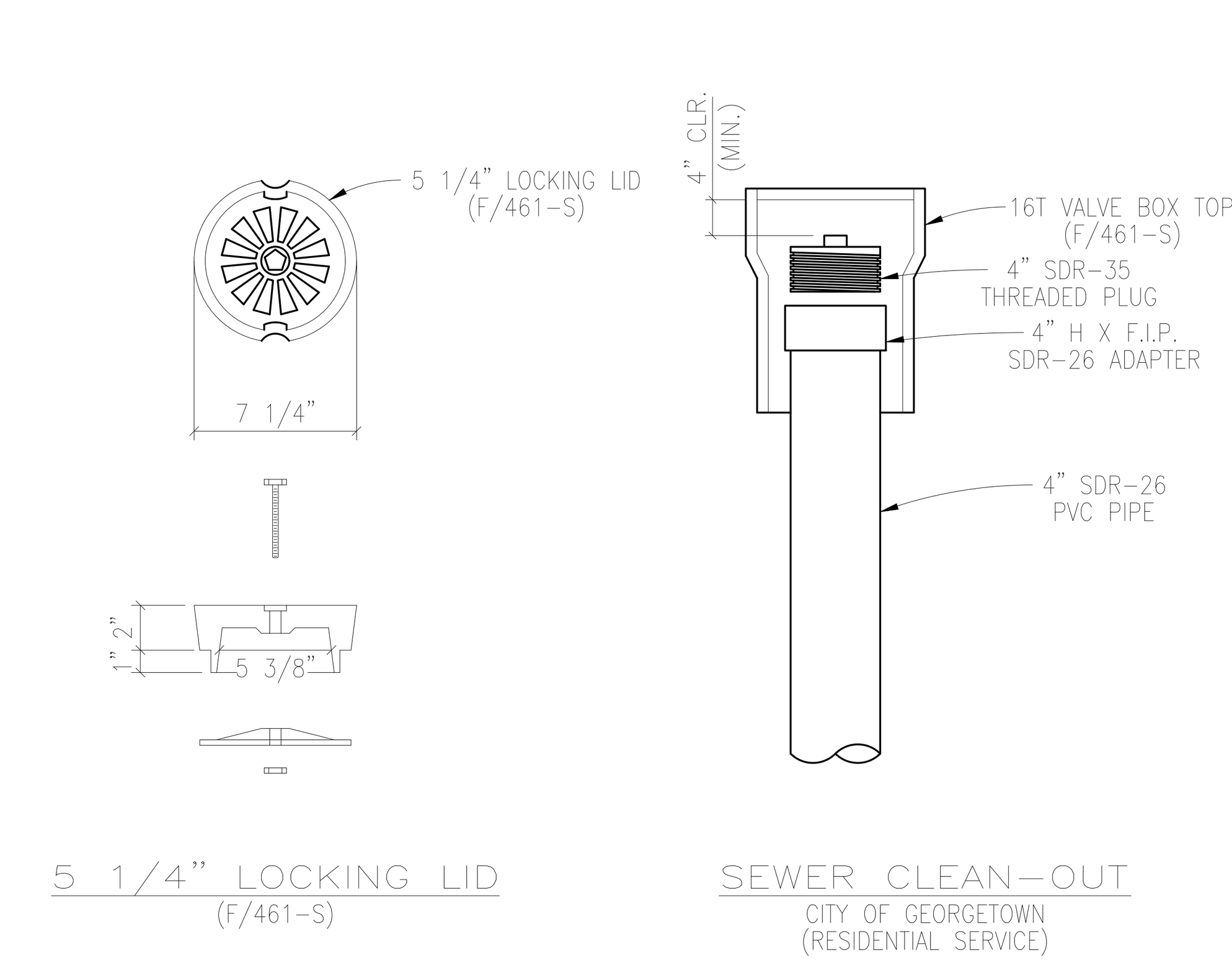


DFW PLASTINCS, INC. PART NO. 1200.SBAMR, BLACK BOX, BLACK COVER AND 2 1/2" PIPE SLOT OR APPROVED EQUAL.

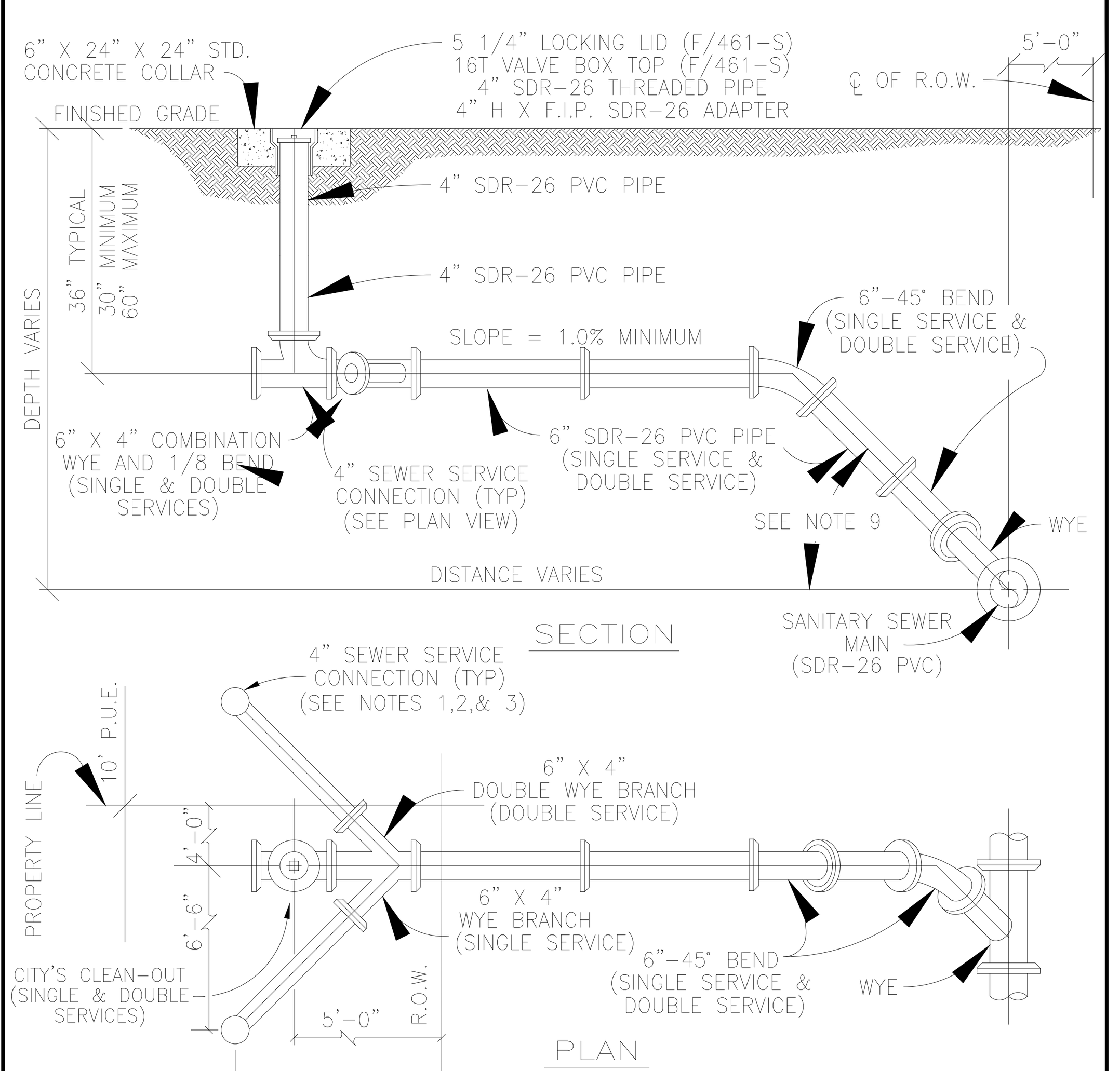


The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: 06/21/2006
GEORGETOWN TEXAS EST. 1848 Georgetown Utility Systems Your Community Owned Utility
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
METER BOX (NON-TRAFFIC AREAS)
DRAWING NAME: W23
SCALE: DATE:
DRAWN BY: APPROVED BY:



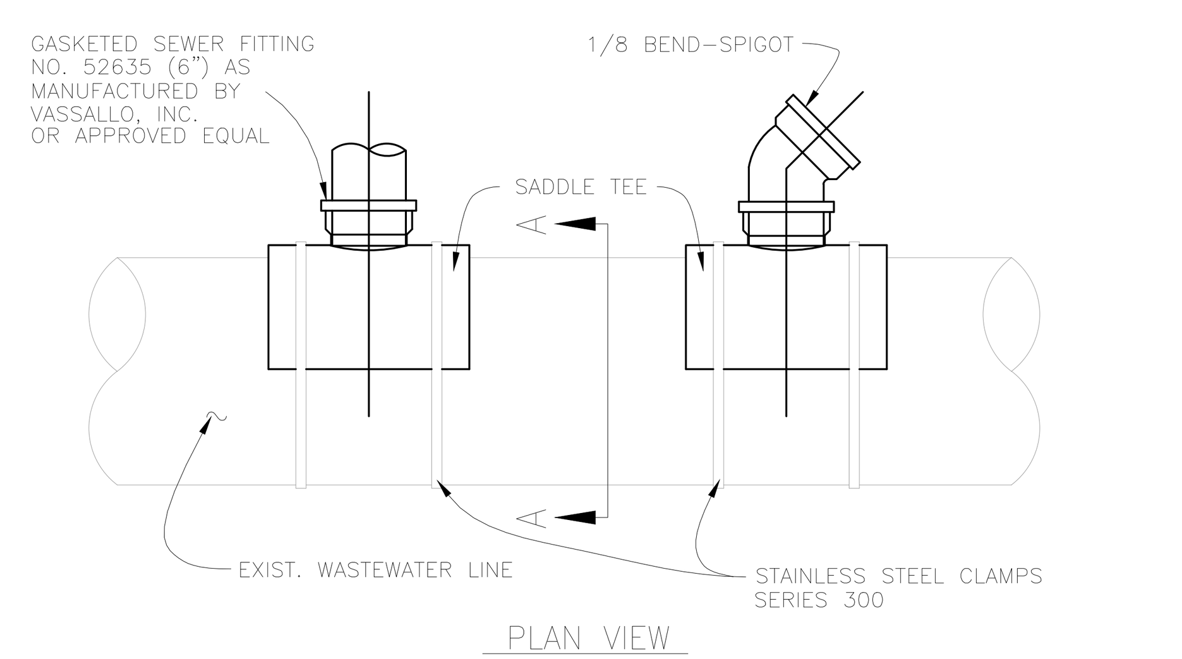
REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS EST. 1848 Georgetown Utility Systems Your Community Owned Utility
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEWER CLEAN-OUT DETAIL
DRAWING NAME: WW12
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB



NOTES:
1. SERVICE CONNECTION RISERS SHALL TERMINATE 8' INSIDE THE PROPETY LINE.
2. THE END OF EACH SERVICE CONNECTION RISER SHALL BE EXTENDED 12" ABOVE FINISH GRADE.
3. EACH SERVICE CONNECTION SHALL BE PLUGGED WATER-TIGHT WITH AN APPROVED CAP OR PLUG.
4. FOR P.V.C. INSTALLATIONS, CONNECT TO EXISTING "BELL END" AND CONNECT OPPSITE END WITH P.V.C. TO P.V.C. KNOCK ON SLEEVE.
5. SOLIDLY TAMP BACKFILL AT LEAST ONE FOOT (1'-0") ABOVE TOP OF PIPE. SERVICES UNDER PAVED AREAS SHALL BE BACKFILLED TO THE SAME SPECIFICATIONS AS SHOWN ON PAVEMENT REPLACEMENT DETAIL.
6. CONTRACTOR SHALL MARK ON A CLEAN SET OF PLANS THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE TO EACH SERVICE LATERAL AND GIVE TO ENGINEER FOR RECORD DRAWING PURPOSES.
7. ANY DEVIATION FROM THESE METHODS MUST BE APPROVED BY THE CITY OF GEORGETOWN ENGINEERING DEPARTMENT.
8. SERVICE LINE MATERIAL SHALL BE P.V.C., SDR-26.
9. SEWER SERVICE SLOPE TO BE 45° OFF CENTERLINE OF MAIN.

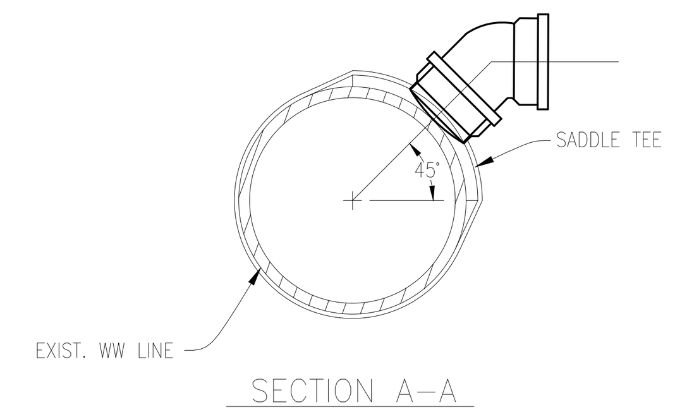
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS EST. 1848 Georgetown Utility Systems Your Community Owned Utility
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEWER SERVICE CONNECTIONS
DRAWING NAME: WW13
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB



SADDLE TEE				
PART NO.	SIZE	L1	H	P
52635	8"X6"	5.625	5.659	1.448

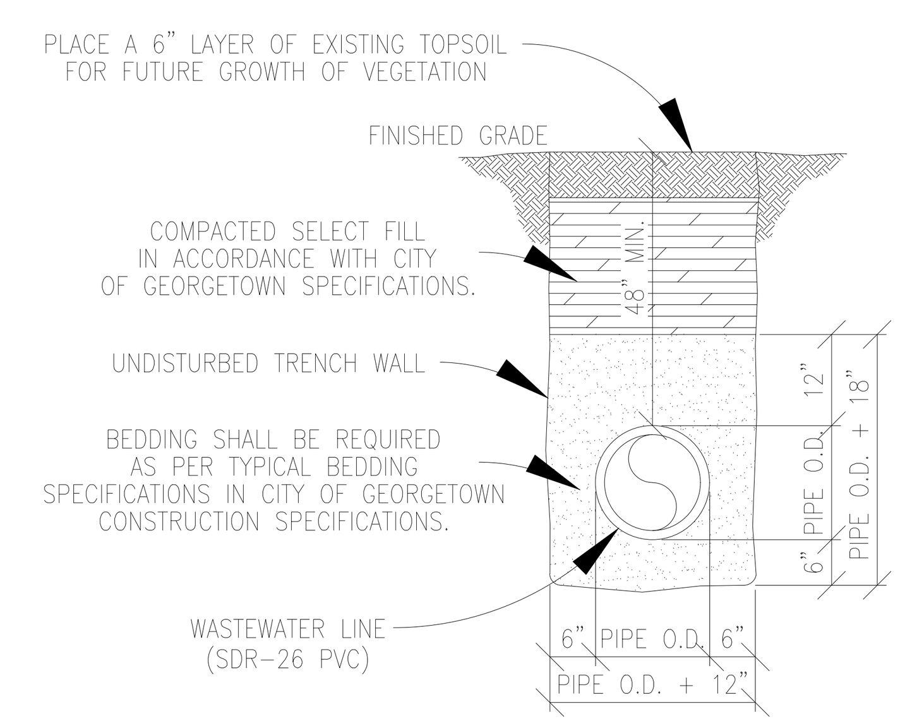
PLASTIC TRENDS INC. – 1/8 BEND – SPIGOT					
PART NO.	SIZE	A	B	C	D
G 406	6	11.270	6.146	1.870	6.090



NOTES:
1. FLEXIBLE SADDLE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
2. SADDLE TEE SHALL BE ORIENTATED 45° TO MAIN. (SEE SEWER SERVICE CONNECTIONS DETAIL – DWG # WW-13)
3. EXCAVATE AROUND EXISTING 8-INCH PIPE, EXPOSING SUFFICIENT ROOM FOR S.S. CLAMPS.
4. THOROUGHLY CLEAN AND DRY THE MATING SURFACE WITH RAG OR PAPER TOWEL MAKE SURE THEY ARE FREE OF DUST AND MOISTURE.
5. MARK THE SIZE OF THE HOLE TO BE CUT USING THE GASKET SKIRT OR THE SADDLE ITSELF AS THE TEMPLATE.
6. SAW OUT THE SECTION OF THE PIPE WHERE THE SADDLE WILL BE LOCATED, WITH A SABER OR KEY HOLE SAW.
7. TEST TO MAKE SURE SADDLE FITS HOLE PROPERLY.
8. SERVICE PIPE SHALL NOT EXTEND MORE THAN ONE-HALF INCH INTO THE MAIN.
9. PLACE GASKET SKIRT AND SADDLE OVER OPENING AND TIGHTEN BAND CLAMPS EVENLY UNTIL SADDLE IS FIRMLY ATTACHED TO THE PIPE. APPLY PRESSURE ON THE SADDLE AGAINST THE PIPE WHILE TIGHTENING THE CLAMPS AS INDICATED ABOVE. DO NOT OVER TIGHTEN, DO NOT STRIP THREAD.
10. REPLACE THE BEDDING AND BACKFILL IN ACCORDANCE WITH THE TRENCH EMBEDMENT DETAIL.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

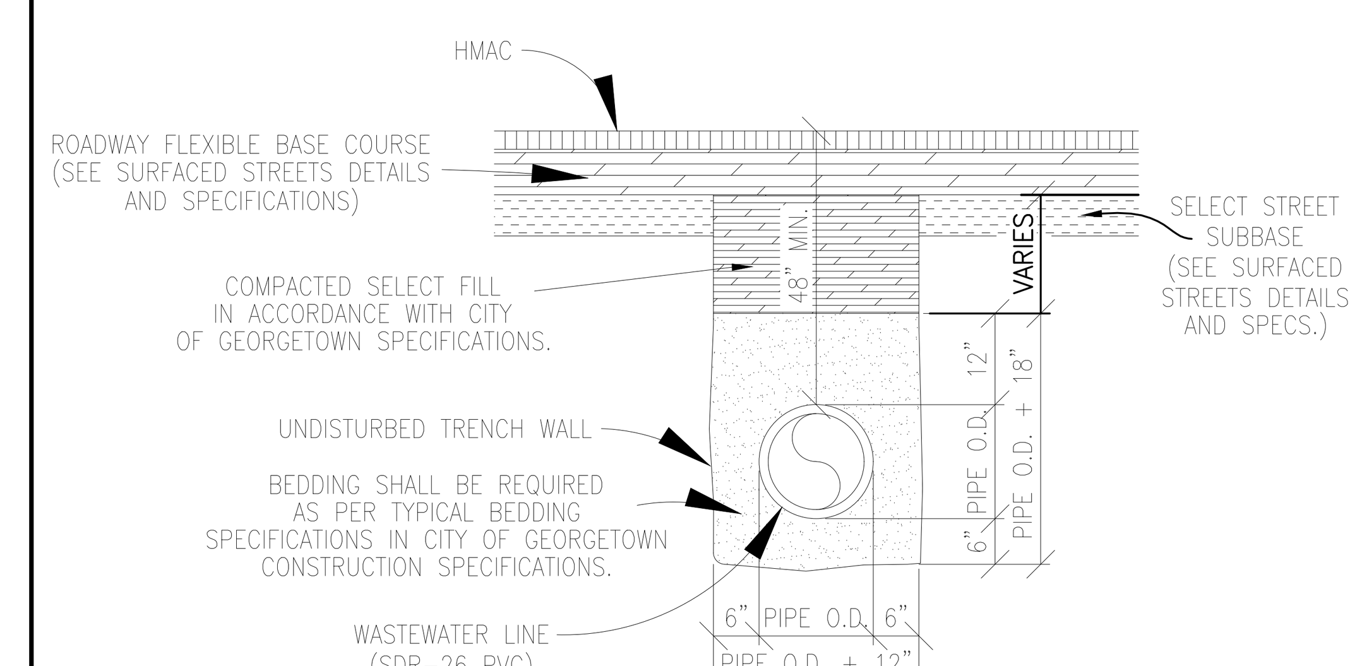
REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS EST. 1848 Georgetown Utility Systems Your Community Owned Utility
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
GASKETED SEWER FITTING FOR SEWER SERVICE CONNECTIONS TO EXISTING MAINS
DRAWING NAME: WW13A
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS EST. 1848 Georgetown Utility Systems Your Community Owned Utility
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS
DRAWING NAME: WW16
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

NOTES:
1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS EST. 1848 Georgetown Utility Systems Your Community Owned Utility
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY
DRAWING NAME: WW18
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB

Texas 811

No.	Date	Revisions	App.

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josh.baran@jabeng.com

GOLF RANCH
100 CANTERA WAY
GEORGETOWN, TEXAS 78626

DETAILS

STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER
01/05/23

Project No.: 21010
Issued: 01/05/2023
Drawn By: JAB
Checked By: JAB

C.18

Sheet 18 OF 20
2021-27-SWP

LANDSCAPE NOTES:

1. Complete all landscape planting and related earthwork including all products, equipment and labor, for the landscape areas shown on the drawing and described in the specifications.
2. All questions should be referred to the project landscape architect.
3. Information provided on this plan is general in nature. Dimensions, locations, and areas are approximate and should be field verified prior to bidding & installation.
4. Quantities shown for plant materials are approximate. Actual installed quantities of plant materials may vary from the plan and should be field determined according to the given spacing and field conditions. Discrepancies between field conditions a n d the plan which limit the contractor should be brought to the attention of the landscape architect prior to installation.
5. By bidding, the contractor acknowledges that he/she has satisfied himself/herself as to the nature and location of the work and to the quality of surface and subsurface materials or obstacles insofar as this data is reasonably ascertainable from an inspection of the site. Any failure by the contractor to acquaint himself/herself with the available information will not relieve him/her from responsibility for estimating properly the difficulty or cost of successfully performing the work as described.
6. Installation of all landscaping must be coordinated with the installation of related irrigation, site work, and grading.
7. Unless specifically noted, install all massed planting utilizing equilateral triangular spacing.
8. Evenly apply 3" of mulch to all continuous planting beds. Mulch will be provided and installed by the contractor.
9. Substitutions of plant species, sizes, or other specified materials will not be allowed without prior approval by the project landscape architect.
10. Plant material a n d layout must be approved by the project landscape architect prior to installation.
11. All identification tags provided by growers and placed on trees and shrubs are to remain on the plants through the punch-list inspection. Tags are to be removed prior to final acceptance, or upon request of the project landscape architect.
12. Seed mix/solid sod will be applied to all construction-damaged ground surfaces not otherwise planted. Contractor shall review related construction drawings for limits of construction and shall also be responsible for coordinating with other site contractors to determine actual areas of seeding required, including areas disturbed by utility extensions.
13. Living earth technologies mix is to be used for planting backfill mixtures.
14. All planting beds indicated will be irrigated with an underground automatic irrigation irrigation contractor is to be a state of Texas licensed irrigator, and is to follow all TCEQ codes and regulations. Contractor is responsible for providing as-built drawings and specifications for irrigation system including pipe sizes and locations.
15. All seeding areas disturbed by construction shall temporarily irrigated or sprinkled in a manner that will not erode the topsoil, but will sufficiently soak the soil to a depth of six inches. The irrigation shall occur at ten-day intervals during the first two months. Rainfall occurences of 1/2 inch or more shall postpone the watering schedule for one week. Restoration shall be acceptable when the grass has grown at least 1-1/2 inches high with 95% coverage, provided no bare spots larger than 16 square feet exist.
16. Regular maintenance is required of all landscape areas and plant materials in a vigorous and healthy condition, free from diseases, pest weeds, and litter. This maintenance shall include weeding, watering, fertilization, pruning, mowing , edging, mulching or other needed maintenance, in accordance with generally accepted horticultural practices until the project has been accepted by the project landscape architect.
17. The owners of the landscaped property, or the manager or agent of the owner, shall be responsible for the maintenance of all landscape areas. Said areas shall be maintained so as to present a healthy, neat and orderly appearance at all times and shall be kept free of refuse and debris. All planting beds shall be provided with a readily available water supply and watered as necessary to ensure continuous healthy growth a n d development. Maintenance shall include the replacement of all dead plant material if that material was used to meet the requirements of the ordinance.
18. All parking lot landscape islands will have a 6 " crown above the top of curb.

LANDSCAPE BIDDING CRITERIA:

1. Landscape contractors are to bid on one-year of maintenance for the landscape in addition to the bid proposal for installation. The landscape maintenance should be a separate line item from the landscape installation bid proposal.
2. Contractors are to adhere to the landscape maintenance specifications when preparing the landscape maintenance bid proposal.

LANDSCAPE MAINTENANCE SPECIFICATIONS:

The property's landscaping shall be maintained in first class condition at all times. The quality of the landscape maintenance should meet the standards normally provided by landscape companies in Georgetown. It will at all times have a neat, clean, healthy, and manicured appearance. Contractor shall provide for fifty-two visits per year.

I. Turf areas
- A. Mowing and edging of all turf areas shall be performed at least once per week, January through December.
- B. Perennial rye grass over-seeding shall be separate and must be approved by management prior to over-seeding. Over-seeding shall be done in a manner and at a rate to insure a lush, thick consistent winter turf.
- C. Trimming and edging of turf areas to be performed at each visit.
- D. All turf areas are to be fertilized a minimum of four times per year with a high quality, slow release fertilizer from a reputable manufacturer.
- E. Contractor shall apply appropriate fungicides as necessary and pre-emergent herbicide two times per year and post-emergent herbicide at the time deemed most efficient and favorable by contractor.
- F. Turf to be treated as often as necessary with appropriate insecticide to control normal soil pests.
- G. Treat fire ants in all turf areas as necessary.
- H. Raking to be performed as needed to maintain appearance.
- I. De-thatch and aerate turf once during the year in conjunction with rye overseeding. If owner opts to not perform rye overseed, de-thatching and aerating to be performed in early spring.
- J. Bag all areas within 45 feet of buildings, driveways, and sidewalks.

II. Shrubs, ground cover, beds and annuals
- A. To be maintained weed free, as needed using appropriate herbicides and manual weeding. Use a minimum of two pre-emergent applications and manually weed each visit.
- B. To be fertilized four times per year with a balanced high quality, slow release fertilizer, appropriate to the shrubs on the project.
- C. Shrubbery to be hand trimmed as specified to maintain a manicured appearance or as otherwise requested by owner. Use only skilled personnel with significant experience in class a properties. No shearing, all to be done with selective hand pruning to keep plant within bounds but to maintain a natural shape and appearance.
- D. To be inspected weekly by qualified supervisor, followed by a written report of problems discovered and actions to be taken.
- E. To be sprayed with appropriate insecticides and fungicides as necessary.
- F. Annuals to be changed out four times per year using four (4) inch pots and fertilized at each change. Monitor and apply fungicides and insecticides as necessary to insure maximum vigor and
- A. appearance.
- G. Apply shredded hardwood mulch to a depth of two inches, a minimum of three times annually. If mulch depth accumulation becomes so excessive as to be detrimental to plant health, rake out and dispose of excess quantities of the oldest material.
- H. All traffic and directional signage to be kept free and clear from all bushes/shrubs, etc.
- I. A three-foot perimeter around all fire hydrants shall be maintained.

III. Landscape trees (4" caliper or less)
- A. To be lightly pruned as necessary (at least once a month during growing season).
- B. To be pruned and shaped once during winter months. Prune to class I standards. Notify management prior to and immediately following pruning activity. Pruning to be done by qualified tree care firm, subject to management approval.
- C. Deep root fertilize all landscape trees one time per year. Submit information on materials, application methods and applicator qualification one week prior to performing work.
- D. All traffic and directional signage to be kept free of tree limbs and branches.

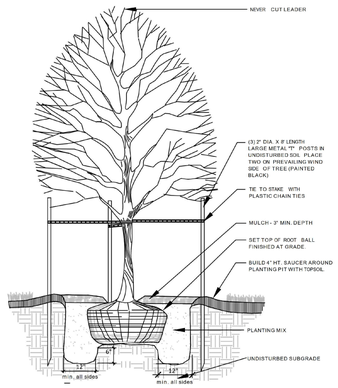
IV. Large trees (greater than 4" caliper)
- A. Keep trees free of vines at all times.
- B. Contractor shall at all times be on the lookout for insect and disease infestations and other tree damage such as lightning or vehicular damage. Contractor shall notify management immediately of such danger or disease so that corrective action can be taken.

V. Debris and litter
- A. Normal trash and litter will be removed from all lawn and landscaped areas weekly.
- B. All debris resulting from any and all landscape work shall be cleaned up immediately.
- C. Remove debris from pots/planters on sidewalks.

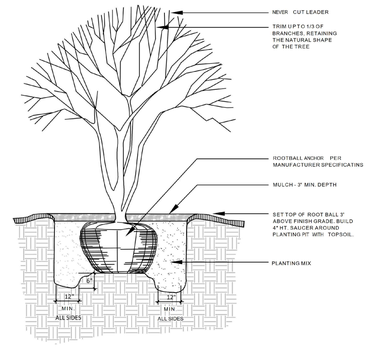
VI. Paved areas
- A. At parking lot perimeters and paving joints, weeds and grasses are to be controlled with contact herbicide sprays and manual weeding as required.
- B. All debris resulting from any and all landscape work shall be cleaned up immediately.

VII. Irrigation
- A. Contractor shall be responsible for maintaining and operating all irrigation systems at the property except as may be otherwise noted.
- B. Irrigation systems must be inspected monthly and a report must be submitted to management. Management must approve repairs greater than $250.00.
- C. Contractor will ensure that watering cycles are in compliance with any city guidelines as a result of water rationing or water conservation. Any fees or penalties incurred by violation of Ordinances will be billed to contractor.
- D. All heads and nozzles broken by landscape maintenance operations will be repaired or replaced at contractor expense.
- E. All nozzles will be cleaned monthly if necessary and all heads will be adjusted as needed.

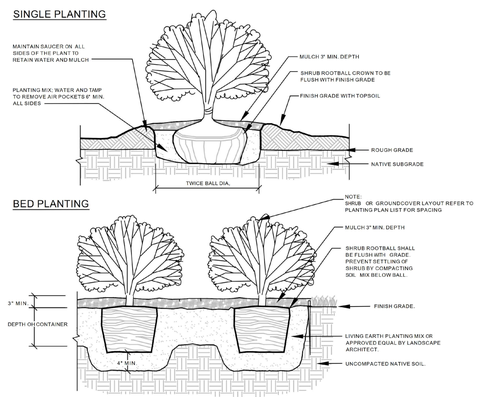
VIII. General
- A. Contractor shall provide adequate supervision to assure that all work will be done in accordance with this agreement and generally accepted good practice. A weekly visit by a qualified supervisor is a minimum requirement. Adequate time shall be allowed for a thorough and complete examination of the entire property.
- B. Contractor shall replace at contractor's expense any plant material that dies due to damage by lawn maintenance, equipment or contractor's negligence.
- C. All work shall be performed by contractor's employees; no work shall be performed by Subcontractors without written consent of management.
- D. All employees will wear uniforms and provide a neat appearance and professional behavior at all times.
- E. Crew members will observe all OSHA regulations. All equipment will be properly maintained and kept in a safe operating condition.
- F. All debris resulting from any and all landscape work shall be immediately cleaned up and removed from site. Use of an on-site dumpster is prohibited.
- G. Additional projects, landscape upgrades, etc. Will be negotiated as needed.
- H. If there are pots or sidewalk planters at property, contractor shall maintain irrigation or hand water as needed. Contractor to maintain plants/annuals in pots/containers in accordance with all specs noted above.



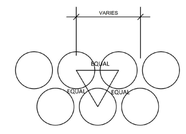
1 SHADE TREE PLANTING
NOT TO SCALE



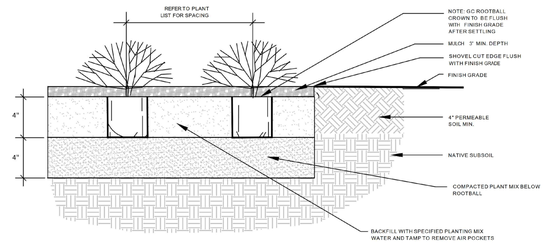
2 ORNAMENTAL TREE PLANTING
NOT TO SCALE



3 SHRUB PLANTING (SINGLE & BED PLANTING)
NOT TO SCALE



4 SHRUB OR GROUNDCOVER TRIANGULAR SPACING
NOT TO SCALE



5 GROUND COVER PLANTING
NOT TO SCALE

No.	Date	Revisions	App.

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GOLF RANCH
100 CANTERA WAY
GEORGETOWN, TEXAS 78626

LANDSCAPE NOTES

STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER
01/05/23

Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.19

Sheet 19 OF 20

2021-27-SWP

Texas 811

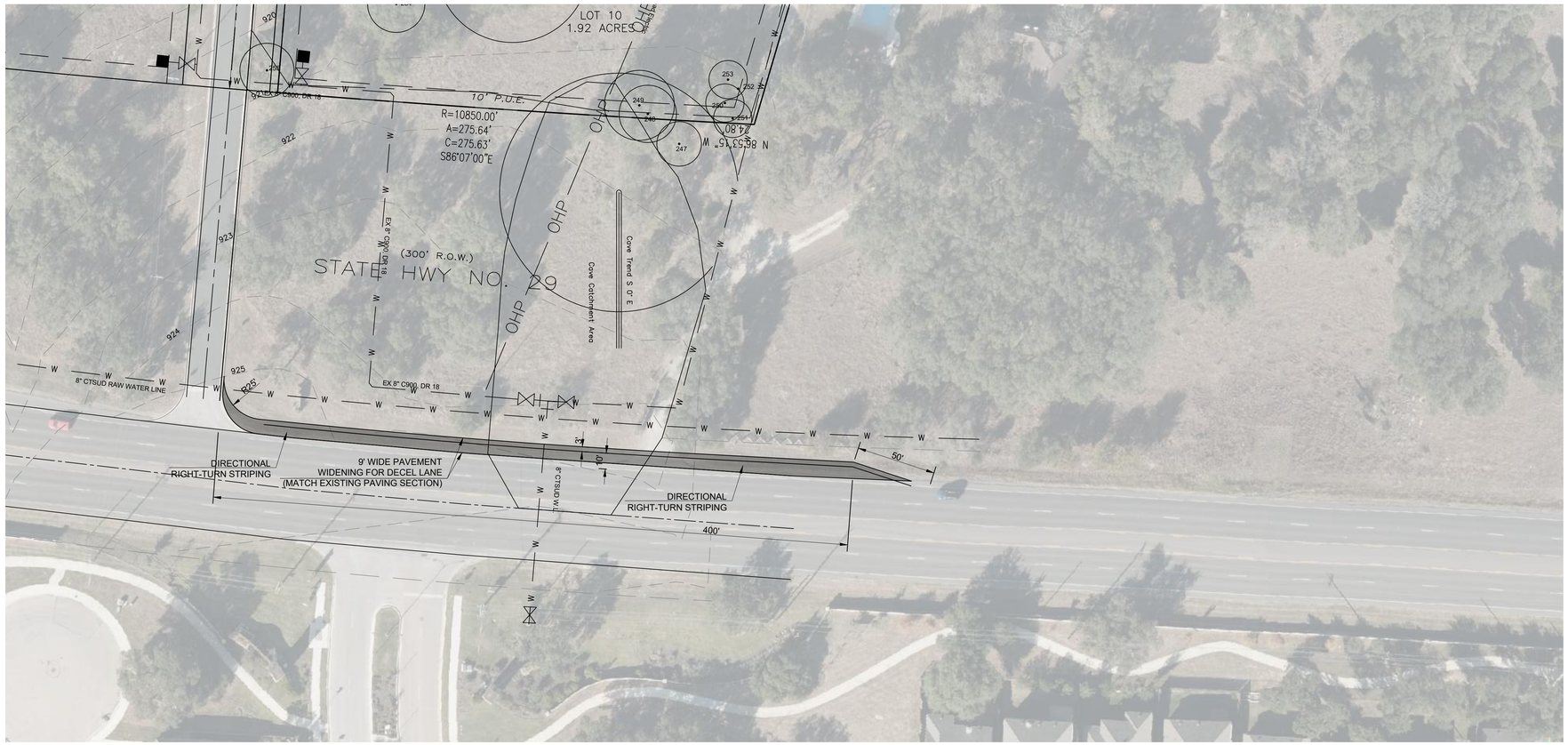
N

0' 20' 40' 60' 80'

NOTES:
1. CONTRACTOR SHALL SAW CUT AND REMOVE 1' OF EXISTING PAVEMENT AND PROVIDE A SMOOTH TRANSITION FROM EXISTING PAVEMENT TO PROPOSED PAVEMENT. COORDINATE CONSTRUCTION WITHIN THE ROW WITH TXDOT PER THE DRIVEWAY PERMIT.
2. EDGE LINES PAINTED SINGLE WHITE SOLID LINE/4" WITH INSIDE STRIPING PAINTED SINGLE WHITE SOLID LINE/4" AT 30" O.C. 45 DEGREES TO EDGE LINES.
3. DECEL LANE WORK REQUIRED A TXDOT APPROVAL. CITY OF GEORGETOWN WILL BE PROVIDED WITH A FINAL AS-BUILT OF TXDOT RIGHT-OF-WAY WORK WITH THE STORMWATER CLOSE-OUT DOCUMENTS PRIOR TO FINAL CONSTRUCTION ACCEPTANCE.

LEGEND:

- PROPERTY LINE
- LOT LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING OVERHEAD ELECTRIC LINE
- PROPOSED FIRE LANE
- PROPOSED SCREEN FENCE
- LIMITS OF CONSTRUCTION (L.O.C.)
- ACCESSIBLE ROUTE
- EXISTING HERITAGE TREE DRIP LINE



No.	Date	Revisions	App.

JAB Engineering, LLC
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josh.baran@jabeng.com

GOLF RANCH

100 CANTERA WAY
GEORGETOWN, TEXAS 78626

DECEL LANE

01/05/23
STATE OF TEXAS
JOSHUA A. BARAN
109242
LICENSED
PROFESSIONAL ENGINEER

Project No.:	21010
Issued:	01/05/2023
Drawn By:	JAB
Checked By:	JAB

C.20

Sheet 20 OF 20

2021-27-SWP

Texas 811

ATTACHMENT G
MAINTENANCE PLAN AND SCHEDULE FOR BMPs

PROJECT NAME: **Golf Ranch**
ADDRESS: **100 Cantera Way**
CITY, STATE: **Georgetown, TX**

BATCH DETENTION BASIN

- 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 and 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 and 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.

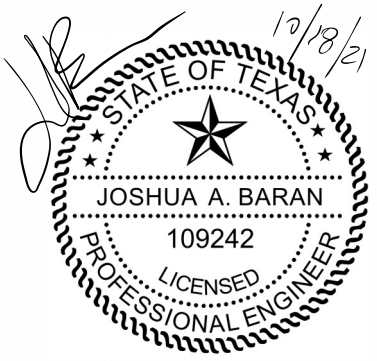
- Logic Controller. The Logic Controller should be inspected as part of the twice-yearly investigations. Verify that the external indicators (active, cycle in progress) are operating properly by turning the controller off and on, and by initiating a cycle by triggering the level sensor in the basin. 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.

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information.

Responsible Party: The Golf Ranch LLC
Mailing Address: 100 Cantera Way
City, State: Georgetown, TX Zip: 78628
Telephone: (512) 863-4573 Fax: _____

Signature of Responsible Party _____ Date 10-18-21

Engineer: Joshua A. Baran, P.E.
Firm: JAB Engineering, LLC
TBPE Firm No.: F-14076
Mailing Address: 4500 Williams Drive, Ste. 212-121
City, State: Georgetown, TX 78633
Telephone: (512) 779-7414



ATTACHMENT I

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

The proposed development does not increases the peak discharge of the 2, 10, 25, and 100-year events, as the development is existing. The discharge will be directed to a batch detention pond and outfall to the adjoining property.

VII. Agent Authorization Form

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

I Loralee St.John ,
Print Name

Managing Member ,
Title - Owner/President/Other

of The Golf Ranch LLC ,
Corporation/Partnership/Entity Name

have authorized Joshua A. Baran, P.E.
Print Name of Agent/Engineer

of JAB Engineering, LLC.
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:

Applicant's Signature

10-18-21
Date

THE STATE OF Texas §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared David Immenhauser 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 18th day of October, ____.

MICHELLE BARAN
Notary Public, State of Texas
Comm. Expires 02-21-2022
Notary ID 129721540

Michelle Baran
NOTARY PUBLIC

Michelle Baran
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 02-21-2022

VIII. Application Fee Form

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Golf Ranch
Regulated Entity Location: 100 Cantera Way, Georgetown, TX 78626
Name of Customer: The Golf Ranch, LLC
Contact Person: Loralee St. John Phone: 512-863-4573
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
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
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

Type of Plan	*Size*	*Fee Due*
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	4.26 Acres	$ 4,000
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	$
Sewage Collection System	L.F.	$
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: 10/21/2021

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

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

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

IX. Core Data Form

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing 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.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN		RN

SECTION II: Customer Information

4. **General Customer Information**	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State *(SOS) or Texas Comptroller of Public Accounts (CPA).*

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* *If new Customer, enter previous Customer below:*

The Golf Ranch, LLC

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
0801109915	32039308518		

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ Yes ☐ No

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☒ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address: 100 Cantera Way

City	Georgetown	State	TX	ZIP	78628	ZIP + 4	

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*

(152) 863-4573		( ) -

SECTION III: Regulated Entity Information

21. **General Regulated Entity Information** *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

***The Regulated Entity Name submitted may be** updated, in order to meet TCEQ Core **Data Standards (removal of organizational endings such** as Inc, LP, or LLC).*

22. **Regulated Entity Name** *(Enter name of the site where the regulated action is taking place.)*

Golf Ranch

23. Street Address of **the Regulated Entity:** *(No PO Boxes)*	100 Cantera Way							
	City	Georgetown	State	TX	ZIP	78628	ZIP + 4	
24. County	Williamson							

If no Street Address is provided, fields 25-28 are required.

25. **Description to Physical Location:**					
26. Nearest City			State	Nearest ZIP Code	
Georgetown			TX	78628	

***Latitude/Longitude** are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).*

27. **Latitude (N)** In Decimal:	30.633599		28. Longitude (W) In Decimal:	-97.761641	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	38	0.93	97	45	41.54

29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)	31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)
5941	0300	459110	

33. **What is the Primary Business of this entity?** *(Do not repeat the SIC or NAICS description.)*

Golf Pro Shop

34. Mailing Address:	100 Cantera Way							
	City	Georgetown	State	TX	ZIP	78628	ZIP + 4	
35. E-Mail Address:	golfranchshop@verizon.net							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(512) 863-4573		( ) -

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. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☒ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☒ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

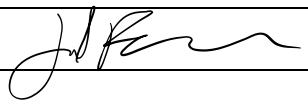
SECTION IV: Preparer Information

40. Name:	Joshua A. Baran, P.E.	41. Title:	Owner's Representative

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 779-7414		( ) -	josh.baran@jabeng.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 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	JAB Engineering, LLC	Job Title:	Owner's Representative for Golf Ranch
Name *(In Print):*	Joshua A. Baran, P.E.	Phone:	(512) 779- 7414
Signature:		Date:	5/6/2023