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: Capella Parkway Utility Improvements						**2. Regulated Entity No.:** TBD			
3. Customer Name: Georgetown Property - Airport T&C, LLC						**4. Customer No.:** TBD			
5. Project Type: **(Please circle/check one)**	New (circled)		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS (circled)	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential (circled)			**8. Site (acres):**		21.7 acres	
9. Application Fee:	$650		**10. Permanent BMP(s):**			N/A			
11. SCS (Linear Ft.):	1,223		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson		**14. Watershed:**			San Gabriel Watershed			

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.)	__	__	X
Region (1 req.)	__	__	X
County(ies)	__	__	X
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 X 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. Scott J. Foster, P.E. Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent — Date: 11/2/23

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):	

ORGANIZED SEWAGE COLLECTION SYSTEM PLAN

FOR

Capella Parkway Utility Improvements
Georgetown, Texas

November 2023

Prepared For:

Georgetown Property - Airport T&C, LLC
317 Grace Ln Ste 240
Austin, Texas 78746

Prepared By:

360 PROFESSIONAL SERVICES, INC.
Texas Firm Registration F4932

P.O. Box 3639
Cedar Park, Texas 78630
512-354-4682 (Main) * 512-351-3331 (Fax)

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I. GENERAL INFORMATION FORM (TCEQ-0587)

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: Scott J. Foster, P.E.

Date: 11/20/23

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: Capella Parkway Utility Improvements
2. County: Williamson
3. Stream Basin: San Gabriel Watershed
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: Todd Dailey
Entity: Georgetown Property - Airport T&C, LLC
Mailing Address: 317 Grace Ln Ste 240
City, State: Austin, TX Zip: 78746
Telephone: (512) 617-6363 FAX: _____
Email Address: todd@capellatx.com

8. Agent/Representative (If any):

Contact Person: Scott J. Foster, P.E.
Entity: 360 Professional Services, Inc.
Mailing Address: P.O. Box 3639
City, State: Cedar Park, TX Zip: 78630
Telephone: (512) 354-4682 FAX: (512) 351-3331
Email Address: scott.foster@360psinc.com

9. Project Location:

☒ The project site is located inside the city limits of Georgetown.
☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
☐ The project site is not located within any city's limits or ETJ.

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

Generally located at the northeast intersection of Northwest Blvd. and Lakeway Drive

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: November 28, 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: _____

Prohibited Activities

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

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

(2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;

(3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;

(4) The use of sewage holding tanks as parts of organized collection systems; and

(5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

(6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

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

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

(2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

(3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

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

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

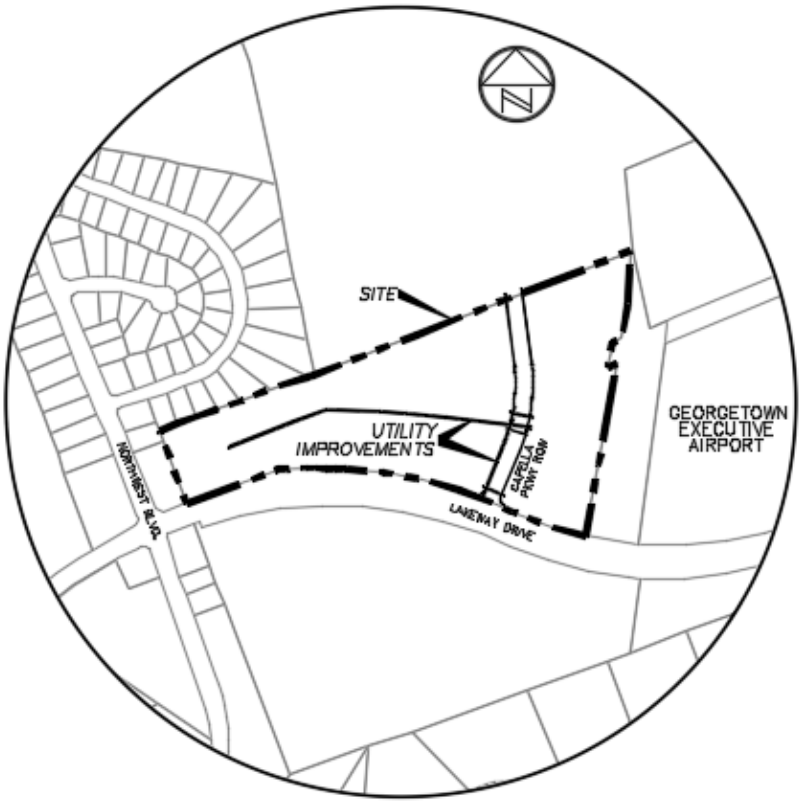
19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

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

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

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

ATTACHMENT A
ROAD MAP

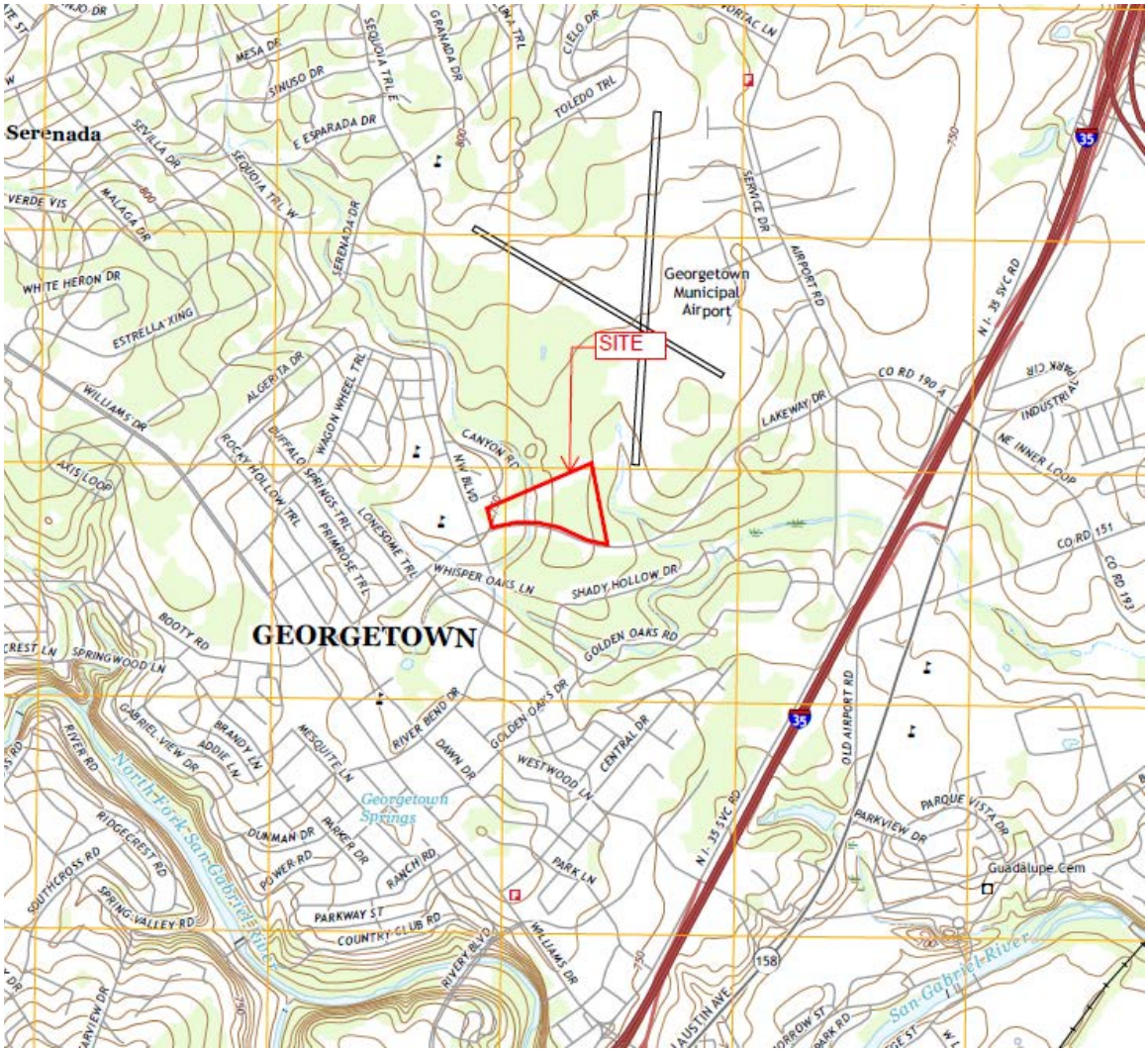


LOCATION MAP
NOT TO SCALE

Driving Directions (from downtown Austin):

1. Head **east** on **E 1st St/E Cesar Chavez St** toward **Interstate -35**
2. Turn **left** onto **N I-35 Frontage Rd**
3. **Slight left** to merge onto **I-35 N**
4. Keep **left** at the fork to stay on **I-35 N**
5. Take **exit** 264 toward **N Austin Ave**
6. Keep **left** at the fork to stay on **Exit 264**
7. Turn **left** onto **N Austin Ave**
8. Use the left lane to turn **left** onto **Lakeway Dr**
9. **End** at property before **Northwest Blvd**

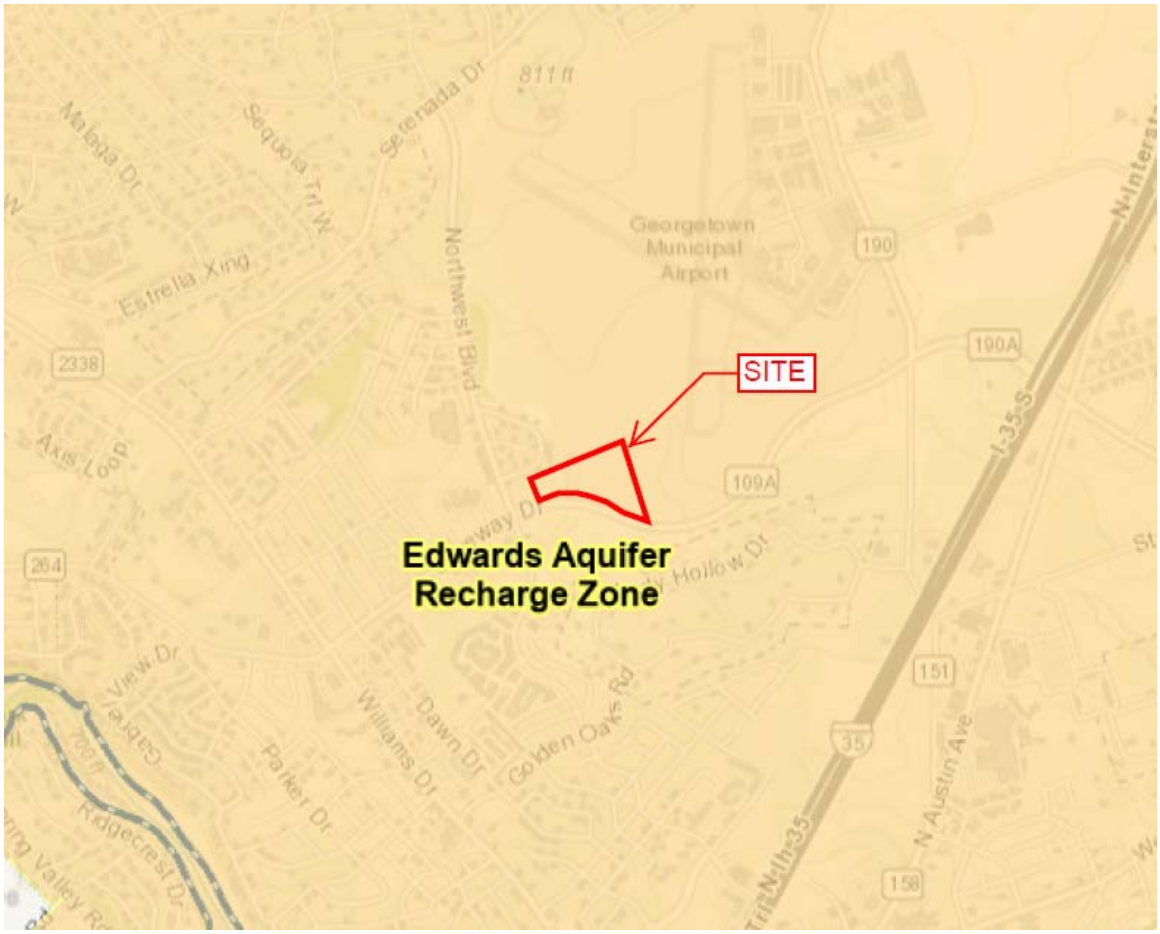
ATTACHMENT B
USGS MAP



Georgetown Quadrangle

Texas
7.5 Minute Series (Topographic)
20220811

ATTACHMENT B
EDWARDS AQUIFER RECHARGE ZONE MAP



ATTACHMENT C
PROJECT DESCRIPTION

The Capella Parkway Utility Improvements project consist of the construction of ±100 LF of 12" wastewater main, ±1,123 LF of 8" wastewater main, ±365 LF of 12" water main, and associated improvements. The ±21.7-acre site is generally located at the northeast intersection of Northwest Blvd. and Lakeway Drive in the City of Georgetown, Williamson County, Texas. Refer to vicinity map located in Attachment A. The site is located within the Recharge Zone of the Edward's Aquifer.

The site is bound by single family and Georgetown Airport to the north, Georgetown Airport to the east, Lakeway Blvd to the south, and existing offices to the west.

The project site is located within the Pecan Branch of the San Gabriel Watershed. The entire San Gabriel Watershed was previously studied within the Georgetown-San Gabriel River Flood Protection Planning Study prepared by Doucet + Chan and Scheibe Consulting, LLC (circa December 2017). Additionally, a portion of this study is located within the 100-year floodplain for Pecan Branch as identified by the Federal Emergency Management Agency, National Flood Insurance Program, as shown on map no. 48491C0291F as dated December 20, 2019, for Williamson County and Incorporated Areas.

The site is previously undeveloped and uncleared except an asphalt road of a previously vacated ROW. No impervious cover, detention, or water quality is being proposed with this project.

All utility improvements are designed in accordance with the City of Georgetown design standards and specifications. Upon completion all utility improvements will be dedicated to the City of Georgetown for maintenance.

II. GEOLOGIC ASSESSMENT FORM (TCEQ-0585)

Horizon™
Environmental Services, Inc.

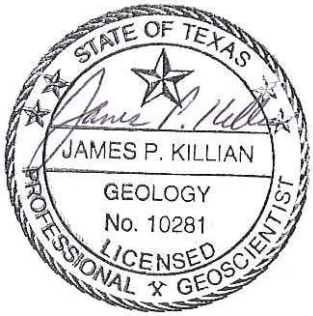
GEOLOGIC ASSESSMENT
22-ACRE LAKEWAY IN GEORGETOWN TRACT
LAKEWAY DRIVE
GEORGETOWN, WILLIAMSON COUNTY, TEXAS
HJN 180130 GA

PREPARED FOR:

CONFIDO PRIMUS, LLC
PHOENIX, ARIZONA

PREPARED BY:

HORIZON ENVIRONMENTAL SERVICES, INC.
TBPG FIRM REGISTRATION NO. 50488



JUNE 2018

CORPORATE HEADQUARTERS
1507 S Interstate 35 ★ Austin, TX 78741-2502 ★ (512) 328-2430 ★ www.horizon-esi.com
An LJA Company

Horizon
Environmental Services, Inc.

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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

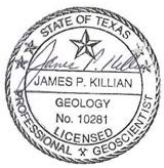
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: James Killian Telephone: 512 328-2430

Date: 18 June 2018 Fax: 512 328-1804

Representing: Horizon Environmental Services, Inc. and TBPG Firm Registration No. 50488
(Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: 22-acre Lakeway in Georgetown Tract, Lakeway Drive, Georgetown, Williamson County, Texas

Project Information

1. Date(s) Geologic Assessment was performed: 30 May 2018
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)
Crawford clay, 1-3% slopes (CfB)	D	1 to 2
Exckrant extremely stony clay, 0-3% slopes (EeB)	D	0 to 1
Georgetown silty clay loam, 1-3% slopes (GsB)	D	2 to 4

Soil Name	Group*	Thickness(feet)

** 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" = 60'
   Site Geologic Map Scale: 1" = 60'
   Site Soils Map Scale (if more than 1 soil type): 1" = 300'

9. Method of collecting positional data:

☒ Global Positioning System (GPS) technology.
☐ Other method(s). Please describe method of data collection: _____

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.
12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.

13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☐ There are _____ (#) 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.

Horizon
Environmental Services, Inc.

ATTACHMENT A

GEOLOGIC ASSESSMENT TABLE

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Lakeway in Georgetown Tract; Lakeway Dr, Georgetown, Williamson Co. Tx

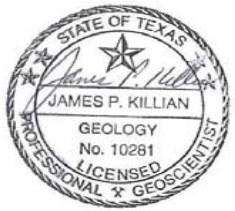
LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
M-1	30.67066	-97.6833	MB	30	Ked	3	3	--	--	0	--	--	X	5	35	X		X		Hillside

* DATUM:_____

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	Man-made 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: **steel casing/conctrete**

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 : 18 June 2018

Sheet ___1___ of __1____

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

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ATTACHMENT B

STRATIGRAPHIC COLUMN

180130 - Lakway in Georgetown\Graphics\180130GA_06A_Strat.mxd | TED | 06-19-2018

Geologic Unit	Hydrologic Unit	Approx. Thickness at Project Site (ft)	Elevation (ft msl)	Depth (ft)
			755	0
Edwards Formation (Ked)	Edwards Aquifer	100	655	100
Comanche Peak Limestone (Kc)		70	585	170
Walnut Formation (Kwa)	Confining Unit	175	410	345

Note: Unit elevations and thicknesses given with respect to a ground surface elevation of 755 ft msl on the western boundary of the project site (Lakeway in Georgetown).

Horizon Environmental Services, Inc.

STATE OF TEXAS
JAMES P. KILLIAN
GEOLOGY
No. 10281
LICENSED
PROFESSIONAL GEOSCIENTIST

ATTACHMENT B

STRATIGRAPHIC COLUMN
LAKEWAY IN GEORGETOWN
LAKEWAY DRIVE
GEORGETOWN,
WILLIAMSON COUNTY, TEXAS

Horizon
Environmental Services, Inc.

ATTACHMENT C

DESCRIPTION OF SITE GEOLOGY

Geologic information for the subject site obtained via literature review is provided in Attachment E, Supporting Information.

A geologic assessment of the approximately 22-acre Lakeway in Georgetown tract was conducted pursuant to Texas rules for regulated activities on the Edwards Aquifer Recharge Zone (EARZ) (30 TAC 213). The subject site consists of undeveloped rangeland located northeast of the intersection of Lakeway Drive and Northwest Boulevard in Georgetown, Williamson County, Texas. Assessment findings were used to develop recommendations for site construction measures intended to be protective of water resources at the subject site and adjacent areas.

The entire subject site is located within the Edwards Aquifer Recharge Zone (EARZ), as defined by the Texas Commission on Environmental Quality (TCEQ). The EARZ occurs where surface water enters the subsurface through exposed limestone bedrock containing faults, fractures, sinkholes, and caves.

The subject site is predominantly underlain by the undifferentiated Edwards Limestone Formation (Ked) (UT-BEG, 1995) with an estimated maximum thickness of about 100 feet.

No geologic feature features and 1 man-made feature (M-1) were identified at the subject site. Further information pertaining to the man-made feature is presented in Attachments D, E, and F. Photographs of the subject site and the man-made feature are presented in Attachment G.

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ATTACHMENT D

SITE GEOLOGIC MAP

Horizon Environmental Services, Inc.

Date:	05/29/2018
Drawn:	TED
HJN NO:	180130 GA
Source:	USDA, 2016; UT-BEG, 1995

Legend

- Man-made Feature
- Edwards Limestone (Ked)
- Subject Site

STATE OF TEXAS — JAMES P. KILLIAN — GEOLOGY — No. 10281 — LICENSED PROFESSIONAL GEOSCIENTIST

Attachment D

Site Geologic Map
Lakeway in Georgetown
Lakeway Drive
Georgetown, Williamson County, Texas

0 50 100
Feet

180130 - Lakway in Georgetown\Graphics\180130GA_02A_ SGM.mxd

Horizon
Environmental Services, Inc.

ATTACHMENT E

SUPPORTING INFORMATION

1.0 INTRODUCTION AND METHODOLOGY

This report and any proposed abatement measures are intended to fulfill Texas Commission on Environmental Quality (TCEQ) reporting requirements (TCEQ, 1999). This geologic assessment includes a review of the subject site for potential aquifer recharge and documentation of general geologic characteristics for the subject site. Horizon Environmental Services, Inc. (Horizon) conducted the necessary field and literature studies according to TCEQ *Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (TCEQ, 2004).

Horizon walked transects spaced less than 50 feet apart, mapped the locations of features using a sub-foot accurate Trimble Geo HX handheld GPS or handheld GPS, and posted processed data utilizing GPS Pathfinder Office software, topographic maps, and aerial photographs. Horizon also searched the area around any potential recharge features encountered to look for additional features. When necessary, Horizon removed loose rocks and soil (by hand) to preliminarily assess each feature's subsurface extent while walking transects. However, labor-intensive excavation was not conducted during this assessment. Features that did not meet the TCEQ definition of a potential recharge feature (per TCEQ, 2004), such as surface weathering, karren, or animal burrows, were evaluated in the field and omitted from this report.

The results of this survey do not preclude the possibility of encountering subsurface voids or abandoned test or water wells during the clearing or construction phases of the proposed project. If a subsurface void is encountered during any phase of the project, work should be halted until the TCEQ (or appropriate agency) is contacted and a geologist can investigate the feature.

2.0 ENVIRONMENTAL SETTING

2.1 LOCATION AND GENERAL DESCRIPTION

The subject site is located northeast of the intersection of Lakeway Drive and Northwest Boulevard in Georgetown, Williamson County, Texas. It consists of approximately 22 acres of undeveloped rangeland (Attachment F, Figure 1). The City of Georgetown operates a small airport located immediately east of the subject site.

2.2 LAND USE

The subject site is vacant with no apparent current use. Surrounding lands are generally used for single-family residential and industrial (City airport) purposes.

2.3 TOPOGRAPHY AND SURFACE WATER

The subject site is situated on gently sloping terrain that is located within the San Gabriel River watershed (Attachment F, Figures 2 and 3). Surface elevations on the subject site vary from a minimum of approximately 735 feet above mean sea level (amsl) near the eastern site boundary, to a maximum of approximately 755 feet amsl near the western property boundary (USGS, 1988). Drainage on the site occurs primarily by overland sheet flow from west to east. In

addition, an unnamed tributary of Pecan Branch bisects the center of the site and drains from north to south.

2.4 EDWARDS AQUIFER ZONE

The entire subject site is located within the Edwards Aquifer Recharge Zone (EARZ) (TCEQ, 2018) (Attachment F, Figure 2). The Recharge Zone is described as an area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer.

2.5 SURFACE SOILS

Three soil units are mapped within the subject site (NRCS, 2018; Werchan and Coker, 1983) (Attachment F, Figure 4). This soil units are described in further detail below.

Crawford clay, 1 to 3% slopes (CfB): This gently sloping soil is on mesas, foot slopes, and at the head of drainage ways on uplands. Typically, the uppermost layer is neutral clay about 27 inches thick. It is brown in the upper 6 inches and dark reddish brown below that. The underlying material is whitish, fractured hard limestone. This soil is well-drained, and the available water capacity is low. When the soil is dry and cracked, permeability is rapid; but when the soil is wet and the cracks are closed, permeability is very slow. Runoff is medium.

Eckrant extremely stony clay, 0 to 3% slopes (EeB): Typically, this soil has an extremely stony, very dark gray, clay surface layer about 11 inches thick. The underlying material is indurated limestone. About 25% of the surface is covered with fragments of limestone; most are about 6 inches across, but range from 3 inches to 3 feet across and are as much as 10 inches thick. The soil is calcareous, moderately alkaline, and well-drained. Permeability is moderately slow, and surface runoff is rapid. The fragments of limestone on the surface help to prevent erosion. The available water capacity is very low because of the shallowness of the soil and stones in the soil.

Georgetown stony clay loam, 1 to 3% slopes (GsB): This a gently sloping soil that occurs within central upland areas of the subject site. Typically, this soil has a slightly acidic, brown, stony clay loam surface layer about 7 inches thick and few stones on or near the surface. The subsoil, which extends down to a depth of about 35 inches, is neutral, reddish-brown clay in the upper part and slightly acidic, reddish-brown, cobbly clay in the lower part. The underlying material is indurated, fractured limestone that has clay loam in crevices and fractures. This soil is well-drained. Permeability is slow, and surface runoff is medium. The available water capacity is low. Reaction is neutral to slightly acidic. The erosion hazard ranges to slight.

2.6 WATER WELLS

A review of TCEQ and Texas Water Development Board (TWDB) records revealed no water wells on the subject site and approximately 24 wells within 0.5 miles of the subject site

(TCEQ, 2018; TWDB, 2018). The majority of these wells are reportedly completed within the Edwards Aquifer at total depths ranging from 175 to 200 feet below surface grade. A few wells are reportedly completed within the Trinity Aquifer at total depths of over 900 feet below surface grade.

The results of this assessment do not preclude the existence of undocumented or abandoned wells on the site. If a water well or casing is encountered during construction, work should be halted near the object until the TCEQ is contacted. If any on-site wells are not intended for future use, they should be capped or properly abandoned according to the Administrative Rules of the Texas Department of Licensing and Regulation (TDLR), 16 Texas Administrative Code (TAC), Chapter 76. A plugging report must be submitted by a licensed water well driller to the TDLR Water Well Driller's Program, Austin, Texas. TCEQ publication RG-347, "Landowner's Guide to Plugging Abandoned Water Wells," provides specific guidance. If a well is intended for use, it must comply with 16 TAC §76.

2.7 GEOLOGY

Literature Review

A review of existing literature shows the subject site is predominantly underlain by the undifferentiated Edwards Limestone Formation (Ked) (UT-BEG, 1995) with an estimated maximum thickness of about 100 feet. The Edwards Limestone Formation consists mostly of gray to light brownish-gray, thin to medium-bedded dolomite, dolomitic limestone, and limestone.

The subject site is located within the Balcones Fault Zone, and available geologic reports indicate the nearest mapped fault is located about 1.5 miles to the south/southeast. In general, the rock strata beneath the site dip to the east-southeast at about 10 to 30 feet per mile (less than 1°). The site Stratigraphic Column is provided as Attachment B, and the Site Geologic Map is Attachment D.

Field Assessment

A field survey of the subject site was conducted by a licensed Horizon geologist on 30 May 2018. Horizon identified no apparent geologic features and 1 man-made feature (M-1) on the subject site that meets the TCEQ definition of a potential recharge feature. Man-made feature M-1 is a manhole cover for a sanitary sewer line operated and maintained by the City of Georgetown. Horizon observed no natural springs and 1 stream (an ephemeral tributary of Pecan Branch) at the subject site.

The man-made feature was evaluated for its potential to be a significant pathway for fluid movement into the Edwards Aquifer. The Geologic Assessment Table (Attachment A) summarizes this evaluation and assigns each feature's sensitivity a total point value. Those with a point value of 40 or higher are deemed to be sensitive groundwater recharge features and should be protected during site development pursuant to TCEQ rules for protection of the Edwards Aquifer (30 TAC 213).

3.0 CONCLUSIONS AND RECOMMENDATIONS

No geologic features and 1 man-made feature (M-1) were identified at the subject site. The man-made feature has been evaluated as non-sensitive for groundwater recharge capability and would therefore not require a TCEQ protective setback buffer.

The site generally appears well-suited to development prospectuses. It should be noted that soil and drainage erosion would increase with ground disturbance. Native grasses and the cobbly content of the soil aid to prevent erosion. Soil and sedimentation fencing should be placed in all appropriate areas prior to any site-disturbing activities.

Because the subject site is located over the Edwards Aquifer Recharge Zone, it is possible that subsurface voids underlie the site. If any subsurface voids are encountered during site development, work should halt immediately so that a geologist may assess the potential for the void(s) to provide meaningful contribution to the Edwards Aquifer.

4.0 REFERENCES

(COA) City of Austin. *GIS/Map Downloads,* 2012 2-foot Contours. <ftp://ftp.ci.austin.tx.us/GIS-Data/Regional/coa_gis.html>. 8 November 2012.

(NRCS) Web Soil Survey, <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed 18 June 2018.

(OSM) OpenStreetMap contributors. Open Street Map, <http://www.openstreetmap.org>. Available under the Open Database License (www.opendatacommons.org/ licenses/odbl). Accessed 15 June 2018.

(TCEQ) *Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones*. Revised October 2004.

_____. Complying with the Edwards Aquifer Rules: Administrative Guidance, Revised August 1999.

_____. Edwards Aquifer Protection Program, Chapter 213 Rules – Recharge Zone, Transition Zone, Contributing Zone, and Contributing Zone within the Transition Zone. Vector digital data. Available at <https://www.tceq.texas.gov/gis/download-tceq-gis-data>. Accessed 15 June 2018.

_____. Edwards Aquifer Protection Program. Edwards Aquifer Viewer, <http://www.tceq.state. tx.us/field/eapp/viewer.html>. Accessed 15 June 2018.

(TWDB) Texas Water Development Board. Water Information Integration and Dissemination System. TWDB Groundwater Database, <https://www2.twdb.texas.gov/apps/ waterdatainteractive/groundwaterdataviewer>. Accessed 18 June 2018.

(USDA) US Department of Agriculture. Digital orthophoto quarter-quadrangle, Georgetown, Texas. National Agriculture Imagery Program, Farm Service Agency, Aerial Photography Field Office. 2016

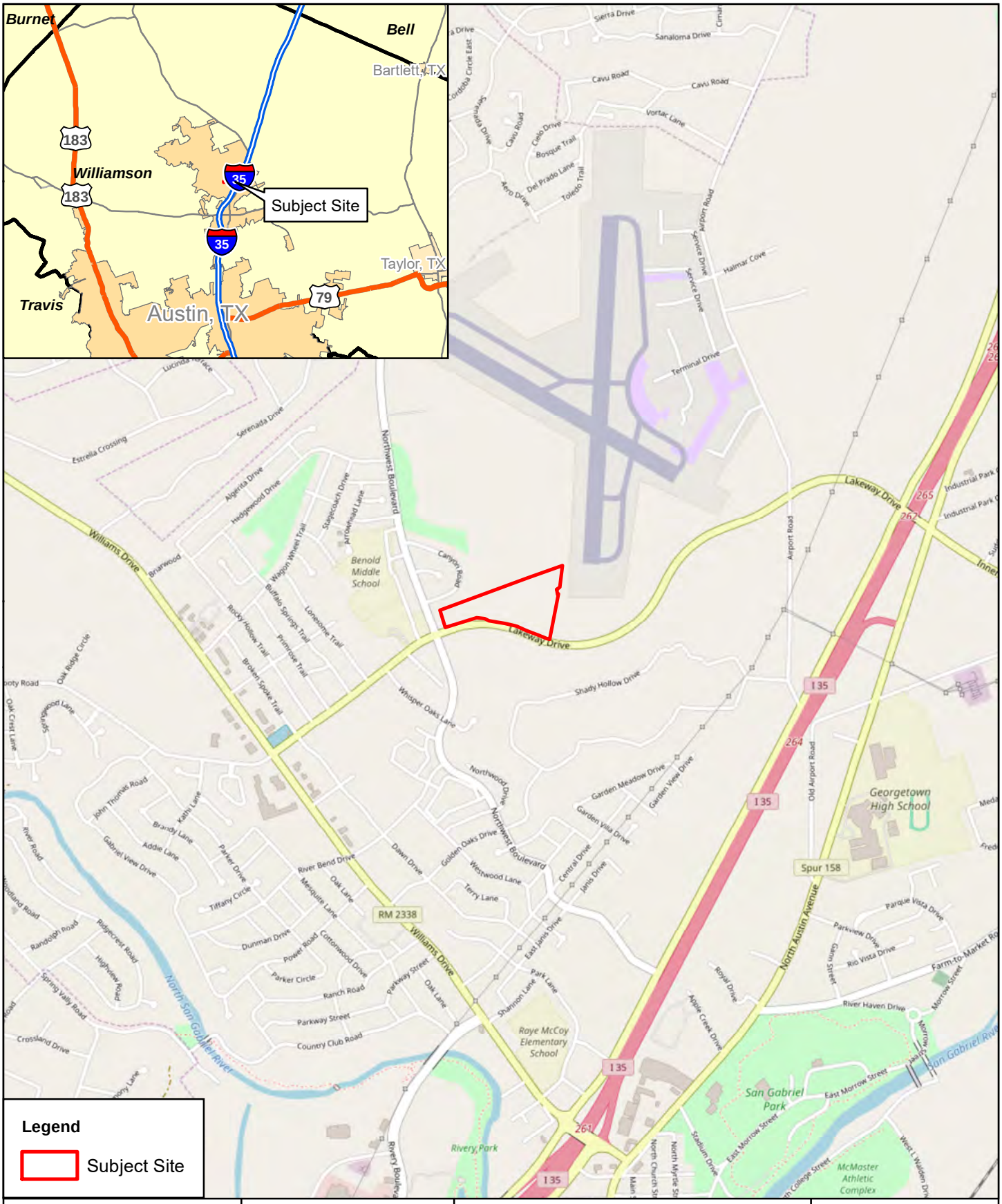
(USGS) US Geological Survey. 7.5-minute series topographic maps, Georgetown, Texas quadrangle, 1988.

(UT-BEG) The University of Texas at Austin Bureau of Economic Geology, V.E. Barnes. *Geologic Atlas of Texas*, Austin Sheet. Virgil Everett Barnes Edition. 1995.

Werchan, L. E., and John L. Coker. *Soil Survey of Williamson County, Texas*. US Department of Agriculture, Natural Resources Conservation Service (formerly Soil Conservation Service), in cooperation with the Texas Agricultural Experiment Station. 1983.

ATTACHMENT F

ADDITIONAL SITE MAPS



Date:	05/29/2018
Drawn:	TED
HJN NO:	180130 GA
Source:	OSM, 2018

Horizon Environmental Services, Inc.

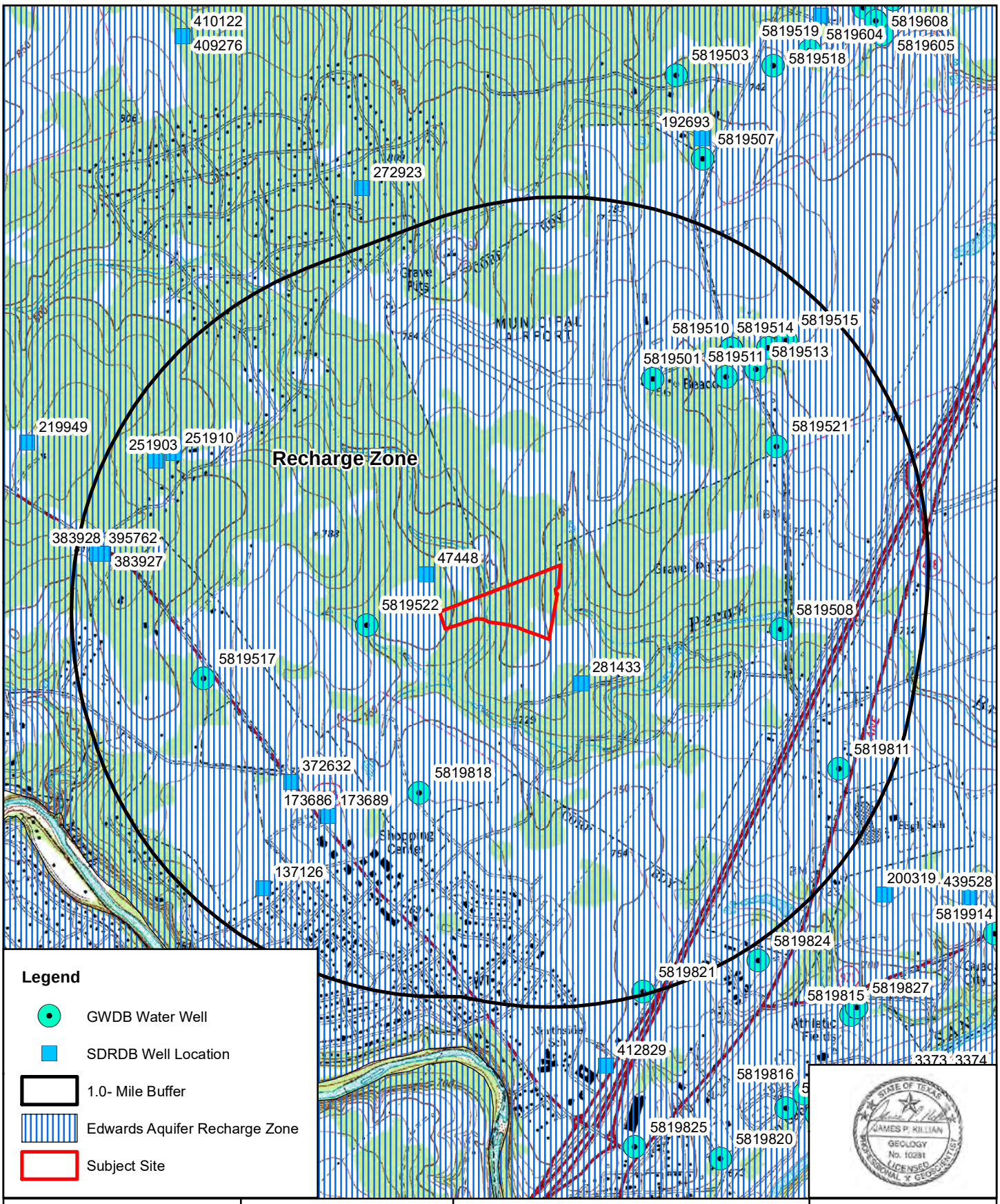
Attachment F, Figure 1

Vicinity Map
Lakeway in Georgetown
Lakeway Drive
Georgetown, Williamson County, Texas

N

0 1,000 2,000
Feet

180130 - Lakway in Georgetown\Graphics\180130GA_01A_Vic.mxd



180130 - Lakway in Georgetown\Graphics\180130GA_03A_Topo_Hydro.mxd

Legend

10-foot Contours

Subject Site

STATE OF TEXAS
JAMES P. KILLIAN
GEOLOGY
No. 10291
LICENSED
PROFESSIONAL GEOSCIENTIST

Horizon Environmental Services, Inc.

Date:	05/21/2018
Drawn:	TED
HJN NO:	180114 GA
Source:	COA, 2012; USDA, 2016

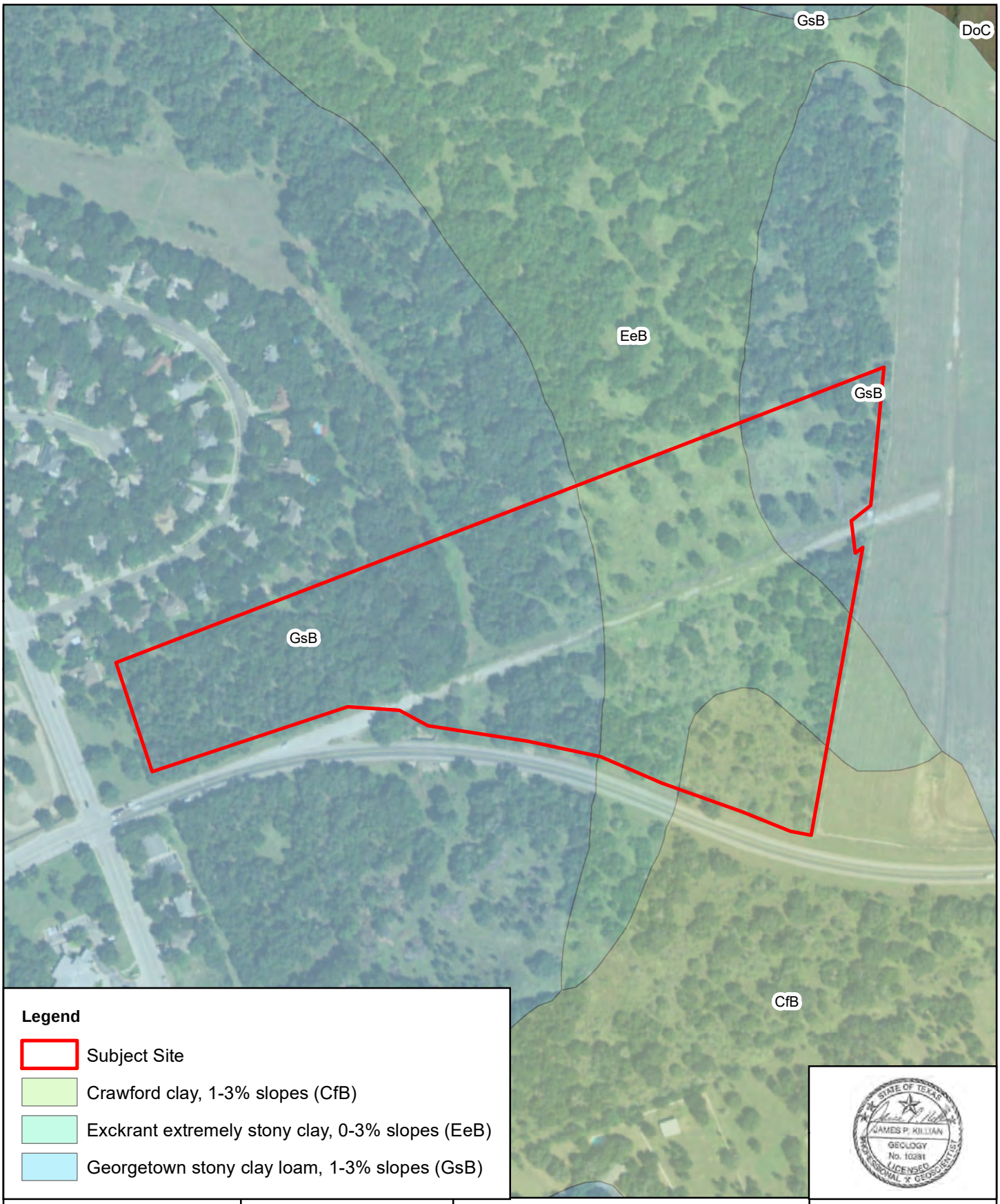
Attachment F, Figure 3

Site Topography Map
Lakeway in Georgetown
Lakeway Drive
Georgetown, Williamson County, Texas

N

0 150 300
Feet

180130 - Lakway in Georgetown\Graphics\180130GA_04A_Topo.mxd



Legend

- Subject Site
- Crawford clay, 1-3% slopes (CfB)
- Exckrant extremely stony clay, 0-3% slopes (EeB)
- Georgetown stony clay loam, 1-3% slopes (GsB)

STATE OF TEXAS
JAMES P. KILLIAN
GEOLOGY
No. 10291
LICENSED
PROFESSIONAL GEOSCIENTIST

Horizon Environmental Services, Inc.

Date:	05/29/2018
Drawn:	TED
HJN NO:	180130 GA
Source:	NRCS, 2018; USDA, 2016

Attachment F, Figure 4
Site Soil Map
Lakeway in Georgetown
Lakeway Drive
Georgetown, Williamson County, Texas

N

0 150 300
Feet

180130 - Lakway in Georgetown\Graphics\180130GA_05A_Soil.mxd

Horizon
Environmental Services, Inc.

ATTACHMENT G

SITE PHOTOGRAPHS

Horizon
Environmental Services, Inc.

PHOTO 1
View of old roadway and entrance gate located inside subject site near Lakeway Drive, facing southwest

PHOTO 2
Opposite view of old roadway within site, facing northeast

PHOTO 3
View of man-made feature M-1 (sanitary sewer manhole), facing north

PHOTO 4
Upstream view of unnamed tributary of Berry Creek at crossing below old roadway, facing north

III. ORGANIZED SEWAGE COLLECTION SYSTEM PLAN (TCEQ-0582)

Organized Sewage Collection System Application

Texas Commission on Environmental Quality

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

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

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

Regulated Entity Name: Capella Parkway Utility Improvements

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

Customer Information

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

   Contact Person: Todd Dailey
   Entity: Georgetown Property - Airport T&C, LLC
   Mailing Address: 317 Grace Ln Ste 240
   City, State: Austin, TX Zip: 78746
   Telephone: (512) 617-6363 Fax: _____
   Email Address: todd@capellatx.com
   The appropriate regional office must be informed of any changes in this information within 30 days of the change.

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

   Contact Person: Scott J. Foster, P.E.
   Texas Licensed Professional Engineer's Number: 84652
   Entity: 360 Professional Services, Inc.
   Mailing Address: P.O. Box 3639
   City, State:Cedar Park, TX Zip: 78630
   Telephone:(512) 354-4682 Fax:(512) 351-3331
   Email Address:scott.foster@360psinc.com

Project Information

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

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

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

100% Domestic	385,000 gallons/day
_____% Industrial	_____ gallons/day
_____% Commingled	_____ gallons/day

   Total gallons/day: 385,000

6. Existing and anticipated infiltration/inflow is 750 gallons per day per acre gallons/day. This will be addressed by: Utilization of watertight Manholes in unpaved areas.

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

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

8. Pipe description:

Table 1 - Pipe Description

Pipe Diameter(Inches)	*Linear Feet (1)*	*Pipe Material (2)*	*Specifications (3)*
12"	100	SDR 26 PVC	ASTM D3034
8"	1,123	SDR 26 PVC	ASTM D3034

Total Linear Feet: 1,223

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

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

   ☒ Existing
   ☐ Proposed

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

   ☒ The City of Georgetown standard specifications.
   ☐ Other. Specifications are attached.

11. ☒ No force main(s) and/or lift station(s) are associated with this sewage collection system.

   ☐ A force main(s) and/or lift station(s) is associated with this sewage collection system and the **Lift Station/Force Main System Application** form (TCEQ-0624) is included with this application.

Alignment

12. ☒ There are no deviations from uniform grade in this sewage collection system without manholes and with open cut construction.

13. ☒ There are no deviations from straight alignment in this sewage collection system without manholes.

   ☐ **Attachment B - Justification and Calculations for Deviation in Straight Alignment without Manholes**. A justification for deviations from straight alignment in this sewage collection system without manholes with documentation from pipe manufacturer allowing pipe curvature is attached.

   ☐ For curved sewer lines, all curved sewer line notes (TCEQ-0596) are included on the construction plans for the wastewater collection system.

Manholes and Cleanouts

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

Table 2 - Manholes and Cleanouts

Line	*Shown on Sheet*	*Station*	*Manhole or Clean-out?*
B1	7 Of 12	5+62	Manhole
B2	8 Of 12	5+86	Manhole
	Of		
	Of		
	Of		
	Of		
	Of		

Line	*Shown on Sheet*	*Station*	*Manhole or Clean-out?*
	Of		
	Of		
	Of		

15. ☒ Manholes are installed at all Points of Curvature and Points of Termination of a sewer line.

16. ☒ The maximum spacing between manholes on this project for each pipe diameter is no greater than:

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

☐ **Attachment C – Justification for Variance from Maximum Manhole Spacing**. The maximum spacing between manholes on this project (for each pipe diameter used) is greater than listed in the table above. A justification for any variance from the maximum spacing is attached, and must include a letter from the entity which will operate and maintain the system stating that it has the capability to maintain lines with manhole spacing greater than the allowed spacing.

17. ☐ All manholes will be monolithic, cast-in-place concrete.

☒ The use of pre-cast manholes is requested for this project. The manufacturer's specifications and construction drawings, showing the method of sealing the joints, are attached.

Site Plan Requirements

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

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

Site Plan Scale: 1" = 80'.

19. ☒ The Site Plan must include the sewage collection system general layout, including manholes with station numbers, and sewer pipe stub outs (if any). Site plan must be overlain by topographic contour lines, using a contour interval of not greater than ten feet and showing the area within both the five-year floodplain and the 100-year floodplain of any drainage way.

20. Lateral stub-outs:

☐ The location of all lateral stub-outs are shown and labeled.
☒ No lateral stub-outs will be installed during the construction of this sewer collection system.

21. Location of existing and proposed water lines:

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

22. 100-year floodplain:

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

Table 3 - 100-Year Floodplain

Line	*Sheet*	*Station*
B1	7 of 12	0+00 to 1+17
B2	8 of 12	0+00 to 3+73
	of	to
	of	to

23. 5-year floodplain:

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

Table 4 - 5-Year Floodplain

Line	*Sheet*	*Station*
B1	7 of 12	0+00 to 0+63
B2	8 of 12	0+00 to 3+00
	of	to
	of	to

24. ☒ Legal boundaries of the site are shown.

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

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

26. ☒ All existing or proposed water line crossings and any parallel water lines within 9 feet of sewer lines are listed in the table below. These lines must have the type of pressure rated pipe to be installed shown on the plan and profile sheets. Any request for a variance from the required pressure rated piping at crossings must include a variance approval from 30 TAC Chapter 290.

☐ There will be no water line crossings.
☐ There will be no water lines within 9 feet of proposed sewer lines.

Table 5 - Water Line Crossings

Line	*Station or Closest Point*	*Crossing or Parallel*	*Horizontal Separation Distance*	*Vertical Separation Distance*
B1	4+49	Crossing	0'	6.8'

27. Vented Manholes:

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

Table 6 - Vented Manholes

Line	*Manhole*	*Station*	*Sheet*
N/A	N/A	N/A	N/A

Line	*Manhole*	*Station*	*Sheet*

28. Drop manholes:

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

Table 7 - Drop Manholes

Line	*Manhole*	*Station*	*Sheet*
N/A	N/A	N/A	N/A

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

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

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

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

31. Minimum flow velocity (From Appendix A)

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

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

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

Table 8 - Flows Greater Than 10 Feet per Second

Line	*Profile Sheet*	*Station to Station*	*FPS*	*% Slope*	*Erosion/Shock Protection*
N/A	N/A	N/A	N/A	N/A	N/A

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

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

Administrative Information

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

35. ☒ Standard details are shown on the detail sheets, which are dated, signed, and sealed by the Texas Licensed Professional Engineer, as listed in the table below:

Table 9 - Standard Details

Standard Details	*Shown on Sheet*
Lateral stub-out marking **[Required]**	13 of 13
Manhole, showing inverts comply with 30 TAC §217.55(l)(2) **[Required]**	13 of 13
Alternate method of joining lateral to existing SCS line for potential future connections **[Required]**	N/A of N/A
Typical trench cross-sections **[Required]**	13 of 13
Bolted manholes **[Required]**	13 of 13
Sewer Service lateral standard details **[Required]**	N/A of N/A
Clean-out at end of line **[Required, if used]**	13 of 13
Baffles or concrete encasement for shock/erosion protection **[Required, if flow velocity of any section of pipe >10 fps]**	N/A of N/A
Detail showing Wastewater Line/Water Line Crossing **[Required, if crossings are proposed]**	13 of 12
Mandrel detail or specifications showing compliance with 30 TAC §217.57(b) and (c) **[Required, if Flexible Pipe is used]**	3 of 12

Standard Details	*Shown on Sheet*
Drop manholes **[Required, if a pipe entering a manhole is more than 24 inches above manhole invert]**	N/A of N/A

36. ☒ All organized sewage collection system general construction notes (TCEQ-0596) are included on the construction plans for this sewage collection system.

37. ☒ All proposed sewer lines will be sufficiently surveyed/staked to allow an assessment prior to TCEQ executive director approval. If the alignments of the proposed sewer lines are not walkable on that date, the application will be deemed incomplete and returned.

    ☒ Survey staking was completed on this date: November 28, 2023

38. ☒ 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.

39. ☒ Any modification of this SCS application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Signature

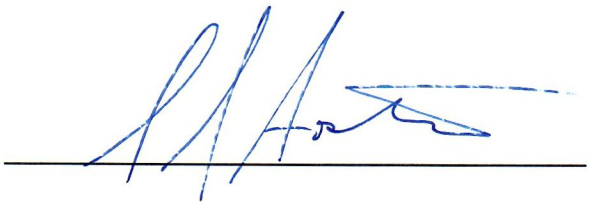
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Organized Sewage Collection System Application** is hereby submitted for TCEQ review and executive director approval. The system was designed in accordance with the requirements of 30 TAC §213.5(c) and 30 TAC §217 and prepared by:

Print Name of Licensed Professional Engineer: Scott J. Foster, P.E.

Date: 11/20/23

Place engineer's seal here:

Signature of Licensed Professional Engineer:



Appendix A-Flow Velocity Table

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

Table 10 - Slope Velocity

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

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

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

Figure 1 - Manning's Formula

Where:

v = velocity (ft/sec)
n = Manning's roughness coefficient (0.013)
Rh = hydraulic radius (ft)
S = slope (ft/ft)

ATTACHMENT A
SCS ENGINEERING DESIGN REPORT
AND
CAPELLA PARKWAY UTILITY IMPROVEMENTS PLANS

ATTACHMENT A
SCS ENGINEERING DESIGN REPORT

Capella Parkway Utility Improvements is a water and wastewater line project. The ±21.7-acre site is generally located at the northeast intersection of Northwest Blvd. and Lakeway Drive in the City of Georgetown, Williamson County, Texas. The project improvements include ±100 LF of 12" wastewater main, ±1,123 LF of 8" wastewater main, ±365 LF of 12" water main, and associated improvements for the site. All utility improvements are designed in accordance with the City of Georgetown design standards and specifications. Upon completion all utility improvements will be dedicated to the City of Georgetown for maintenance.

The project site is located within the Pecan Branch of the San Gabriel Watershed. A portion of this study is located within the 100-year floodplain for Pecan Branch as identified by the Federal Emergency Management Agency, National Flood Insurance Program, as shown on map no. 48491C0291F as dated December 20, 2019, for Williamson County and Incorporated Areas, located in Attachment A1. Additionally, the site is located within the Edwards Aquifer Rechange Zone and can be found in Attachment A2.

The proposed wastewater improvements will connect to an existing 21" PVC wastewater main constructed per the Pecan Branch Wastewater Interceptor Plans by Kasberg, Patrick and Associates, LP Consulting Engineers dated March 2006. The existing 21" main is at 0.2% slope and has a capacity of 4.59 MGD. The flow will be conveyed to The Pecan Branch WWTP which is owned and operated by the City of Georgetown. The City of Georgetown references TCEQ design requirements. 360PSI has utilized City of Round Rock Utility Criteria Manual for the design calculations for this project.

The Peak Dry Weather Flow (PDWF) is the peak wastewater flow from the LUEs that are contributing to the system, excluding inflow from surface water or infiltration of ground water. The PDWF is derived from the formula:

$$Q_{pdwf} = ([18 + (0.018 \times F)\ 0.5] / [4 + (0.018 \times F)\ 0.5]) \times F$$

Where: F = 80 gal./person/day x No. of LUEs x 3.5/1440 = average dry weather flow in gpm

The Peak Wet Weather Flow (PWWF) was obtained by adding inflow and infiltration to the Peak Dry Weather Flow. For sizing purposes, external contributions are accounted for by including 750 gallons per day per acre served for inflow and infiltration. The proposed pipe material is shown in Table 1:

Table 1: Pipe Description

Pipe Diameter (inches)	Pipe Material	Pipe Specifications
12	SDR 26 PVC	ASTM D3034
8	SDR 26 PVC	ASTM D3034

The design information based on full pipe flow with inflow and infiltration are shown in Table 2:

Table 2: Full Pipe Flow Design

Pipe Diameter (inches)	Max LUEs	Minimum Slope	Maximum Slope	Min. Velocity at Capacity (fps)	Max. Velocity at Capacity (fps)
12	500	1.1%	1.1%	4.7	4.7
8	2,600	0.5%	1.2%	2.4	3.7

The City of Georgetown has approved the anticipated flows into the system. The estimated design flows are based upon the City of Georgetown zoning for the site. The site is zoned Commercial and Industrial and each lot is assumed to generate 50 LUEs (9.7 gpm). Table A3 provides the PDWF and PWWF for the proposed flows which are less than the maximum flows previously identified.

Table 3: Pipe Design Flow

Line	Pipe Diameter (inches)	Design LUEs	PDWF (gpm)	PWWF (gpm)
B1 Sta: 0+00-1+00	12	200	151.5	160.2
B1 Sta: 1+00-5+62	8	100	78.7	82.6
B2 Sta: 0+00-3+22	8	150	115.6	118.1
B2 Sta: 3+22-5+76	8	50	40.5	43.0

All utility improvements are in accordance with the City of Georgetown design standards and specifications. In addition, the following City of Georgetown specifications related to safety, material specifications, and testing can be found in Attachment A3.

- Section CIP12 - Testing of Pipelines and Manholes
- Section CIP13 - Summary of Testing (Miscellaneous)
- Section WW1 - Concrete Manholes (Wastewater)
- Section WW2 - Polyvinyl Chloride (PVC) Pipe-Wastewater
- Section WW3 - Connections to and Work on the Existing Wastewater System

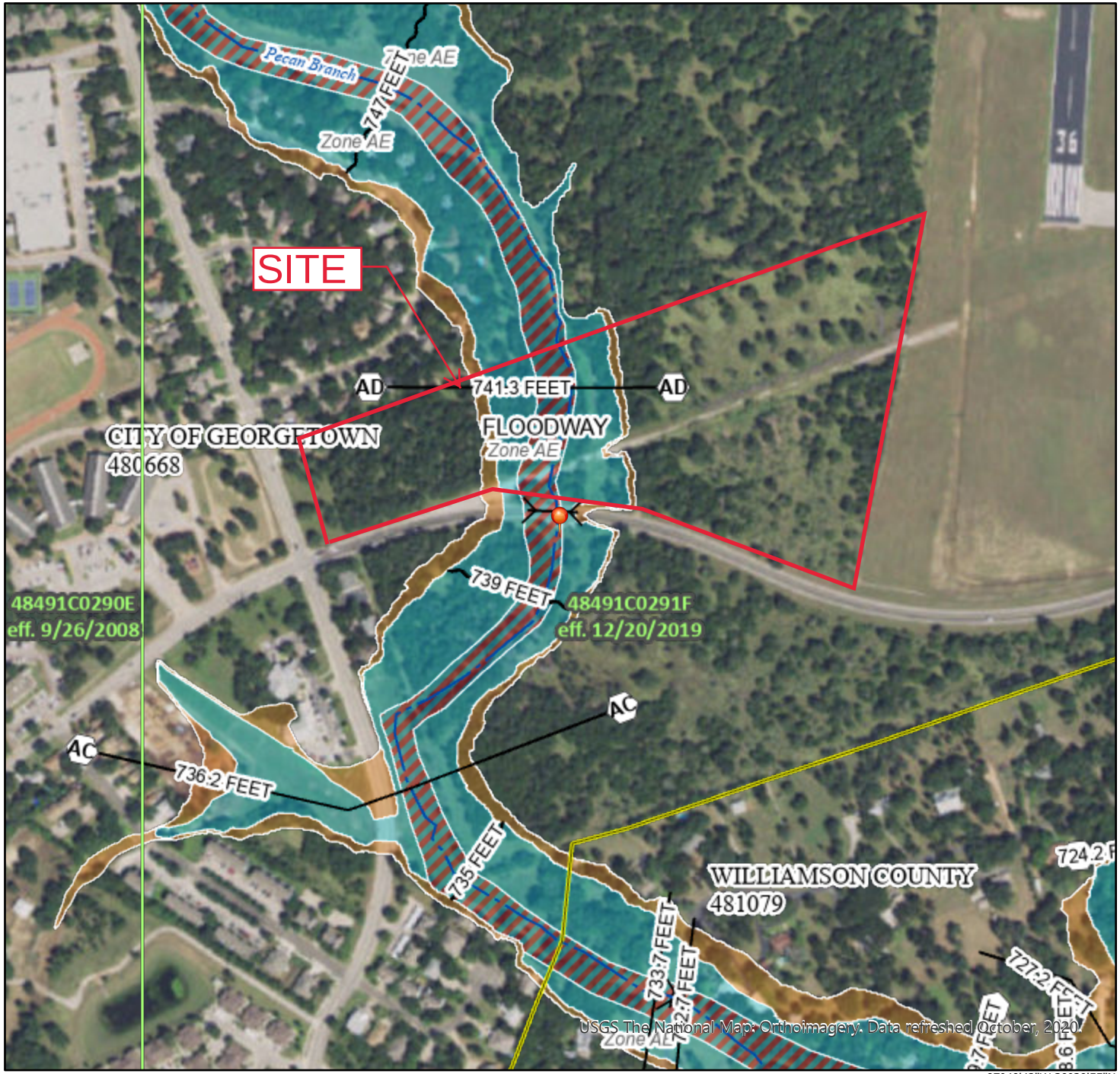
Scott J. Foster, P.E.
360 PROFESSIONAL SERVICES, INC.
Texas Firm Registration F4932

Attachment A1:
FEMA Map No. 48491C0291F
(Dated 12/20/2019)

National Flood Hazard Layer FIRMette

FEMA

97°41'20"W 30°40'26"N



97°40'42"W 30°39'55"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

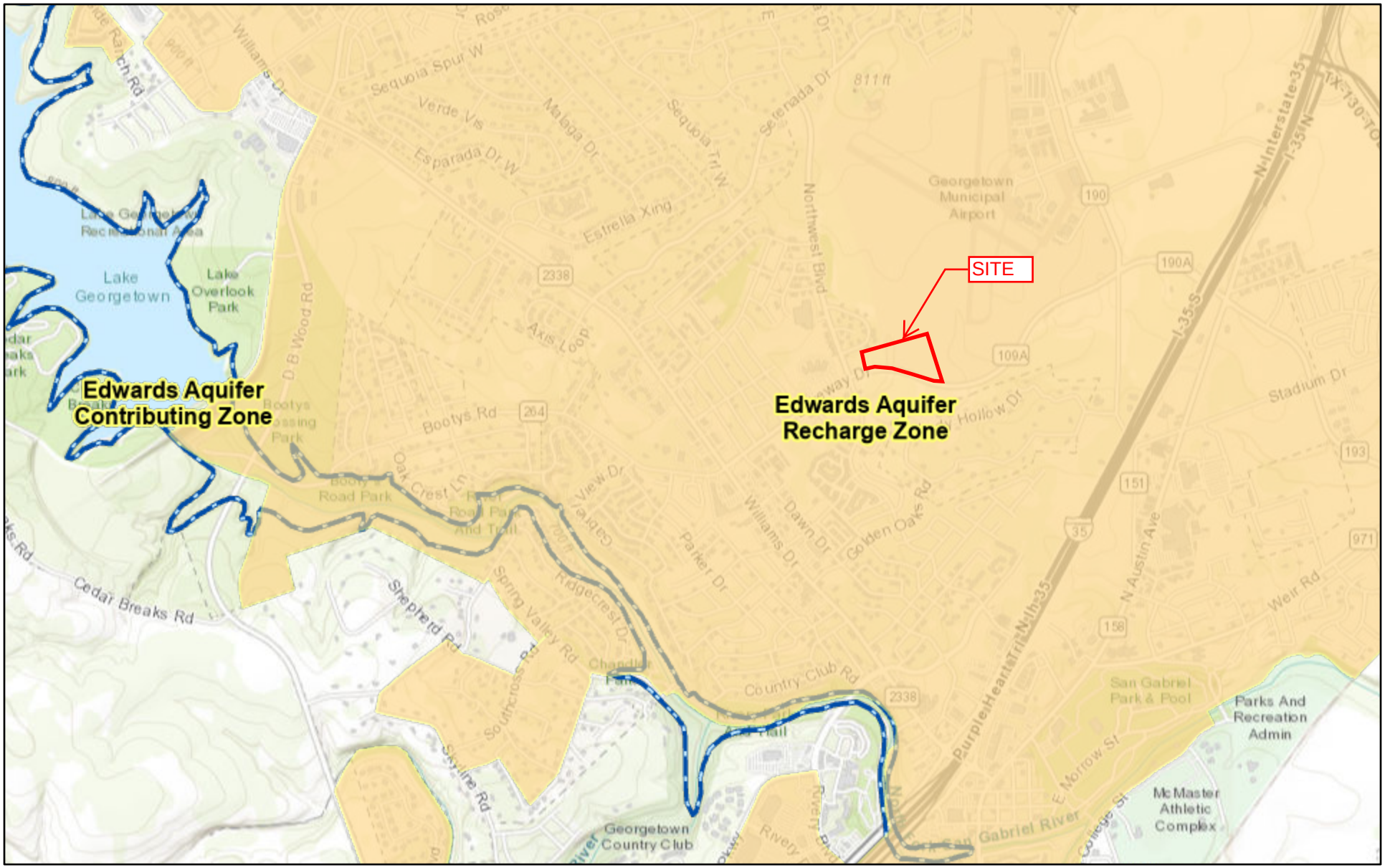
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/7/2021 at 5:52 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Attachment A2:
Edwards Aquifer Rechange Zone

Edwards Aquifer Viewer Custom Print



10/26/2023, 10:28:46 AM

1:36,112

0 0.28 0.55 1.1 mi

0 0.42 0.85 1.7 km

Edwards Aquifer Label

Edwards Aquifer Boundary

Edwards Aquifer Boundary central line

City/Place

TX Counties

7.5 Minute Quad Grid

TCEQ_EDWARDS_OFFICIAL_MAPS

County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, TCEQ

Web AppBuilder for ArcGIS

Attachment A3:
City of Georgetown Specifications

TECHNICAL SPECIFICATIONS

SECTION CIP12 – TESTING OF PIPELINES AND MANHOLES

CIP12.01 SCOPE OF WORK

A. This specification covers the requirements to perform ex-filtration testing and deflection testing of gravity pipelines and to perform pressure and leakage testing of pressure pipelines.

CIP12.02 SUBMITTALS

A. Within 30 days after the Notice to Proceed, the Contractor shall submit to the Engineer or the City for approval, technical product literature including a description of the deflection test procedure for flexible pipe greater than 27-inches in diameter, video inspection of gravity wastewater lines, and all other pertinent data to illustrate conformance to the specification found within.

CIP12.03 GENERAL

A. The entire length of the installed gravity line and the force main shall be field tested for water tightness. Gravity wastewater lines shall be video taped by camera.

B. Hydrostatic pressure and leakage tests shall be made on all pressure pipelines carrying wastewater or water.

C. All labor and equipment, including, but not limited to test pump with regulated by-pass meters and gauges required for conducting pipeline tests, shall be furnished by the Contractor. The Contractor shall furnish equipment and necessary piping as required to transport water used in testing from source to test location.

D. Time and sequence of testing shall be scheduled by the Contractor, subject to observation and approval by the City. The Contractor shall provide adequate labor, tools and equipment to operate valves and to locate and repair any leaks discovered during the initial filling of the pipeline prior to actual testing or during the course of the tests.

CIP12.04 CLEANING

A. At the conclusion of the work, thoroughly clean all pipelines by flushing with water or other means to remove all dirt, stones, pieces of wood, or other material which may have entered the pipes during the construction period. Debris cleaned from the lines shall be removed from the low end of the pipeline. If after this cleaning, obstructions remain, they shall be removed. After the pipelines are cleaned and if the groundwater level is above the pipe or following a heavy rain, the Engineer will examine the pipes for leaks. If any defective pipes or joints are discovered, they shall be repaired, and/or replaced by the Contractor at his expense.

CIP12.05 TEST PROCEDURES FOR GRAVITY PIPELINES, FORCE MAINS AND MANHOLES

A. Scope: After sewers and manholes have been installed and backfilled, subject newly laid gravity lines and manholes to a leakage test. Contractor to furnish all labor, materials, tools and equipment to test lines. Take such precautions as required to prevent damage to lines and appurtenances being tested. Repair any damage resulting from test at Contractor's expense. Conduct test in presence of Engineer or designated City Representative.

B. Test Procedures for Leakage Test of Gravity Sewer: Contractor, at his option, may test lines by hydrostatic or low pressure air test as specified below. However, the Engineer may direct a specific test be performed in specified areas of the Project.

C. Infiltration or Exfiltration Test (for Gravity Sewer)

1. Preparation: Seal ends of line section being tested with water tight plugs, equipped with pipe riser inserted and braced in the inlet of the manholes. Fill section with water 24-hours prior to start of test. Fill slowly from downstream manhole in test section so that no air is trapped in the line. Leave outlets of stacks and service lines exposed and unplugged until after exfiltration test has been made. Outlets terminating below level of test water surface to be temporarily extended upward by installing additional lengths of pipe. After completion of satisfactory test, remove lengths of pipe added for test.

2. Duration of Test: Test for 24-hours. Minimum head of either two (2) feet measured above the crown, inside pipe at upper end of section or four (4) feet measured above trench water table, whichever is higher, so that a net positive of two (2) feet TCEQ is used for testing.

3. Allowable Leakage: Allowable leakage or exfiltration in any individual section under construction shall not exceed 10 gallons per inch of inside diameter per mile of pipe per 24 hours.

D. Low Pressure Air Test

1. Preparation: Clean pipe to be tested by propelling snug fitting inflated rubber ball through the pipe with water or by use of water jet cleaning equipment. After manhole to manhole reach of pipe has been backfilled and cleaned, pneumatic plugs shall be placed in the line at each manhole and inflated to 25 psig. Add air slowly to the section under test until the internal pressure of 4.0 psig is obtained. Allow at least two (2) minutes for air temperature to stabilize, adding only the amount of air required to maintain pressure.

2. Duration of Test and Allowable Leakage

Decrease pressure to 3.5 psig and start stopwatch. Determine the time in seconds that is required for the internal air pressure to reach 2.5 psig. Minimum permissible pressure holding times are indicated in seconds and shall be computed by the following equation:

$T = (0.085 \times D \times K)/Q$

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

Since K value of less than 1.0 shall not be used, there are minimum times for each pipe diameter as outlined below:

Pipe Diameter	Minimum Time	Length for Minimum Time	Time for Longer Length
(inches)	(seconds)	(feet)	(seconds)
6	340	398	0.855(L)
8	454	298	1.520(L)
10	567	239	2.374(L)
12	680	199	3.419(L)
15	850	159	5.342(L)
18	1020	133	7.693(L)
21	1190	114	10.471(L)
24	1360	100	13.676(L)

Pipe Diameter	Minimum Time	Length for Minimum Time	Time for Longer Length
27	1530	88	17.309(L)
30	1700	80	21.369(L)
33	1870	72	25.856(L)
36	2040	66	30.771(L)

The test may be stopped if no pressure loss has occurred during the first 25% of the calculated testing time. If any pressure loss or leakage has occurred during the first 25% of the testing period, then the test shall continue for the entire test duration as outlined above or until failure. Lines with a 27-inch average inside diameter and larger may be air tested at each joint. If the joint test is used, a visual inspection of the joint shall be performed immediately after testing. The pipe is to be pressurized to 3.5 psi greater than the pressure exerted by groundwater above the pipe. Once the pressure has stabilized, the minimum time allowable for the pressure to drop from 3.5 psi gauge to 2.5 psi gauge shall be 10 seconds.

E. Test Procedures for Hydrostatic Test for Manholes

1. Manholes shall be tested for leakage separately and independently of the wastewater lines by hydrostatic exfiltration testing, or other methods acceptable to the City. If a manhole fails a leakage test, the manhole must be made water tight and retested. The maximum leakage for hydrostatic testing shall be 0.025 gallon per vertical foot per hour. Alternative test methods must ensure compliance with the above allowable leakage. Hydrostatic exfiltration testing shall be performed as follows: all wastewater lines coming into the manhole shall be sealed with an internal pipe plug, then the manhole shall be filled with water and maintained full for at least one (1) hour. For concrete manholes a wetting period of 24-hours may be used prior to testing in order to allow saturation of the concrete.

F. Test Procedures for Vacuum Testing Manholes

1 In lieu of the hydrostatic exfiltration test, manholes may be tested by vacuum. Manholes tested by vacuum shall be performed by the Contractor in compliance with these specifications.

2. Manholes shall be tested after installation of all connections (existing and/or proposed) in place. All lift holes shall be plugged with an approved non-shrink grout and all drop connections and gas sealing connections shall be installed prior to testing. The lines entering the manhole shall be temporarily plugged with the plugs braced to prevent them from being drawn into the manhole. The plugs shall be installed in the lines beyond the drop-connections, gas sealing connections, etc. The test head shall be placed inside the frame at the top of the manhole and inflated in accordance with the manufacturer's recommendations. A vacuum of 10-inches of mercury shall be drawn, and the vacuum pump shall be turned off. With the valve closed, the level of vacuum shall be read after the required test time as shown in the following table. If the drop in the level is less than one (1) inch of mercury (final vacuum of nine (9) inches of mercury), the manhole will have passed the vacuum test. The required test time shall be 120-seconds.

3. Manholes which have a final vacuum of nine (9) inches of mercury after the time indicated will be accepted. Any manhole which fails the vacuum test as described above shall be repaired with an approved non-shrink grout or other material acceptable to the Engineer and the City based on the material from which the manhole is constructed. The manhole shall be retested as described above until a successful test is made.

G. Exfiltration Test

1. Preparation: Seal ends of manhole being tested with watertight plugs. Fill manhole 24-hours prior to start of test. Manholes to be filled to top of manhole cone section.

2. Duration of Test: The test shall be performed for a 24-hour duration.

3. Allowable Leakage: No leakage is allowed. The water elevation shall be the same at beginning and end of test period.

H. Deflection Testing

1. Deflection tests shall be performed on all flexible pipes. For pipes with inside diameters less than 27-inches, a rigid mandrel shall be used to measure deflection. For pipelines with an inside diameter of 27-inches and greater, the Contractor shall submit to the Engineer the proposed method, with which shall provide a precision of ± two tenths of one percent (0.2%) deflection, for review and approval by the Texas Commission on Environmental Quality. The test shall be conducted after final backfill has been in place at least 30 days in the presence of a representative of the City's Utilities Department. No pipe shall exceed a deflection of five percent (5%). If a pipe should fail to pass the deflection test, the problem shall be corrected and a second test shall be conducted after the final backfill has been in place an additional 30 days. Test shall be performed without mechanical pulling devices.

2. Mandrel Sizing: The rigid mandrel shall have an outside diameter (O.D.) equal to 95% of the inside diameter (I.D.) of the pipe. The inside diameter of the pipe, for the purpose of determining the outside diameter of the mandrel, shall be the average outside diameter of the pipe minus two minimum wall thickness for O.D. controlled pipe and the average inside diameter for the I.D. Controlled pipe, all dimensions shall be per appropriate standard. Statistical or other "tolerance packages" shall not be considered in mandrel sizing.

3. Mandrel Design: The rigid mandrel shall be constructed of a metal or rigid plastic material that can withstand 200 psi without being deformed. The mandrel shall have nine or more "runners" or "legs" as long as the total number of legs is an odd number. The barrel section of the mandrel shall have a length of at least 75% of the inside diameter of the pipe. A proving ring shall be provided and used for each size mandrel in use.

4. Method Options: Adjustable or flexible mandrels are prohibited. A television inspection is not a substitute for the deflection test. A deflectometer may be approved provided the Contractor notifies the Engineer in a timely manner and submits adequate information for the Engineer to submit to the Texas Commission on Environmental Quality for review and approval. Mandrels with removable legs or runners may also be approved provided the Contractor notifies the Engineer in a timely manner and submits adequate information for the Engineer to submit to the Texas Commission on Environmental Quality for review and approval.

I. Repairs of Lines: Remove and replace or make approved corrective repairs to any section of line or manhole which has leakage that exceeds above amounts. Repair any individual leaks that may appear whether or not overall section meets leakage requirements. Individual leaks will ordinarily be revealed by looking through sewer with a light while groundwater level is over sewer, during water tamping operations or immediately after water leakage is emptied from sewer.

J. Retest: Sewers and/or manholes failing to meet requirements of leakage test will, after repair by Contractor, be tested again for leakage. No sewer or manhole will be accepted until leakage is less than allowable amount.

K. Video Inspection

1. The use of a television camera for inspection prior to placing the sewer in service will be required. Video inspection is at the cost of the Contractor, and copies of the DVD will be presented to the City prior to final acceptance. One (1) copy of the DVD shall be submitted to the City.

2. Post construction video of the gravity wastewater lines will be evaluated on a case-by-case basis for acceptance. Preparation for video taping of wastewater line shall be as follows:

   a. Flush and clean the gravity wastewater line prior to video taping.

   b. The videotape shall display the station, in accordance with the Plans and Standards, and counter on the screen. Manhole numbers and stations shall correspond to the contract documents.

   c. If debris is evident in the line during the video, the line will be flushed and cleaned to allow a clean video.

   d. All manholes will be identified at the beginning and end of the video corresponding to contract documents with upstream and downstream ends identified.

   e. Additional video inspections shall be performed prior to completion of one-year warranty period and submitted on DVD.

L. Force Main

1. Force Main shall be pressure tested one and one-half (1 1/2) times the maximum output of the pumps. The allowable hydrostaic leakage rate shall be based on CIP 12.06 Table 6A.

CIP12.06 TEST PROCEDURES FOR PRESSURE PIPELINES

A. General

1. After the pipe has been laid and backfilled and the backfill has been otherwise consolidated, all newly laid pipe, or any valved section thereof, shall be subjected to the hydrostatic pressure specified below for that particular type of pipe. The duration of the hydrostatic test shall be at least two (2) hours. Unless otherwise specified or noted on the Plans. All meters, fixtures, devices or appliances which are connected to the pipeline system and which might be damaged if subjected to the specified test pressure shall be disconnected and the ends of the branch lines plugged or capped during the testing procedures.

2. Each valved (capped or plugged) section of pipe shall be filled slowly with water and all air shall be expelled. If permanent air vents are not located at all high points, the Contractor shall install, at his own expense, corporation or blow-off cocks at such points so that air can be expelled as filling takes place. After verification that all air has been expelled, the cocks shall be closed and the pipe kept filled until tested. All exposed pipe, fittings, valves, hydrants and joints shall be examined while under test pressure and all visible leaks shall be stopped. Any cracked or defective pipe, fittings, valves or hydrants discovered during testing shall be removed and replaced by the Contractor. Replacement shall be with sound material and the test shall be repeated until satisfactory to the City.

B. Special Requirements: Where any section of pipeline is provided with concrete reaction blocking, the hydrostatic pressure shall not be made until at least five (5) days have elapsed after installation of the blocking. However, if high-early-strength cement is used in the concrete, two (2) days shall have elapsed prior to testing.

C. Leakage Test: A Leakage Test will be conducted on each valved section over the entire Project. The leakage test shall be at 150 psi for at least four (4) hours. Fire lines shall be tested at 200 psi for two (2)

hours with 0 loss.

D. Allowable Leakage

1. The allowable hydrostatic leakage rate shall be based on the following formula:

Fire lines 0 loss
L= SD √P133,200
L = testing allowance in gallons per hour
S = length of pipe tested in feet
D = nominal diameter of the pipe in inches
P = average test pressure during the hydrostatic test in pounds per square inch (gauge)

Table 6A
Hydrostatic testing allowance per 1,000 ft of pipeline* - *gph*†

Avg. Test Pressure *psi*	Nominal Pipe Diameter – in.																	
	3	4	6	8	10	12	14	16	18	20	24	30	36	42	48	54	60	64
450	.48	.64	.95	1.27	1.59	1.91	2.23	2.55	2.87	3.18	3.82	4.78	5.73	6.69	7.64	8.60	9.56	10.19
400	.45	.60	.90	1.20	1.50	1.80	2.10	2.40	2.70	3.00	3.60	4.50	5.41	6.31	7.21	8.11	9.01	9.61
350	.42	.56	.84	1.12	1.40	1.69	1.97	2.25	2.53	2.81	3.37	4.21	5.06	5.90	6.74	7.58	8.43	8.99
300	.39	.52	.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60	3.12	3.90	4.68	5.46	6.24	7.02	7.80	8.32
275	.37	.50	.75	1.00	1.24	1.49	1.74	1.99	2.24	2.49	2.99	3.73	4.48	5.23	5.98	6.72	7.47	7.97
250	.36	.47	.71	.95	1.19	1.42	1.66	1.90	2.14	2.37	2.85	3.56	4.27	4.99	5.70	6.41	7.12	7.60
225	.34	.45	.68	.90	1.13	1.35	1.58	1.80	2.03	2.25	2.70	3.38	4.05	4.73	5.41	6.03	6.76	7.21
200	.32	.43	.64	.85	1.06	1.28	1.48	1.70	1.91	2.12	2.55	3.19	3.82	4.46	5.09	5.73	6.37	6.80
175	.30	.40	.59	.80	.99	1.19	1.39	1.59	1.79	1.98	2.38	2.98	3.58	4.17	4.77	5.36	5.96	6.36
150	.28	.37	.55	.74	.92	1.10	1.29	1.47	1.66	1.84	2.21	2.76	3.31	3.86	4.41	4.97	5.52	5.88
125	.25	.34	.50	.67	.84	1.01	1.18	1.34	1.51	1.68	2.01	2.52	3.02	3.53	4.03	4.53	5.04	5.37
100	.23	.30	.45	.60	.75	.90	1.05	1.20	1.35	1.50	1.80	2.25	2.70	3.15	3.60	4.05	4.50	4.80

* If the pipeline under test contains sections of various diameters, the testing allowance will be the sum of the testing allowance for each size.
† Calculated on the basis of Eq. 1.

a. These formulas are based on a testing allowance of 11.65 gpd/mi/in. (1.079 L/d/km/mm) of nominal diameter at a pressure of 150 psi (1,034 kPa).

b. 5.2.1.6.1 Testing allowance at various pressures is shown in Tables 6A and 6B.

c. 5.2.1.6.2 When testing against closed metal-seated valves, an additional testing allowance per closed valve of 0.0078 gal/h/in. (1.2 mL/h/mm) of nominal valve size shall be allowed.

d. 5.2.1.6.3 When hydrants are in the test section, the test shall be made against the main valve in the hydrant.

e. 5.2.1.7 Acceptance of installation. Acceptance shall be determined on the basis of testing allowance. If any test of laid pipe discloses a testing allowance grater than that specified in Sec. 5.2.1.6, repairs or replacements shall be accomplished inaccordance with the specifications.

f. 5.2.1.7.1 All visible leaks are to be repaired regardless of the allowance used for

testing.

2. If such testing discloses leakage in excess of this specified allowable, the Contractor, at his expense, shall locate and correct all defects in the pipeline until the leakage is within the specified allowance. All known leaks, irregardless of this test, shall be repaired.

E. Pressure Test: After satisfactorily completing the leakage test, each valved section over the entire project, shall be tested at 200 psi for a sufficient period (approximately 10 min) to discover all leaking or defective materials and/or workmanship.

F. Disinfecting Water Mains: The Contractor shall disinfect all water mains before the new facilities are placed into service. Disinfection must be performed in accordance with AWWA C651, latest revision and water samples must be submitted to a laboratory approved by the Texas Department of Health. Sample must be collected by the Contractor or his representative in the presence of the City or his representative. The Contractor shall be responsible for delivering the samples to an approved laboratory for testing. Sample results must indicate the facility is free of microbiological contamination before it is placed into service. It shall be the Contractor's responsibility to obtain a current copy of AWWA C651 to determine the correct forms of chlorine for disinfection, the basic disinfection procedure, preventive and corrective measures during construction, methods of chlorination, final flushing procedures, procedures for bacteriological tests, procedures for redisinfection and disinfection procedures when cutting into existing mains. The Contractor, at its expense, will supply the concentrated chlorine disinfecting material, the City's personnel will supervise and direct the overall sterilization procedure. The Contractor, at his own expense, shall provide all other equipment, supplies and necessary labor to perform the sterilization under general supervision by the City.

G. General

1. All valves shall be arranged to prevent the strong disinfecting dosage from flowing back into the existing water supply piping. The new pipeline shall then be completely filled with disinfecting solution by feeding the concentrated chlorine and approved water from the existing system uniformly into the new piping in such proportions that every part of the line has a minimum concentration of chlorine as prescribed in AWWA C651.

2. Unless otherwise identified, all quantities called for herein refer to measurements by the testing procedures in the current edition of "Standard Methods of Examination of Water and Wastewater". The chlorine concentration of each step in the sterilization procedure shall be verified by chlorine residual determinations. This disinfecting solution shall be retained in the piping for at least twenty-four (24) hours, and all valves, hydrants, etc., shall be operated to disinfect all their parts. After this retention period, the water shall contain no less than the chlorine residual prescribed in AWWA C651 throughout the treated section of the pipeline.

3. This heavily chlorinated water shall then be carefully flushed from the line until the chlorine concentration is not higher than the residual generally prevailing in the existing distribution system, or approximately 1.0 parts per million. Proper planning and appropriate preparations to handle, dilute and dispose of this strong chlorine solution without causing injury or damage to the public, the water system, the environment must be approved by the City before flushing of the line may begin, and the flushing shall be witnessed by an authorized representative of the City.

H. Bacteriological Testing

1. After final flushing of the strong disinfecting solution, water samples from the line shall be tested for bacteriological quality, at the Contractor's expense, and must be found free of coliform organisms before the pipeline may be placed in service. One (1) test sample shall be drawn from the end of the main and additional samples collected at intervals of not more than one-thousand (1,000) feet along the pipeline. A minimum of three (3) samples must be collected.

2. The Contractor, at his own expense, shall install sufficient sampling taps at proper locations along the pipeline. Each sampling tap shall consist of a standard corporation cock installed in

the line and extended with a copper tubing gooseneck assembly. After samples have been collected, the gooseneck assembly shall be removed and retained for future use.

3. Samples for bacteriological analysis shall be collected only from suitable taps, in sterile bottles. Collection of the test samples shall be made in the presence of City personnel. If the initial disinfection fails to produce acceptable sample tests, the disinfection procedure shall be repeated (without extra compensation) until satisfactory test results have been obtained, before the piping may be placed in service.

CIP12.07 FINAL ACCEPTANCE

A. No pipe installation will be accepted until all known leaks have been repaired whether or not leakage is within allowable limits. Locating and repairing of leaks shall be performed by the Contractor at no additional cost to the City.

B. The City will certify that all required pressure and leakage tests have been successfully completed before the pipeline is accepted.

CIP12.08 PAYMENT

A. No separate payment will be made for work completed in accordance with this specification, and the cost thereof will be included in the appropriate items of the Proposal and Bid Schedule.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION CIP13 – SUMMARY OF TESTING (MISCELLANEOUS)

CIP13.01 SCOPE OF WORK

A. This specification covers the requirements to perform testing of various work items for this Project.

CIP13.02 SUBMITTALS

A. Within 30 days after the Notice to Proceed, the Contractor shall submit to the Engineer or the City for approval, technical product literature and all other pertinent data to illustrate conformance to the specification found within.

CIP13.03 TESTING FOR ROADS

Testing for roads shall be in accordance with Table 13-1.

Table 13-1

Item	Test Method	Passing Criteria	Comments
Hot Mix Asphaltic Concrete (HMAC)	Tex-200-F	See SD1.06 A	Sieve Analysis of Fine and Coarse Aggregate
	Tex-207-F	94.5%-97.5%Lab Density; 91.0%-96.0%In-PlaceField Density	Determining Density of Compacted Bituminous Mixtures
	Tex-210-F	See SD 1.06 B	Determining Asphalt Content of Bituminous Mixtures by Extraction
	Tex-227-F		Max. Specific Gravity of Bituminous Mixtures
	Tex-208-F	Max 35	Stability
Trench Backfill	Applicable Tex Testing Method	See Section G4.05	Minimum of one test every 250 linear feet of trench length for each lift.
Embankment	Tex-114-E		Test every 2,000 SY of roadbed surface
Flexible Base	Tex-107-E, Part II	2% shrinkage	Bar Linear Shrinkage
	Tex-411-A		Magnesium Soundness
	Tex-110-E		Sieve Analysis
	Tex-113-E	100% Density	Moisture Density
	Tex-115-E		Roadway Density
	Tex-116-E	40 Max.	Wet Ball Mill
	Tex-117-E	45 psi @ 0 psi lateral & 175 psi @ 15 psi lateral Max. increase ≤ 20	Triaxial Test (Part I or II)
	Tex-460-A	Plasticity Index ≤ 10	Particle Count (Part I)
	Tex-106-E	Liquid Limit ≤35	Plasticity Index
	Tex-104-E	±2% Optimum	Liquid Limit
	Tex-103-E		Moisture Content

Table 13-1, cont.

Item	Test Method	Passing Criteria	Comments
Striping	Tex-828-B Tex-854-B	10 or more stripes visible (day) 6 or more stripes visible (night) 0.060-inches minimum thickness for edgeline markings 0.090-inches minimum thickness for stop bars, legends, symbols, gore and centerline/no passing barrier line markings 0.180-inches maximum thickness for all markings	Glass Beads: If criteria is not met, check Tex-828-B for scheduling replacement of striping. The average of the readings across each sample must be equal to or above the specified minimum thickness. No reading should be more than 10-mils below the specified minimum thickness.

CIP13.04 TESTING FOR WATER/WASTEWATER

Testing for water/wastewater shall be in accordance with Table 13-2.

Table 13-2

Item	Test Method	Passing Criteria	Comments
Valves, Hydrants and Appurtenances	Manufacturer's Recommendations	Manufacturer's Recommendations	Functional field test of each valve, including actuators and valve control equipment.
Water and Wastewater Lines			As described in Section CIP 12: Testing of Pipelines

CIP13.05 TESTING FOR CONCRETE

Testing for concrete shall be in accordance with Table 13-3.

Table 13-3

Item	Test Method	Passing Criteria	Comments
Asphalt Board	Tex-524-C	Deflection from horizontal <1:3[1]/,	
Concrete Slump			See Table 13-4 for Slump
Coarse Aggregate	Tex-413-A Tex-410-A Tex-411-A	0.25% by weight clay lumps 1.00% by weight shale 5.00% by weight laminated and/or friable particles 40% wear 12% loss Sodium Sulfate 18% loss Magnesium Sulfate	See Table 13-5 for Gradation Soundness Test

Table 13-3, cont.

Fine Aggregate	Tex-612-J Tex-408-A	60% by weight acid insoluble residue subject to direct traffic. Color shall not be darker than Organic Color No. 3 (Gardner No. 11)	 Color Test

	Tex-401-F Tex-203-F Tex-402-A	 Not less than 80 Between 2.3 & 3.1 for Non-Class K Between 2.6 & 2.8 for Class K	See Table 13-6 for Gradation Sand Equivalent Fineness Modulus
Membrane Curing	Tex-219-F	2% loss for 24-hour test 4% loss for 72-hour test	Water Retention Test

Table 13-4

Concrete Designation	Slump	Maximum Slump
1. All drill shaft	6	7
2. Uncased drill shafts, thin walled sections (<9") and pre-stressed concrete members	4	5
3. Slabs, caps, columns, piers, wall sections over 9", etc.	3	4
4. Underwater or seal concrete	6	7
5. Riprap, curb, gutter and other miscellaneous concrete.	As specified by City.	

Table 13-5

Aggregate Grade No.	Nominal Size (in)	Amount Retained (%)								
		2 1/2 in	2 in	1 1/2 in	1 in	¾ in	½ in	3/8 in	No 4	No 8
1	2	0	0-20	15-50		60-80			95-100	
2 (467)*	1 1/2			0-5		30-65		70-90	95-100	
3	1 1/2			0-5		10-40	40-75		95-100	
4 (57)*	1				0-5		40-75		90-100	95-100
5 (67)*	¼					0-10		45-80	90-100	95-100
6 (7)*	½							30-60	85-100	95-100
7	3/8							5-30	75-100	
8	3/8							0-5	35-80	90-100

Table 13-6

Aggregate Grade No.	Amount Retained (%)							
	3/8 in	No 4	No 8	No 16	No 30	No 50	No 100	No 200
1	0	0-5	0-20	15-50	35-75	65-90	90-100	97-100

CIP13.06 PAYMENT

A. No separate payment will be made for work completed in accordance with this specification, and the cost thereof will be included in the appropriate items of the Proposal and Bid Schedule.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION WW1 – CONCRETE MANHOLES (WASTEWATER)

WW1.01 SCOPE OF WORK

A. This specification covers the requirements to install precast concrete manholes, frames and covers, and appurtenances as shown on the Plans and as specified herein.

WW1.02 SUBMITTALS

A. Within 30 days after the Notice to Proceed, the Contractor shall submit to the Engineer or the City for approval, shop drawings, product data, materials of construction, and details of installation shall be submitted in accordance with Section CIP10- SUBMITTALS. Submittals shall include the following: base sections, riser sections, eccentric conical top sections, flat slab tops, grade rings with notarized certificate indicating compliance with ASTM C478, pipe connection to manhole, manhole frame and cover with notarized certificate indicating compliance with ASTM A48, Class 30, method of repair for minor damage to precast concrete sections, manhole lining system.

B. Design Data

1. Precast concrete structures:

a. Six (6) copies of sectional plan(s) and elevations showing dimensions and reinforcing steel placement.

b. Six (6) copies of concrete design mix.

C. Test Reports

1. Precast concrete structures:

a. Six (6) copies of concrete test cylinder reports from an approved testing laboratory certifying conformance with specifications.

WW1.03 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM)

1. ASTM A48 - Specification for Gray Iron Castings.

2. ASTM A615 - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.

3. ASTM C33 - Specification for Concrete Aggregates.

4. ASTM C150 - Standard Specification for Portland Cement.

5. ASTM C478 - Standard Specification for Precast Reinforced Concrete Manhole Sections.

6. ASTM D4101 - Specification for Propylene Plastic Injection and Extrusion Materials.

B. American Concrete Institute (ACI)

1. ACI 318 - Building Code Requirements for Reinforced Concrete.

2. ACI 350R - Concrete Sanitary Engineering Structures.

C. American Association of State Highway and Transportation Officials (AASHTO)

1. Standard Specifications for Highway, Streets and Bridges.

D. Occupational Safety and Health Administration (OSHA)

E. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

WW1.04 QUALITY ASSURANCE

A. All material shall be new and unused.

B. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other City representative. Inspection may be made at place of Manufacture, at work site following delivery, or both.

C. Materials will be examined for compliance with ASTM specifications, these Specifications and approved Manufacturer's drawings. Additional inspection criteria shall include: appearance, dimensions(s), blisters, cracks and soundness.

D. Materials shall be rejected for failure to meet any Specification requirement. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to City.

E. Repair minor damage to precast concrete sections by approved method, if repair is authorized by Engineer or the City.

WW1.05 PRODUCTS

A. Reference to a Manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.

B. Like items of materials/equipment shall be the end products of one Manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and Manufacturer's service.

C. Provide lifting lugs or holes in each precast section for proper handling.

WW1.06 PRECAST CONCRETE MANHOLE SECTIONS

A. Precast concrete base sections, riser sections, transition top sections, flat slab tops and grade rings shall conform to ASTM C478 and meet the following requirements:

1. Bottom slab thickness shall be 12-inches.

2. Top section shall be flat slab with a minimum clear opening of $32\ ^{7}/_{8}$-inches diameter.

3. Base, riser and transition top sections shall have tongue and groove joints.

4. Sections shall be cured by an approved method.

5. Precast concrete sections shall be shipped after concrete has attained 3,000 psi compressive strength.

6. Design precast concrete base, riser, transition top, flat slab top and grade ring for a minimum HS-20 loading plus earth load. Calculate earth load with a unit weight of 130 pounds per cubic foot.

7. Mark date of manufacture, name and trademark of Manufacturer on the inside of each precast section.

8. Construct and install precast concrete base as shown on the Plans.

9. Provide integrally cast knock-out panels in precast concrete manhole sections at locations, and with sizes shown on Plans. Knock-out panels shall have no steel reinforcing.

B. Manhole diameter shall be as shown on the Plans, but not less than the diameter of the largest connecting pipe plus two (2) feet.

C. Pipe Sections

Pipe sections shall conform to current specifications for Precast Reinforced Manhole Sections, ASTM Designation C478, with the following additions:

1. Pipe shall be machine made by a process which will provide for uniform placement of zero slump concrete in the form and compaction by mechanical devices which will assure a dense concrete in the finished product.

2. Aggregates for the concrete shall consist of limestone aggregates in the proportion of at least 75% by weight of the total aggregates.

3. Minimum wall thickness for the manhole risers shall be as listed under Wall "B" in the "Class Tables" of ASTM C76 for Class III pipe.

D. Joints

1. Joints shall conform to the joint specifications in ASTM C478, C76, and ASTM C443. All manhole sections, including the bottom section, shall be furnished with "O-ring" type rubber gasket joints. The joints shall be furnished and installed with the bell down to resist groundwater infiltration. All joints shall be sealed with mortar or an approved non-shrink grout on the inside and the outside of the manhole. Grade rings shall be mortared to each other and on the inside and outside to provide a waterproof seal.

E. Manhole Steps

1. Unless specifically approved by the City, manhole steps shall not be provided.

WW1.07 MANHOLE FRAME AND COVER

A. Manhole frames and covers shall be of good quality, strong, tough, even grained cast iron, smooth, free from scale, lumps, blisters, sand holes and defects of any kind which render them unfit for the service for which they are intended. Manhole covers and frame seats shall be machined to a true surface. Castings shall be thoroughly cleaned and subject to hammer inspection. Cast iron shall conform to ASTM A48, Class 30.

B. Manhole covers shall have a diamond pattern, pickholes and the word SEWER as appropriate cast in three (3) inch letters. Manhole frame and covers shall be Neenah Foundry, Western Iron Works, Vulcan Foundry, or equal. Model numbers refer to Western Iron works products:

1. Manhole Frame and cover - WRM-36.

WW1.08 JOINTING PRECAST MANHOLE SECTIONS

A. Seal tongue and groove joints of precast manhole sections with rubber "O"-ring gasket. O-ring gasket shall conform to ASTM C443.

B. Completed joint shall withstand 15 psi internal water pressure without leakage or displacement of gasket or sealant.

WW1.09 PIPE CONNECTIONS TO MANHOLE

A. Connect pipe to manhole in the following ways:

1. Flexible sleeve - Integrally cast sleeve in precast manhole section or install sleeve in a formed or cored opening. Fasten pipe in sleeve with stainless steel clamp(s). Coat stainless steel clamp(s) with bituminous material to protect from corrosion. Flexible sleeve shall be Lock Joint Flexible Manhole Sleeve; Kor-N-Seal connector; PSX Press-Seal Gasket or equal.

2. Compression gasket - Integrally cast compression gasket in precast manhole section. Insert pipe into compression gasket. Compression gasket shall be A-Lok, or equal.

WW1.10 INSTALLATION

A. Manhole Installation

1. Manholes shall be constructed to the dimensions shown on the Plans and as specified herein. Protect all work against flooding and flotation.

2. Place manhole base on a bed of screened gravel eight (8) inches in depth as shown on the Plans. Set manhole base so that a maximum grade adjustment of eight (8) inches is required to bring the manhole frame and cover to final grade.

Use precast concrete grade rings to adjust manhole frame and cover to final grade.

3. Set precast concrete barrel sections plumb with a $^{1}/_{4}$-inch maximum out of plumb tolerance allowed. Seal joints of precast barrel sections with either a rubber "O" ring set in a recess or preformed flexible joint sealant in sufficient quantity to fill 75 percent of the joint cavity. Fill the outside and inside joint with non-shrink mortar and finished flush with the adjoining surfaces. Caulk the inside of any leaking barrel section joint with non-shrink grout to the satisfaction of the Engineer and the City.

4. Allow joints to set for 14 hours before backfilling unless a shorter period is specifically approved by the Engineer or the City.

5. Plug holes in the concrete barrel sections required for handling with a non-shrinking grout or non-shrinking grout in combination with concrete plugs. Finish flush on the inside.

6. Core holes in precast sections to accommodate pipes prior to setting manhole sections in place to prevent jarring which may loosen the mortar joints.

7. Backfill carefully and evenly around manhole sections.

B. Manhole Pipe Connections

1. Construct manhole pipe connections, including pipe stubs, as specified above. Close or seal pipe stubs for future connections with a gasketed watertight plug.

C. Setting Manhole Frame and Cover

1. Set manhole covers and frames in a full mortar bed. Utilize precast concrete grade rings, for a maximum adjustment of twelve (12) inches, to assure frame and cover are set to the finished grade. Set manhole frame and cover to final grade prior to placement of permanent paving.

WW1.11 TESTS

A. Test each manhole in accordance with Section CIP12- TESTING OF PIPELINES AND MANHOLES. Engineer or the City's representative shall observe each test.

WW1.12 CLEANING

A. Thoroughly clean all new manholes of all silt, debris and foreign matter of any kind, prior to final inspections.

WW1.13 PAYMENT

A. Payment for furnished and installed manholes shall be paid according to the unit price per each in the proper item of the Proposal and Bid Schedule.

B. All work and materials to complete the reinforced concrete pipe including but not limited to excavation, bedding, backfill, connection to pipe, etc. shall be subsidiary to this item.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION WW2 – POLYVINYL CHLORIDE (PVC) PIPE-WASTEWATER

WW2.01 SCOPE OF WORK

A. This specification covers the requirements to install and test polyvinyl chloride (PVC) pipe and fittings, including excavation, sheeting, storing, dewatering, pipe laying, jointing, testing, backfilling, and any other work that is required or necessary to complete the installation as shown in the Plans as specified herein, complete as shown on the Plans and as specified herein.

WW2.02 SUBMITTALS

A. Within 30 days of the Notice to Proceed, the Contractor shall submit to the Engineer or the City for approval, technical product literature including the names of the pipe and fittings suppliers, a list of materials to be furnished, shop drawings on required pipes and fittings, certified test reports that the pipe for this Contract was manufactured and tested in accordance with the ASTM Standards specified herein, and all other pertinent data to illustrate conformance to the specification found within.

WW2.03 QUALITY ASSURANCE

A. All PVC pipe and fittings shall be from a single Manufacturer. The Supplier shall be responsible for the provisions of all test requirements specified in ASTM D3034 or ASTM F789 as applicable. In addition, all PVC pipe to be installed under this Contract may be inspected at the plant for compliance with these specifications by an independent testing laboratory provided by the City. The Contractor shall require the Manufacturer's cooperation in these inspections. The cost of plant inspection of all pipe approved for this Contract, plus the cost of inspection of disapproved pipe, will be borne by the Contractor.

B. Inspections of the pipe may also be made by the Engineer or other representatives of the City after delivery. The pipe shall be subject to rejection at any time on account of failure to meet any of the Specification requirements, even though sample pipes may have been accepted as satisfactory at the place of manufacture. Pipe rejected after delivery shall be marked for identification and shall be removed from the job at once.

WW2.04 POLYVINYL CHLORIDE (PVC) WASTEWATER PIPE AND FITTINGS

A. Pipe and fittings shall be Type PSM, PVC SDR 26 with full diameter dimensions and shall conform to ASTM D3034, or Type PS-46 PVC conforming to ASTM F789, for sizes 4 through 15-inch and shall conform to ASTM F679 for sizes 18 through 27-inch. Straight pipe shall be furnished in lengths of not more than 13-feet and wyes shall be furnished in lengths of not more than three (3) feet. Saddle wyes will not be allowed.

B. PVC pipe and fittings shall have bell and spigot push-on joints. The bell shall consist of an integral wall section with a solid cross-section elastomeric gasket securely locked in place to prevent displacement during assembly. Elastomeric gaskets shall conform to ASTM F477.

C. All fittings and accessories shall have bell and/or spigot configurations compatible with the pipe.

D. For Force Main, all pipe shall be C-900, DR-18 pipe or epoxy coated ductile iron encased with brown 8 mil. polyethylene film.

WW2.05 HANDLING AND CUTTING PIPE

A. Pipe and fittings are slightly brittle. Care shall be taken in shipping, handling and laying to avoid damaging the pipe and fittings. Extra care will be necessary during cold weather construction.

B. Any pipe or fitting showing a crack or which has received a blow that may have caused an incipient fracture, even though no such fracture can be seen, shall be marked as rejected and removed at once from the work.

C. All pipe ends shall be square after cutting.

D. While stored, pipe shall be adequately supported from below at not more than three (3) foot intervals to prevent deformation. Pipe shall not be stacked higher than six (6) feet. Pipe and fittings shall be stored in a manner which will keep them at ambient outdoor temperatures and out of direct sunlight. Temporary shading as required to meet this requirement shall be provided. Simple covering of the pipe and fittings which allows temperature buildup when exposed to direct sunlight will not be permitted.

WW2.06 JOINTING POLYVINYL CHLORIDE (PVC) WASTEWATER PIPE AND FITTINGS

A. PVC wastewater pipe and fittings shall be jointed in accordance with the recommendations of the latest ASTM Standards and detailed instructions of the Manufacturer.

B. All manhole connections shall be as shown on the Plans.

WW2.07 INSTALLING POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS

A. No single piece of pipe shall be laid unless it is generally straight. The centerline of the pipe shall not deviate from a straight line drawn between the centers of the openings at the ends of the pipe by more than $^{1}/_{16}$-inch per foot of length. If a piece of pipe fails to meet this requirement check for straightness, it shall be rejected and removed from the site. Laying instructions of the Manufacturer shall be explicitly followed.

B. Any pipe or fittings discovered to be defective after laying shall be removed and replaced with a sound piece.

C. The Engineer or the City may examine each bell and spigot end to determine whether any preformed joint has been damaged prior to installation. Any pipe having defective joint surfaces shall be rejected, marked as such, and immediately removed from the job site.

D. All pipe shall be sound and clean before laying. When laying is not in progress, including lunch time, the open ends of the pipe shall be closed by watertight plugs or other approved means.

E. Pipe and fittings shall be installed in accordance with the instructions of the Manufacturer, ASTM D2321 and as specified herein. As soon as the excavation is complete to normal grade of the bottom of the trench, bedding shall be placed, compacted and graded to provide firm, uniform and continuous support for the pipe. Bell holes shall be excavated so that only the barrel of the pipe bears upon the bedding. The pipe shall be laid accurately to the lines and grades indicated on the Plans. The specified embedment shall be accurately shaped and trimmed to receive the pipe barrel and each pipe section, when in place, shall have a uniform bearing on the subgrade for the full length of the pipe barrel. Pipe shall not be laid unless the subgrade is free of water and in a satisfactory condition. Adjustments of the pipe to line and grade shall be made by scraping away or filling in with granular material, and not by wedging or blocking up the bell. Blocking under the pipe will not be permitted. The bedding as shown in the details of the Plans, shall be placed evenly on each side of the pipe to mid-diameter and hand tools shall be used to force the bedding under the haunches of the pipe and into the bell holes to give firm continuous support for the pipe. The bedding shall then be placed to 12-inches above the top of the pipe. The initial three (3) feet of backfill above the bedding backfill shall be placed in eight (8) inch layers and carefully compacted. Generally, the compaction shall be done evenly on each side of the pipe and compaction equipment shall not be operated directly over the pipe until sufficient backfill has been placed to ensure that such compaction equipment will not have a damaging effect on the pipe. Equipment used in compacting the initial three (3) feet of backfill shall be approved by the pipe Manufacturer's representative prior to use.

F. Joints shall not be "pulled" or "cramped". Each joint of pipe shall be completed in compliance with Manufacturer’s recommendations.

G. Before any joint is made, the pipe shall be checked to assure that a close joint with the next adjoining pipe has been maintained and that the inverts are matched and conform to the required grade. The pipe shall not be driven down to grade by striking it.

H. Precautions shall be taken to prevent flotation of the pipe in the trench.

I. When moveable trench bracing such as trench boxes, moveable sheeting, shoring or plates are used to support the sides of the trench, care shall be taken in placing and moving the boxes or supporting bracing to prevent movement of the pipe, or disturbance of the pipe bedding and the backfill. Trench boxes, moveable sheeting, shoring or plates shall not be allowed to extend below mid-diameter of the pipe. As trench boxes, moveable sheeting, shoring or plates are moved, screened material shall be placed to fill any voids created and the screened material and backfill shall be re-compacted to provide uniform side support for the pipe.

J. Pipe stubs for manhole connections shall not exceed 3.25-feet in length unless directed otherwise by the Engineer or the City. Install caps where required. When connecting to an existing manhole, the opening for the connection of the wastewater pipe and the manhole shall be cored using an approved coring machine to the dimensions and size required to install the flexible "SEAL BOOT" resilient connector that meets the requirements of ASTM C-923. The connection shall be watertight when complete and meet the requirements of Section WW1- CONCRETE MANHOLES.

K. Wastewater mains shall be installed in straight trenches from manhole to manhole or manhole to cleanout. There will be no curvilinear installations of wastewater mains.

WW2.08 TESTING

A. Testing and cleaning of pipe shall be as specified in Specification Section CIP12- TESTING OF PIPELINES AND MANHOLES.

WW2.09 PAYMENT

A. The wastewater line, complete in place, will be measured for payment in linear feet along the centerline of the pipe actually installed. Measurement shall be through all manholes and no deduction in length will be made for such appurtenances. Installation of the wastewater line will be paid for at the unit contract price per linear foot as provided in the Proposal and Bid Schedule.

B. Payment of the unit contract price for the items of work performed shall be the total compensation for furnishing all labor, materials, tools, testing equipment and incidentals and performing all work that is necessary for the installation of the pipe, fittings, embedment or encasement, and all other appurtenances in accordance with the Plans and the provisions of these specifications.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION WW3 – CONNECTIONS TO AND WORK ON THE EXISTING WASTEWATER SYSTEM

WW3.01 SCOPE OF WORK

A. This specification covers the requirements to maintain flow in existing sewers, handle existing wastewater flow, construct and maintain all temporary connections and diversions and construct the permanent connections to the new system as shown on the Plans and as directed by the Engineer.

WW3.02 SUBMITTALS

A. None required unless specifically called for in the Plans, details, or requested by the Engineer.

WW3.03 GENERAL

A. The Contractor shall supply all materials, equipment and labor required for plugging existing wastewater lines, all work on existing manholes (including all work and materials required to reshape existing manhole inverts with concrete and connecting new wastewater lines to existing manholes) and all additional work required.

B. Should damage of any kind occur to the existing wastewater line, the Contractor shall at his/her own expense, as part of the work under this Section, make repairs to the satisfaction of the Engineer.

C. The Contractor shall notify the Engineer immediately of any discrepancies in elevations of existing wastewater lines and manholes between those shown on the Plans and those established during construction in order that the Engineer can make the necessary modifications.

D. All new wastewater pipe for connection shall conform to the pipe specifications in Section WW2-POLYVINYL CHLORIDE (PVC) PIPE - WASTEWATER.

WW3.04 HANDLING WASTEWATER FLOWS

A. The Contractor shall provide all labor, equipment and materials necessary to maintain existing flows, including temporary diversions and all pumping of sewage that may be required to prevent backing up of wastewater lines and shall immediately remove all offensive matter at his/her own expense.

B. The Contractor shall not be permitted to overflow, bypass, pump or by any other means convey sewage to any stream, or other water course.

C. All procedures for maintaining flows must meet the approval of the Engineer and the Contractor shall be required to submit to the Engineer, for approval, a detailed written plan of all methods of flow maintenance 10 days in advance of flow interruption.

WW3.05 PAYMENT

A. No separate payment shall be made for work performed in accordance with this section of the specifications, and the cost thereof shall be included in the proper items of the Proposal and Bid Schedule.

END OF SECTION

REVISIONS/CORRECTIONS

No.	DESCRIPTION	REVISE (R) DELETE (D) ADD (A)	TOTAL SHEETS IN PLAN	NET CHANGE IMPERV. COVER	SITE IMPERV. COVER	% IMP. COVER	APPROVAL DATE

CONSTRUCTION PLANS FOR CAPELLA PARKWAY UTILITY IMPROVEMENTS

REPLAT OF HAVINS AIRPORT COMMERCIAL SUBDIVISION LOT 1 BLOCK C

DATE OF SUBMITTAL: 11/06/2023

OWNER:
GEORGETOWN PROPERTY – AIRPORT T&C, LLC
TODD DAILEY
317 GRACE LN STE 240
AUSTIN, TX 78746

DEVELOPER:
GEORGETOWN PROPERTY – AIRPORT T&C, LLC
TODD DAILEY
317 GRACE LN STE 240
AUSTIN, TEXAS 78746

LEGAL DESCRIPTION
REPLAT OF HAVINS AIRPORT COMMERCIAL SUBDIVISION LOT 1, BLOCK C AS RECORDED IN DOCUMENT NO 2023051459 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.

REPLAT OF LOT 1A, BLOCK A, OF THE REPLAT OF HAVINS AIRPORT COMMERCIAL SUBDIVISION LOT 1, BLOCK C (UNDER REVIEW)

ACREAGE:
21.7 ACRES

RELATED CASES:
2021–1–PP (APPROVED 06/20/2023)
2021–48–FP (APPROVED 06/20/2023)

WATERSHED:
PECAN BRANCH OF THE SAN GABRIEL WATERSHED

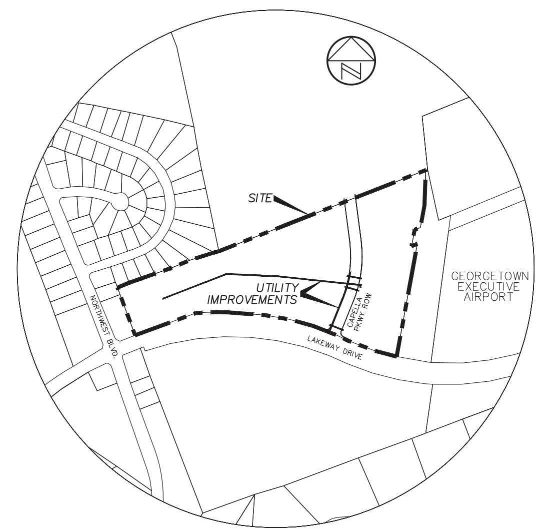
PROJECT DESCRIPTION:
THIS PROJECT CONSISTS OF THE CONSTRUCTION OF ±100 LF OF 12" WASTEWATER MAIN, ±1,123 LF OF 8" WASTEWATER MAIN, AND ±365 LF OF 12" WATER MAIN AND ASSOCIATED IMPROVEMENTS.

GENERAL PLAN NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS THE CITY OF AUSTIN MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. A PORTION OF THIS SITE LIES WITHIN THE 100–YEAR FLOODPLAIN, AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, NATIONAL FLOOD INSURANCE PROGRAM, AS SHOWN ON MAP NO. 48491C0291F , DATED DECEMBER 20, 2020, FOR WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS.
3. WATER AND WASTEWATER SERVICE TO BE PROVIDED BY THE CITY OF GEORGETOWN.
4. THIS SITE IS LOCATED OVER THE EDWARD'S AQUIFER RECHARGE ZONE.
5. A ORGANIZED SEWAGE COLLECTION SYSTEM PLAN WAS APPROVED BY TCEQ ON ___________ EAPP NO ___________.

GEORGETOWN GENERAL NOTES:

1. THESE PLANS WERE PREPARED, SEALED, SIGNED, AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER.THEREFORE, BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE PLANS FOR CONSTRUCTION OF THEPROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILSMANUAL 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 TO THE CITY.
3. THE PROPERTY SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN.
4. A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER QUALITY REGULATIONS, WAS COMPLETED ON JUNE 2018. ANY SPRINGS AND STREAMS AS IDENTIFIED IN THE GEOLOGIC ASSESSMENT ARE SHOWN HEREIN.



LOCATION MAP
NOT TO SCALE

Sheet List Table

Sheet Number	Sheet Title
01	COVER SHEET
02	FINAL PLAT
03	GENERAL NOTES
04	EXISTING CONDITIONS AND DEMOLITION PLAN AND EROSION / SEDIMENTATION CONTROL AND TREE PROTECTION PLAN
05	TREE LIST
06	OVERALL UTILITY SITE PLAN
07	PUBLIC WASTEWATER LINE B1, B1–A, B1–B, & B1–C PLAN AND PROFILE
08	PUBLIC WASTEWATER LINE B2, B2–A, & B2–B PLAN AND PROFILE
09	PUBLIC WATER LINE PLAN AND PROFILE
10	CONSTRUCTION DETAILS SHEET 1
11	CONSTRUCTION DETAILS SHEET 2
12	CONSTRUCTION DETAILS SHEET 3

IN CITY OF GEORGETOWN, WILLIAMSON COUNTY, TEXAS

ENGINEER'S CERTIFICATION:

STATE OF TEXAS
SCOTT J. FOSTER
84652
LICENSED
PROFESSIONAL ENGINEER
11/02/2023

LICENSED PROFESSIONAL ENGINEER
REGISTRATION NO.84652
360 PROFESSIONAL SERVICES, INC.
P.O. BOX 3639
CEDAR PARK, TEXAS 78630

PREPARED BY:
CIVIL ENGINEER:

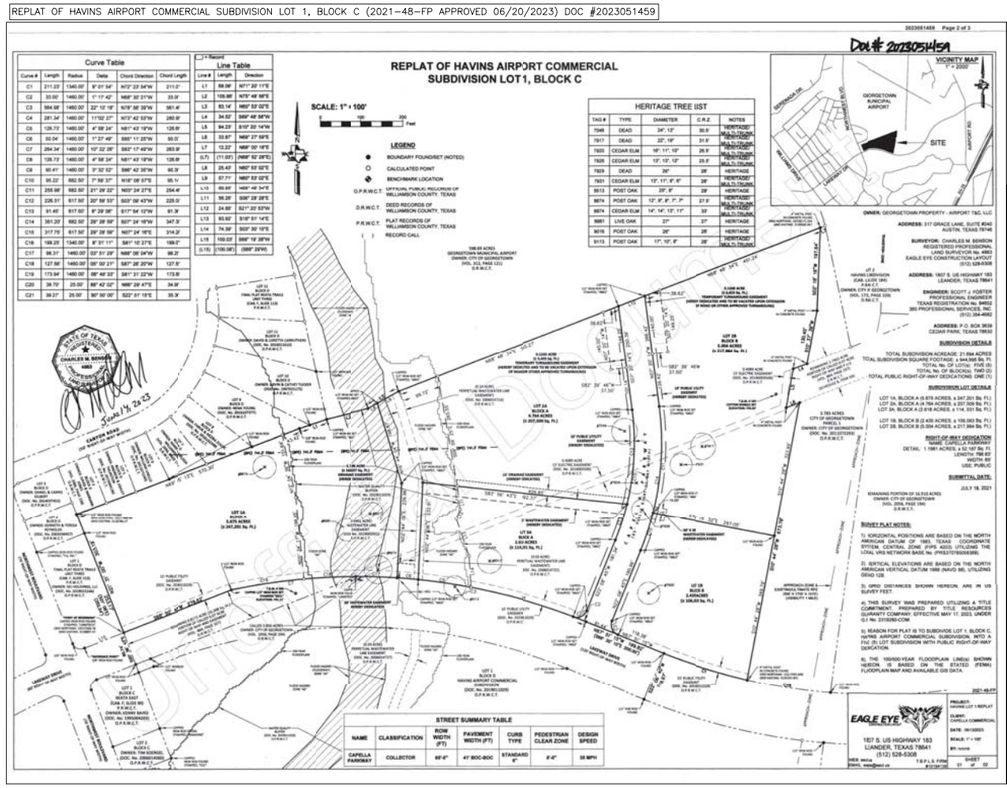
360 PROFESSIONAL SERVICES, INC.
TEXAS FIRM REGISTRATION F4932
P.O. BOX 3639
CEDAR PARK, TEXAS 78630
PHONE (512) 354–4682
CONTACT: SCOTT J. FOSTER, P.E.

SURVEYOR:
EAGLE EYE CONSTRUCTION LAYOUT, LLC
FIRM NO. 10194139
1807 S. US HIGHWAY 183
LEANDER, TEXAS 78641
PHONE: 512–528–5308
CONTACT: CHARLES M. BENSON

SHEET
01
OF 12

2023–XXXX–CON

REPLAT OF HAVINS AIRPORT COMMERCIAL SUBDIVISION LOT 1, BLOCK C (2021-48-FP APPROVED 06/20/2023) DOC #2023051459



Doc# 2023051459

2023051459 Page 2 of 3

2023051459 Page 3 of 3

Doc# 2023051459

REPLAT OF HAVINS AIRPORT COMMERCIAL SUBDIVISION LOT 1, BLOCK C

STATE OF TEXAS
COUNTY OF WILLIAMSON

KNOW ALL MEN BY THESE PRESENTS:

DANIEL, TODD DAILEY, MANAGING MEMBER OF GEORGETOWN PROPERTY - AIRPORT T&C, LLC., SOLE OWNER OF THE CERTAIN 5.675 ACRE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED, RECORDED IN DOCUMENT No. 2021089784 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CERTIFY THAT I HAVE REVIEWED AND APPROVED THIS PLAT AND DO HEREBY RESUBDIVIDE SAID TRACT AS SHOWN HEREON; DO HEREBY COVENANT THAT ALL RESTRICTIONS LISTED HEREIN, WHICH SHALL RUN WITH THE LAND, AND DO HEREBY DEDICATE TO THE PUBLIC USE FOREVER ALL STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF GEORGETOWN MAY DEEM APPROPRIATE; I HEREBY AND MY HEIRS, SUCCESSORS, AND ASSIGNS TO WARRANT AND FOREVER DEFEND SUCH DEDICATIONS; ALL AND SINGULAR TO THE CITY OF GEORGETOWN, AGAINST EVERY PERSON WHOMSOEVER CLAIMING OR TO CLAIM THE SAME OR ANY PART THEREOF. THIS SUBDIVISION IS TO BE KNOWN AS:

REPLAT OF LOT 1A, BLOCK A, OF THE REPLAT OF HAVINS AIRPORT COMMERCIAL SUBDIVISION, LOT 1, BLOCK C

TO CERTIFY WHICH, WITNESS MY HAND THIS _____ DAY OF OCTOBER, 2023.

GEORGE DAN PROPERTY - AIRPORT T&C, LLC
TODD DAILEY, MANAGING MEMBER

KNOWN ALL MEN BY THESE PRESENTS

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED TODD DAILEY, MANAGING MEMBER OF GEORGETOWN PROPERTY - AIRPORT T&C, LLC, A TEXAS LIMITED LIABILITY COMPANY, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF OCTOBER, 2023

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

PRINTED NAME OF NOTARY / EXPIRES

PLANNING AND ZONING COMMISSION
STATE OF TEXAS
COUNTY OF WILLIAMSON

THIS SUBDIVISION TO BE KNOWN AS, REPLAT OF LOT 1A, BLOCK A, OF THE REPLAT OF HAVINS AIRPORT COMMERCIAL SUBDIVISION LOT 1, BLOCK C, HAS BEEN ACCEPTED AND APPROVED FOR PUBLIC FILING RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS, ACCORDING TO THE MINUTES OF THE MEETING OF THE PLANNING AND ZONING COMMISSION ON THE _____ DAY OF JUNE, 2023.

ENCEL BASHEAR, CHAIRMAN — DATE

CHERE HONTZMANN, SECRETARY — DATE

PLANNING DIRECTOR
STATE OF TEXAS
COUNTY OF WILLIAMSON

I, SOFIA NELSON, PLANNING DIRECTOR OF THE CITY OF GEORGETOWN, TEXAS, DO HEREBY CERTIFY THIS PLAT IS APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

THE MEETING OF THE DEDICATED CITIZEN PLANNING AND ZONING COMMISSION ON THE _____ DAY OF JUNE, 2023.

SOFIA NELSON, PLANNING DIRECTOR — DATE

CITY FLOODPLAIN COORDINATOR
STATE OF TEXAS
COUNTY OF WILLIAMSON

BASED UPON THE REPRESENTATION OF THE ENGINEER OR SURVEYOR WHOSE SEAL IS AFFIXED HERETO, AND AFTER REVIEW OF THE PLAT AS DEPICTED BY THE SAID ENGINEER OR SURVEYOR, I FIND THAT IT COMPLIES WITH CHAPTER 13 OF THE C.O.G.O. DRAINAGE REVENTION OF THE GEORGETOWN MUNICIPAL CODE. THIS CERTIFICATION IS MADE SOLELY UPON SUCH REPRESENTATION AND SHOULD NOT BE RELIED UPON FOR VERIFICATION OF ANY OF THE ACCOMPANYING FACTS ALLEGED. THE CITY OF GEORGETOWN DISCLAIMS ANY RESPONSIBILITY TO ANY MEMBER OF THE PUBLIC OR INDEPENDENT VERIFICATIONS OF THE REPRESENTATION, FACTUAL OR OTHERWISE, CONTAINED IN THIS PLAT AND THE DOCUMENT ASSOCIATED WITH IT.

WESLEY WRIGHT, P.E., CFM, FLOODPLAIN COORDINATOR — DATE
CITY OF GEORGETOWN

COUNTY CLERK
STATE OF TEXAS
COUNTY OF WILLIAMSON

I, NANCY RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON

THE _____ DAY OF OCTOBER, 2023 A.D., AT _____ O'CLOCK, _____ M., ANDDULY

RECORDED THIS THE _____ DAY OF OCTOBER, 2023, A.D., AT _____ O'CLOCK, _____ M. IN THE OFFICIAL

PUBLIC RECORDS OF SAID COUNTY IN DOCUMENT No. _____

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

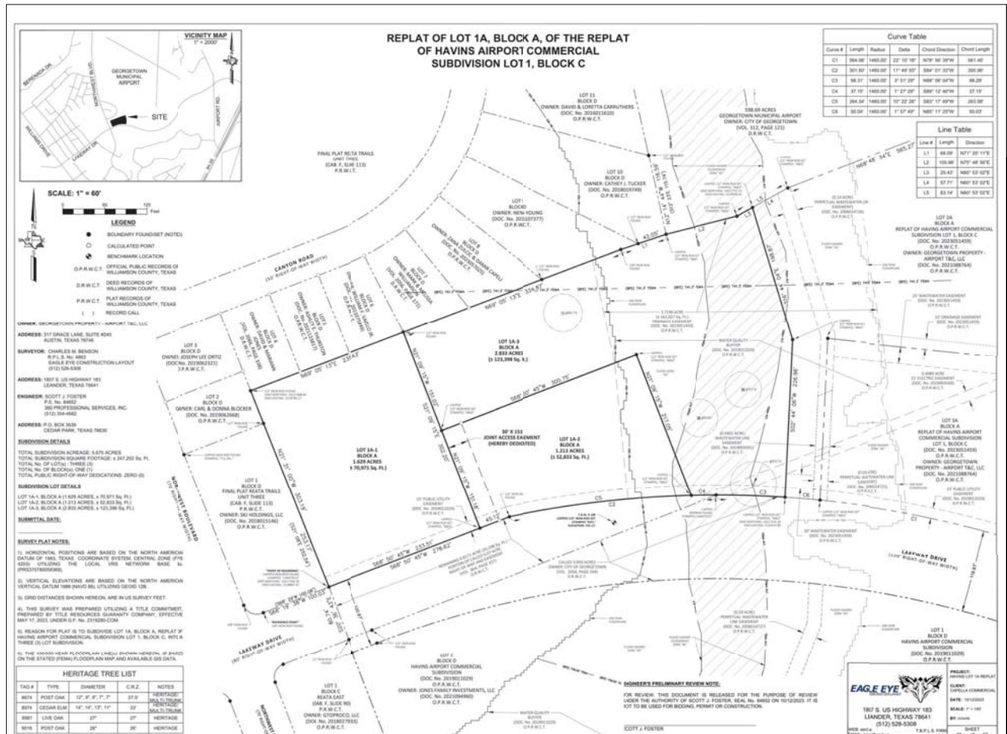
BY: _____
CONNIE PHELPS,DEPUTY

NANCY RISTER
COUNTY CLERK,
WILLIAMSON COUNTY, TEXAS

EAGLE EYE
167 S. US HIGHWAY 183
LEANDER, TEXAS 78641
(512) 528-5308

PROJECT: HAVINS LOT 1A REPLAT
CLIENT: CAPELLA COMMERCIAL
DATE: 10/12/2023
SCALE: N/A
BY: mmm
T.B.P.L.S. FIRM #10194100
SHEET 02 OF 02

REPLAT OF LOT 1A, BLOCK A, OF THE REPLAT OF HAVINS AIRPORT COMMERCIAL SUBDIVISION LOT 1, BLOCK C (2021-48-FP) (UNDER REVIEW)



REPLAT OF LOT 1A, BLOCK A, OF THE REPLAT OF HAVINS AIRPORT COMMERCIAL SUBDIVISION LOT 1, BLOCK C

STATE OF TEXAS
COUNTY OF WILLIAMSON

KNOW ALL MEN BY THESE PRESENTS:

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GEORGE DAN PROPERTY - AIRPORT T&C, LLC
TODD DAILEY, MANAGING MEMBER

KNOWN ALL MEN BY THESE PRESENTS

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED TODD DAILEY, MANAGING MEMBER OF GEORGETOWN PROPERTY - AIRPORT T&C, LLC, A TEXAS LIMITED LIABILITY COMPANY, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF OCTOBER, 2023

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

PRINTED NAME OF NOTARY / EXPIRES

PLANNING AND ZONING COMMISSION
STATE OF TEXAS
COUNTY OF WILLIAMSON

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ENCEL BASHEAR, CHAIRMAN — DATE

CHERE HONTZMANN, SECRETARY — DATE

PLANNING DIRECTOR
STATE OF TEXAS
COUNTY OF WILLIAMSON

I, SOFIA NELSON, PLANNING DIRECTOR OF THE CITY OF GEORGETOWN, TEXAS, DO HEREBY CERTIFY THIS PLAT IS APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

THE MEETING OF THE DEDICATED CITIZEN PLANNING AND ZONING COMMISSION ON THE _____ DAY OF OCTOBER, 2023.

SOFIA NELSON, PLANNING DIRECTOR — DATE

CITY FLOODPLAIN COORDINATOR
STATE OF TEXAS
COUNTY OF WILLIAMSON

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WESLEY WRIGHT, P.E., CFM, FLOODPLAIN COORDINATOR — DATE
CITY OF GEORGETOWN

COUNTY CLERK
STATE OF TEXAS
COUNTY OF WILLIAMSON

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BY: _____
CONNIE PHELPS,DEPUTY

NANCY RISTER
COUNTY CLERK,
WILLIAMSON COUNTY, TEXAS

EAGLE EYE
167 S. US HIGHWAY 183
LEANDER, TEXAS 78641
(512) 528-5308

PROJECT: HAVINS LOT 1A REPLAT
CLIENT: CAPELLA COMMERCIAL
DATE: 10/12/2023
SCALE: N/A
BY: mmm
T.B.P.L.S. FIRM #10194100
SHEET 02 OF 02

TEXAS REGISTRATION F4932
P.O. BOX 3639
GEORGETOWN, TEXAS 78626
PHONE (512) 354-4662
FAX (512) 900-7962

360 PROFESSIONAL SERVICES, INC.

No.	Date	Revisions	App.

CAPELLA PARKWAY
UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

FINAL PLAT

Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

SHEET
02
OF 12

2023-XXXX-CON

T:\EE-C Users\Work\Documents\MSOffice\Capella GT 22 Acre Utility Extension\Cad\Sheets\02 FINAL PLAT.dwg PLOT DATE: 10/31/2023 2:06pm PLOTTED BY: neil LAYOUT: Layout1

CITY OF AUSTIN GENERAL CONSTRUCTION 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 AUSTIN MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. CONTRACTOR SHALL CALL TEXAS 811 (811 OR 1–800–344–8377) FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W
3. CONTRACTOR SHALL NOTIFY THE CITY OF AUSTIN –SITE & SUBDIVISION DIVISION TO SUBMIT REQUIRED DOCUMENTATION, PAY CONSTRUCTION INSPECTION FEES, AND TO SCHEDULE THE REQUIRED SITE AND SUBDIVISION PRE–CONSTRUCTION MEETING. THIS MEETING MUST BE HELD PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN THE R.O.W. OR PUBLIC EASEMENTS. PLEASE VISIT HTTP://AUSTINTEXAS.GOV/PAGE/COMMERCIAL–SITE–AND–SUBDIVISION–INSPECTIONS FOR A LIST OF SUBMITTAL REQUIREMENTS, INFORMATION CONCERNING FEES, AND CONTACT INFORMATION.
4. FOR SLOPES OR TRENCHES GREATER THAN FIVE (5) FEET IN DEPTH, A NOTE MUST BE ADDED STATING: "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 MUST COMPLY WITH ENVIRONMENTAL REQUIREMENTS.
6. UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS AND PRIOR TO THE FOLLOWING, THE ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DRAINAGE, FILTRATION, AND DETENTION FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.
   - 6.1. RELEASE OF THE CERTIFICATE OF OCCUPANCY BY THE DEVELOPMENT SERVICES DEPARTMENT (INSIDE THE CITY LIMITS); OR
   - 6.2. INSTALLATION OF AN ELECTRIC OR WATER METER (IN THE FIVE–MILE ETJ)

DEVELOPER INFORMATION:

GEORGETOWN PROPERTY – AIRPORT T&C, LLC	(512) 617–6363
OWNER	PHONE #
GEORGETOWN PROPERTY – AIRPORT T&C, LLC (TODD DAILEY)	(512) 617–6363
DEVELOPER	PHONE #
317 GRACE LN STE 240, AUSTIN, TEXAS 78746	
OWNER ADDRESS	
360 PROFESSIONAL SERVICES, INC. (SCOTT J. FOSTER, P.E.)	(512) 354–4682
OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS	PHONE #
GEORGETOWN PROPERTY – AIRPORT T&C, LLC (TODD DAILEY)	(512) 617–6363
PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE	PHONE #
GEORGETOWN PROPERTY – AIRPORT T&C, LLC (TODD DAILEY)	(512) 617–6363
PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE	PHONE #

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF AUSTIN STANDARD SPECIFICATIONS, AS AMENDED BY SPECIAL PROVISION. CURRENT AT THE TIME OF BIDDING.
2. 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.
3. 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.
4. CONTRACTOR TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING EXCESS AND WASTE MATERIAL. INCLUDING METHODS OF HANDLING AND DISPOSAL.
5. IF REQUIRED, 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.
6. LOCATION OF EXISTING UTILITIES SHOWN ON PLANS WAS COMPILED FROM RECORD INFORMATION. NO WARRANTY IS IMPLIED AS TO THE ACTUAL LOCATION OF EXISTING UTILITIES.
7. 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.
8. 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.
9. CONTRACTOR TO CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES. (NO SEPARATE PAY)
10. THROUGHOUT THE CONSTRUCTION, AND AT THE COMPLETION OF CONSTRUCTION. THE CONTRACTOR TO ENSURE THAT DRAINAGE OF STORM WATER RUNOFF IS NOT BLOCKED.
11. THESE PLANS, PREPARED BY 360 PROFESSIONAL SERVICES, INC. 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 360 PROFESSIONAL SERVICES, INC.'S LICENSED 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.
12. TRAFFIC CONTROLS TO BE CONTRACTOR'S RESPONSIBILITY AND INSTALLED IN ACCORDANCE WITH THE CITY OF AUSTIN. ADDITIONALLY, THE CONTRACTOR IS TO SCHEDULE THE WORK AND TRAFFIC CONTROLS TO ACHIEVE THE FOLLOWING TRAFFIC GUIDELINES:

    ATTN: MINIMUM OF ONE ACCESS POINT TO THE SITE TO REMAIN OPEN AT ALL TIMES.
    MINIMUM OF ONE LANE WITHIN THE ADJACENT ACCESS EASEMENTS TO REMAIN OPEN AT ALL TIMES.
    CONTRACTOR IS RESPONSIBLE FOR COORDINATING LANE CLOSURES WITH OWNER.
13. CONTRACTOR TO EXERCISE CAUTION DURING CONSTRUCTION NEAR AND AROUND GAS LINES. NOTIFY GAS COMPANY 24 HOURS PRIOR TO CONSTRUCTION.
14. NO BLASTING IS ALLOWED ON THIS PROJECT.
15. BURNING IS NOT ALLOWED ON THIS PROJECT.
16. CONTRACTOR TO INSTALL 1/2–INCH–DIAMETER BY 12–INCH–LONG REBAR VERTICALLY, WITH TWO (2) FEET OF SURVEYOR'S RIBBON ATTACHED AT END OF ALL PIPE STUBS. TOP OF BAR TO BE NOT LESS THAN 12 INCHES ABOVE THE FINISHED GRADE.

A. BLUE RIBBON – WATER LINE
B. GREEN RIBBON – WASTEWATER LINE
C. YELLOW RIBBON – GAS LINE
D. ORANGE RIBBON – TELECOM DUCT BANK
E. RED RIBBON – ELECTRICAL DUCT BANK

24. 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.
25. A CURB LAYDOWN IS REQUIRED AT ALL POINTS WHERE THE PROPOSED SIDEWALK INTERSECTS THE CURB.
26. 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.
27. 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.
28. 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. 360 PROFESSIONAL SERVICES, INC., IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION REGARDING SURVEYS OR BENCHMARK LOCATIONS.

    BENCHMARKS ARE AS FOLLOWS: SEE EXISTING CONDITIONS AND DEMOLITION PLAN
29. DEMOLITION PERMITS (IF NEEDED) ARE TO BE OBTAINED BY THE CONTRACTOR AT THEIR EXPENSE.
30. CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW THE GEOTECHNICAL REPORT AND SHALL FOLLOW THE RECOMMENDATIONS SPECIFIED THEREIN INCLUDING, BUT NOT LIMITED TO, PAVING RECOMMENDATIONS, SUBGRADE PREPARATIONS, PILE INSTALLATION PROCEDURES, GROUND WATER MANAGEMENT AND STEEP SLOPE BEST MANAGEMENT PRACTICES
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 STORM WATER FROM EXCAVATIONS IS PROHIBITED UNLESS THE STORM WATER IS DISCHARGED TO ENCOURAGE SHEET/OVERLAND FLOW. ADDITIONAL EROSION AND SEDIMENTATION CONTROLS MAY BE REQUIRED, AT NO ADDITIONAL COST TO THE OWNER.
33. UNLESS OTHERWISE NOTED, STORM SEWERS TO BE: 6"–15" SDR 35 PVC, 18" AND GREATER, RCP ASTM–C76 CLASS III. ALL PUBLIC STORM SEWER TO BE RCP ASTM–C76 CLASS III.
34. 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 AUSTIN INSPECTOR FOR FURTHER INVESTIGATION.
35. UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF OCCUPANCY OR FINAL INSPECTION RELEASE BY THE CITY, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DRAINAGE FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH APPROVED PLANS.

GEORGETOWN GENERAL NOTES

1. THESE CONSTRUCTION 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.
2. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO 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 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 2 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 DISK (300DPI). IF A DISK IS SUBMITTED, A BOND SET SHALL BE INCLUDED WITH THE DISK.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CHAPTER 290
TCEQ CHAPTER 290.44(E)(4)
(EFFECTIVE DECEMBER 10, 2015)

(4) WHERE THE NINE–FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING CRITERIA SHALL APPLY.

(A) NEW WATERLINE INSTALLATION – PARALLEL LINES.
- (i) WHERE A NEW POTABLE WATERLINE PARALLELS AN EXISTING, NONPRESSURE OR PRESSURE RATED WASTEWATER MAIN OR LATERAL AND THE LICENSED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS IS ABLE TO DETERMINE THAT THE EXISTING WASTEWATER MAIN OR LATERAL IS NOT LEAKING, THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE EXISTING WASTEWATER MAIN OR LATERAL, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE EXISTING WASTEWATER MAIN OR LATERAL. EVERY EFFORT SHALL BE EXERTED NOT TO DISTURB THE BEDDING AND BACKFILL OF THE EXISTING WASTEWATER MAIN OR LATERAL.
- (ii) WHERE A NEW POTABLE WATERLINE PARALLELS AN EXISTING PRESSURE–RATED WASTEWATER MAIN OR LATERAL AND IT CANNOT BE DETERMINED BY THE LICENSED PROFESSIONAL ENGINEER IF THE EXISTING LINE IS LEAKING, THE EXISTING WASTEWATER MAIN OR LATERAL SHALL BE REPLACED WITH AT LEAST 150 PSI PRESSURE–RATED PIPE. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE NEW WASTEWATER LINE, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE REPLACED WASTEWATER MAIN OR LATERAL.
- (iii) WHERE A NEW POTABLE WATERLINE PARALLELS A NEW WASTEWATER MAIN, THE WASTEWATER MAIN OR LATERAL SHALL BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE–RATED PIPE. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE WASTEWATER MAIN OR LATERAL.

(B) NEW WATERLINE INSTALLATION – CROSSING LINES.
- (i) WHERE A NEW POTABLE WATERLINE CROSSES ABOVE A WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND MUST BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. WHEN CROSSING AN EXISTING WASTEWATER MAIN OR LATERAL AND IT IS DISTURBED OR SHOWS SIGNS OF LEAKING, THE WASTEWATER MAIN OR LATERAL SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE–RATED PIPE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.
  - (I) THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE AN EXISTING, NON–PRESSURE RATED WASTEWATER MAIN OR LATERAL.
  - (II) THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE AN EXISTING, PRESSURE–RATED WASTEWATER MAIN OR LATERAL.
- (ii) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NONPRESSURE RATED WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END. THE MATERIALS AND METHOD OF INSTALLATION SHALL CONFORM TO ONE OF THE FOLLOWING OPTIONS:
  - (I) WITHIN NINE FEET HORIZONTALLY OF EITHER SIDE OF THE WATERLINE, THE WASTEWATER PIPE AND JOINTS SHALL BE CONSTRUCTED WITH PIPE MATERIAL HAVING A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. AN ABSOLUTE MINIMUM VERTICAL SEPARATION DISTANCE OF TWO FEET SHALL BE PROVIDED. THE WASTEWATER MAIN OR LATERAL SHALL BE LOCATED BELOW THE WATERLINE.
  - (II) ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18–FOOT (OR LONGER) SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE ENCASING PIPE SHALL BE CENTERED ON THE WATERLINE AND SHALL BE AT LEAST TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WASTEWATER MAIN OR LATERAL. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE–FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATERTIGHT NON–SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF SIX INCHES BETWEEN THE ENCASEMENT PIPE AND THE WATERLINE SHALL BE PROVIDED. THE WASTEWATER LINE SHALL BE LOCATED BELOW THE WATERLINE.
- (iii) WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN OR LATERAL, THE WATERLINE SHALL BE ENCASED AS DESCRIBED FOR WASTEWATER MAINS OR LATERALS IN CLAUSE (II) OF THIS SUBPARAGRAPH OR CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE AND THE WASTEWATER MAIN OR LATERAL SHALL BE PROVIDED. WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN, THE PROCEDURES IN §217.53(D) OF THIS TITLE (RELATING TO PIPE DESIGN) MUST BE FOLLOWED.
- (iv) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER LINE SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTER LINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.
- (v) WHERE CEMENT STABILIZED SAND BEDDING IS REQUIRED, THE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE). THE CEMENT STABILIZED SAND BEDDING SHALL BE A MINIMUM OF SIX INCHES ABOVE AND FOUR INCHES BELOW THE WASTEWATER MAIN OR LATERAL. THE USE OF BROWN COLORING IN CEMENT STABILIZED SAND FOR WASTEWATER MAIN OR LATERAL BEDDING IS RECOMMENDED FOR THE IDENTIFICATION OF PRESSURE RATED WASTEWATER MAINS DURING FUTURE CONSTRUCTION.

TCEQ WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES
REVISED FEBRUARY 2019

1. THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED. AT A MINIMUM, CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS MEET TCEQ'S "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS."
2. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/NSF INTERNATIONAL STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI [§290.44(A)(1)].
3. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NSF INTERNATIONAL SEAL OF APPROVAL (NSF–PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS [§290.44(A)(2)].
4. NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY [§290.44(A)(3)].
5. ALL WATER LINE CROSSINGS OF WASTEWATER MAINS SHALL BE PERPENDICULAR [§290.44(E)(4)(B)].
6. WATER TRANSMISSION AND DISTRIBUTION LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE [§290.44(A)(4)].
7. THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES IS 0.25 PERCENT [§290.44(B)].
8. THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES WITH VENT OPENINGS TO THE ATMOSPHERE COVERED WITH 16–MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT [§290.44(D)(1)].
9. THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION [§290.44(F)(1)].
10. WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI–PERMANENT BODY OF WATER THE WATERLINE SHALL BE INSTALLED IN A SEPARATE WATERTIGHT PIPE ENCASEMENT. VALVES MUST BE PROVIDED ON EACH SIDE OF THE CROSSING WITH FACILITIES TO ALLOW THE UNDERWATER PORTION OF THE SYSTEM TO BE ISOLATED AND TESTED [§290.44(F)(2)].
11. PURSUANT TO 30 TAC §290.44(A)(5), THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA FORMULAS FOR PVC PIPE, CAST IRON AND DUCTILE IRON PIPE. INCLUDE THE FORMULAS IN THE NOTES ON THE PLANS.

    O THE HYDROSTATIC LEAKAGE RATE FOR POLYVINYL CHLORIDE (PVC) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C–605 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

WHERE:
- Q = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
- L = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
- D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
- P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).

O THE HYDROSTATIC LEAKAGE RATE FOR DUCTILE IRON (DI) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C–600 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

WHERE:
- L = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
- S = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
- D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
- P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).

12. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION. SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZED MUST MEET §290.44(E)(1)–(4).
13. THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE–FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE–FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT [§290.44(E)(5)].
14. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER LINE, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION [§290.44(E)(6)].
15. SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MAINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE [§290.44(E)(7)].
16. WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS [§290.44(E)(8)].
17. THE CONTRACTOR SHALL DISINFECT THE NEW WATERLINES IN ACCORDANCE WITH AWWA STANDARD C–651–14 OR MOST RECENT, THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATERLINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER [§290.44(F)(3)].
18. DECHLORINATION OF DISINFECTING WATER SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C655–09 OR MOST RECENT.

AMERICANS WITH DISABILITIES ACT:

THE CITY OF AUSTIN HAS REVIEWED THIS PLAN FOR COMPLIANCE WITH CITY DEVELOPMENT REGULATIONS ONLY. THE APPLICANT, PROPERTY OWNER, AND OCCUPANT OF THE PREMISES ARE RESPONSIBLE FOR DETERMINING WHETHER THE PLAN COMPLIES WITH ALL OTHER LAWS, REGULATIONS, AND RESTRICTIONS WHICH MAY BE APPLICABLE TO THE PROPERTY AND ITS USE.

SEQUENCE OF CONSTRUCTION:

1. INSTALL CONSTRUCTION FENCING, STABILIZED CONSTRUCTION ENTRANCE, EROSION CONTROLS AND TREE PROTECTION FENCING PER APPROVED EROSION AND SEDIMENTATION CONTROL/TREE PROTECTION PLAN.
2. INSTALL WASTEWATER LINES AND APPURTENANCES.
3. INSTALL WATER LINES AND APPURTENANCES.
4. ESTABLISH REVEGETAION IN ALL DISTURBED AREAS.
5. REMOVE TEMPORARY CONTROL DEVICES.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
ORGANIZED SEWAGE COLLECTION SYSTEM (F–0596)
GENERAL CONSTRUCTION NOTES
(EFFECTIVE JULY 15, 2015)

1. THIS ORGANIZED SEWAGE COLLECTION SYSTEM (SCS) MUST BE CONSTRUCTED IN ACCORDANCE WITH 30 TEXAS ADMINISTRATIVE CODE (TAC) §213.5(C), THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES AND ANY LOCAL GOVERNMENT STANDARD SPECIFICATIONS.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROPOSED REGULATED PROJECT MUST BE PROVIDED WITH COPIES OF THE SCS PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS MUST BE REQUIRED TO KEEP ON–SITE COPIES OF THE PLAN AND THE APPROVAL LETTER.
3. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE PRESIDING TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - – THE NAME OF THE APPROVED PROJECT;
   - – THE ACTIVITY START DATE; AND
   - – THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
4. ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED SCS APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF AN SCS APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL INFORMATION NECESSARY FOR ITS REVIEW AND APPROVAL.
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 MANUFACTURERS SPECIFICATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
6. IF ANY SENSITIVE FEATURES ARE DISCOVERED DURING THE WASTEWATER LINE TRENCHING ACTIVITIES, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPLICANT MUST IMMEDIATELY NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TCEQ OF THE FEATURE DISCOVERED. A GEOLOGIST'S ASSESSMENT OF THE LOCATION AND EXTENT OF THE FEATURE DISCOVERED MUST BE REPORTED TO THAT REGIONAL OFFICE IN WRITING AND THE APPLICANT MUST SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR FOR MODIFYING THE PROPOSED COLLECTION SYSTEM ALIGNMENT AROUND THE FEATURE. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.
7. SEWER LINES LOCATED WITHIN OR CROSSING THE 5–YEAR FLOODPLAIN OF A DRAINAGE WAY WILL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL, OR THE SEWER LINES MUST BE ENCASED IN CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES.
8. BLASTING PROCEDURES FOR PROTECTION OF EXISTING SEWER LINES AND OTHER UTILITIES WILL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION CRITERIA. SAND IS NOT ALLOWED AS BEDDING OR BACKFILL IN TRENCHES THAT HAVE BEEN BLASTED. IF ANY EXISTING SEWER LINES ARE DAMAGED, THE LINES MUST BE REPAIRED AND RETESTED.
9. ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100–YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE.

    THE DIAMETER OF THE MANHOLES MUST BE A MINIMUM OF FOUR FEET AND THE MANHOLE FOR ENTRY MUST HAVE A MINIMUM CLEAR OPENING DIAMETER OF 30 INCHES. THESE DIMENSIONS AND OTHER DETAILS SHOWING COMPLIANCE WITH THE COMMISSION'S RULES CONCERNING MANHOLES AND SEWER LINE/MANHOLE INVERTS DESCRIBED IN 30 TAC §217.55 ARE INCLUDED ON PLAN SHEET 12 OF 12.

    IT IS SUGGESTED THAT ENTRANCE INTO MANHOLES IN EXCESS OF FOUR FEET DEEP BE ACCOMPLISHED BY MEANS OF A PORTABLE LADDER. THE INCLUSION OF STEPS IN A MANHOLE IS PROHIBITED.
10. WHERE WATER LINES AND NEW SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
11. WHERE SEWERS LINES DEVIATE FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE ALL CURVATURE OF SEWER PIPE MUST BE ACHIEVED BY THE FOLLOWING PROCEDURE WHICH IS RECOMMENDED BY THE PIPE MANUFACTURER: N/A________________.

    IF PIPE FLEXURE IS PROPOSED, THE FOLLOWING METHOD OF PREVENTING DEFLECTION OF THE JOINT MUST BE USED: N/A______________.

    SPECIFIC CARE MUST BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC §217.54.
12. NEW SEWAGE COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH STUB OUTS FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. THE LOCATION OF SUCH STUB OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH STUB OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB–OUTS MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE END OF THE STREET PAVEMENT. ALL STUB–OUTS MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING SEWER LINE NOT FURNISHED WITH STUB OUTS MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING TECHNIQUES.

    IF NO STUB–OUT IS PRESENT AN ALTERNATE METHOD OF JOINING LATERALS IS SHOWN IN THE DETAIL ON PLAN SHEET 12 OF 12. (FOR POTENTIAL FUTURE LATERALS).

    THE PRIVATE SERVICE LATERAL STUB–OUTS MUST BE INSTALLED AS SHOWN ON THE PLAN AND PROFILE SHEETS ON PLAN SHEET 12 OF 12 AND MARKED AFTER BACKFILLING AS SHOWN IN THE DETAIL ON PLAN SHEET 12 OF 12.
13. TRENCHING, BEDDING AND BACKFILL MUST CONFORM WITH 30 TAC §217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY WITH THE STANDARDS OF ASTM D–2321, CLASSES IA, IB, II OR III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 (ANSI A 106.2) CLASSES A, B OR C.
14. SEWER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN–OUT, IT MUST BE TESTED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEAN–OUT IS USED AT THE END OF THE PROPOSED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT UNLESS IT CAN BE CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(C)(3)(E).
15. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC §217.57. THE ENGINEER MUST RETAIN COPIES OF ALL TEST RESULTS WHICH MUST BE MADE AVAILABLE TO THE EXECUTIVE DIRECTOR UPON REQUEST. THE ENGINEER MUST CERTIFY IN WRITING THAT ALL WASTEWATER LINES HAVE PASSED ALL REQUIRED TESTING TO THE APPROPRIATE REGIONAL OFFICE WITHIN 30 DAYS OF TEST COMPLETION AND PRIOR TO USE OF THE NEW COLLECTION SYSTEM. TESTING METHOD WILL BE:
    - (A) FOR A COLLECTION SYSTEM PIPE THAT WILL TRANSPORT WASTEWATER BY GRAVITY FLOW, THE DESIGN MUST SPECIFY AN INFILTRATION AND EXFILTRATION TEST OR A LOW–PRESSURE AIR TEST. A TEST MUST CONFORM TO THE FOLLOWING REQUIREMENTS:
      - (1) LOW PRESSURE AIR TEST.
        - (A) A LOW PRESSURE AIR TEST MUST FOLLOW THE PROCEDURES DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) C–828, ASTM C–924, OR ASTM F–1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS REQUIRED IN TABLE C.3 IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH.
        - (B) FOR SECTIONS OF COLLECTION SYSTEM PIPE LESS THAN 36 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY, UNLESS A PIPE IS TO BE TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION.
          - (I) A PIPE MUST BE PRESSURIZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE.
          - (II) ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS COMPUTED FROM THE FOLLOWING EQUATION:

EQUATION C.3

$$T = \frac{0.085 \times D \times K}{Q}$$

WHERE:

T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS
K = 0.000419 X D X L, BUT NOT LESS THAN 1.0
D = AVERAGE INSIDE PIPE DIAMETER IN INCHES
L = LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET
Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE

(C) SINCE A K VALUE OF LESS THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING TABLE C.3:

PIPE DIAMETER (INCHES)	MINIMUM TIME (SECONDS)	MAXIMUM LENGTH FOR MINIMUM TIME (FEET)	TIME FOR LONGER LENGTH (SECONDS/FOOT)
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

(D) AN OWNER MAY STOP A TEST IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME.
(E) IF ANY PRESSURE LOSS OR LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF A TESTING PERIOD, THEN THE TEST MUST CONTINUE FOR THE ENTIRE TEST DURATION AS OUTLINED ABOVE OR UNTIL FAILURE.
(F) WASTEWATER COLLECTION SYSTEM PIPES WITH A 27 INCH OR LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT INSTEAD OF FOLLOWING THE PROCEDURE OUTLINED IN THIS SECTION.
(G) A TESTING PROCEDURE FOR PIPE WITH AN INSIDE DIAMETER GREATER THAN 33 INCHES MUST BE APPROVED BY THE EXECUTIVE DIRECTOR.

(2) INFILTRATION/EXFILTRATION TEST.
- (A) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF 2.0 FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE.
- (B) AN OWNER SHALL USE AN INFILTRATION TEST IN LIEU OF AN EXFILTRATION TEST WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER LEVEL.
- (C) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST TWO FEET ABOVE EXISTING GROUNDWATER LEVEL, WHICHEVER IS GREATER.
- (D) FOR CONSTRUCTION WITHIN A 25–YEAR FLOOD PLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD AS IN SUBPARAGRAPH (C) OF THIS PARAGRAPH.
- (E) IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, AN OWNER SHALL UNDERTAKE REMEDIAL ACTION IN ORDER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED. AN OWNER SHALL RETEST A PIPE FOLLOWING A REMEDIATION ACTION.

(B) IF A GRAVITY COLLECTION PIPE IS COMPOSED OF FLEXIBLE PIPE, DEFLECTION TESTING IS ALSO REQUIRED. THE FOLLOWING PROCEDURES MUST BE FOLLOWED:
- (1) FOR A COLLECTION PIPE WITH INSIDE DIAMETER LESS THAN 27 INCHES, DEFLECTION MEASUREMENT REQUIRES A RIGID MANDREL.
  - (A) MANDREL SIZING.
    - (I) A RIGID MANDREL MUST HAVE AN OUTSIDE DIAMETER (OD) NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A PIPE, AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTMS, AMERICAN WATER WORKS ASSOCIATION, UNI–BELL, OR AMERICAN NATIONAL STANDARDS INSTITUTE, OR ANY RELATED APPENDIX.
    - (II) IF A MANDREL SIZING DIAMETER IS NOT SPECIFIED IN THE APPROPRIATE STANDARD, THE MANDREL MUST HAVE AN OD EQUAL TO 95% OF THE ID OF A PIPE. IN THIS CASE, THE ID OF THE PIPE, FOR THE PURPOSE OF DETERMINING THE OD OF THE MANDREL, MUST EQUAL BE THE AVERAGE OUTSIDE DIAMETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD CONTROLLED PIPE AND THE AVERAGE INSIDE DIAMETER FOR ID CONTROLLED PIPE.
    - (III) ALL DIMENSIONS MUST MEET THE APPROPRIATE STANDARD.
  - (B) MANDREL DESIGN.
    - (I) A RIGID MANDREL MUST BE CONSTRUCTED OF A METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200 PSI WITHOUT BEING DEFORMED.
    - (II) A MANDREL MUST HAVE NINE OR MORE ODD NUMBER OF RUNNERS OR LEGS.
    - (III) A BARREL SECTION LENGTH MUST EQUAL AT LEAST 75% OF THE INSIDE DIAMETER OF A PIPE.
    - (IV) EACH SIZE MANDREL MUST USE A SEPARATE PROVING RING.
  - (C) METHOD OPTIONS.
    - (I) AN ADJUSTABLE OR FLEXIBLE MANDREL IS PROHIBITED.
    - (II) A TEST MAY NOT USE TELEVISION INSPECTION AS A SUBSTITUTE FOR A DEFLECTION TEST.
    - (III) IF REQUESTED, THE EXECUTIVE DIRECTOR MAY APPROVE THE USE OF A DEFLECTOMETER OR A MANDREL WITH REMOVABLE LEGS OR RUNNERS ON A CASE–BY–CASE BASIS.
- (2) FOR A GRAVITY COLLECTION SYSTEM PIPE WITH AN INSIDE DIAMETER 27 INCHES AND GREATER, OTHER TEST METHODS MAY BE USED TO DETERMINE VERTICAL DEFLECTION.
- (3) A DEFLECTION TEST METHOD MUST BE ACCURATE TO WITHIN PLUS OR MINUS 0.2% DEFLECTION.
- (4) AN OWNER SHALL NOT CONDUCT A DEFLECTION TEST UNTIL AT LEAST 30 DAYS AFTER THE FINAL BACKFILL.
- (5) GRAVITY COLLECTION SYSTEM PIPE DEFLECTION MUST NOT EXCEED FIVE PERCENT (5%).
- (6) IF A PIPE SECTION FAILS A DEFLECTION TEST, AN OWNER SHALL CORRECT THE PROBLEM AND CONDUCT A SECOND TEST AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

16. ALL MANHOLES MUST BE TESTED TO MEET OR EXCEED THE REQUIREMENTS OF 30 TAC §217.58.
    - (A) ALL MANHOLES MUST PASS A LEAKAGE TEST.
    - (B) AN OWNER SHALL TEST EACH MANHOLE (AFTER ASSEMBLY AND BACKFILLING) FOR LEAKAGE, SEPARATE AND INDEPENDENT OF THE COLLECTION SYSTEM PIPES, BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING, OR OTHER METHOD APPROVED BY THE EXECUTIVE DIRECTOR.
      - (1) HYDROSTATIC TESTING.

(A) THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING OR ANY ALTERNATIVE TEST METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH PER HOUR.
(B) TO PERFORM A HYDROSTATIC EXFILTRATION TEST, AN OWNER SHALL SEAL ALL WASTEWATER PIPES COMING INTO A MANHOLE WITH AN INTERNAL PIPE PLUG, FILL THE MANHOLE WITH WATER, AND MAINTAIN THE TEST FOR AT LEAST ONE HOUR.
(C) A TEST FOR CONCRETE MANHOLES MAY USE A 24–HOUR WETTING PERIOD BEFORE TESTING TO ALLOW SATURATION OF THE CONCRETE.

(2) VACUUM TESTING.
- (A) TO PERFORM A VACUUM TEST, AN OWNER SHALL PLUG ALL LIFT HOLES AND EXTERIOR JOINTS WITH A NON–SHRINK GROUT AND PLUG ALL PIPES ENTERING A MANHOLE.
- (B) NO GROUT MUST BE PLACED IN HORIZONTAL JOINTS BEFORE TESTING.
- (C) STUB–OUTS, MANHOLE BOOTS, AND PIPE PLUGS MUST BE SECURED TO PREVENT MOVEMENT WHILE A VACUUM IS DRAWN.
- (D) AN OWNER SHALL USE A MINIMUM 60 INCH/LB TORQUE WRENCH TO TIGHTEN THE EXTERNAL CLAMPS THAT SECURE A TEST COVER TO THE TOP OF A MANHOLE.
- (E) A TEST HEAD MUST BE PLACED AT THE INSIDE OF THE TOP OF A CONE SECTION, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- (F) THERE MUST BE A VACUUM OF 10 INCHES OF MERCURY INSIDE A MANHOLE TO PERFORM A VALID TEST.
- (G) A TEST DOES NOT BEGIN UNTIL AFTER THE VACUUM PUMP IS OFF.
- (H) A MANHOLE PASSES THE TEST IF AFTER 2.0 MINUTES AND WITH ALL VALVES CLOSED, THE VACUUM IS AT LEAST 9.0 INCHES OF MERCURY.

17. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.

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No.	Date	Revisions	App.

360 PROFESSIONAL SERVICES, INC.

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STATE OF TEXAS
SCOTT J. FOSTER
84652
LICENSED PROFESSIONAL ENGINEER
11/02/2023

CAPELLA PARKWAY UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

GENERAL NOTES

Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

SHEET
03
OF 12

2023–XXXX–CON

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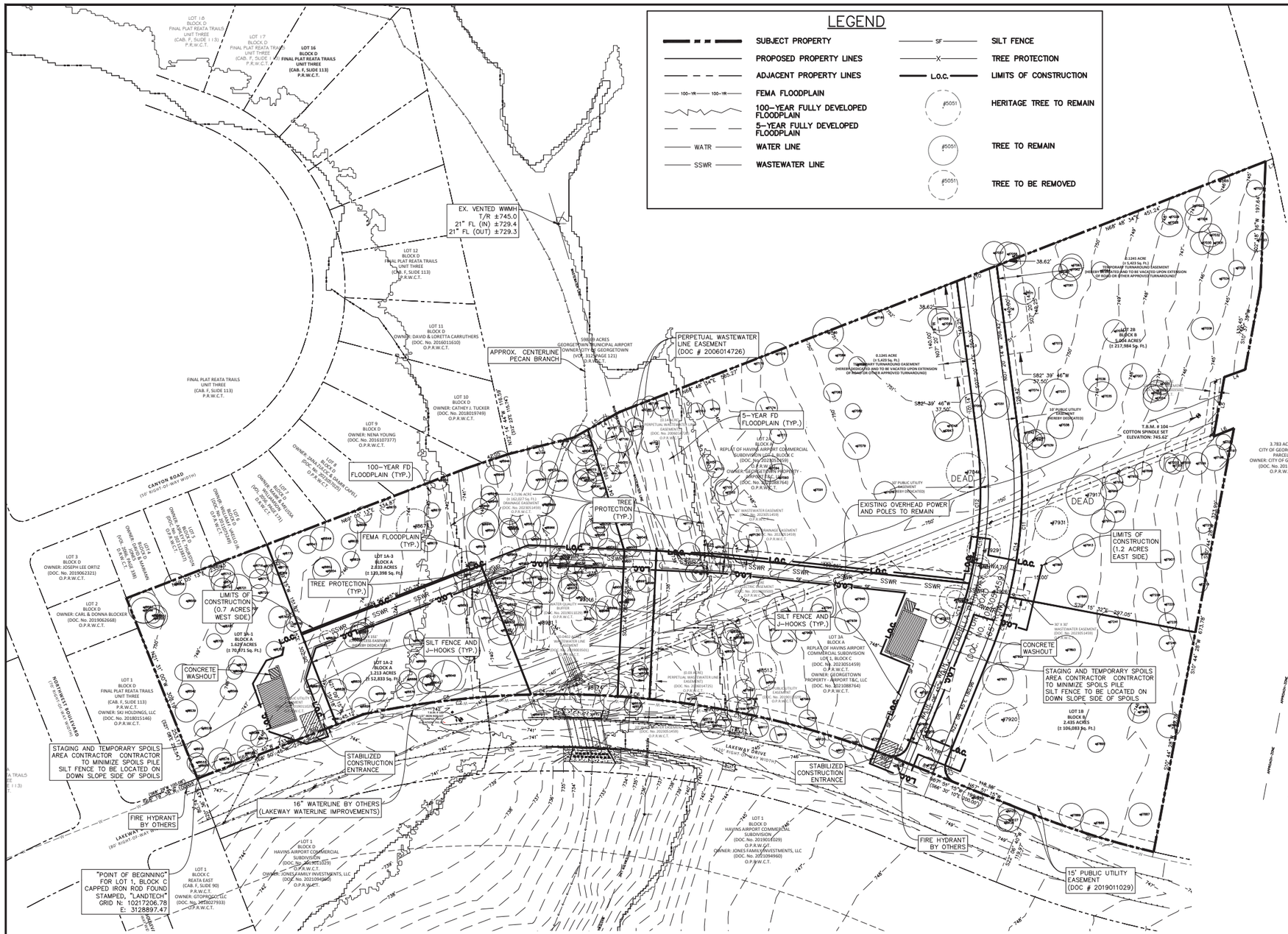

LEGEND

▬ ▪ ▪ ▬	SUBJECT PROPERTY	——SF——	SILT FENCE
———	PROPOSED PROPERTY LINES	——X——	TREE PROTECTION
— — —	ADJACENT PROPERTY LINES	▬ L.O.C. ▬	LIMITS OF CONSTRUCTION
—100-YR—100-YR—	FEMA FLOODPLAIN	#5051	HERITAGE TREE TO REMAIN
	100-YEAR FULLY DEVELOPED FLOODPLAIN		
	5-YEAR FULLY DEVELOPED FLOODPLAIN		
—— WATR ——	WATER LINE	#5051	TREE TO REMAIN
—— SSWR ——	WASTEWATER LINE		
		#5051	TREE TO BE REMOVED

DEMOLITION NOTES:

1. SURVEY INFORMATION SHOWN HEREON IS BASED UPON INFORMATION PROVIDED BY EAGLE EYE CONSTRUCTION LAYOUT, LLC DATED DECEMBER 21, 2018. NO WARRANTY IS EXPRESSED OR IMPLIED TO ITS ACCURACY. CONTRACTOR TO NOTIFY ENGINEER IF DISCREPANCIES ARE FOUND.
2. LOCATIONS OF PUBLIC AND FRANCHISE UTILITIES SHOWN ARE APPROXIMATE AND MAY NOT BE COMPLETE. CONTRACTOR SHALL CALL THE ONE CALL CENTER (811) AT LEAST 48 HOURS PRIOR TO COMMENCING DEMOLITION OR CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL CONTACT ANY OTHER UTILITY COMPANIES WHO DO NOT SUBSCRIBE TO THE ONE CALL PROGRAM FOR LINE MARKINGS. THE CONTRACTOR BEARS SOLE RESPONSIBILITY FOR VERIFYING LOCATIONS OF EXISTING UTILITIES, SHOWN OR NOT SHOWN, AND FOR ANY DAMAGE DONE TO THESE FACILITIES.
3. REMOVAL OR RELOCATION OF EXISTING PUBLIC AND PRIVATE FRANCHISE UTILITIES (WATER, ELECTRIC, AND GAS ETC.) WITHIN THE LIMITS OF THE SITE DEMOLITION SHALL BE COORDINATED WITH THE APPLICABLE UTILITY AGENCIES AND IN ACCORDANCE WITH LOCAL CODES
4. ALL EXISTING UTILITY SERVICES TO BE TURNED OFF BY UTILITY FRANCHISE TECHNICIAN TO ALLOW FOR EXISTING SERVICE LINES TO BE CUT/PLUGGED AT MAIN.
5. ALL UTILITIES IN STREET RIGHT-OF-WAY TO REMAIN IN PLACE UNLESS NOTED OTHERWISE.
6. SURFACE PAVEMENT INDICATED HEREON (SUCH AS ASPHALT OR CONCRETE) MAY OVERLAY HIDDEN STRUCTURES (SUCH AS OTHER LAYERS OF PAVEMENT, BUILDING SLAB, ETC.) THAT ARE ALSO TO BE REMOVED.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL OF EXISTING PAVEMENT SECTION, STRUCTURAL SUBGRADE, STRUCTURAL FOUNDATION, AND UTILITIES WITHIN THE SITE. CONTRACTOR TO DISPOSE ALL DEMOLITION SPOILS OFF-SITE IN A LEGAL MANNER.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES, IRRIGATION LINES, PAVEMENT, ETC., TO REMAIN RESULTING FROM DEMOLITION ACTIVITIES AND REPAIR AT HIS OWN EXPENSE.
9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
10. ALL ITEMS TO BE REMOVED SHALL BE DISPOSED OFF-SITE IN A MANNER ACCEPTABLE TO ALL APPLICABLE REGULATIONS.
11. PERIMETER EROSION CONTROL DEVICES AND TREE PROTECTION FOR TREES SHALL BE IN PLACE PRIOR TO DEMOLITION. REFERENCE EROSION CONTROL PLAN AND DETAILS FOR TYPE AND LOCATION.

ECS NOTES:

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS – CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.
2. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
3. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THE SITE MAP.
4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE ARCHITECTURAL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
5. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCE – PROVIDE TURNBACKS EVERY 200'S LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
6. THERE ARE NO KNOWN CEF'S ON-SITE.
7. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
8. ADDITIONAL EROSION AND SEDIMENTATION CONTROLS MAY BE REQUIRED BY THE INSPECTOR AT TIME OF CONSTRUCTION.
9. CONTRACTOR TO REPLACE SILT FENCE – PROVIDE TURNBACKS EVERY 200' WITH TRIANGULAR FILTER DIKE AS NEEDED TO CONSTRUCT DRIVEWAYS AND PARKING SPACES.
10. MULCH SOCK OR TRIANGULAR FILTER DIKE TO BE USED INSTEAD OF SILT FENCE WITH TREE CRITICAL ROOT ZONE

TREES	REMOVED (INCHES)
NOT LOCATED INSIDE OF FUTURE CAPELLA PARKWAY ROW	177
LOCATED INSIDE OF FUTURE CAPELLA PARKWAY ROW	71
TOTAL	247

NOTE:

360 Professional Services, Inc. is not responsible for the means and methods employed by the contractor to implement this demolition plan. This demolition plan simply indicates the known objects on the subject tracts that are to be demolished and removed from the site. 360 Professional Services, Inc. does not warrant or represent that the plan, which was prepared based on survey and utility information provided by others, shows all improvements and utilities, that the improvements and utilities are shown accurately, or that the utilities shown can be removed. The contractor is responsible for performing his own site reconnaissance to scope his work and to confirm with the owners of improvements and utilities the ability and process for the removal of their facilities. This plan is intended to give a general guide to the contractor, nothing more. The goal of the demolition is to leave the site in a state suitable for the construction of the proposed development. Removal or preservation of improvements, utilities, etc. to accomplish this goal are the responsibility of the contractor.
Contractor shall comply with all local, state, and federal regulations regarding the demolition of objects on the site and the disposal of the demolished materials off-site. It is the contractor's sole responsibility to review the site, determine the applicable regulations, receive the required permits and authorizations, and comply.

BENCHMARK NOTE:

B.M # 101 (OFFSITE)

(CITY OF GEORGETOWN GIS CONTROL MONUMENT No. 96-010)

DESCRIPTION: 3" BRASS DISK SET IN 24" DIAMETER CONCRETE, POURED IN PLACE, THAT PROJECTS 1' ABOVE GROUND LEVEL AND IS STAMPED, "CITY OF GEORGETOWN 1996, PT. No. 96-010" LOCATED NEAR THE INTERIOR EASTERLY MOST CORNER OF A FENCE SURROUNDING AN AIRPORT PUMP STATION ALONG AIRPORT ROAD.

GRID NORTING: 10219757.4003
EASTING: 3133649.3403
ELEVATION: 736.02'

B.M. #100 (ONSITE)

DESCRIPTION: CAPPED 1/2" IRON ROD WITH PLASTIC CAP, STAMPED "EECL", SET ALONG THE NORTHERLY CURVING RIGHT-OF-WAY LINE OF LAKEWAY DRIVE, SAME BEING THE CURVING SOUTHERLY LOT LINE OF THE PROPOSED LOT 1, BLOCK C, AS SHOWN HEREON.

GRID NORTHING: 10217310.350
EASTING: 3129296.348
ELEVATION: 741.11'

(__) = Record

Line Table

Line #	Length	Direction
L1	68.09'	N71° 20' 11"E
(L1)	(67.98')	(N71° 09'E)
L2	105.96'	N75° 48' 56"E
(L2)	(105.36')	(N78° 17' 30"E)
L3	83.14'	N60° 53' 02"E
(L3)	(83.14')	(N60° 41' 30"E)
L4	34.52'	S69° 48' 58"W
(L4)	(35.41')	(N68° 37' 57"E)
L5	94.23'	S10° 20' 14"W
(L5)	(94.43')	(N10° 43' 16"E)
L6	33.87'	N69° 27' 59"E
(L6)	(35.41')	(S68° 37' 57"W)
L7	12.22'	N68° 00' 18"E
(L7)	(11.03')	(N68° 52' 28"E)

(__) = Record

Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	211.23'	1340.00'	9° 01' 54"	N72° 23' 54"W	211.01'
(C1)	(410.30')	(1340.00')	N/A	(S75° 16' 30"E)	(408.70')
C2	564.98'	1460.00'	22° 10' 18"	N78° 56' 39"W	561.46'
(C2)	(565.68')	(1460.00')	N/A	(S77° 36' 10"E)	(562.14')
C3	301.50'	1460.00'	11° 49' 55"	S84° 01' 33"W	300.96'
C4	199.25'	1340.00'	8° 31' 11"	S81° 10' 27"E	199.07'

SURVEY LEGEND

●	BOUNDARY FOUND/SET (NOTED)
○	CALCULATED POINT
⊕	BENCHMARK/BUILDING HEIGHT LOCATION
	UTILITY POLE
←	GUY WIRE
—— OE ——	OVERHEAD ELECTRIC
◉WWMH	WASTEWATER MANHOLE
	SIGN
	EDGE OF PAVEMENT
——//——	WOOD PRIVACY FENCE
——x——	BARBWIRE FENCE
——o——	CHAIN LINK FENCE
P.R.W.C.T.	PLAT RECORDS WILLIAMSON COUNTY, TEXAS
O.P.R.W.C.T.	OFFICIAL PUBLIC RECORDS WILLIAMSON COUNTY, TEXAS
D.R.W.C.T.	DEED RECORDS WILLIAMSON COUNTY, TEXAS

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION

No.	Date	Revisions	App.

360 PROFESSIONAL SERVICES, INC.
TEXAS REGISTRATION F4932
P.O. BOX 3639
CEDAR PARK, TEXAS 78630
PHONE (512) 354-4682
FAX (512) 900-7962

STATE OF TEXAS
SCOTT J. FOSTER
84652
LICENSED PROFESSIONAL ENGINEER
11/02/2023

CAPELLA PARKWAY UTILITY IMPROVEMENTS GEORGETOWN, TEXAS

EXISTING CONDITIONS AND DEMOLITION PLAN AND EROSION / SEDIMENTATION CONTROL AND TREE PROTECTION PLAN

Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

SHEET
04
OF 12

2023-XXXX-CON

FILE: C:\Users\lesli\Documents\360PSI\Capella\GT 22 Acre Utility Extension\Cad\Sheets\05 EXIST.dwg LAYOUT: 02 DEMO PLOT DATE: 11/1/2023 9:55am PLOTTED BY: lesli
XREFS: x2436 xsurvey_360PSI xsite xPecan Branch GIS IMAGES: SJF Sign.tif

TREE LIST

TAG #	TYPE	TREE DIAMETER	NOTES	CAPELLA ROW	REMOVE
7001	POST OAK	16"			
7002	POST OAK	16"			
7004	POST OAK	20"			
7005	POST OAK	14"			
7007	POST OAK	20"			
7009	CEDAR ELM	12", 11"	MULTI-TRUNK		
7022	POST OAK	12"			
7023	POST OAK	17"			
7024	CEDAR ELM	13"			
7025	POST OAK	17"			
7026	POST OAK	21"			
7027	POST OAK	15"			
7028	POST OAK	22"			
7029	POST OAK	12"			
7030	POST OAK	18"			
7031	POST OAK	18"			
7032	DEAD	18"			
7034	DEAD	14"			
7035	POST OAK	23"			
7036	POST OAK	20"			
7037	CEDAR ELM	20"			
7038	DEAD	21"			
7039	POST OAK	19"			
7040	CEDAR ELM	15"			
7041	CEDAR ELM	14"			
7042	DEAD	17"			
7046	DEAD	24", 13"	HERITAGE/MULTI-TRUNK		
7047	POST OAK	14"			
7048	POST OAK	24"			
7050	POST OAK	20"		ROW	
7051	POST OAK	22"		ROW	
7053	POST OAK	21"		ROW	
7054	CEDAR ELM	12", 12"	MULTI-TRUNK		
7055	CEDAR ELM	18"			
7056	POST OAK	21"			
7057	CEDAR ELM	18"			
7058	POST OAK	15", 8"	MULTI-TRUNK		
7059	POST OAK	15", 11"	MULTI-TRUNK		
7060	CEDAR ELM	12"			
7061	CEDAR ELM	14", 13"	MULTI-TRUNK		
7062	LIVE OAK	18"			
7063	LIVE OAK	18"			
7064	LIVE OAK	14"			
7071	CEDAR ELM	13", 8"	MULTI-TRUNK		
7072	CEDAR ELM	14"			
7074	DEAD	12", 11"	MULTI-TRUNK		
7075	DEAD	13", 10"	MULTI-TRUNK		
7076	CEDAR ELM	17"			
7079	CEDAR ELM	12", 11", 7"	MULTI-TRUNK		
7082	CEDAR ELM	12"			
7083	CEDAR ELM	14"			
7084	CEDAR ELM	12"			
7087	CEDAR ELM	13"			
7091	CEDAR ELM	14", 10"	MULTI-TRUNK		
7093	DEAD	22"			
7094	POST OAK	20"			
7101	POST OAK	13"			
7102	POST OAK	13", 12"	MULTI-TRUNK		
7103	POST OAK	13"			
7104	POST OAK	13"			
7111	CEDAR ELM	14"			
7116	CEDAR ELM	12"			
7117	POST OAK	15"			
7119	CEDAR ELM	12"			
7122	CEDAR ELM	18"			
7123	POST OAK	16"			
7125	DEAD	14"			
7126	POST OAK	13"			
7129	CEDAR ELM	20"			REMOVE
7130	POST OAK	14", 8"	MULTI-TRUNK		REMOVE
7133	POST OAK	20"			
7134	CEDAR ELM	19"			
7163	DEAD	13"			
7168	POST OAK	14"			
7170	CEDAR ELM	13"			
7172	CEDAR ELM	13"			
7174	POST OAK	17"			
7178	DEAD	13"			
7179	POST OAK	18"			
7180	POST OAK	24"			
7181	POST OAK	13"			
7183	POST OAK	14"			
7185	DEAD	17"			
7186	DEAD	12"			
7189	DEAD	12"			
7191	CEDAR ELM	19"			
7192	CEDAR ELM	21"			
7195	POST OAK	12"			
7197	CEDAR ELM	13"			
7198	POST OAK	20"			
7199	CEDAR ELM	21"			
7200	DEAD	13"			
7201	POST OAK	13"			
7202	POST OAK	15"			
7210	CEDAR ELM	12"			
7214	POST OAK	15"			
7218	POST OAK	12"			
7225	POST OAK	13"			
7229	CEDAR ELM	12"			
7235	POST OAK	14"			

TREE LIST

TAG #	TYPE	TREE DIAMETER	NOTES	CAPELLA ROW	REMOVE
7241	CEDAR ELM	17"			
7245	POST OAK	12"			
7879	POST OAK	13"			
7880	CEDAR ELM	17"			
7881	CEDAR ELM	19"			
7887	DEAD	18"			
7888	MESQUITE	22"	MULTI-TRUNK		
7889	MESQUITE	19"			
7892	MESQUITE	13"			
7893	DEAD	23"			
7896	DEAD	16"			
7897	CEDAR ELM	13"			
7899	POST OAK	14"			
7902	CEDAR ELM	15"			
7907	CEDAR ELM	15"			
7911	CEDAR ELM	19"			
7912	CEDAR ELM	12", 8"	MULTI-TRUNK		
7913	CEDAR ELM	12", 11"	MULTI-TRUNK		
7914	CEDAR ELM	14"			
7916	CEDAR ELM	13"			
7917	DEAD	22", 19"	HERITAGE/MULTI-TRUNK		
7920	CEDAR ELM	16", 11", 10"	HERITAGE/MULTI-TRUNK		
7921	CEDAR ELM	18", 12"	MULTI-TRUNK		
7922	MESQUITE	17", 10"	MULTI-TRUNK		
7925	MESQUITE	16"		ROW	REMOVE
7926	CEDAR ELM	13", 13", 12"	HERITAGE/MULTI-TRUNK	ROW	REMOVE
7927	CEDAR ELM	15"		ROW	REMOVE
7928	CEDAR ELM	17"		ROW	REMOVE
7929	DEAD	26"	HERITAGE	ROW	REMOVE/DEAD
7931	CEDAR ELM	26"	HERITAGE/MULTI-TRUNK		
7932	POST OAK	24"			REMOVE
7933	DEAD	15"			
7939	POST OAK	20"			
7940	CEDAR ELM	20"			
7941	CEDAR ELM	17"			
7942	CEDAR ELM	12"			
7951	CEDAR ELM	13"		ROW	
7954	DEAD	17"		ROW	
7955	CEDAR ELM	13"		ROW	
7956	CEDAR ELM	13"		ROW	REMOVE
7957	CEDAR ELM	16"			
7958	POST OAK	24"			
7959	POST OAK	18"			
7962	POST OAK	20"			
7963	DEAD	12"			
7965	CEDAR ELM	13"			
7968	POST OAK	13"			
7984	POST OAK	12"			
7986	DEAD	16"			
7990	CEDAR ELM	12"			
7992	CEDAR ELM	13"			
7996	POST OAK	19"			
7997	POST OAK	17"			
7998	POST OAK	18"			
7999	CEDAR ELM	12", 10"	MULTI-TRUNK		
8504	LIVE OAK	12"			
8507	LIVE OAK	16"			
8508	LIVE OAK	12"			
8509	LIVE OAK	13"			
8510	CEDAR ELM	21"			
8511	LIVE OAK	15"			
8513	POST OAK	25", 8"	HERITAGE/MULTI-TRUNK		
8515	CEDAR ELM	12"			
8520	DEAD	14"			REMOVE/DEAD
8525	CEDAR ELM	12"			
8526	CEDAR ELM	12"			
8530	CEDAR ELM	13"			
8531	CEDAR ELM	14"			
8533	POST OAK	15"			
8534	POST OAK	15"			
8536	POST OAK	13"			
8538	POST OAK	13"			
8539	POST OAK	12", 11"	MULTI-TRUNK		
8542	DEAD	12"			
8552	POST OAK	17"	MULTI-TRUNK		
8554	POST OAK	12"			
8555	POST OAK	15"			
8556	LIVE OAK	20"			
8557	LIVE OAK	19", 11"	MULTI-TRUNK		
8558	POST OAK	17"			
8559	POST OAK	12"			
8565	POST OAK	13"			
8577	POST OAK	12", 9"	MULTI-TRUNK		
8578	POST OAK	13", 10"	MULTI-TRUNK		
8583	POST OAK	13"			
8588	POST OAK	12"			
8595	POST OAK	13"			
8598	CEDAR ELM	12"			
8604	POST OAK	12"			REMOVE
8620	CEDAR ELM	12"			
8624	POST OAK	13"			
8638	POST OAK	12", 9"	MULTI-TRUNK		
8645	POST OAK	12"			
8647	POST OAK	14"			
8649	POST OAK	16", 16"	MULTI-TRUNK		
8668	CEDAR ELM	12"			
8671	POST OAK	13"			
8673	POST OAK	12"			
8674	POST OAK	12", 9", 8", 7", 7"	MULTI-TRUNK		
8677	CEDAR ELM	12"			

TREE LIST

TAG #	TYPE	TREE DIAMETER	NOTES	CAPELLA ROW	REMOVE
7241	CEDAR ELM	17"			
7245	POST OAK	12"			
7879	POST OAK	13"			
7880	CEDAR ELM	17"			
7881	CEDAR ELM	19"			
7887	DEAD	18"			
7888	MESQUITE	22"	MULTI-TRUNK		
7889	MESQUITE	19"			
7892	MESQUITE	13"			
7893	DEAD	23"			
7896	DEAD	16"			
7897	CEDAR ELM	13"			
7899	POST OAK	14"			
7902	CEDAR ELM	15"			
7907	CEDAR ELM	15"			
7911	CEDAR ELM	19"			
7912	CEDAR ELM	12", 8"	MULTI-TRUNK		
7913	CEDAR ELM	12", 11"	MULTI-TRUNK		
7914	CEDAR ELM	14"			
7916	CEDAR ELM	13"			
7917	DEAD	22", 19"	HERITAGE/MULTI-TRUNK		
7920	CEDAR ELM	16", 11", 10"	HERITAGE/MULTI-TRUNK		
7921	CEDAR ELM	18", 12"	MULTI-TRUNK		
7922	MESQUITE	17", 10"	MULTI-TRUNK		
7925	MESQUITE	16"		ROW	REMOVE
7926	CEDAR ELM	13", 13", 12"	HERITAGE/MULTI-TRUNK	ROW	REMOVE
7927	CEDAR ELM	15"		ROW	REMOVE
7928	CEDAR ELM	17"		ROW	REMOVE
7929	DEAD	26"	HERITAGE	ROW	REMOVE/DEAD
7931	CEDAR ELM	26"	HERITAGE/MULTI-TRUNK		
7932	POST OAK	24"			REMOVE
7933	DEAD	15"			
7939	POST OAK	20"			
7940	CEDAR ELM	20"			
7941	CEDAR ELM	17"			
7942	CEDAR ELM	12"			
7951	CEDAR ELM	13"		ROW	
7954	DEAD	17"		ROW	
7955	CEDAR ELM	13"		ROW	
7956	CEDAR ELM	13"		ROW	REMOVE
7957	CEDAR ELM	16"			
7958	POST OAK	24"			
7959	POST OAK	18"			
7962	POST OAK	20"			
7963	DEAD	12"			
7965	CEDAR ELM	13"			
7968	POST OAK	13"			
7984	POST OAK	12"			
7986	DEAD	16"			
7990	CEDAR ELM	12"			
7992	CEDAR ELM	13"			
7996	POST OAK	19"			
7997	POST OAK	17"			
7998	POST OAK	18"			
7999	CEDAR ELM	12", 10"	MULTI-TRUNK		
8504	LIVE OAK	12"			
8507	LIVE OAK	16"			
8508	LIVE OAK	12"			
8509	LIVE OAK	13"			
8510	CEDAR ELM	21"			
8511	LIVE OAK	15"			
8513	POST OAK	25", 8"	HERITAGE/MULTI-TRUNK		
8515	CEDAR ELM	12"			
8520	DEAD	14"			REMOVE/DEAD
8525	CEDAR ELM	12"			
8526	CEDAR ELM	12"			
8530	CEDAR ELM	13"			
8531	CEDAR ELM	14"			
8533	POST OAK	15"			
8534	POST OAK	15"			
8536	POST OAK	13"			
8538	POST OAK	13"			
8539	POST OAK	12", 11"	MULTI-TRUNK		
8542	DEAD	12"			
8552	POST OAK	17"	MULTI-TRUNK		
8554	POST OAK	12"			
8555	POST OAK	15"			
8556	LIVE OAK	20"			
8557	LIVE OAK	19", 11"	MULTI-TRUNK		
8558	POST OAK	17"			
8559	POST OAK	12"			
8565	POST OAK	13"			
8577	POST OAK	12", 9"	MULTI-TRUNK		
8578	POST OAK	13", 10"	MULTI-TRUNK		
8583	POST OAK	13"			
8588	POST OAK	12"			
8595	POST OAK	13"			
8598	CEDAR ELM	12"			
8604	POST OAK	12"			REMOVE
8620	CEDAR ELM	12"			
8624	POST OAK	13"			
8638	POST OAK	12", 9"	MULTI-TRUNK		
8645	POST OAK	12"			
8647	POST OAK	14"			
8649	POST OAK	16", 16"	MULTI-TRUNK		
8668	CEDAR ELM	12"			
8671	POST OAK	13"			
8673	POST OAK	12"			
8674	POST OAK	12", 9", 8", 7", 7"	MULTI-TRUNK		
8677	CEDAR ELM	12"			

TREE LIST

TAG #	TYPE	TREE DIAMETER	NOTES	CAPELLA ROW	REMOVE
8678	POST OAK	13"			
8683	POST OAK	12"			
8684	POST OAK	15"			
8692	POST OAK	14"			
8706	DEAD	12"			
8712	CEDAR ELM	16"			
8713	POST OAK	14", 12"	MULTI-TRUNK		
8714	POST OAK	12", 9", 8"	MULTI-TRUNK		
8716	POST OAK	19"			
8717	POST OAK	15"			
8721	POST OAK	12", 12", 8"	MULTI-TRUNK		
8723	POST OAK	14"			
8725	POST OAK	13"			
8727	POST OAK	12"			
8729	CEDAR ELM	15"			
8730	CEDAR ELM	12"			
8738	POST OAK	14"			
8744	POST OAK	13"			
8759	CEDAR ELM	13"			
8761	POST OAK	12"			
8763	POST OAK	12", 10"	MULTI-TRUNK		
8769	POST OAK	13", 9"	MULTI-TRUNK		
8770	DEAD	12"			
8771	CEDAR ELM	14"			
8773	CEDAR ELM	13"			
8801	POST OAK	12"			
8813	POST OAK	15"			
8815	POST OAK	12"			
8823	DEAD	12"			REMOVE/DEAD
8826	POST OAK	14"			
8828	CEDAR ELM	12", 9"	MULTI-TRUNK		
8830	DEAD	14"			
8847	CEDAR ELM	14"			
8849	CEDAR ELM	13", 11"	MULTI-TRUNK		
8852	POST OAK	14"			
8854	POST OAK	22"			
8860	POST OAK	14"			
8861	POST OAK	13"			
8862	POST OAK	13"			
8869	POST OAK	12"			
8876	POST OAK	14"			
8886	POST OAK	14"			
8892	POST OAK	13"			
8893	POST OAK	12"			
8904	POST OAK	14"			
8911	POST OAK	12"			
8912	POST OAK	13", 12", 7"	MULTI-TRUNK		
8913	POST OAK	13", 11", 8"	MULTI-TRUNK		
8916	POST OAK	13"			
8920	POST OAK	15", 15"	MULTI-TRUNK		
8922	POST OAK	20"			
8924	POST OAK	16"			
8925	POST OAK	14"			
8927	POST OAK	12"			
8928	POST OAK	15"			
8931	POST OAK	17"			
8936	POST OAK	12"			
8941	POST OAK	12", 10", 9", 7"	MULTI-TRUNK		
8942	POST OAK	13"			
8943	CEDAR ELM	12"			
8945	POST OAK	15"			
8946	POST OAK	16"			
8948	DEAD	12"			
8949	POST OAK	13"			
8951	POST OAK	17"			
8952	POST OAK	18"			
8954	CEDAR ELM	17", 14"	MULTI-TRUNK		
8955	POST OAK	13"			
8956	POST OAK	14"			
8959	POST OAK	13"			REMOVE
8961	POST OAK	14"			
8962	POST OAK	13"			REMOVE
8964	CEDAR ELM	17"			
8965	CEDAR ELM	17"			
8966	POST OAK	19"			
8969	CEDAR ELM	13"			
8970	CEDAR ELM	17"			
8972	POST OAK	17"			
8974	CEDAR ELM	14", 14", 13", 11"	HERITAGE/MULTI-TRUNK		
8975	POST OAK	22"			
8979	CEDAR ELM	13"			
8981	LIVE OAK	27"	HERITAGE/MULTI-TRUNK		
8983	POST OAK	20"			
8984	POST OAK	13"			
8988	POST OAK	15"			
8990	POST OAK	19"			
8992	POST OAK	12"			
8993	POST OAK	13"			
8997	POST OAK	15"			
8999	CEDAR ELM	14"			
9000	POST OAK	15"			
9001	POST OAK	12", 9"	MULTI-TRUNK		REMOVE
9007	POST OAK	12"			
9011	DEAD	16"			REMOVE/DEAD
9012	POST OAK	17"			
9013	POST OAK	16"			
9016	POST OAK	26"	HERITAGE		
9017	DEAD	12"			
9019	POST OAK	16"			
9021	DEAD	14"			

TREE LIST

TAG #	TYPE	TREE DIAMETER	NOTES	CAPELLA ROW	REMOVE
9024	POST OAK	14"			
9025	POST OAK	14"			
9027	POST OAK	13"			REMOVE
9028	POST OAK	16"			REMOVE
9030	POST OAK	16"			REMOVE
9031	POST OAK	17"			
9032	CEDAR ELM	12"			
9034	POST OAK	15"			REMOVE
9038	CEDAR ELM	18"			
9042	DEAD	14"			
9045	CEDAR ELM	14"			
9046	POST OAK	17"			
9048	CEDAR ELM	16"			
9049	CEDAR ELM	13"			
9050	POST OAK	14"			
9052	POST OAK	13"			
9053	POST OAK	13"			
9056	POST OAK	15"			
9058	POST OAK	19"			
9061	POST OAK	23"			
9063	POST OAK	13"			
9069	CEDAR ELM	12"			
9070	CEDAR ELM	17"			
9071	CEDAR ELM	14", 7"	MULTI-TRUNK		
9072	CEDAR ELM	15"			
9073	POST OAK	18"			
9075	POST OAK	18"			
9076	POST OAK	12"			
9085	POST OAK	15"			
9088	POST OAK	16"			
9094	POST OAK	23"			
9095	POST OAK	12"			
9096	DEAD	17"			
9099	CEDAR ELM	12"			
9103	DEAD	14"			
9108	POST OAK	12"			
9112	POST OAK	20"			
9113	POST OAK	17", 10", 8"	HERITAGE/MULTI-TRUNK		
9114	POST OAK	20"			
9116	POST OAK	12"			
9117	POST OAK	15"			
9118	CEDAR ELM	13"			
9120	POST OAK	13"			
9121	POST OAK	12"			
9123	POST OAK	14"			
9124	POST OAK	16"			
9125	POST OAK	13"			
9126	POST OAK	13"			
9127	POST OAK	18"			

No.	Date	Revisions	App.

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STATE OF TEXAS
SCOTT J. FOSTER
84652
LICENSED PROFESSIONAL ENGINEER

CAPELLA PARKWAY UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

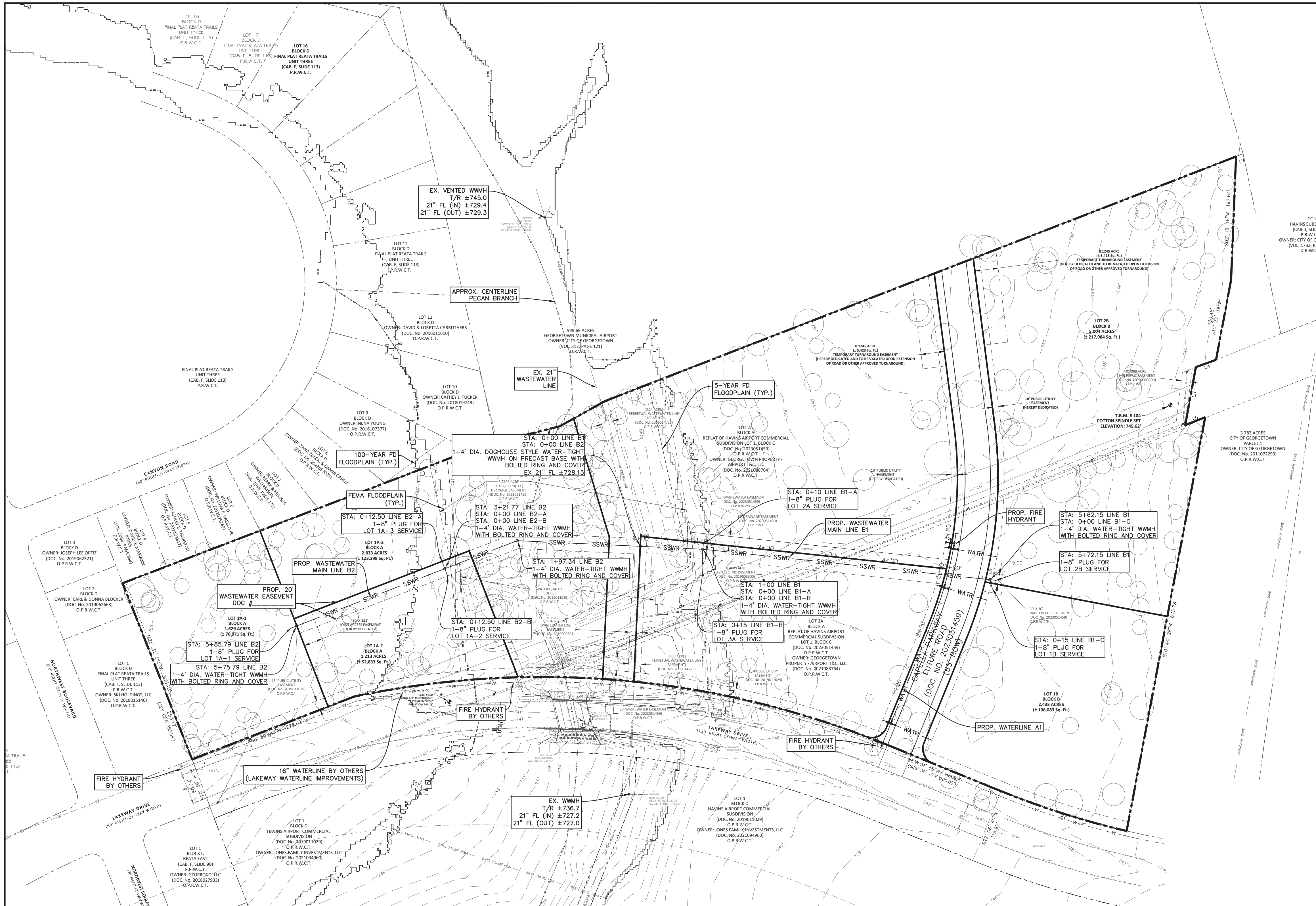
TREE LIST

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION

Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

SHEET 05 OF 12

2023-XXXX-CON



N
W E
S

SCALE IN FEET

80 40 0 80

LEGEND

- SUBJECT PROPERTY
- PROPOSED PROPERTY LINES
- ADJACENT PROPERTY LINES
- FEMA FLOODPLAIN
- 100-YEAR FULLY DEVELOPED FLOODPLAIN
- 5-YEAR FULLY DEVELOPED FLOODPLAIN
- WATR — WATER LINE
- SSWR — WASTEWATER LINE
- FIRE HYDRANT

GENERAL NOTES:

1. THIS PROJECT IS LOCATED IN THE CITY LIMITS OF GEORGETOWN.
2. WARNING SIGNS ARE REQUIRED TO BE PLACED UNDER THE OVERHEAD ELECTRIC LINES TO MAKE ALL PERSONNEL AWARE OF THE ELECTRIC HAZARD.
3. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO HAVE STAKING VERIFIED BY OWNER PRIOR TO START OF CONSTRUCTION.
5. REFER TO PLAN AND PROFILE SHEETS FOR ADDITIONAL NOTES.

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION

No.	Date	Revisions	App.

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11/02/2023

CAPELLA PARKWAY UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

OVERALL UTILITY SITE PLAN

Scale: AS SHOWN
Designed by:
Drawn by:
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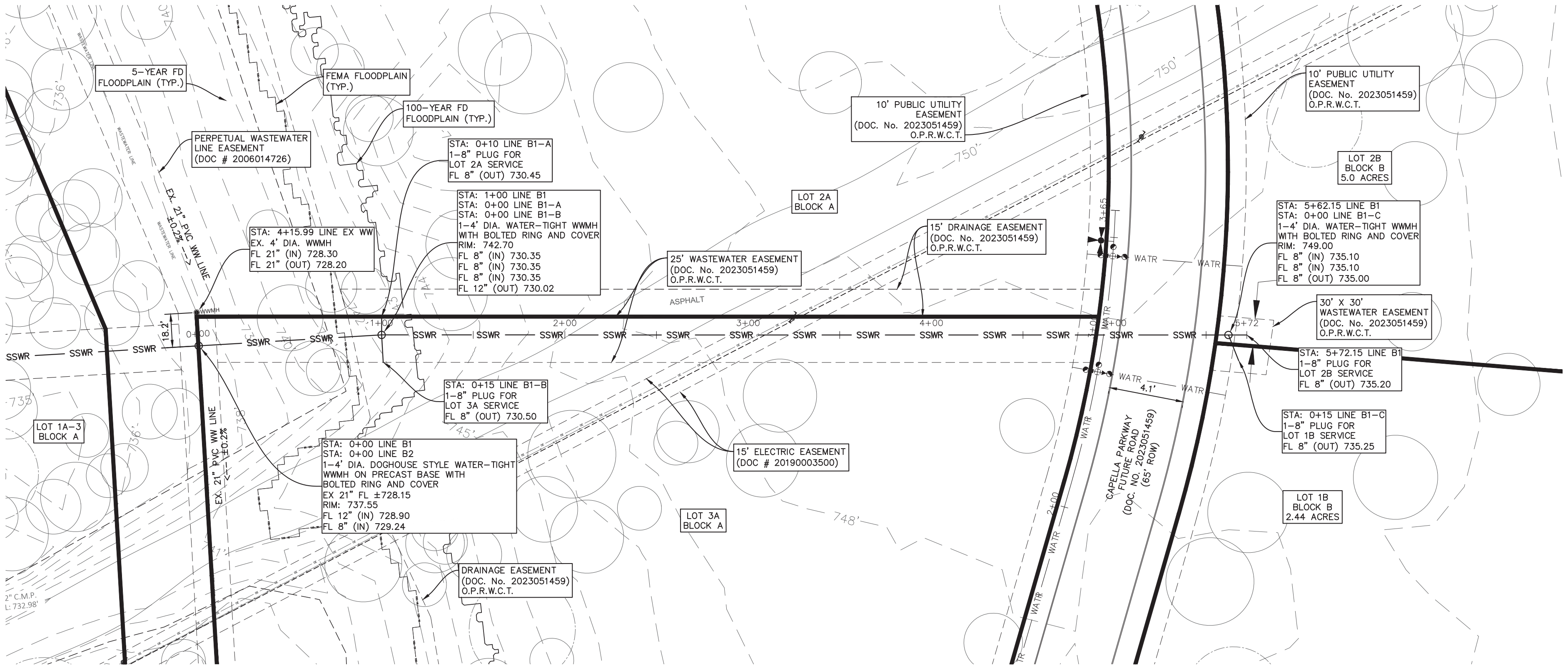
Date: NOVEMBER 2023
Project No.

SHEET 06 OF 12

2023-XXXX-CON



LEGEND

—— W ——	EXIST. WATER MAIN
	EXIST. FIRE HYDRANT
—— WASTEWATER LINE ——	EXIST. WASTEWATER MAIN
—— WATR ——	PROP. WATER MAIN
	PROP. FIRE HYDRANT
	PROP. VALVE
—— SSWR ——	PROP. WASTEWATER

N / E / S / W

SCALE IN FEET: 40 20 0 40

UTILITY NOTES:

1. CONTRACTOR TO FIELD VERIFY LOCATION AND FLOWLINES OF ALL EXISTING UTILITIES.
2. WATER AND WASTEWATER TO BE PROVIDED BY THE CITY OF GEORGETOWN.
3. CONTRACTOR TO COORDINATE WITH MEP PLANS AT ALL UTILITY STUBOUTS.
4. CONTRACTOR TO ENSURE NO FIRE HYDRANTS, METERS OR VALVES ARE PLACED IN SIDEWALKS OR CURB AND GUTTER.
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6. ALL PUBLIC UTILITY WORK SHALL CONFORM TO CITY OF GEORGETOWN STANDARDS AND SPECIFICATIONS.
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6. ALL WATERLINES P.I.'S BOTH HORIZONTAL AND VERTICAL, SHALL BE ACHIEVED BASED UPON THE PIPE MANUFACTURER'S SPECIFIED MAXIMUM ALLOWABLE JOINT DEFLECTION. P.I.'S LESS THAN OR EQUAL TO 80% OF THE MANUFACTURER'S MAXIMUM SHALL BE CONSTRUCTED AS A SINGLE JOINT DEFLECTION. P.I.'S IN EXCESS OF 80% OF THE MANUFACTURER'S MAXIMUM ALLOWABLE JOINT DEFLECTION ANGLE SHALL BE CONSTRUCTED AS A SERIES OF EVENLY DISTRIBUTED DEFLECTIONS OVER MULTIPLE JOINTS, SO THAT NO SINGE DEFLECTION IS GREATER THAN 80% OF THE MAXIMUM.
7. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO UTILITY INSTALLMENT.
8. ALL WATER AND WASTEWATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE SEPARATION DISTANCES INDICATED IN CHAPTER 290 – DRINKING WATER STANDARDS, CHAPTER 217 – DESIGN CRITERIA FOR SEWERAGE SYSTEMS AMD CHAPTER 210 – DESIGN CRITERIA FOR RECLAIMED SYSTEMS OF TCEQ RULES.
9. ALL UTILITY STUB OUTS MARKED WITH 4" PVC, MIN. 5' HIGH AND PAINTED BLUE FOR WATER AND GREEN FOR WASTEWATER.
10. REFER TO CONSTRUCTION DETAILS FOR MANHOLE INTERIOR AND EXTERIOR COATING.

GEORGETOWN UTILITY NOTES:

1. WASTEWATER MAINS AND SERVICE LINES SHALL BE SDR 26 PVC.
2. WASTEWATER MAINS SHALL BE INSTALLED WITHOUT HORIZONTAL OR VERTICAL BENDS.
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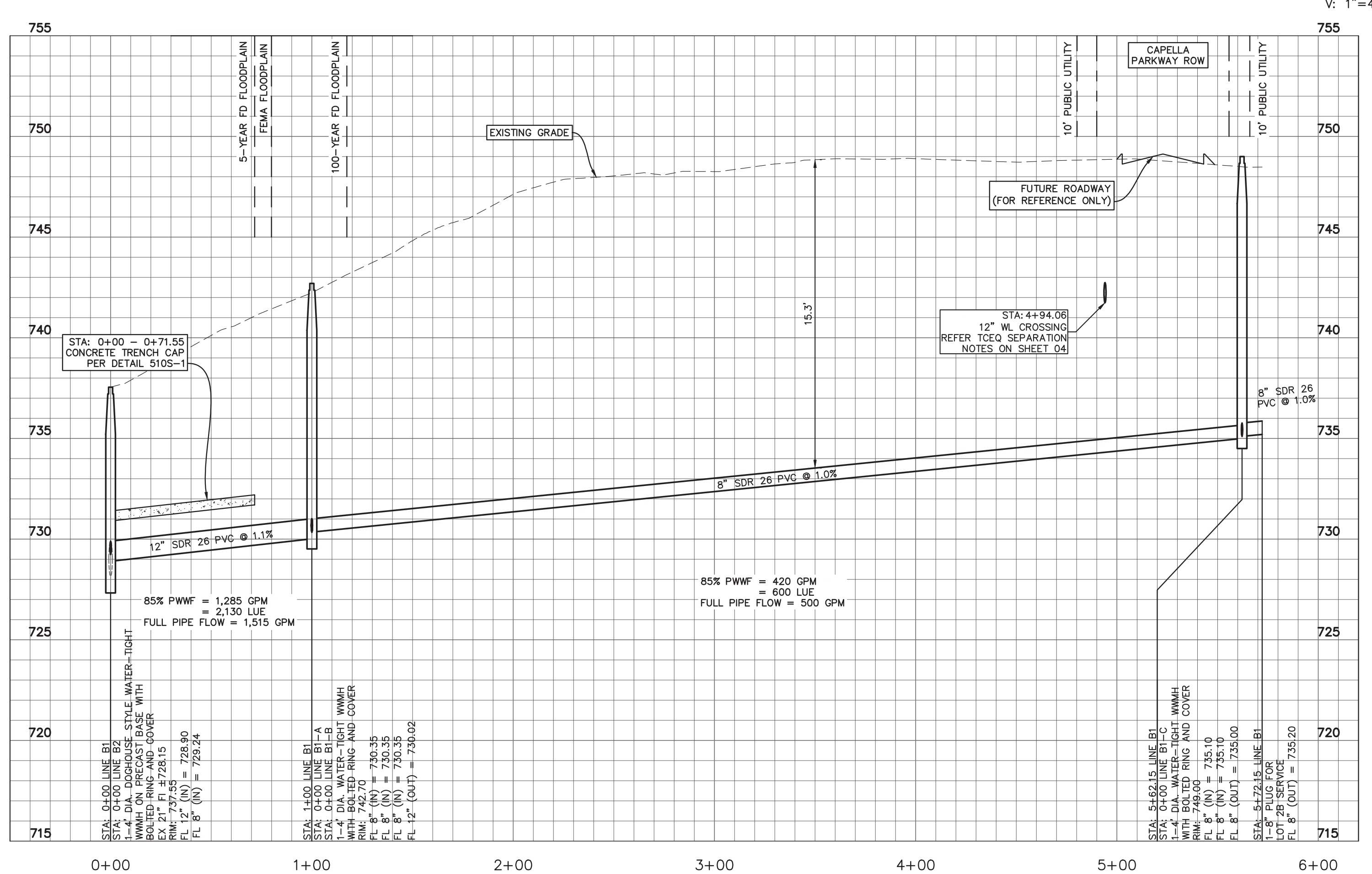
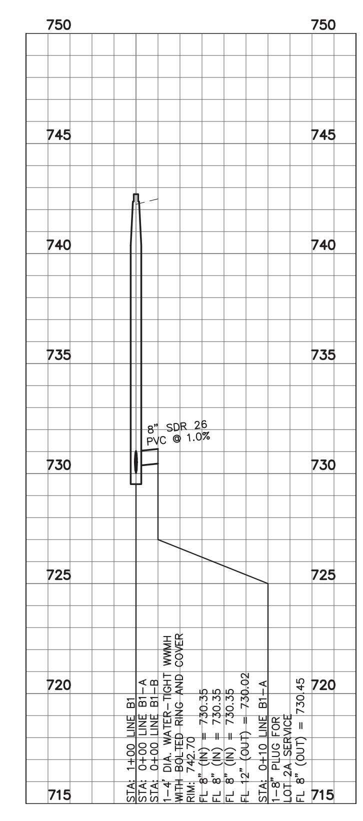
4. WASTEWATER MAINS SHALL BE LOW PRESSURE AIR TESTED AND MANDREL TESTED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.
5. WASTEWATER MANHOLES SHALL BE VACUUM TESTED AND COATED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.
6. WASTEWATER MAINS SHALL BE CAMERA TESTED BY THE CONTRACTOR AND SUBMITTED TO THE CITY ON DVD FORMAT PRIOR TO PAVING THE STREETS.
7. PRIVATE WATER SYSTEM FIRE LINES SHALL BE TESTED BY THE CONTRACTOR TO 200 PSI FOR 2 HOURS.
8. 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.
9. PUBLIC WATER SYSTEM MAINS SHALL BE 150 PSI C900 PVC AND TESTED BY THE CONTRACTOR AT 150 PSI FOR 2 HOURS.
10. ALL BENDS AND CHANGES IN DIRECTION ON WATER MAINS SHALL BE RESTRAINED AND THRUST BLOCKED.
11. LONG FIRE HYDRANT LEADS SHALL BE RESTRAINED.
12. ALL WATER LINES ARE TO BE BACTERIA TESTED BY THE CONTRACTOR ACCORDING TO THE CITY STANDARDS AND SPECIFICATIONS.
13. WATER AND SEWER MAIN CROSSINGS SHALL MEET ALL REQUIREMENTS OF THE TCEQ AND THE CITY.

WASTEWATER LINE B1
STA: 0+00 - 5+72

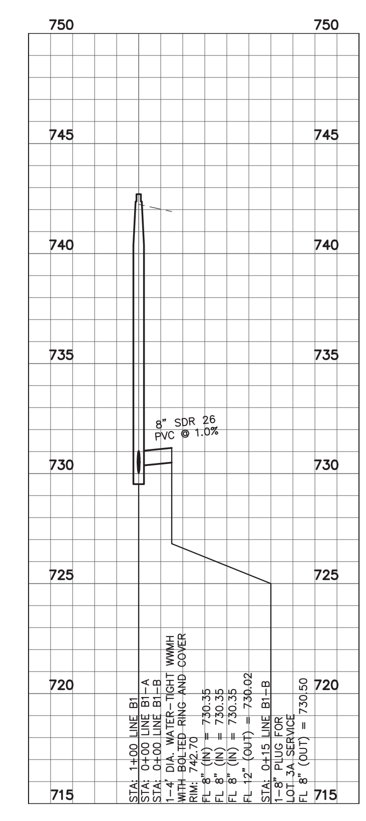
SCALE: H: 1"=40' V: 1"=4'



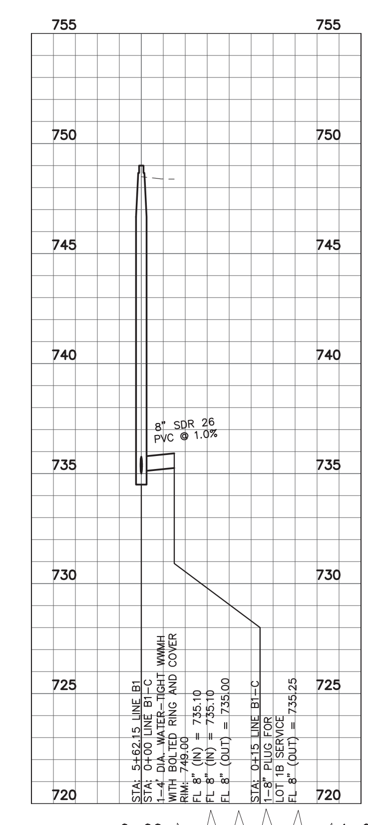
WASTEWATER LINE B1-A
STA: 0+00 - 0+10



WASTEWATER LINE B1-B
STA: 0+00 - 0+15



WASTEWATER LINE B1-C
STA: 0+00 - 0+15



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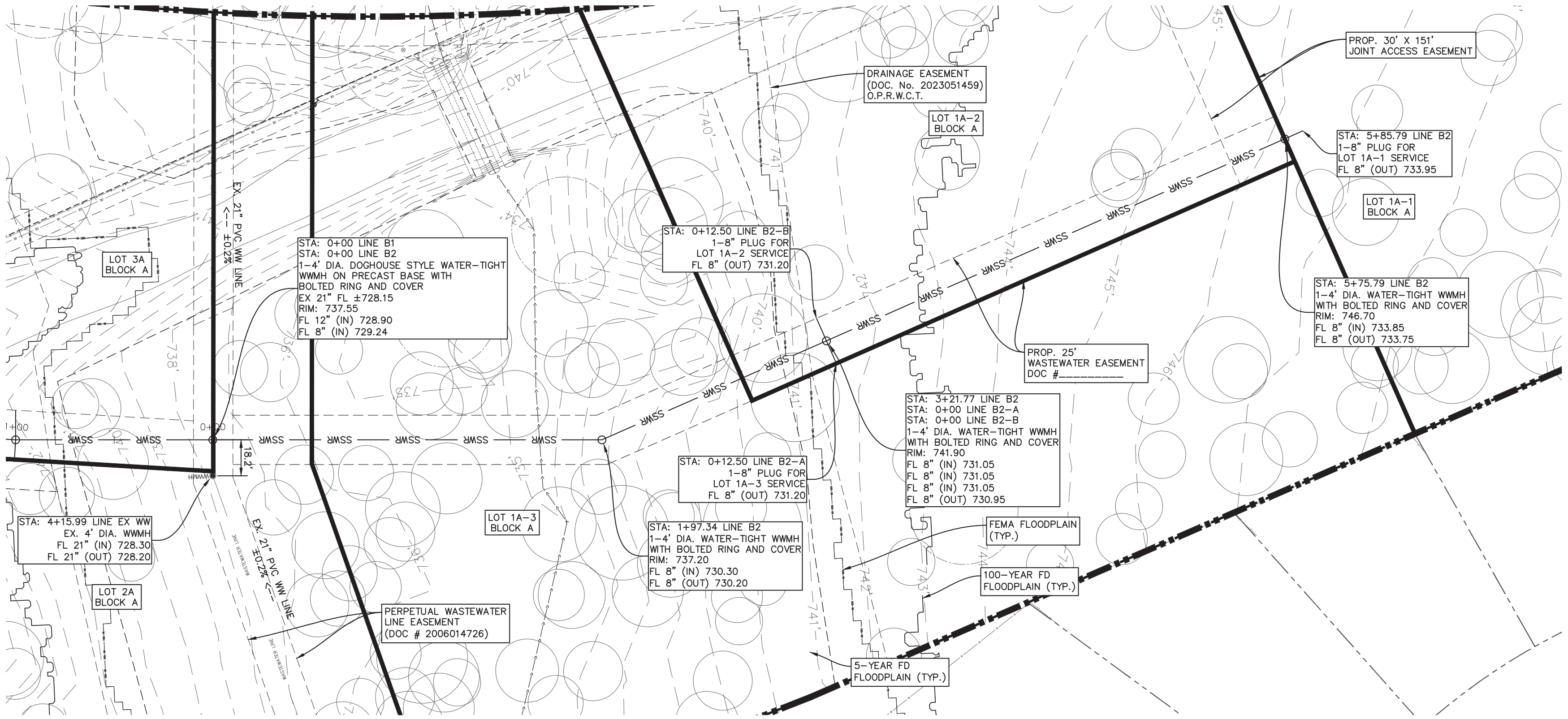
CAPELLA PARKWAY UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

PUBLIC WASTEWATER LINE B1, B1-A, B1-B, & B1-C PLAN AND PROFILE

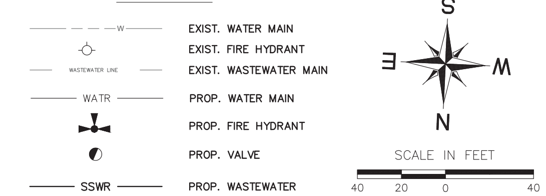
Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

SHEET 07 OF 12

2023-XXXX-CON



LEGEND



UTILITY NOTES:

1. CONTRACTOR TO FIELD VERIFY LOCATION AND FLOWLINES OF ALL EXISTING UTILITIES.
2. WATER AND WASTEWATER TO BE PROVIDED BY THE CITY OF GEORGETOWN.
3. CONTRACTOR TO COORDINATE WITH MEP PLANS AT ALL UTILITY STUBOUTS.
4. CONTRACTOR TO ENSURE NO FIRE HYDRANTS, METERS OR VALVES ARE PLACED IN SIDEWALKS OR CURB AND GUTTER.
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6. ALL PUBLIC UTILITY WORK SHALL CONFORM TO CITY OF GEORGETOWN STANDARDS AND SPECIFICATIONS.
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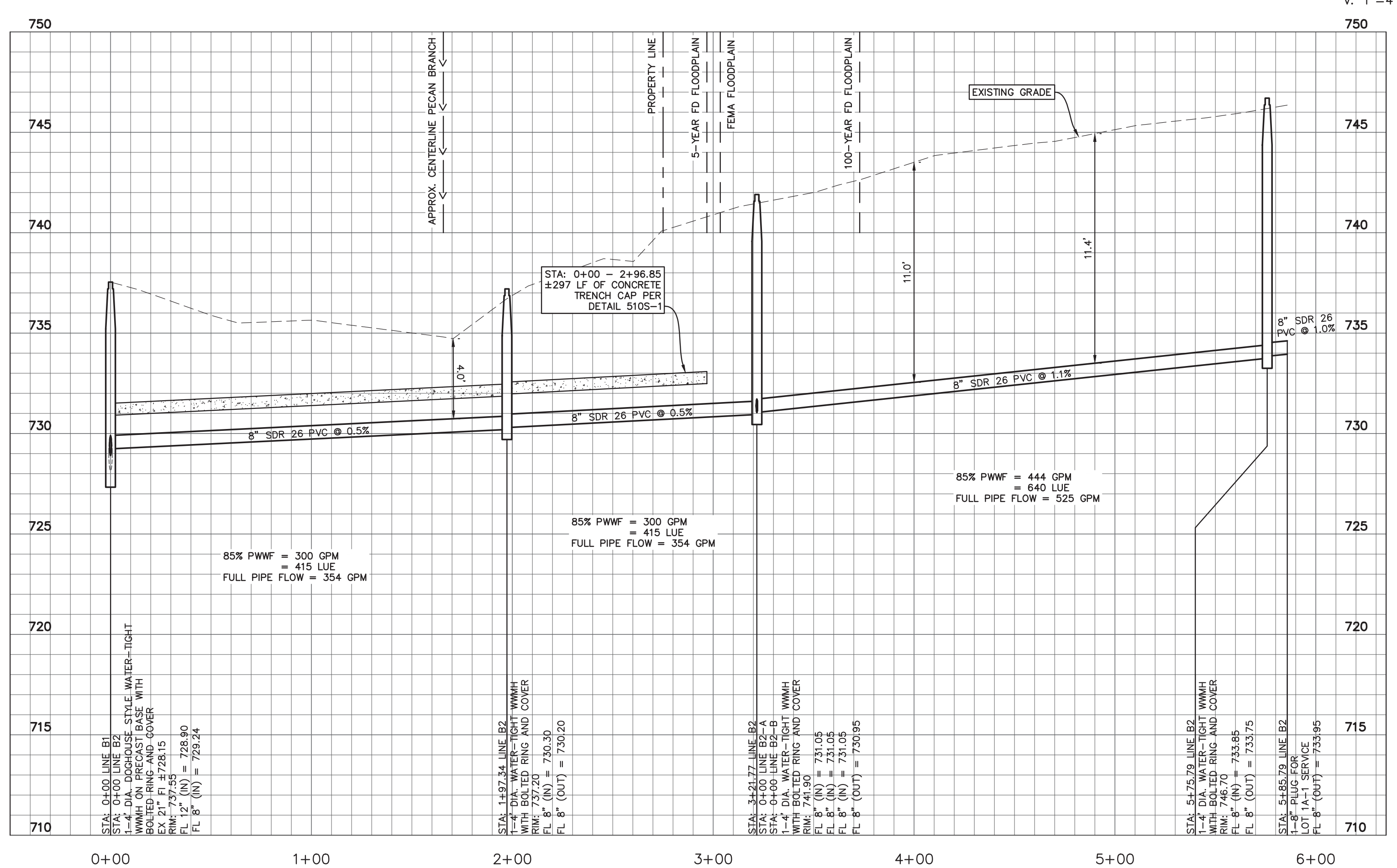
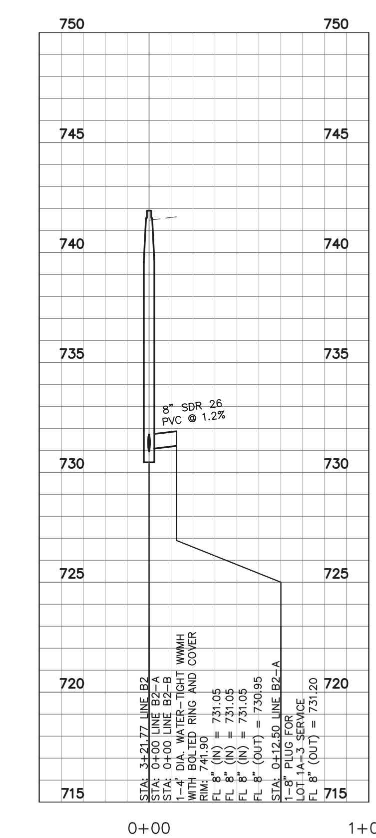
13. WATER AND SEWER MAIN CROSSINGS SHALL MEET ALL REQUIREMENTS OF THE TCEQ AND THE CITY.

WASTEWATER LINE B2
STA: 0+00 - 5+86

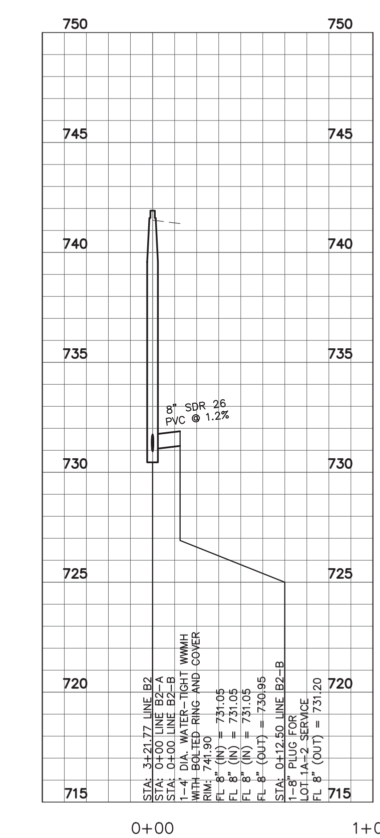
SCALE: H: 1"=40' V: 1"=4'



WASTEWATER LINE B2-A
STA: 0+00 - 0+12



WASTEWATER LINE B2-B
STA: 0+00 - 0+12



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No.	Date	Revisions	App.

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STATE OF TEXAS
SCOTT J. FOSTER
84652
LICENSED PROFESSIONAL ENGINEER
11/02/2023

CAPELLA PARKWAY UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

PUBLIC WASTEWATER LINE B2, B2-A, & B2-B PLAN AND PROFILE

Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

SHEET 08 OF 12

2023-XXXX-CON

FILE: C:\Users\lesli\Documents\360PSI\Capella\GT 22 Acre Utility Extension\Cad\Sheets\Water and Wastewater Profiles.dwg LAYOUT: 02 PLOT DATE: 11/1/2023 10:21am PLOTTED BY: lesli
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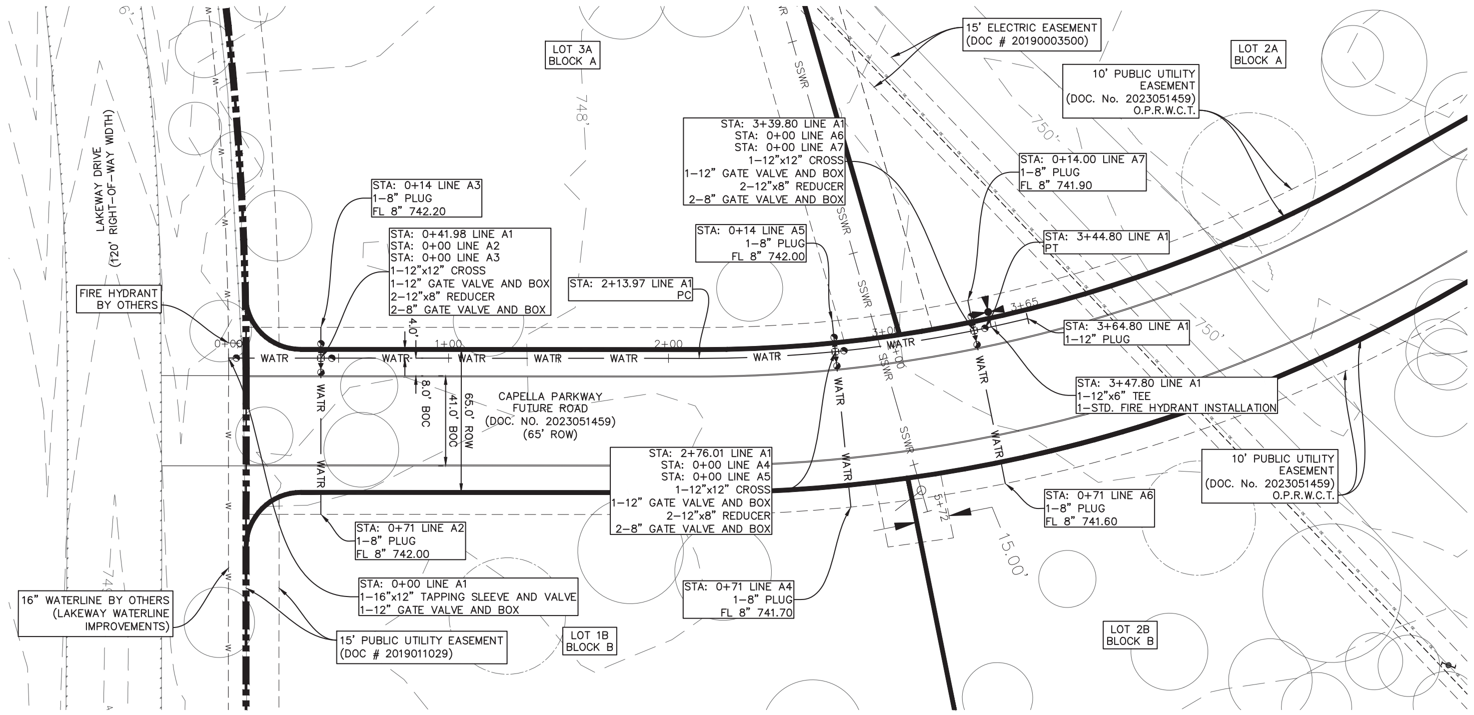
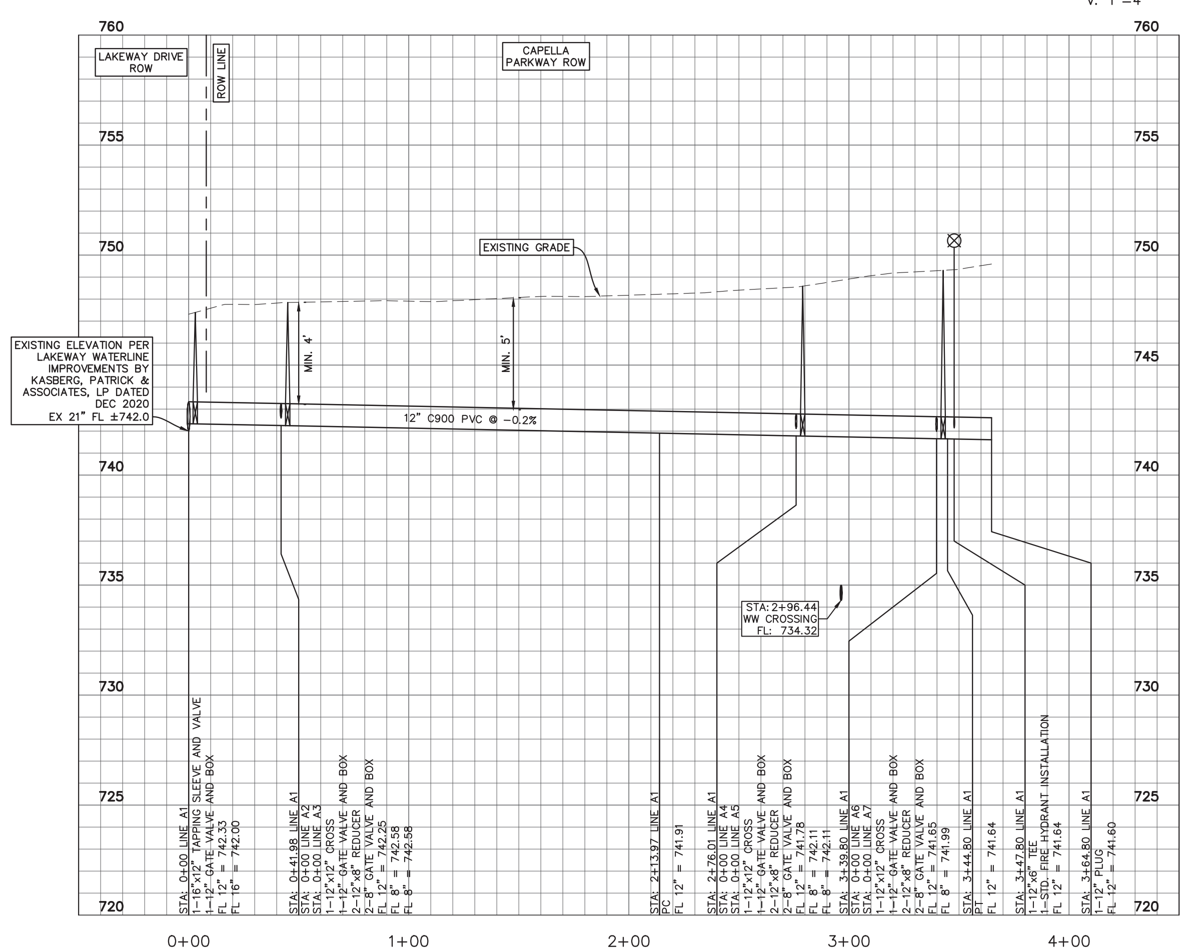


WATER LINE A1
STA: 0+00 - 3+65

SCALE: H: 1"=40'
V: 1"=4'



LEGEND

— — W — —	EXIST. WATER MAIN
	EXIST. FIRE HYDRANT
WASTEWATER LINE	EXIST. WASTEWATER MAIN
—— WATR ——	PROP. WATER MAIN
	PROP. FIRE HYDRANT
	PROP. VALVE
—— SSWR ——	PROP. WASTEWATER

SCALE IN FEET
40 20 0 40

UTILITY NOTES:

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SCOTT J. FOSTER 84652 LICENSED PROFESSIONAL ENGINEER 11/02/2023

CAPELLA PARKWAY UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

PUBLIC WATER LINE PLAN AND PROFILE

Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

SHEET 09 OF 12

2023–XXXX–CON

GUIDELINES FOR DESIGN AND INSTALLATION OF
TEMPORARY EROSION AND SEDIMENTATION CONTROLS

TYPE OF STRUCTURE	REACH LENGTH	MAXIMUM DRAINAGE AREA	SLOPE
SILT FENCE	N/A	2 ACRES	0 – 10%
	200 FEET	2 ACRES	10 – 20%
	100 FEET	1 ACRE	20 – 30%
	50 FEET	1/2 ACRE	> 30%
TRIANGLE FILTER DIKE	100 FEET	1/2 ACRE	< 30% SLOPE
	50 FEET	1/4 ACRE	> 30% SLOPE
ROCK BERM *, **	500 FEET	< 5 ACRES	0 – 10%

* FOR ROCK BERM DESIGN WHERE PARAMETERS ARE OTHER THAN STATED, DRAINAGE AREA CALCULATIONS AND ROCK BERM DESIGN MUST BE SUBMITTED FOR REVIEW.

** HIGH SERVICE ROCK BERMS MAY BE REQUIRED IN AREAS OF ENVIRONMENTAL SIGNIFICANCE AS DETERMINED BY THE CITY OF GEORGETOWN.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — TEMPORARY EROSION AND SEDIMENTATION CONTROL GUIDELINES — EC01

NOTE: THIS SECTION IS INTENDED TO ASSIST THOSE PERSONS PREPARING WATER POLLUTION ABATEMENT PLANS (WPAP) OR STORM WATER POLLUTION PREVENTION PLANS (SW3P) THAT COMPLY WITH FEDERAL, STATE AND/OR LOCAL STORM WATER REGULATIONS.

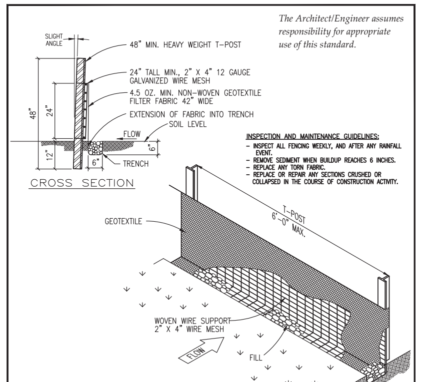
1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. ALL PROJECTS WITHIN THE RECHARGE ZONE OF THE EDWARD'S AQUIFER SHALL SUBMIT A BEST MANAGEMENT PRACTICES AND WATER POLLUTION AND ABATEMENT PLAN TO THE TNRCC FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
4. ALL PLANTING SHALL BE DONE BETWEEN MAY 1 AND SEPTEMBER 15 EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING. IF PLANTING IS AUTHORIZED TO BE DONE OUTSIDE THE DATES SPECIFIED, THE SEED SHALL BE PLANTED WITH THE ADDITION OF WINTER FESCUE (KENTUCKY 31) AT A RATE OF 100lb/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED. ALL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE "A" RECENT CROP, RECLEANED AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEED SHALL BE FURNISHED IN SEALED, STANDARD CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS.
5. ALL DISTURBED AREAS TO BE RESTORED AS NOTED IN THE WATER POLLUTION ABATEMENT PLAN.
6. THE PLANTED AREA TO BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF FOUR (4) INCHES. THE IRRIGATION TO OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO MONTHS TO INSURE GERMINATION AND ESTABLISHMENT OF THE GRASS . RAINFALL OCCURRENCES OF 1/2 INCH OR GREATER TO POSTPONE THE WATERING SCHEDULE ONE WEEK.
7. RESTORATION TO BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1-1/2 INCHES HIGH WITH 95% *COVERAGE*, PROVIDED NO BARE SPOTS LARGER THAN 25 SQUARE FEET EXIST.
8. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL TO BE PLACED IN ALL AREAS DISTURBED BY CONSTRUCTION.
9. THE CONTRACTOR TO HYDROMULCH OR SOD (AS SHOWN ON PLANS) ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION.
10. EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIPLINE.
11. TO AVOID SOIL COMPACTION, CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIPLINE AREAS.
12. WHERE A FENCE IS CLOSER THAN FOUR (4) FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT (8) FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE FENCING.
13. TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
14. ANY ROOT EXPOSED BY CONSTRUCTION ACTIVITY TO BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
15. CONTRACTOR TO PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES").
16. THE CONTRACTOR IS TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/4 INCH TO VERIFY THAT THEY HAVE NOT BEEN SIGNIFICANTLY DISTURBED. ANY ACCUMULATED SEDIMENT AFTER A SIGNIFICANT RAINFALL TO BE REMOVED AND PLACED IN THE OWNER DESIGNATED SPOIL DISPOSAL SITE. THE CONTRACTOR TO CONDUCT PERIODIC INSPECTIONS OF ALL EROSION/SEDIMENTATION CONTROLS AND TO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
17. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR FEET (2'-4') BEHIND THE AREA IN QUESTION.
18. NO ABOVE AND/OR BELOW GROUND TEMPORARY FUEL STORAGE FACILITIES TO BE STORED ON THE PROJECT SITE.
19. IF EROSION AND SEDIMENTATION CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER'S REPRESENTATIVE AND THE CONTRACTOR TO EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEMS FOR DAMAGE PRIOR TO CONSTRUCTION. ANY DAMAGE TO PREEXISTING EROSION AND SEDIMENTATION CONTROLS NOTED TO BE REPAIRED AT OWNERS EXPENSE.
20. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES — EC01A — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB

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

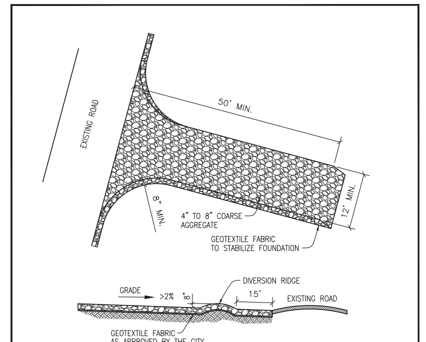


INSTALLATION:

- 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.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — SILT FENCE DETAIL — EC02 — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB



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.

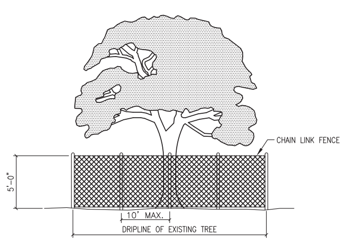
INSPECTIONS AND MAINTENANCE GUIDELINES:

- 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.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — STABILIZED CONSTRUCTION ENTRANCE — EC06 — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB



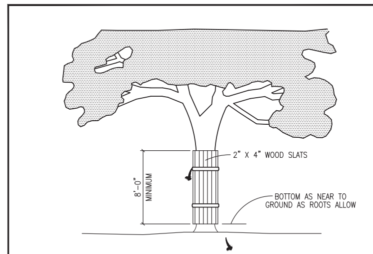
NOTES:

1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES; WILL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY.
   C. WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
3. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   B. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN SIX FEET (6'-0") TO BUILDING.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — TREE PROTECTION – CHAIN LINK FENCE — EC09 — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB



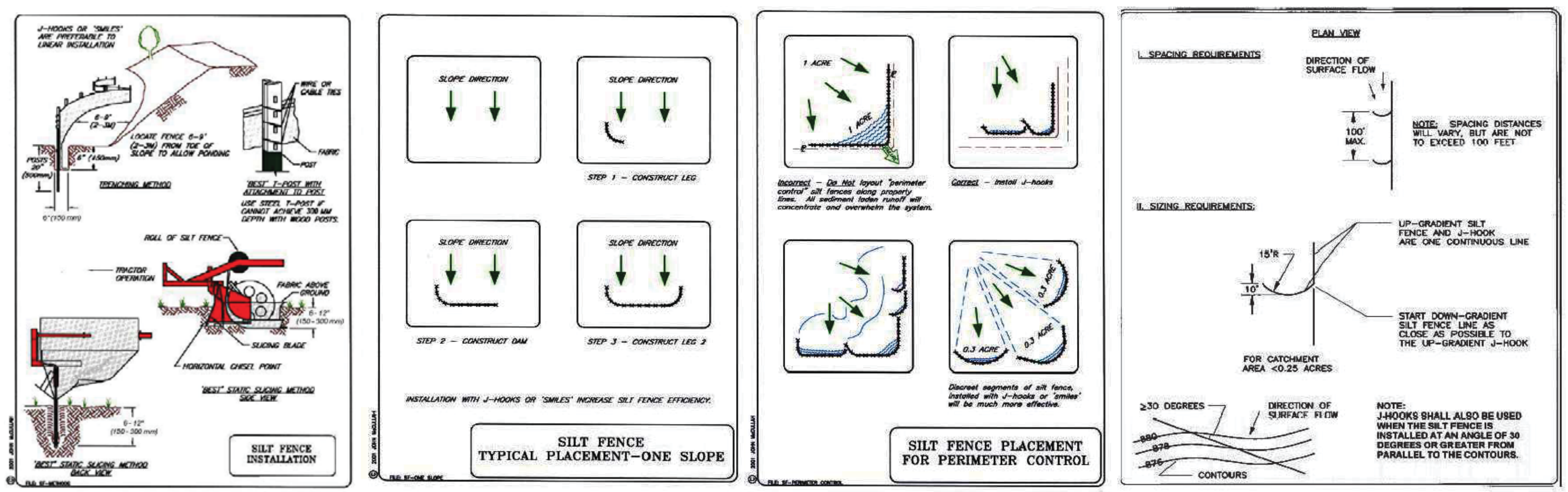
NOTES:

1. WHERE ANY EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN FOUR FEET (4'-0") TO A TREE TRUNK; PROTECT THE TRUNK WITH STRAPPED-ON-PLANKING TO A HEIGHT OF EIGHT FEET (8'-0"), OR TO THE LIMITS OF LOWER BRANCHING IN ADDITION TO THE REDUCED FENCING PROVIDED.
2. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO (2) DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE, AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
3. PRIOR EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINE. MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
4. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
5. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
6. NO LANDSCAPE TOPSOIL DRESSING GREATER THE FOUR INCHES (4") SHALL BE PERMITTED WITHIN THE DRIPLINE OF A TREE. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
7. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.

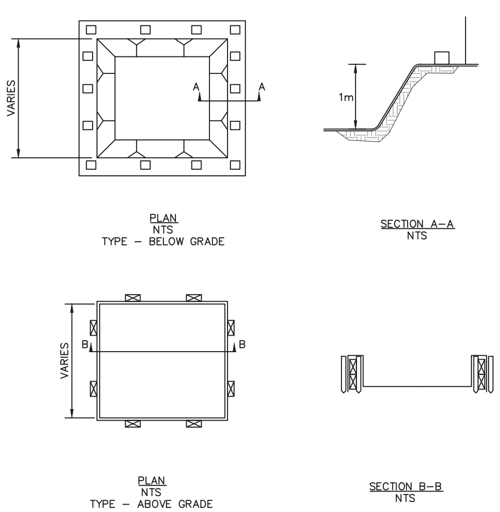
The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — TREE PROTECTION – WOOD SLATS — EC10 — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB



SILT FENCE
SCALE: N.T.S.



CONCRETE WASHOUT SCHEMATIC
SCALE: N.T.S.

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION

No.	Date	Revisions	App.

360 PROFESSIONAL SERVICES, INC.
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STATE OF TEXAS — SCOTT J. FOSTER — 84652 — LICENSED PROFESSIONAL ENGINEER — 11/02/2023

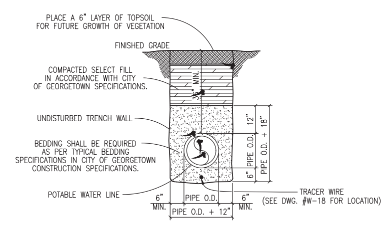
CAPELLA PARKWAY UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

CONSTRUCTION DETAILS SHEET 1

Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

SHEET 10 OF 12

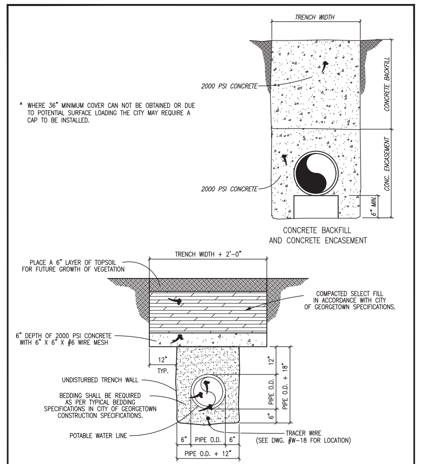
2023-XXXX-CON



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.

ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS
W02

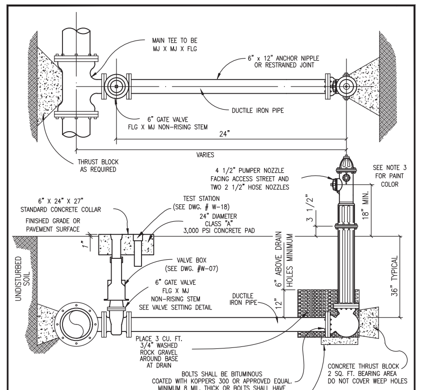


* WHERE 36" MINIMUM COVER CAN NOT BE OBTAINED OR DUE TO POTENTIAL SURFACE LOADING THE CITY MAY REQUIRE A CAP TO BE INSTALLED.

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.

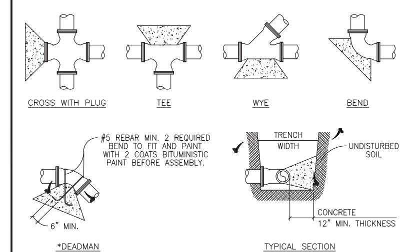
ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CONCRETE TRENCH CAP DETAIL
W02A



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 "FIRE-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.

ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL FIRE HYDRANT INSTALLATION
W10



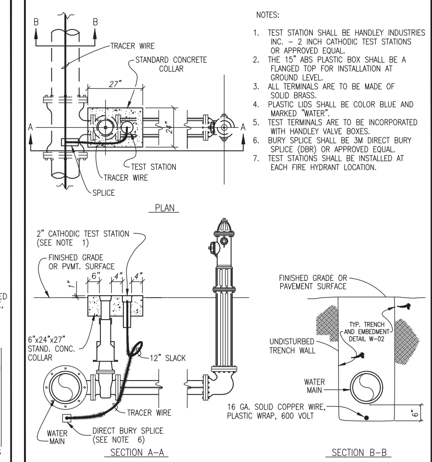
ALL THRUST BLOCKS SHALL BE FORMED. LAID FORMS SHALL BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO THE POURING OF CONCRETE AND SHALL ALSO BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO COVERING. TYPICAL LOCATIONS WHICH REQUIRE CONCRETE REACTION (THRUST) BLOCKS, FOR PRESSURE MAINS FOUR INCHES (4") AND 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.

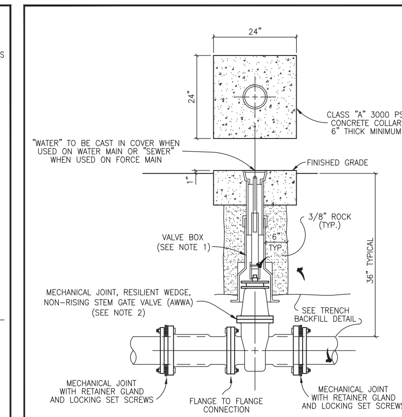
ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TYPICAL THRUST BLOCKS FOR WATER AND FORCE MAIN
W11
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB



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.

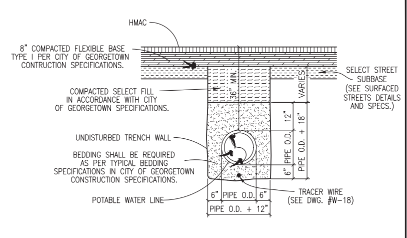
ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRACER WIRE INSTALLATION AND TEST STATION LOCATION
W18



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.

ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
INLINE VALVE INSTALLATION
W21

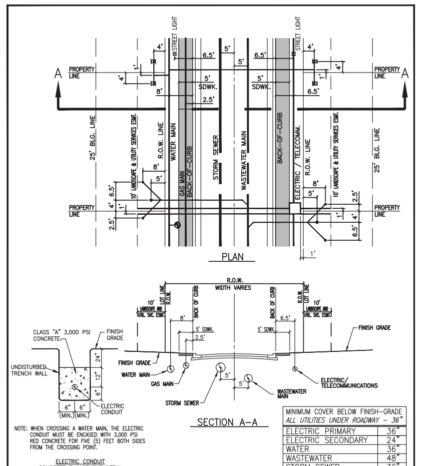


TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER 1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER 2'-0" + PIPE O.D.

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).

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

ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY
W22



NOTE: WHEN CROSSING A WATER MAIN, THE ELECTRIC CONDUIT MUST BE ENCASED WITH 3,000 PSI RED CONCRETE FOR FIVE (5) FEET BOTH SIDES FROM THE CROSSING POINT.

MINIMUM COVER BELOW FINISH-GRADE *ALL UTILITIES UNDER ROADWAY – 36"*	
ELECTRIC PRIMARY	36"
ELECTRIC SECONDARY	24"
WATER	36"
WASTEWATER	48"
STORM SEWER	36"
GAS	36"
TELECOMMUNICATIONS	36"

CLASSIFICATION	ROW	B–B	PVMT.
LOCAL STREET	50'	28'	24'
RESIDENTIAL STREET	65'	37'	33'
MAJOR COLLECTOR	73'	45'	41'

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

ADOPTED 6/21/2006
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
UTILITY ASSIGNMENTS FOR LOCAL STREETS, RESIDENTIAL COLLECTORS AND MAJOR COLLECTORS
W01A
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION

No.	Date	Revisions	App.

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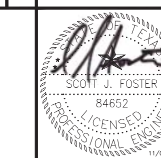


CAPELLA PARKWAY UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

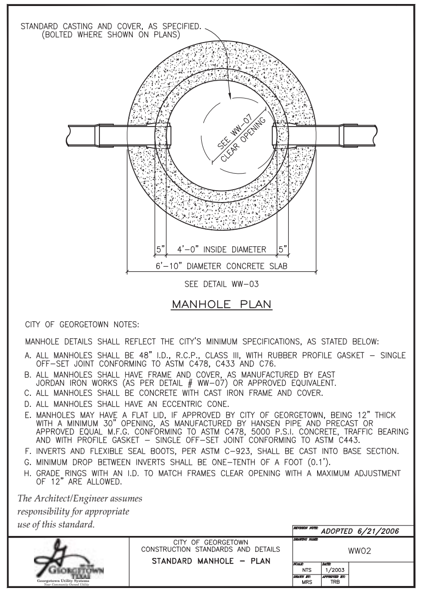
CONSTRUCTION DETAILS
SHEET 2

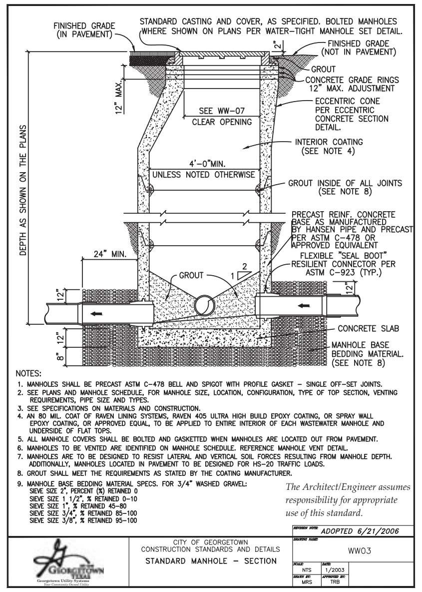
Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

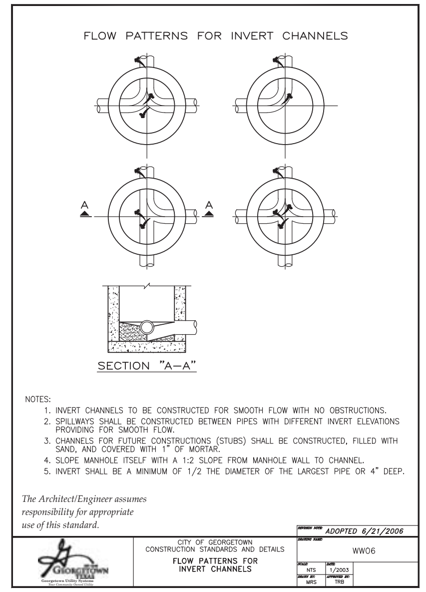
SHEET 11 OF 12

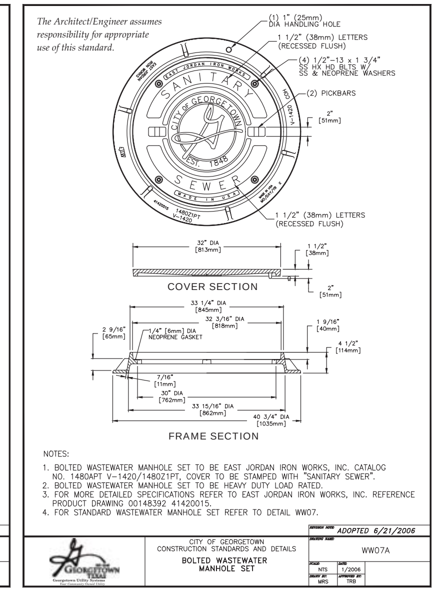
2023-XXXX-CON

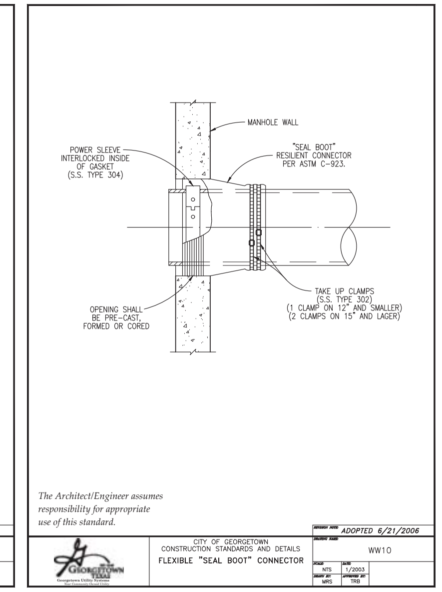
FILE: C:\Users\lesli\Documents\360PSI\Capella\GT 22 Acre Utility Extension\Cad\Sheets\10 CONSTRUCTION DETAILS.dwg LAYOUT: 2 PLOT DATE: 11/1/2023 11:11am PLOTTED BY: lesli
XREFS: x2436 IMAGES: 24_x_24_Grate_Inlet.jpg 3x3jb.jpg 510S-1.jpg 520s-11B_Page_1.tif 520s-11B_Page_2.tif 24x24JB.jpg 642s-1_Silt Fence.tiff ECM Figure 1.4.5.G.3.jpg ECM SF fig145-g2.jpg ECM SF fig145-g4.jpg

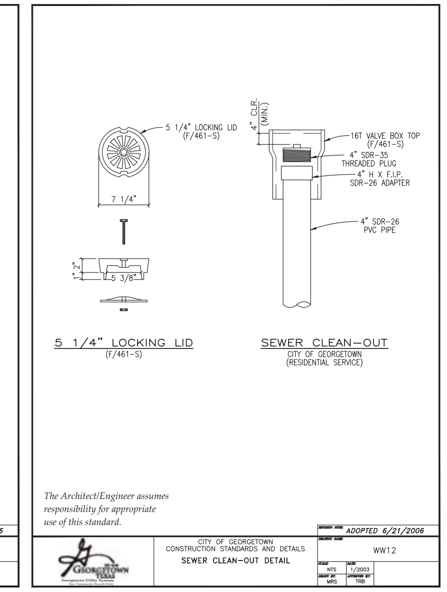


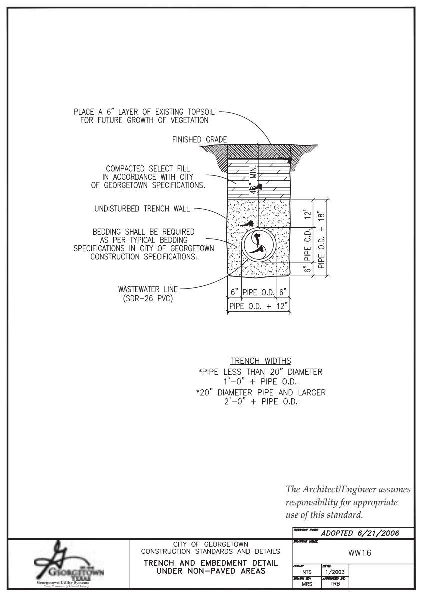


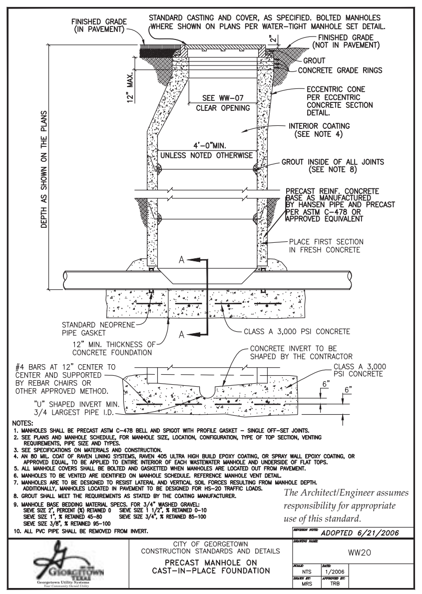


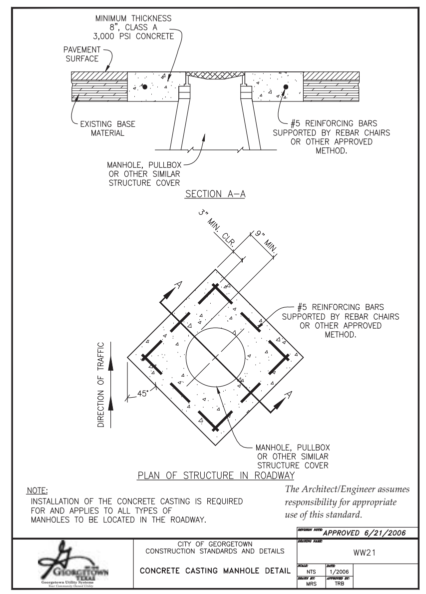


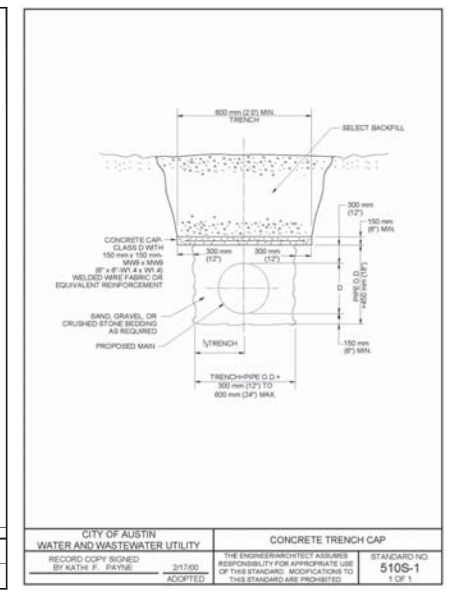






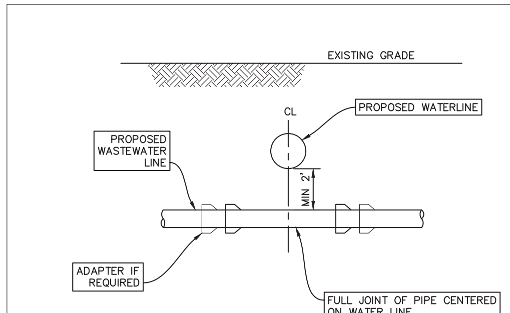






NOTES:

1. ALL UTILITY STUB OUTS MARKED WITH 4" PVC, MIN. 5' HIGH AND PAINTED BLUE FOR WATER AND GREEN FOR WASTEWATER.



WATER AND WASTEWATER CROSSING DETAIL

NOTES:

1. ONE JOINT OF WASTEWATER PRESSURE PIPE TO BE CENTERED BENEATH EACH OF THE WATERLINE CROSSINGS PER TCEQ WATER/SEWER SEPARATION REQUIREMENTS. REFER TO TCEQ NOTES ON SHEET 03.

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION

No.	Date	Revisions	App.

360 PROFESSIONAL SERVICES, INC.
TEXAS REGISTRATION F4932
P.O. BOX 3538
CEDAR PARK, TEXAS 78630
PHONE (512) 354-4682
FAX (512) 900-7962

SCOTT J. FOSTER 84652 LICENSED PROFESSIONAL ENGINEER 11/02/2023

CAPELLA PARKWAY
UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

CONSTRUCTION DETAILS
SHEET 3

Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

SHEET 12 OF 12

2023-XXXX-CON

IV. TEMPORARY STORMWATER SECTION (TCEQ-0602)

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.

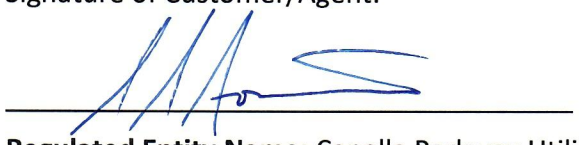
Signature

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: Scott J. Foster, P.E.

Date: 11/20/23

Signature of Customer/Agent:



Regulated Entity Name: Capella Parkway Utility Improvements

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: Pecan Branch of the San Gabriel Watershed

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

The following practices will be followed for spill prevention and cleanup:

- Manufactures' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.

- Materials and equipment necessary for spill cleanout will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.

- All spills will be cleaned up immediately after discovery.

- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contract with a hazardous substance.

- Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of size.

- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.

- The Contractor site superintendent, responsible for the day-to-day site operations, will be the spill prevention and cleanup coordinator. They will designate at least two other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of the responsible spill personnel will be posted in the material storage area and in the office trailer onsite.

Refer to the TCEQ Spills: Reportable Quantities website to determine whether you must report and under what rule. (https://www.tceq.texas.gov/response/spills/spill_rq.html)

ATTACHMENT B
POTENTIAL SOURCES OF CONTAMINATION

Potential Sources of Contamination during the construction of this project:

- Oil and Grease: from runoff pollutants associated with paving operations
- Asphalt: emulsion from the streets just after construction is complete
- Construction Phase Pollutants: hydraulic fluid, accidental fuel spills, machine oil, and sediment.

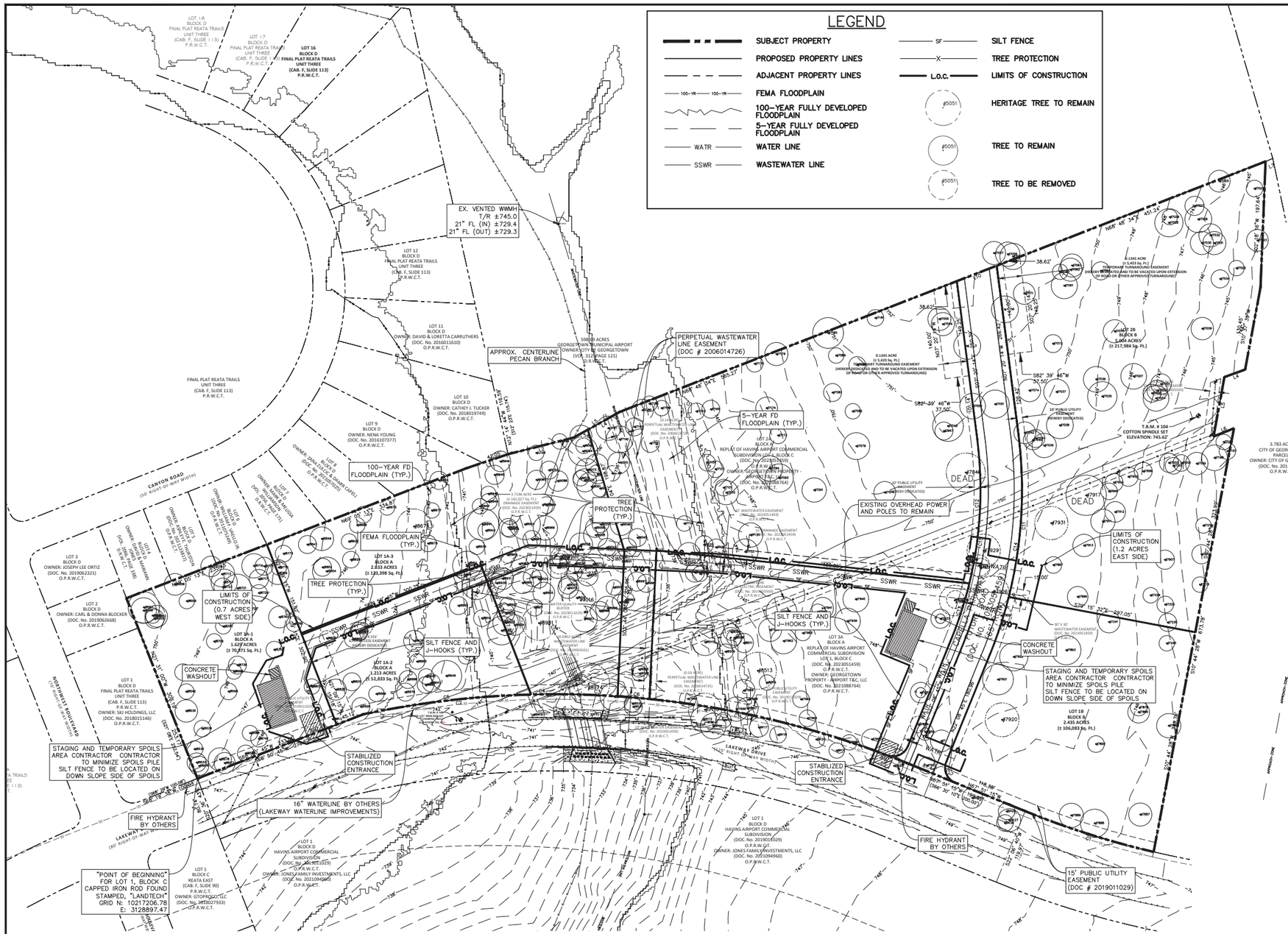
ATTACHMENTS C & D
SEQUENCE OF MAJOR ACTIVITIES AND TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

1. Temporary erosion and sedimentation controls are to be installed as indicated on the approved site plan or subdivision construction plan and in accordance with the stormwater pollution prevention plan (SWPPP) that is required to be posted on the site.
   The following Temporary BMPs will be used during this construction: (1.9 Acres)
   a. Stabilized Construction Entrance
   b. Silt Fence/Triangular Filter Dike
   c. Tree Protection
   d. Concrete Washout
2. The environmental project manager or site supervisor must contact the City of Georgetown at (512) 930-2572, 72 hours prior to the scheduled date of the required on-site preconstruction meeting.
3. The environmental project manager, and/or site supervisor, and/or designated responsible party, and the general contractor will follow the storm water pollution prevention plan (SWPPP) posted on the site. Temporary erosion and sedimentation controls will be revised, if needed, to comply with city inspectors' directives, and revised construction schedule relative to the water quality plan requirements and the erosion plan.
4. Temporary erosion and sedimentation controls will be inspected and maintained in accordance with the storm water pollution prevention plan (SWPPP) posted on the site.
5. Begin site clearing/construction (or demolition) activities. (1.9 Acres)
6. Complete construction and start revegetation of the site. (1.9 Acres)
7. Upon completion of the site construction and revegetation of a project site, the design engineer shall submit an engineer's letter of concurrence to the City of Georgetown that construction, including revegetation, is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the appropriate city inspector.
8. After a final inspection has been conducted by the city inspector and with approval from the city inspector, remove the temporary erosion and sedimentation controls and complete any necessary final revegetation resulting from removal of the controls. Conduct any maintenance and rehabilitation of the water quality ponds or controls.

ATTACHMENT F
STRUCTURAL PRACTICES

The Capella Parkway Utility Improvements project consist of the construction of wastewater mains, a water main, and associated improvements. No impervious cover, detention, or water quality is being proposed with this project. No structural practices will be located within a floodplain.

ATTACHMENT G
EROSION AND SEDIMENT CONTROL SHEET
WITH LIMITS OF CONSTRUCTION AREAS



LEGEND

▬ ▪ ▪ ▬	SUBJECT PROPERTY	——SF——	SILT FENCE
———	PROPOSED PROPERTY LINES	——X——	TREE PROTECTION
—— – – ——	ADJACENT PROPERTY LINES	▬ L.O.C. ▬	LIMITS OF CONSTRUCTION
— 100–YR — 100–YR —	FEMA FLOODPLAIN	#5051	HERITAGE TREE TO REMAIN
	100–YEAR FULLY DEVELOPED FLOODPLAIN		
— —— —	5–YEAR FULLY DEVELOPED FLOODPLAIN		
—— WATR ——	WATER LINE	#5051	TREE TO REMAIN
—— SSWR ——	WASTEWATER LINE		
		#5051	TREE TO BE REMOVED

DEMOLITION NOTES:

1. SURVEY INFORMATION SHOWN HEREON IS BASED UPON INFORMATION PROVIDED BY EAGLE EYE CONSTRUCTION LAYOUT, LLC DATED DECEMBER 21, 2018. NO WARRANTY IS EXPRESSED OR IMPLIED TO ITS ACCURACY. CONTRACTOR TO NOTIFY ENGINEER IF DISCREPANCIES ARE FOUND.
2. LOCATIONS OF PUBLIC AND FRANCHISE UTILITIES SHOWN ARE APPROXIMATE AND MAY NOT BE COMPLETE. CONTRACTOR SHALL CALL THE ONE CALL CENTER (811) AT LEAST 48 HOURS PRIOR TO COMMENCING DEMOLITION OR CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL CONTACT ANY OTHER UTILITY COMPANIES WHO DO NOT SUBSCRIBE TO THE ONE CALL PROGRAM FOR LINE MARKINGS. THE CONTRACTOR BEARS SOLE RESPONSIBILITY FOR VERIFYING LOCATIONS OF EXISTING UTILITIES, SHOWN OR NOT SHOWN, AND FOR ANY DAMAGE DONE TO THESE FACILITIES.
3. REMOVAL OR RELOCATION OF EXISTING PUBLIC AND PRIVATE FRANCHISE UTILITIES (WATER, ELECTRIC, AND GAS ETC.) WITHIN THE LIMITS OF THE SITE DEMOLITION SHALL BE COORDINATED WITH THE APPLICABLE UTILITY AGENCIES AND IN ACCORDANCE WITH LOCAL CODES
4. ALL EXISTING UTILITY SERVICES TO BE TURNED OFF BY UTILITY FRANCHISE TECHNICIAN TO ALLOW FOR EXISTING SERVICE LINES TO BE CUT/PLUGGED AT MAIN.
5. ALL UTILITIES IN STREET RIGHT–OF–WAY TO REMAIN IN PLACE UNLESS NOTED OTHERWISE.
6. SURFACE PAVEMENT INDICATED HEREON (SUCH AS ASPHALT OR CONCRETE) MAY OVERLAY HIDDEN STRUCTURES (SUCH AS OTHER LAYERS OF PAVEMENT, BUILDING SLAB, ETC.) THAT ARE ALSO TO BE REMOVED.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL OF EXISTING PAVEMENT SECTION, STRUCTURAL SUBGRADE, STRUCTURAL FOUNDATION, AND UTILITIES WITHIN THE SITE. CONTRACTOR TO DISPOSE ALL DEMOLITION SPOILS OFF–SITE IN A LEGAL MANNER.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES, IRRIGATION LINES, PAVEMENT, ETC., TO REMAIN RESULTING FROM DEMOLITION ACTIVITIES AND REPAIR AT HIS OWN EXPENSE.
9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
10. ALL ITEMS TO BE REMOVED SHALL BE DISPOSED OFF–SITE IN A MANNER ACCEPTABLE TO ALL APPLICABLE REGULATIONS.
11. PERIMETER EROSION CONTROL DEVICES AND TREE PROTECTION FOR TREES SHALL BE IN PLACE PRIOR TO DEMOLITION. REFERENCE EROSION CONTROL PLAN AND DETAILS FOR TYPE AND LOCATION.

ECS NOTES:

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS – CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.
2. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
3. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THE SITE MAP.
4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE ARCHITECTURAL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
5. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCE – PROVIDE TURNBACKS EVERY 200'S LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN–OFF.
6. THERE ARE NO KNOWN CEF'S ON–SITE.
7. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
8. ADDITIONAL EROSION AND SEDIMENTATION CONTROLS MAY BE REQUIRED BY THE INSPECTOR AT TIME OF CONSTRUCTION.
9. CONTRACTOR TO REPLACE SILT FENCE – PROVIDE TURNBACKS EVERY 200' WITH TRIANGULAR FILTER DIKE AS NEEDED TO CONSTRUCT DRIVEWAYS AND PARKING SPACES.
10. MULCH SOCK OR TRIANGULAR FILTER DIKE TO BE USED INSTEAD OF SILT FENCE WITH TREE CRITICAL ROOT ZONE

TREES	REMOVED (INCHES)
NOT LOCATED INSIDE OF FUTURE CAPELLA PARKWAY ROW	177
LOCATED INSIDE OF FUTURE CAPELLA PARKWAY ROW	71
TOTAL	247

NOTE:

360 Professional Services, Inc. is not responsible for the means and methods employed by the contractor to implement this demolition plan. This demolition plan simply indicates the known objects on the subject tracts that are to be demolished and removed from the site. 360 Professional Services, Inc. does not warrant or represent that the plan, which was prepared based on survey and utility information provided by others, shows all improvements and utilities, that the improvements and utilities are shown accurately, or that the utilities shown can be removed. The contractor is responsible for performing his own site reconnaissance to scope his work and to confirm with the owners of improvements and utilities the ability and process for the removal of their facilities. This plan is intended to give a general guide to the contractor, nothing more. The goal of the demolition is to leave the site in a state suitable for the construction of the proposed development. Removal or preservation of improvements, utilities, etc. to accomplish this goal are the responsibility of the contractor.

Contractor shall comply with all local, state, and federal regulations regarding the demolition of objects on the site and the disposal of the demolished materials off–site. It is the contractor's sole responsibility to review the site, determine the applicable regulations, receive the required permits and authorizations, and comply.

BENCHMARK NOTE:

B.M # 101 (OFFSITE)

(CITY OF GEORGETOWN GIS CONTROL MONUMENT No. 96–010)

DESCRIPTION: 3" BRASS DISK SET IN 24" DIAMETER CONCRETE, POURED IN PLACE, THAT PROJECTS 1' ABOVE GROUND LEVEL AND IS STAMPED, "CITY OF GEORGETOWN 1996, PT. No. 96–010" LOCATED NEAR THE INTERIOR EASTERLY MOST CORNER OF A FENCE SURROUNDING AN AIRPORT PUMP STATION ALONG AIRPORT ROAD.

GRID NORTING: 10219757.4003
EASTING: 3133649.3403
ELEVATION: 736.02'

B.M. #100 (ONSITE)

DESCRIPTION: CAPPED 1/2" IRON ROD WITH PLASTIC CAP, STAMPED "EECL", SET ALONG THE NORTHERLY CURVING RIGHT–OF–WAY LINE OF LAKEWAY DRIVE, SAME BEING THE CURVING SOUTHERLY LOT LINE OF THE PROPOSED LOT 1, BLOCK C, AS SHOWN HEREON.

GRID NORTHING: 10217310.350
EASTING: 3129296.348
ELEVATION: 741.11'

(__) = Record

Line Table

Line #	Length	Direction
L1	68.09'	N71° 20' 11"E
(L1)	(67.98')	(N71° 09'E)
L2	105.96'	N75° 48' 56"E
(L2)	(105.36')	(N78° 17' 30"E)
L3	83.14'	N60° 53' 02"E
(L3)	(83.14')	(N60° 41' 30"E)
L4	34.52'	S69° 48' 58"W
(L4)	(35.41')	(N68° 37' 57"E)
L5	94.23'	S10° 20' 14"W
(L5)	(94.43')	(N10° 43' 16"E)
L6	33.87'	N69° 27' 59"E
(L6)	(35.41')	(S68° 37' 57"W)
L7	12.22'	N68° 00' 18"E
(L7)	(11.03')	(N68° 52' 28"E)

(__) = Record

Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	211.23'	1340.00'	9° 01' 54"	N72° 23' 54"W	211.01'
(C1)	(410.30')	(1340.00')	N/A	(S75° 16' 30"E)	(408.70')
C2	564.98'	1460.00'	22° 10' 18"	N78° 56' 39"W	561.46'
(C2)	(565.68')	(1460.00')	N/A	(S77° 36' 10"E)	(562.14')
C3	301.50'	1460.00'	11° 49' 55"	S84° 01' 33"W	300.96'
C4	199.25'	1340.00'	8° 31' 11"	S81° 10' 27"E	199.07'

SURVEY LEGEND

●	BOUNDARY FOUND/SET (NOTED)
○	CALCULATED POINT
⊕	BENCHMARK/BUILDING HEIGHT LOCATION
	UTILITY POLE
←	GUY WIRE
—— OE ——	OVERHEAD ELECTRIC
◉ WWMH	WASTEWATER MANHOLE
	SIGN
	EDGE OF PAVEMENT
——//——	WOOD PRIVACY FENCE
——x——	BARBWIRE FENCE
——○——	CHAIN LINK FENCE
P.R.W.C.T.	PLAT RECORDS WILLIAMSON COUNTY, TEXAS
O.P.R.W.C.T.	OFFICIAL PUBLIC RECORDS WILLIAMSON COUNTY, TEXAS
D.R.W.C.T.	DEED RECORDS WILLIAMSON COUNTY, TEXAS

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION

No.	Date	Revisions	App.

360 PROFESSIONAL SERVICES, INC.

TEXAS REGISTRATION F4932
P.O. BOX 3639
CEDAR PARK, TEXAS 78630
PHONE (512) 354–4682
FAX (512) 900–7962

SCOTT J. FOSTER
84652
11/02/2023

CAPELLA PARKWAY UTILITY IMPROVEMENTS
GEORGETOWN, TEXAS

EXISTING CONDITIONS AND DEMOLITION PLAN AND EROSION / SEDIMENTATION CONTROL AND TREE PROTECTION PLAN

Scale: AS SHOWN
Designed by:
Drawn by:
Checked by:
Date: NOVEMBER 2023
Project No.

SHEET
04
OF 12

2023–XXXX–CON

FILE: C:\Users\lesli\Documents\360PSI\Capella\GT 22 Acre Utility Extension\Cad\Sheets\05 EXIST.dwg LAYOUT: 02 DEMO PLOT DATE:
XREFS: x2436 xsurvey_360PSI xsite xPecan Branch GIS IMAGES: SJF Sign.tif
PLOTTED BY: lesli

ATTACHMENT I
INSPECTION AND MAINTENANCE FOR TEMPORARY BMPs

GEORGETOWN TECHNICAL SPECIFICATIONS
SECTION G6 – SEDIMENTATION AND TEMPORARY EROSION CONTROL

TECHNICAL SPECIFICATIONS

SECTION G6 – SEDIMENTATION AND TEMPORARY EROSION CONTROL

G6.01 SCOPE OF WORK

A. This specification covers the requirements necessary to perform all installation, maintenance, removal and area cleanup related to sedimentation control work as shown on the Plans and as specified herein.

G6.02 SUBMITTALS

A. Within 10 days after Notice to Proceed, the Contractor shall submit to the Engineer for approval, technical product literature for all commercial products to be used for sedimentation and erosion control.

G6.03 GENERAL

A. The work shall include, but not necessarily be limited to: triangular filter dike, rock berm, silt fence, curb inlet protection, stabilized construction entrance, tree protection, excelsior matting, and temporary mulching, sediment removal and disposal, device maintenance, removal of temporary devices, temporary mulching, excelsior matting installation and final cleanup. All sedimentation and erosion control shall be installed prior to the start of any construction activities.

G6.04 QUALITY ASSURANCE

A. The Contractor shall be responsible for the timely installation and maintenance of all sedimentation control devices necessary to prevent the movement of sediment from the construction site to off site areas or into the stream system via surface runoff or underground drainage systems. Measures in addition to those shown on the Plans necessary to prevent the movement of sediment off site shall be installed, maintained, removed, and cleaned up at the expense of the Contractor. No additional charges to the City will be considered.

B. Sedimentation and erosion control measures shall conform to the requirements outlined in the Texas Natural Resources Conservation Commission, Chapter 213.

G6.05 MATERIALS

A. Triangular Filter Dike

1. Triangular filter dike sections shall be either 10-feet or 20-feet in length.
2. Geotextile fabric shall extend to 12-inches upstream of triangular filter dike structure.
3. Triangular filter dike structure shall be 18-inches in length on all three (3) faces.
4. Three (3) inch to five (5) inch open graded rock shall be placed over skirt to anchor it on the upstream side.
5. Structure shall be formed by six (6) gauge six inch by six inch (6”x6”) welded wire mesh.
6. Geotextile fabric shall be non-woven, 4.5 oz. minimum and 36-inches wide.

B. Rock Berm

1. Woven wire sheathing shall be 20-gauge with one (1) inch openings.
2. Rock shall be three inches to five inches (3”-5”) open graded.

C. Silt Fence

1. Steel posts shall be a minimum of four (4) feet in length, heavy weight T-Post.

2. Welded wire fabric shall be two-inch by four-inch (2"x4") mesh of 12-gauge by 12-gauge galvanized wire mesh.

3. Silt fence fabric shall be a 4.5 oz minimum non-woven geotextile filter fabric 36-inches wide.

4. Tie wires for securing silt fence fabric to wire mesh shall be light gauge metal clips (hog rings), or $^{1}/_{32}$-inch diameter soft aluminum wire.

5. Prefabricated commercial silt fence may be substituted for built-in-field fence. Prefabricated silt fence shall be "Envirofence" as manufactured by Mirafi Inc., Charlotte, NC or equal.

D. Curb Inlet Protection

1. 4.5 oz. minimum non-woven geotextile filter fabric shall be used.

2. Sand bags shall be used to hold the filter fabric in place.

E. Stabilized Construction Entrance

1. Stabilized construction entrance shall have a minimum width of 12-feet and a minimum length of 50-feet.

2. An eight (8) inch high diversion ridge shall be constructed 15-feet from the edge of the existing roadway.

3. Stabilized construction entrance shall be graded to drain towards the existing roadway at a two-percent (2%) slope.

4. Rock shall be four-inches to eight-inches (4"-8") coarse aggregate.

5. Rock shall be placed to a depth of at least eight (8) inches.

F. Tree Protection – Chain Link Fence

1. Chain link fence shall be five (5) feet in height.

2. Fence shall be installed around the driplines of the trees to be protected.

G. Tree Protection – Wood Slats

1. Where any exceptions result in a fence being closer than four (4) feet to a tree trunk, protect the trunk with strapped-on-planking two inches by four inches (2"x4") wood slats to a height of eight (8) feet, or to the limits of lower branching in addition to the reduced fencing provided.

2. Trees most heavily impacted by construction activities should be watered deeply once a week during periods of hot, dry weather. Tree crowns should be sprayed with water periodically to reduce dust accumulation on the leaves.

3. Any trenching required for the installation of landscape irrigation shall be placed as far from existing tree trunks as possible.

4. No landscape topsoil dressing greater than four (4) inches shall be permitted within the dripline of a tree. No soil is permitted on the root flare of any tree.

5. No vehicles or equipment shall be allowed to park within the dripline of an existing tree.

H. Soil Retention Blankets

1. Soil retention blankets shall be installed in all seeded drainage swales and ditches as shown on the Plans or as directed by the Engineer. Only soil retention blankets included on TxDOT's Approved Products List will be considered acceptable for use on this Project.

I. Temporary Mulch

1. Temporary mulch shall be applied to areas where rough grading has been completed but final grading is not anticipated to begin within 30 days of the completion of rough grading.

G6.06 INSTALLATION

A. Triangular Filter Dike

1. Layout the filter dike following as closely as possible to the contour.

2. Clear the ground of debris, rocks, and plants that will interfere with installation.

3. Place the filter dike sections one (1) at a time, with the skirt on the uphill side towards the direction of flow anchoring each section to the ground before the next section is placed.

4. Anchors should be placed on two (2) foot centers alternating from front to back so that there is actually only one (1) foot in between anchors.

5. Securely fasten the skirt from one (1) section of filter dike to the next.

6. Filter dikes must maintain continuous contact with the ground.

7. After the site is completely stabilized, the dikes and any remaining silt should be removed. Silt should be disposed of in a manner that will not contribute to additional siltation.

B. Rock Berm Installation

1. Layout the rock berm following as closely as possible to the contour.

2. Clear the ground of debris, rocks or plants that will interfere with installation.

3. Place woven wire fabric on the ground along the proposed installation with enough overlap to completely encircle the finished size of the berm.

4. Place the rock along the center of the wire to the designated height.

5. Wrap the structure with the previously placed wire mesh secure enough so that when walked across, the structure retains its shape.

6. Secure with tie wire.

7. The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approximately four (4) inches deep to prevent failure of the control.

8. The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

C. Silt Fence Installation

1. Layout the silt fence following as closely as possible to the contour.

2. Clear the ground of debris, rocks, and plants (including grasses taller than two (2) inches) to provide a smooth flow approach surface. Excavate four-inches deep by four-inches wide (4"x4") trench on upstream side of face per Plans.

3. Drive the heavy duty T-post at least 12-inches into the ground and at a slight angle towards the flow.

4. Attach the two-inches by four-inches (2"x4") 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-inches above ground level. The welded wire mesh to be overlapped six (6) inches and tied at least six (6) times with hog rings.

5. The silt fence to be installed with a skirt a minimum of 11-inches wide placed on the uphill side of the fence inside excavated trench. The fabric to overlap the top of the wire by one (1) inch.

6. Anchor the silt fence by backfilling with excavated dirt and rocks.

7. Geotextile splices should be a minimum of 18-inches wide attached in at least six (6) places.

D. Curb Inlet Protection Installation

1. Clear the pavement of debris, rocks, etc. to provide a smooth surface for installation.

2. Place the filter fabric over the inlet and extend to five (5) feet beyond inlet opening, upstream of inlet. Terminate fabric in street gutter with sand bags placed in gutter flowline.

3. Place sandbags on top of filter fabric around the perimeter of the protected area to secure the filter fabric.

4. Care shall be taken insure that the inlet protection will remain in place during periods of heavy runoff and that severe ponding will not occur in the street.

E. Stabilized Construction Entrance Installation

1. Clear the area of debris, rocks or plants that will interfere with installation.

2. Grade the area for the entrance to flow back on to the construction site. Runoff from the stabilized construction entrance onto a public street will not be allowed except for the first 15 feet connecting to the public street.

3. Place geotextile fabric if required.

4. Place rock as required.

F. Tree Protection – Chain Link Fence

1. Tree protection fences shall be installed prior to the commencement of any site preparation work (clearing, grubbing or grading).

2. Fences shall completely surround the tree, or clusters of trees; will be located at the outermost limit of the tree branches (dripline), and will be maintained throughout the construction project in order to prevent the following:

   a. Soil compaction in the root zone area resulting from vehicular traffic, or storage of equipment or materials.

   b. Root zone disturbances due to grade changes greater than six (6) inches cut or fill or trenching not reviewed and authorized by the City.

   c. Wounds to exposed roots, trunks or limbs by mechanical equipment.

   d. Other activities detrimental to trees, such as chemical storage, cement truck cleaning and fire.

3. Exceptions to installing fences at tree driplines may be permitted in the following cases:

a. Where permeable paving is to be installed, erect the fence at the outer limits of the permeable paving area.

b. Where trees are close to a proposed building, erect the fence no closer than six (6) feet to building.

G. Tree Protection – Wood Slats

1. Any roots exposed by construction activity shall be pruned flush with the soil. Backfill root areas with good quality top soil as soon as possible. If exposed root areas are not backfilled within two (2) days, cover them with organic material in a manner which reduces soil temperature, and minimizes water loss due to evaporation.

2. Prior to excavation or grade cutting within tree dripline, make a clean cut between the disturbed and undisturbed root zones with a rock saw or similar equipment, to minimize damage to remaining roots.

3. Pruning to provide clearance for structures, vehicular traffic and equipment shall take place before construction starts.

H. Excelsior Matting

1. The area to be covered shall be properly prepared, fertilized and seeded with permanent vegetation before the blanket is applied.

2. When the blanket is unrolled, the netting shall be on top and the fibers in contact with the soil over the entire area.

3. The blankets shall be applied in the direction of water flow, and stapled. Blankets shall be placed a minimum of three (3) rows, of four (4) foot wide (total approx. 12-foot width) within the drainage swale/ditch and stapled together in accordance with Manufacturer's instructions.

4. Side overlaps shall be four (4) inch minimum. The staples shall be made of wire, 0.091-inch in diameter or greater, "U" shaped with legs 10-inches in length and a $1^{1}/_{2}$-inch crown. The staples shall be driven vertically into the ground, spaced approximately two (2) linear feet apart, on each side, and one (1) row in the center alternately spaced between each size.

5. Upper and lower ends of the matting shall be buried to a depth of four (4) inches in a trench.

6. Erosion stops shall be created every 25-feet by making a fold in the fabric and carrying the fold into a silt trench across the full width of the blanket. The bottom of the fold shall be four (4) inches below the ground surface. Staple on both sides of fold.

7. Where the matting must be cut or more than one (1) roll length is required in the swale, turn down upper end of downstream roll into a slit trench to a depth of four (4) inches. Overlap lower end of upstream roll four (4) inches past edge of downstream roll and staple.

8. To ensure full contact with soil surface, roll matting with a roller weighing 100-pounds per foot of width perpendicular to flow direction after seeding, placing matting and stapling.

9. Thoroughly inspect channel after completion. Correct any areas where matting does not present a smooth surface in full contact with the soil below.

I. Temporary Mulching

1. Straw mulch shall be applied at rate of 100 lbs/1,000 ft^2 and tackified with latex acrylic copolymer at a rate of 1 gal/1,000 ft^2 diluted in a ratio of 30 parts water to one (1) part latex acrylic copolymer mix.

G6.07 MAINTENANCE AND INSPECTIONS

A. Inspections

1. Contractor shall make a visual inspection of all sedimentation control devices once per week and promptly after every rain event exceeding ¼-inch. If such inspection reveals that additional measures are needed to prevent movement of sediment to offsite areas or into the vent trench, Contractor shall promptly install additional devices as needed. Sediment controls in need of maintenance shall be repaired promptly.

B. Device Maintenance

1. Triangular Filter Dikes

a. Realign berms as needed to prevent gaps between the sections.

b. Accumulated silt should be removed after each rainfall event, and disposed of in a manner which shall not cause additional siltation.

2. Rock Berm

a. Remove sediment and other debris when buildup reaches six (6) inches and dispose of the accumulated silt in an approved manner.

b. Repair any loose wire sheathing.

c. Reshape as needed.

d. Replace berm when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.

3. Silt Fences

a. Remove accumulated sediment when buildup reaches six (6) inches.

b. Replace damaged fabric, or patch with a two (2) foot minimum overlap.

c. Replace or repair any sections crushed or collapsed in the course of construction activity.

d. Make other repairs as necessary to ensure that the fence is filtering all runoff directed to the fence.

4. Curb Inlet Protection

a. Repair any damaged fabric, or patch with a two (2) foot minimum overlap.

b. Replace any damaged sandbags.

c. Remove accumulated sediment.

5. Stabilized Construction Entrance

a. Periodic top dressing with additional stone may be required as conditions demand to prevent tracking or flowing of sediment onto public rights-of-way.

c. Cleanout any measures used to trap sediment as needed.

d. All sediment spilled, dropped, washed or tracked on to public rights-of-way should be removed immediately by the Contractor.

e. When necessary, wheels should be cleaned to remove sediment prior to entrance onto public rights-of-way.

f. 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.

g. All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

6. Tree Protection – Chain Link Fence

a. Repair or replace any chain link fence damaged by construction activities.

7. Tree Protection – Wood Slats

a. Repair or replace any wood slats damaged by construction activities.

8. Excelsior Matting

a. Replace matting as needed to prevent erosion from occurring.

9. Temporary Mulch

a. Replace mulch as needed to prevent erosion from occurring.

G6.08 REMOVAL AND FINAL CLEANUP

A. Once the site has been fully stabilized against erosion, remove sediment control devices and all accumulated silt. Dispose of silt and waste materials in proper manner. Re-grade all areas disturbed during this process and stabilize against erosion with surfacing materials as indicated on the Plans.

G6.09 PAYMENT

A. Silt fence and rock berm will be paid per linear foot installed as listed in the Proposal and Bid Schedule.

B. Stabilized Construction Entrance will be paid per each installed as listed in the Proposal and Bid Schedule.

C. Tree protection will be paid per each installed as listed in the Proposal and Bid Schedule.

D. Erosion Control Blankets will be paid per square yard as listed in the Proposal and Bid Schedule.

E. Triangular Filter Dikes will be paid per linear foot as listed in the Proposal and Bid Schedule.

F. No separate payment will be made for all other work performed in accordance with this specification, and the cost thereof shall be included in the proper items of the Proposal and Bid Schedule.

END OF SECTION

ATTACHMENT J

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

GEORGETOWN TECHNICAL SPECIFICATIONS
SECTION G6 – SEDIMENTATION AND TEMPORARY EROSION CONTROL

GEORGETOWN TECHNICAL SPECIFICATIONS
SECTION G7 – LOAMING, HYDROSEEDING AND PERMANENT EROSION CONTROL

TECHNICAL SPECIFICATIONS

SECTION G6 – SEDIMENTATION AND TEMPORARY EROSION CONTROL

G6.01 SCOPE OF WORK

A. This specification covers the requirements necessary to perform all installation, maintenance, removal and area cleanup related to sedimentation control work as shown on the Plans and as specified herein.

G6.02 SUBMITTALS

A. Within 10 days after Notice to Proceed, the Contractor shall submit to the Engineer for approval, technical product literature for all commercial products to be used for sedimentation and erosion control.

G6.03 GENERAL

A. The work shall include, but not necessarily be limited to: triangular filter dike, rock berm, silt fence, curb inlet protection, stabilized construction entrance, tree protection, excelsior matting, and temporary mulching, sediment removal and disposal, device maintenance, removal of temporary devices, temporary mulching, excelsior matting installation and final cleanup. All sedimentation and erosion control shall be installed prior to the start of any construction activities.

G6.04 QUALITY ASSURANCE

A. The Contractor shall be responsible for the timely installation and maintenance of all sedimentation control devices necessary to prevent the movement of sediment from the construction site to off site areas or into the stream system via surface runoff or underground drainage systems. Measures in addition to those shown on the Plans necessary to prevent the movement of sediment off site shall be installed, maintained, removed, and cleaned up at the expense of the Contractor. No additional charges to the City will be considered.

B. Sedimentation and erosion control measures shall conform to the requirements outlined in the Texas Natural Resources Conservation Commission, Chapter 213.

G6.05 MATERIALS

A. Triangular Filter Dike

1. Triangular filter dike sections shall be either 10-feet or 20-feet in length.
2. Geotextile fabric shall extend to 12-inches upstream of triangular filter dike structure.
3. Triangular filter dike structure shall be 18-inches in length on all three (3) faces.
4. Three (3) inch to five (5) inch open graded rock shall be placed over skirt to anchor it on the upstream side.
5. Structure shall be formed by six (6) gauge six inch by six inch (6”x6”) welded wire mesh.
6. Geotextile fabric shall be non-woven, 4.5 oz. minimum and 36-inches wide.

B. Rock Berm

1. Woven wire sheathing shall be 20-gauge with one (1) inch openings.
2. Rock shall be three inches to five inches (3”-5”) open graded.

C. Silt Fence

1. Steel posts shall be a minimum of four (4) feet in length, heavy weight T-Post.

2. Welded wire fabric shall be two-inch by four-inch (2"x4") mesh of 12-gauge by 12-gauge galvanized wire mesh.

3. Silt fence fabric shall be a 4.5 oz minimum non-woven geotextile filter fabric 36-inches wide.

4. Tie wires for securing silt fence fabric to wire mesh shall be light gauge metal clips (hog rings), or $^{1}/_{32}$-inch diameter soft aluminum wire.

5. Prefabricated commercial silt fence may be substituted for built-in-field fence. Prefabricated silt fence shall be "Envirofence" as manufactured by Mirafi Inc., Charlotte, NC or equal.

D. Curb Inlet Protection

1. 4.5 oz. minimum non-woven geotextile filter fabric shall be used.

2. Sand bags shall be used to hold the filter fabric in place.

E. Stabilized Construction Entrance

1. Stabilized construction entrance shall have a minimum width of 12-feet and a minimum length of 50-feet.

2. An eight (8) inch high diversion ridge shall be constructed 15-feet from the edge of the existing roadway.

3. Stabilized construction entrance shall be graded to drain towards the existing roadway at a two-percent (2%) slope.

4. Rock shall be four-inches to eight-inches (4"-8") coarse aggregate.

5. Rock shall be placed to a depth of at least eight (8) inches.

F. Tree Protection – Chain Link Fence

1. Chain link fence shall be five (5) feet in height.

2. Fence shall be installed around the driplines of the trees to be protected.

G. Tree Protection – Wood Slats

1. Where any exceptions result in a fence being closer than four (4) feet to a tree trunk, protect the trunk with strapped-on-planking two inches by four inches (2"x4") wood slats to a height of eight (8) feet, or to the limits of lower branching in addition to the reduced fencing provided.

2. Trees most heavily impacted by construction activities should be watered deeply once a week during periods of hot, dry weather. Tree crowns should be sprayed with water periodically to reduce dust accumulation on the leaves.

3. Any trenching required for the installation of landscape irrigation shall be placed as far from existing tree trunks as possible.

4. No landscape topsoil dressing greater than four (4) inches shall be permitted within the dripline of a tree. No soil is permitted on the root flare of any tree.

5. No vehicles or equipment shall be allowed to park within the dripline of an existing tree.

H. Soil Retention Blankets

1. Soil retention blankets shall be installed in all seeded drainage swales and ditches as shown on the Plans or as directed by the Engineer. Only soil retention blankets included on TxDOT's Approved Products List will be considered acceptable for use on this Project.

I. Temporary Mulch

1. Temporary mulch shall be applied to areas where rough grading has been completed but final grading is not anticipated to begin within 30 days of the completion of rough grading.

G6.06 INSTALLATION

A. Triangular Filter Dike

1. Layout the filter dike following as closely as possible to the contour.

2. Clear the ground of debris, rocks, and plants that will interfere with installation.

3. Place the filter dike sections one (1) at a time, with the skirt on the uphill side towards the direction of flow anchoring each section to the ground before the next section is placed.

4. Anchors should be placed on two (2) foot centers alternating from front to back so that there is actually only one (1) foot in between anchors.

5. Securely fasten the skirt from one (1) section of filter dike to the next.

6. Filter dikes must maintain continuous contact with the ground.

7. After the site is completely stabilized, the dikes and any remaining silt should be removed. Silt should be disposed of in a manner that will not contribute to additional siltation.

B. Rock Berm Installation

1. Layout the rock berm following as closely as possible to the contour.

2. Clear the ground of debris, rocks or plants that will interfere with installation.

3. Place woven wire fabric on the ground along the proposed installation with enough overlap to completely encircle the finished size of the berm.

4. Place the rock along the center of the wire to the designated height.

5. Wrap the structure with the previously placed wire mesh secure enough so that when walked across, the structure retains its shape.

6. Secure with tie wire.

7. The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approximately four (4) inches deep to prevent failure of the control.

8. The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

C. Silt Fence Installation

1. Layout the silt fence following as closely as possible to the contour.

2. Clear the ground of debris, rocks, and plants (including grasses taller than two (2) inches) to provide a smooth flow approach surface. Excavate four-inches deep by four-inches wide (4"x4") trench on upstream side of face per Plans.

3. Drive the heavy duty T-post at least 12-inches into the ground and at a slight angle towards the flow.

4. Attach the two-inches by four-inches (2"x4") 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-inches above ground level. The welded wire mesh to be overlapped six (6) inches and tied at least six (6) times with hog rings.

5. The silt fence to be installed with a skirt a minimum of 11-inches wide placed on the uphill side of the fence inside excavated trench. The fabric to overlap the top of the wire by one (1) inch.

6. Anchor the silt fence by backfilling with excavated dirt and rocks.

7. Geotextile splices should be a minimum of 18-inches wide attached in at least six (6) places.

D. Curb Inlet Protection Installation

1. Clear the pavement of debris, rocks, etc. to provide a smooth surface for installation.

2. Place the filter fabric over the inlet and extend to five (5) feet beyond inlet opening, upstream of inlet. Terminate fabric in street gutter with sand bags placed in gutter flowline.

3. Place sandbags on top of filter fabric around the perimeter of the protected area to secure the filter fabric.

4. Care shall be taken insure that the inlet protection will remain in place during periods of heavy runoff and that severe ponding will not occur in the street.

E. Stabilized Construction Entrance Installation

1. Clear the area of debris, rocks or plants that will interfere with installation.

2. Grade the area for the entrance to flow back on to the construction site. Runoff from the stabilized construction entrance onto a public street will not be allowed except for the first 15 feet connecting to the public street.

3. Place geotextile fabric if required.

4. Place rock as required.

F. Tree Protection – Chain Link Fence

1. Tree protection fences shall be installed prior to the commencement of any site preparation work (clearing, grubbing or grading).

2. Fences shall completely surround the tree, or clusters of trees; will be located at the outermost limit of the tree branches (dripline), and will be maintained throughout the construction project in order to prevent the following:

   a. Soil compaction in the root zone area resulting from vehicular traffic, or storage of equipment or materials.

   b. Root zone disturbances due to grade changes greater than six (6) inches cut or fill or trenching not reviewed and authorized by the City.

   c. Wounds to exposed roots, trunks or limbs by mechanical equipment.

   d. Other activities detrimental to trees, such as chemical storage, cement truck cleaning and fire.

3. Exceptions to installing fences at tree driplines may be permitted in the following cases:

a. Where permeable paving is to be installed, erect the fence at the outer limits of the permeable paving area.

b. Where trees are close to a proposed building, erect the fence no closer than six (6) feet to building.

G. Tree Protection – Wood Slats

1. Any roots exposed by construction activity shall be pruned flush with the soil. Backfill root areas with good quality top soil as soon as possible. If exposed root areas are not backfilled within two (2) days, cover them with organic material in a manner which reduces soil temperature, and minimizes water loss due to evaporation.

2. Prior to excavation or grade cutting within tree dripline, make a clean cut between the disturbed and undisturbed root zones with a rock saw or similar equipment, to minimize damage to remaining roots.

3. Pruning to provide clearance for structures, vehicular traffic and equipment shall take place before construction starts.

H. Excelsior Matting

1. The area to be covered shall be properly prepared, fertilized and seeded with permanent vegetation before the blanket is applied.

2. When the blanket is unrolled, the netting shall be on top and the fibers in contact with the soil over the entire area.

3. The blankets shall be applied in the direction of water flow, and stapled. Blankets shall be placed a minimum of three (3) rows, of four (4) foot wide (total approx. 12-foot width) within the drainage swale/ditch and stapled together in accordance with Manufacturer's instructions.

4. Side overlaps shall be four (4) inch minimum. The staples shall be made of wire, 0.091-inch in diameter or greater, "U" shaped with legs 10-inches in length and a $1^{1}/_{2}$-inch crown. The staples shall be driven vertically into the ground, spaced approximately two (2) linear feet apart, on each side, and one (1) row in the center alternately spaced between each size.

5. Upper and lower ends of the matting shall be buried to a depth of four (4) inches in a trench.

6. Erosion stops shall be created every 25-feet by making a fold in the fabric and carrying the fold into a silt trench across the full width of the blanket. The bottom of the fold shall be four (4) inches below the ground surface. Staple on both sides of fold.

7. Where the matting must be cut or more than one (1) roll length is required in the swale, turn down upper end of downstream roll into a slit trench to a depth of four (4) inches. Overlap lower end of upstream roll four (4) inches past edge of downstream roll and staple.

8. To ensure full contact with soil surface, roll matting with a roller weighing 100-pounds per foot of width perpendicular to flow direction after seeding, placing matting and stapling.

9. Thoroughly inspect channel after completion. Correct any areas where matting does not present a smooth surface in full contact with the soil below.

I. Temporary Mulching

1. Straw mulch shall be applied at rate of 100 lbs/1,000 ft^2 and tackified with latex acrylic copolymer at a rate of 1 gal/1,000 ft^2 diluted in a ratio of 30 parts water to one (1) part latex acrylic copolymer mix.

G6.07 MAINTENANCE AND INSPECTIONS

A. Inspections

1. Contractor shall make a visual inspection of all sedimentation control devices once per week and promptly after every rain event exceeding ¼-inch. If such inspection reveals that additional measures are needed to prevent movement of sediment to offsite areas or into the vent trench, Contractor shall promptly install additional devices as needed. Sediment controls in need of maintenance shall be repaired promptly.

B. Device Maintenance

1. Triangular Filter Dikes

a. Realign berms as needed to prevent gaps between the sections.

b. Accumulated silt should be removed after each rainfall event, and disposed of in a manner which shall not cause additional siltation.

2. Rock Berm

a. Remove sediment and other debris when buildup reaches six (6) inches and dispose of the accumulated silt in an approved manner.

b. Repair any loose wire sheathing.

c. Reshape as needed.

d. Replace berm when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.

3. Silt Fences

a. Remove accumulated sediment when buildup reaches six (6) inches.

b. Replace damaged fabric, or patch with a two (2) foot minimum overlap.

c. Replace or repair any sections crushed or collapsed in the course of construction activity.

d. Make other repairs as necessary to ensure that the fence is filtering all runoff directed to the fence.

4. Curb Inlet Protection

a. Repair any damaged fabric, or patch with a two (2) foot minimum overlap.

b. Replace any damaged sandbags.

c. Remove accumulated sediment.

5. Stabilized Construction Entrance

a. Periodic top dressing with additional stone may be required as conditions demand to prevent tracking or flowing of sediment onto public rights-of-way.

c. Cleanout any measures used to trap sediment as needed.

d. All sediment spilled, dropped, washed or tracked on to public rights-of-way should be removed immediately by the Contractor.

e. When necessary, wheels should be cleaned to remove sediment prior to entrance onto public rights-of-way.

f. 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.

g. All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

6. Tree Protection – Chain Link Fence

a. Repair or replace any chain link fence damaged by construction activities.

7. Tree Protection – Wood Slats

a. Repair or replace any wood slats damaged by construction activities.

8. Excelsior Matting

a. Replace matting as needed to prevent erosion from occurring.

9. Temporary Mulch

a. Replace mulch as needed to prevent erosion from occurring.

G6.08 REMOVAL AND FINAL CLEANUP

A. Once the site has been fully stabilized against erosion, remove sediment control devices and all accumulated silt. Dispose of silt and waste materials in proper manner. Re-grade all areas disturbed during this process and stabilize against erosion with surfacing materials as indicated on the Plans.

G6.09 PAYMENT

A. Silt fence and rock berm will be paid per linear foot installed as listed in the Proposal and Bid Schedule.

B. Stabilized Construction Entrance will be paid per each installed as listed in the Proposal and Bid Schedule.

C. Tree protection will be paid per each installed as listed in the Proposal and Bid Schedule.

D. Erosion Control Blankets will be paid per square yard as listed in the Proposal and Bid Schedule.

E. Triangular Filter Dikes will be paid per linear foot as listed in the Proposal and Bid Schedule.

F. No separate payment will be made for all other work performed in accordance with this specification, and the cost thereof shall be included in the proper items of the Proposal and Bid Schedule.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION G7 – LOAMING, HYDROSEEDING AND PERMANENT EROSION CONTROL

G7.01 SCOPE OF WORK

A. This specification covers the requirements to provide erosion control and place topsoil, finish grade, apply fertilizer, hydraulically apply seed and mulch and maintain all seeded areas as shown on the Plans and as specified herein, including all areas disturbed by the Contractor.

G7.02 SUBMITTALS

A. Within 30 days after the Notice to Proceed, the Contractor shall submit to the Engineer or the City for approval, samples of all materials to be used and all other pertinent data to illustrate conformance to the specification found within.

G7.03 TOPSOIL

A. Topsoil shall be fertile, friable, natural topsoil typical of topsoil of the locality and shall be obtained from a well drained site that is free of flooding. It shall be without admixture of subsoil or slag and free of stones, lumps, plants or their roots, sticks, clay, peat and other extraneous matter and shall not be delivered to the site or used while in a frozen or muddy condition. Topsoil as delivered to the site or stockpiled shall have pH between 6.0 and 7.0 and shall contain not less than three (3) percent organic matter as determined by loss of ignition of moisture-free samples dried at 100 degrees Celsius. The topsoil shall meet the following mechanical analysis:

	Percentage Passing
1-inch screen opening	100
No. 10 mesh	95 - 100
No. 270 mesh	35 - 75
0.002 mm*	5 - 25

* Clay size fraction determined by pipette or hydrometer analysis.

B. At least 10 days prior to anticipated start of topsoiling operations, a one (1) pint sample of topsoil material shall be delivered by the Contractor to a laboratory for testing and approval. All testing shall be at the sole expense of the Contractor. Based on tests performed by the laboratory, the topsoil shall be identified as acceptable, acceptable with certain fertilizer and limestone applications or unacceptable. If the topsoil is found acceptable the fertilizer and lime requirements will be as specified or as recommended by the laboratory. If the topsoil is found unacceptable, the Contractor shall be responsible for identifying another source of topsoil and shall incur all expenses associated with testing additional samples. All topsoil incorporated into the site work shall match the sample provided to the laboratory for testing. Topsoil stockpiled under other Sections of these Specifications may be used subject to the testing and approval outlined above. Contractor will be responsible for screening stockpiled topsoil and providing additional topsoil as required at his/her own expense.

C. Lime shall be ground limestone containing not less than 85-percent calcium and magnesium carbonates and be ground to such fineness that at least 50-percent shall pass a 100-mesh sieve and at least 90-percent shall pass a 20-mesh sieve.

D. All planting shall be done between May 1 and September 15 except as specifically authorized in writing. If planting is authorized to be done outside the dates specified, the seed shall be planted with the addition of winter fescue (Kentucky 31) at a rate of 100 lbs. per acre.

E. The seed shall be furnished and delivered premixed in the proportions specified within. A Manufacturer's Certificate of Compliance to the specified mixes shall be submitted by the Manufacturers for each seed type. These certificates shall include the guaranteed percentages of purity, weed content and germination of the seed and also the net weight and date of shipment. No seed may be sown until the Contractor has submitted the certificates.

F. Seed shall be delivered in sealed containers bearing the dealer's guaranteed analysis.

G. Mulch shall be a specially processed cellulose fiber containing no growth or germination-inhibiting factors. It shall be manufactured in such a manner that after addition and agitation in slurry tanks with water, the fibers in the material become uniformly suspended to form a homogeneous slurry. When sprayed on the ground, the material shall allow absorption and percolation of moisture. Each package of the cellulose fiber shall be marked by the manufacturer to show the air-dry weight content and not contain in excess of 10-percent moisture.

H. Excelsior matting blanket installed in all drainage swales and ditches shall be in accordance with Section G6- SEDIMENTATION AND TEMPORARY EROSION CONTROL.

G7.04 APPLICATION OF TOPSOIL

A. Unless otherwise shown on the plans, topsoil shall be placed to a minimum compacted depth of six (6) inches on all parts of the site not covered with structures, pavement, or existing woodland.

B. For all areas to be seeded:

1. Fertilizer (10-20-10) shall be applied at the rate of 30-lbs. per 1,000-sq. ft. or as determined by the soil test.

2. Seed shall be applied at the rate of five (5) lbs. per 1,000-sq. ft.

3. Fiber mulch shall be applied at the rate of 40-lbs. per 1,000-sq. ft.

C. After the topsoil is placed and before it is raked to true lines and rolled, limestone shall be spread evenly over the loam surface and thoroughly incorporated by heavy raking to at least one half the depth of topsoil.

D. The application of fertilizer may be performed hydraulically in one (1) operation with hydroseeding and fiber mulching. The Contractor is responsible for cleaning all structures and paved areas of unwanted deposits of the hydroseeded mixture.

G7.05 INSTALLATION OF TOPSOIL

A. Previously established grades, as shown on plans shall be maintained in a true and even condition.

B. Subgrade shall be prepared by tilling prior to placement of topsoil to obtain a more satisfactory bond between the two layers. Tillage operations shall be across the slope. Tillage shall not take place on slopes steeper than two (2) horizontal to one (1) vertical or where tillage equipment cannot be operated. Tillage shall be accomplished by disking or harrowing to a depth of nine (9) inches parallel to contours. Tillage shall not be performed when the subgrade is frozen, excessively wet, extremely dry or in other conditions which would not permit tillage. The subgrade shall be raked and all rubbish, sticks, roots and stones larger than two (2) inches shall be removed. Subgrade surfaces shall be raked or otherwise loosened immediately prior to being covered with loam.

C. Topsoil shall be placed over approved areas to a depth sufficiently greater than required so that after natural settlement and light rolling, the complete work will conform to the lines, grades and elevations indicated. No loam shall be spread in water or while frozen or muddy.

D. After topsoil has been spread, it shall be carefully prepared by scarifying or harrowing and hand raking. All stiff clods, lumps, roots, litter and other foreign material shall be removed from the loamed area and disposed of by the Contractor. The areas shall also be free of smaller stones, in excessive quantities, as

determined by the Engineer or the City. The whole surface shall then be rolled with a hand roller weighing not more than 100-lbs per foot of width. During the rolling, all depressions caused by settlement of rolling shall be filled with additional loam and the surface shall be regraded and rolled until a smooth and even finished grade is created.

E. Seeding shall be done within 10 days following soil preparation. Seed shall be applied hydraulically at the rates and percentages indicated. The spraying equipment and mixture shall be so designed that when the mixture is sprayed over an area, the grass seed and mulch shall be equal in quantity to the specified rates. Prior to the start of work, the Contractor shall furnish the Engineer with a certified statement as to the number of pounds of materials to be used per 100-gallons of water. This statement shall also specify the number of square feet of seeding that can be covered with the quantity of solution in the Contractor's hydroseeder. Upon completion of seeding operations, the Contractor shall furnish the Engineer and the City with a certified statement on the actual quantity of solution applied.

F. In order to prevent unnecessary erosion of newly topsoiled and graded slopes and unnecessary siltation of drainageways, the Contractor shall carry out seeding and mulching as soon as he/she has satisfactorily completed a unit or portion of the project. A unit or portion of the project shall be determined by the City or Engineer. When protection of newly loamed and graded areas is necessary at a time which is outside of the normal seeding season, the Contractor shall protect those areas by what ever means necessary as approved by the Engineer and the City and shall be responsible for prevention of siltation in the areas beyond the limit of work.

G. When newly graded subgrade areas cannot be topsoiled and seeded because of season or weather conditions and will remain exposed for more than 30 days, the Contractor shall protect those areas against erosion and washouts in accordance with Section G6- SEDIMENTATION AND TEMPORARY EROSION CONTROL, or by other measures as approved by the Engineer and the City. Prior to application of topsoil, any such materials applied for erosion control shall be removed or thoroughly incorporated into the subgrade by disking. Fertilizer shall be applied prior to spreading of topsoil.

H. On slopes, the Contractor shall provide against washouts by a method approved by the Engineer and the City. Any washout which occurs shall be regraded and reseeded at the Contractor's expense until a good sod is established.

G7.06 HYDROMULCHING

A. Fertilizer: 18-18-5, (Nitrogen, Phosphoric Acid, Potash) show release granular at a rate of 25-lbs per 1,000-sq. ft.

B. Water: The Contractor shall provide water necessary for grass planting and maintenance until acceptance by the City.

C. Planting Seasons: Grass planting by sodding, sprigging, or hydromulching shall normally be done between May 1 and September 15.

D. Hydromulching General

1. Submit Manufacturer’s product specifications and guaranteed purity analysis for fertilizer.

2. Product Delivery, Storage and Handling

a. Deliver fertilizer to site in original unopened containers bearing Manufacturer’s guaranteed chemical analysis, name, trademark and conformance to State Law.

b. Store fertilizer in a dry location and protect from weather.

3. Guaranty and Replacement

a. Provide guaranty for a period of one (1) year after final completion and acceptance of project, that the installed grass areas be at least the quality and condition as during acceptance.

b. Rehydromulch unacceptable areas during the guaranty period. Guaranty shall not include damage or loss of lawn due to acts of God, acts of vandalism or negligence on the part of the City.

E. Native Grass Hydromulching-Products

1. Grass Seed: Common Bermuda grass, hulled, minimum 82% pure live seed. All grass seed shall be free from noxious weed, grade "A" recent crop, recleaned and treated with appropriate fungicide at time of mixing. Seed shall be furnished in sealed, standard containers with dealer's guaranteed analysis.

2. Mulch: Conwed regular wood fiber mulch or approved equal.

3. Fertilizer: 18-18-5, water-soluble or an approved equal.

4. Topsoil: Supply high quality imported topsoil of loamy character to the limits shown on the Plans, high in humus and organic content from local agriculture source. Topsoil to be free from clay, lumps, coarse sands, stones, roots and other foreign matter. There shall be no toxic amounts of acid or alkaline elements. Soil to be used for on-site mixing of backfill.

F. Native Grass Hydromulching-Execution

1. Preparation: Fine grade to final elevation removing any debris and insuring the seedbed is smooth.

2. Installation: Use a hydromulcher (sprayer) and apply the mixture at the following rate. (Mix in accordance with Manufacturer's recommendations.)

a. Hydromulch mixture shall contain 2.5-lbs. of common Bermuda grass seed per 1,000-sq. ft. hydromulch applied.

b. Mulch – 60-lbs. per 1,000-sq. ft.

c. Fertilizer – 25-lbs (18-18-5) per 1,000-sq. ft.

3. General Maintenance

a Water the completed installation as necessary to insure germination of grass.

b. Maintain grass areas until complete germination and establishment of all areas.

c. Correct defective work as soon as apparent. Maintenance shall include, but not be limited to, weeding and fertilizing.

d. Clean up: Remove trash and debris from the site.

e. Acceptance: Substantial completion inspection to determine acceptance of grass areas will be made by the City after complete germination and coverage has been attained.

G7.07 MAINTENANCE OF DEVELOPING GRASS

A. The Contractor shall water and maintain all grassed areas until final acceptance. He shall also re-fertilize at the rate of one (1) pound of nitrogen and one (1) pound of phosphorous per 1,000-sq. ft. every 60 days until the grass is accepted.

B. Areas which, due to settling or improper leveling, do not have positive drainage shall be re-leveled with topsoil and replanted with grass.

C. Areas damaged by erosion, vehicle ruts and similar damage shall be re-leveled with topsoil and replanted. Finished ground surface shall be sufficiently smooth and level to facilitate mowing.

G7.08 ACCEPTANCE

A. Work under this section shall be considered acceptable when finish graded surfaces are level and well-drained, when there are no bare spots larger than three (3) square feet, when no more than 10 percent of the total area has bare spots larger than one (1) square foot, when not more than 15 bare spots larger than six (6) inches square and the grass is at least two (2) inches high, and when other requirements listed herein are met.

B. Acceptance of work normally coincides with final acceptance of the entire project. However, seasonal factors may be cause for delay in grass planting, development, and acceptance.

C. The City will accept responsibility for normal maintenance when grass is accepted. However, the Contractor shall remain responsible for any subsequent grass damage that he causes and for warranty of materials and workmanship for a period of not less than one (1) year from the time of acceptance.

D. The Contractor shall furnish full and complete written instruction for maintenance of the seeded areas to the City at the time of acceptance.

G7.09 PAYMENT

A. No separate payment will be made for finish grading, placement of topsoil or grass planting and fertilizing. All related costs shall be included in the proper item of the Proposal and Bid Schedule.

END OF SECTION

V. AGENT AUTHORIZATION FORM (TCEQ-0599)

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

I Todd Dailey,
Print Name

Managing Member,
Title - Owner/President/Other

of Georgetown Property - Airport T&C, LLC,
Corporation/Partnership/Entity Name

have authorized Scott J. Foster, P.E.
Print Name of Agent/Engineer

of 360 Professional Services, Inc.
Print Name of Firm

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

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

10/27/2023
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Todd Dailey 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 27 day of October.

NOTARY PUBLIC

NICHOLE SPROULL
Notary ID #131753057
My Commission Expires
November 18, 2026

Nichole Sproull
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 11/18/26

VI. APPLICATION FEE FORM (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Capella Parkway Utility Improvements
Regulated Entity Location: Northeast intersection of Northwest Blvd. and Lakeway Drive
Name of Customer: Georgetown Property - Airport T&C, LLC
Contact Person: Todd Dailey Phone: (512) 617-6363
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	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	$
Sewage Collection System	1,223 L.F.	$ 650.00
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____ Date: 11/20/23

TCEQ-0574 (Rev. 02-24-15)

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

VII. CORE DATA FORM (TCEQ-10400)

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:*

Georgetown Property - Airport T&C, LLC | N/A

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0804100782	32079600337		

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: Developer

15. Mailing Address:	317 Grace Ln Ste 240							
	City	Austin	**State**	TX	**ZIP**	78746	**ZIP + 4**	4834

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

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

(512) 617-6363		( ) -

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.)*

Capella Parkway Utility Improvements

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	317 Grace Ln Ste 240							
	City	Austin	**State**	TX	**ZIP**	78746	**ZIP + 4**	4834
24. County	Travis							

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

25. Description to Physical Location:	Generally located at the northeast intersection of Northwest Blvd. and Lakeway Drive				
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:	30.670400		**28. Longitude (W) In Decimal:**	-97.683625	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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)
6552		237210	

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

Real Estate Developer

34. Mailing Address:	**317 Grace Ln Ste 240**							
	City	**Austin**	**State**	**TX**	**ZIP**	**78746**	**ZIP + 4**	**4834**
35. E-Mail Address:	**todd@capellatx.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 617-6363		( ) -

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:

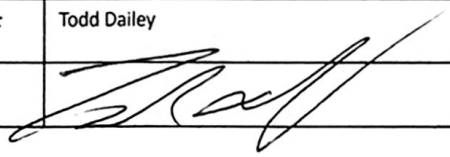
SECTION IV: Preparer Information

40. Name:	Scott J. Foster, P.E.	41. Title:	Principal

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 354-4582		( ) -	scott.foster@360psinc.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:	Georgetown Property - Airport T&C, LLC	Job Title:	Managing Member
Name *(In Print)*:	Todd Dailey	Phone:	(512) 617- 6363
Signature:		Date:	10/27/2023

Owner Authorization Form

Texas Commission on Environmental Quality
for Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

Land Owner Authorization

I, STEVE RICHMOND of Agua Fria Ranch LLC
Land Owner Signatory Name — Land Owner Name (Legal Entity or Individual)

am the owner of the property located at
Lot 1B, Block B, of the Havins Airport Commercial (BLK C LT 1 REPLAT), Doc #2023051459
Legal description of the property referenced in the application

and am duly authorized in accordance with §213.4(c)(2) and §213.4(d)(1) or §213.23(c)(2) and §213.23(d) relating to the right to submit an application, signatory authority, and proof of authorized signatory.

I do hereby authorize Georgetown Property - Airport T&C, LLC
Applicant Name (Legal Entity or Individual)

to conduct construction of a wastewater line within easement as shown on Doc #2023051459
Description of the proposed regulated activities

at 909 Lakeway Drive Georgetown, TX 78628.
Precise location of the authorized regulated activities

Land Owner Acknowledgement

I understand that Agua Fria Ranch LLC
Land Owner Name (Legal Entity or Individual)

Is ultimately responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation even if the responsibility for compliance and the right to possess and control the property referenced in the application has been contractually assumed by another legal entity. I further understand that any failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

Land Owner Signature

Land Owner Signature

12/12/23
Date

THE STATE OF § NEW MEXICO

County of § SANTA FE

BEFORE ME, the undersigned authority, on this day personally appeared STEVE RICHMOND 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 12 day of December 2023

NOTARY PUBLIC

Belinda Yazzie

Typed or Printed Name of Notary

STATE OF NEW MEXICO
NOTARY PUBLIC
BELINDO YAZZIE
COMMISSION NUMBER 1124177
EXPIRATION DATE 02-23-2027

MY COMMISSION EXPIRES: 02/27/2027

Attached: (Mark all that apply)

- ☐ Lease Agreement
- ☐ Signed Contract
- ☐ Deed Recorded Easement
- ☑ Other legally binding document

Applicant Acknowledgement

I, Todd Dailey of Georgetown Property - Airport T&C, LLC

Applicant Signatory Name — Applicant Name (Legal Entity or Individual)

acknowledge that Agua Fria Ranch LLC

Land Owner Name (Legal Entity or Individual)

has provided Georgetown Property - Airport T&C, LLC

Applicant Name (Legal Entity or Individual)

with the right to possess and control the property referenced in the Edwards Aquifer protection plan.

I understand that Georgetown Property - Airport T&C, LLC

Applicant Name (Legal Entity or Individual)

is contractually responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation. I further understand that failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

Applicant Signature

_____ _____

Applicant Signature — Date

THE STATE OF § _____

County of § _____

BEFORE ME, the undersigned authority, on this day personally appeared _____ 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 _____ day of _____

_____

NOTARY PUBLIC

_____

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: _____