

WATER POLLUTION ABATEMENT PLAN APPLICATION

FOR

WOODLAKE RETAIL

100 Woodlake Drive
Georgetown, Texas 78633

Prepared For:

TAILWIND 303 PROPERTIES, LLC
8001 QUAKER AVE., STE K
LUBBOCK, TX 79424-3368

Prepared By:



Sandlin Services, LLC
TBPELS Firm # 21356
P: (806) 679-7303

February 13, 2024

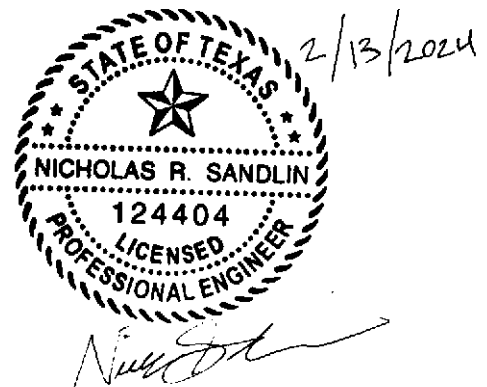




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***WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN***

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Edwards Aquifer Application Cover Page (TCEQ-20705)

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: Woodlake Retail					2. Regulated Entity No.:				
3. Customer Name: Tailwind 303 Properties LLC					4. Customer No.:				
5. Project Type: (Please circle/check one)	<input checked="" type="radio"/> New	Modification			Extension		Exception		
6. Plan Type: (Please circle/check one)	<input checked="" type="radio"/> WPAP	<input type="radio"/> CZP	<input type="radio"/> SCS	<input type="radio"/> UST	<input type="radio"/> AST	<input type="radio"/> EXP	<input type="radio"/> EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	<input type="radio"/> Residential	<input checked="" type="radio"/> Non-residential				8. Site (acres):		1.054	
9. Application Fee:	4,000		10. Permanent BMP(s):				Batch Detention Pond		
11. SCS (Linear Ft.):	n/a		12. AST/UST (No. Tanks):				n/a		
13. County:	Williamson		14. Watershed:				Granger Lake-San Gabriel River		

Application Distribution


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

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

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

Austin Region			
County:	Hays	Travis	Williamson
Original (1 req.)	—	—	_1_
Region (1 req.)	—	—	_1_
County(ies)	—	—	_1_
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___ Barton Springs/ Edwards Aquifer ___ Hays Trinity ___ Plum Creek	___ Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___ Austin ___ Buda ___ Dripping Springs ___ Kyle ___ Mountain City ___ San Marcos ___ Wimberley ___ Woodcreek	___ Austin ___ Bee Cave ___ Pflugerville ___ Rollingwood ___ Round Rock ___ Sunset Valley ___ West Lake Hills	___ Austin ___ Cedar Park ___ Florence _1_ Georgetown ___ Jerrell ___ Leander ___ Liberty Hill ___ Pflugerville ___ Round Rock

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. NICK SANDLIN, P.E. (SANDLIN SERVICES, LLC)	
Print Name of Customer/Authorized Agent 	2/13/2024
Signature of Customer/Authorized Agent	Date

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



General Information Form (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.

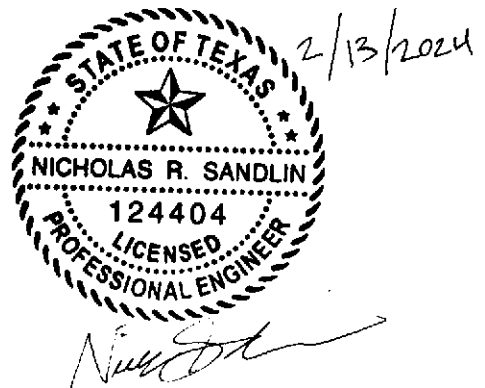
Signature

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: NICK SANDLIN, P.E. (SANDLIN SERVICES, LLC)

Date: 2/13/2024

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: WOODLAKE RETAIL
2. County: WILLIAMSON
3. Stream Basin: BRAZOS RIVER
4. Groundwater Conservation District (If applicable): N/A

5. Edwards Aquifer Zone:

- ☒ Recharge Zone
☐ Transition Zone

6. Plan Type:

- ☒ WPAP
☐ SCS
☐ Modification

- ☐ AST
☐ UST
☐ Exception Request

7. Customer (Applicant):

Contact Person: BRAD ANDREWS

Entity: TAILWIND 303 PROPERTIES LLC

Mailing Address: 8001 QUAKER AVE STE K

City, State: LUBBOCK, TX

Zip: 79424-3368

Telephone: 806-368-6554

FAX: _____

Email Address: brad@bradandrewsrealty.com

8. Agent/Representative (If any):

Contact Person: NICK SANDLIN, P.E.

Entity: SANDLIN SERVICES, LLC

Mailing Address: 9111 JOLLYVILLE RD, STE 212

City, State: AUSTIN, TX

Zip: 78759

Telephone: 806-679-7303

FAX: _____

Email Address: nick@sandlinservices.com

9. Project Location:

- ☒ The project site is located inside the city limits of GEORGETOWN, TX.
- ☐ 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.

100 Woodlake Dr, Georgetown, TX 78633

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: 5/13/2024

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.



General Information Form (TCEQ-0587)

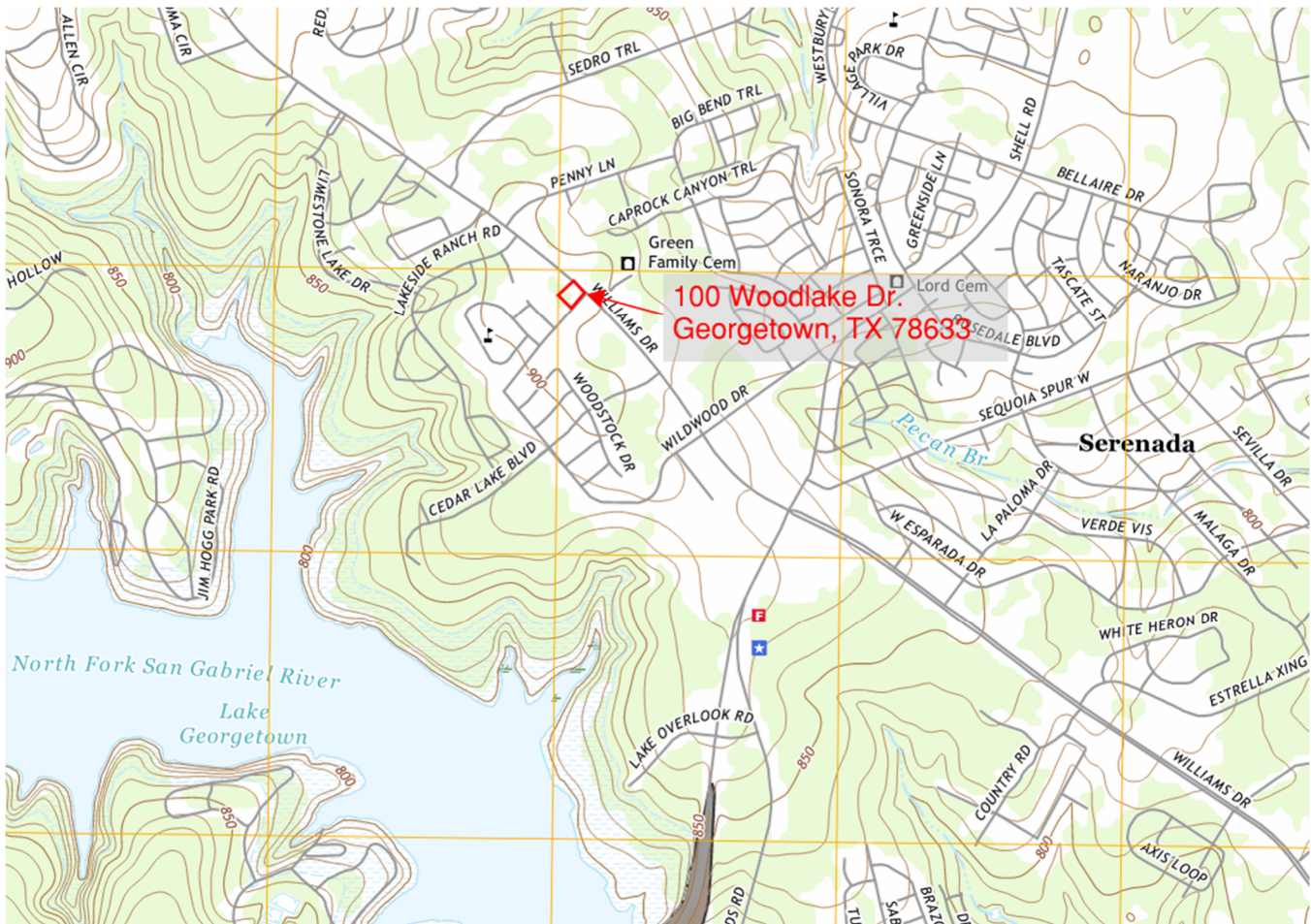
Attachment A: Road Map



Source: Google Earth Pro accessed 09/21/2023

General Information Form (TCEQ-0587)

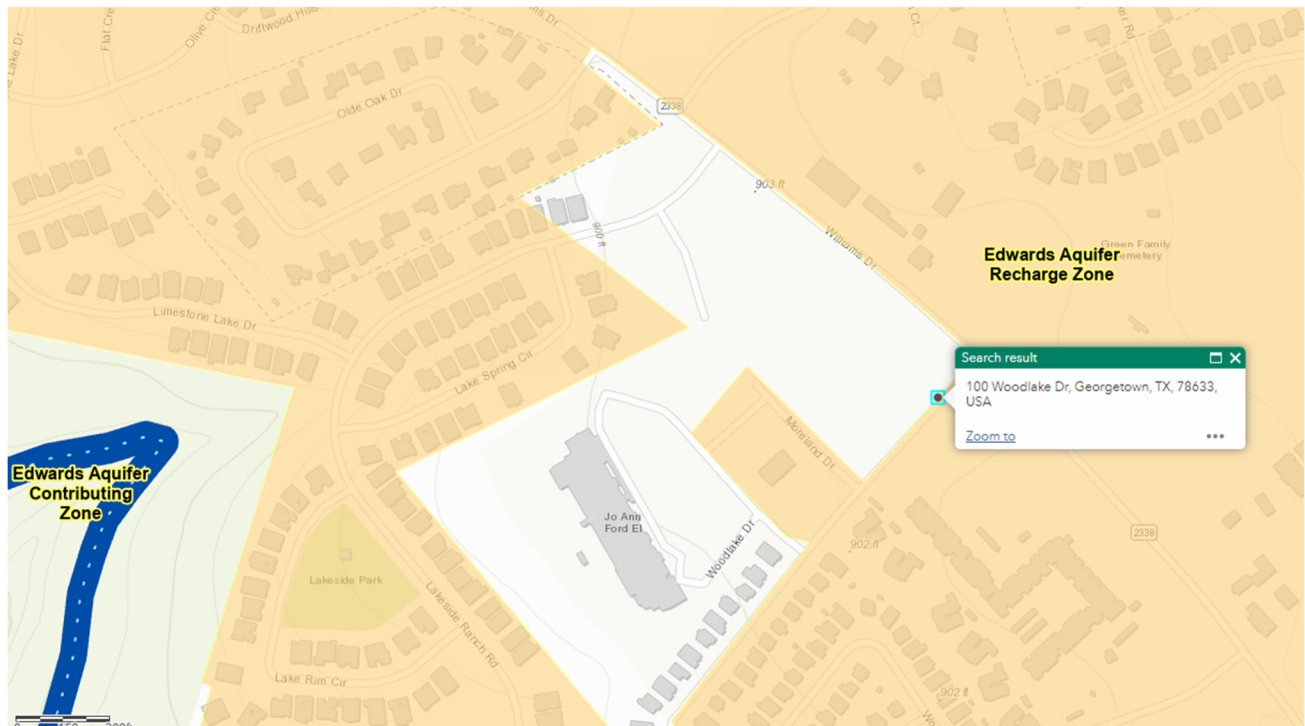
Attachment B: USGS Quadrangle Map Edwards Aquifer Recharge Zone Map FEMA FIRM Map



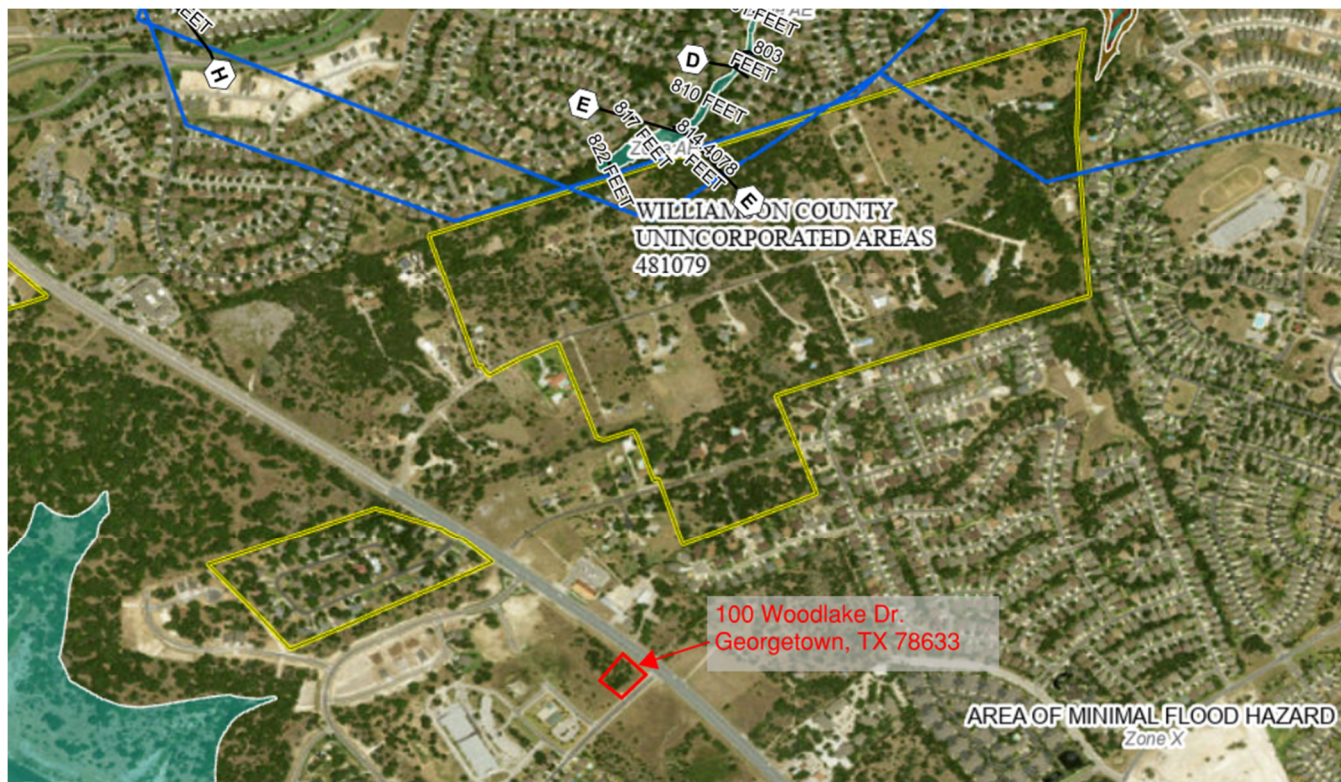
Source: Portion of USGS Quadrangle Map (TX_Georgetown_20220811_TM_geo)

EDWARDS AQUIFER ZONE MAP

Woodlake Retail
 100 Woodlake Dr.
 Georgetown, Williamson County, Texas
 Source: TCEQ Edwards Aquifer Viewer
 Accessed 09/20/2023



FEMA FIRM MAP PANEL



Source: Portion of FEMA FIRM Map Panel 48491C0280E (effective 09/26/2008)

National Flood Hazard Layer FIRMette



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, X, AR
	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
GENERAL STRUCTURES	Area of Undetermined Flood Hazard Zone D
	Channel, Culvert, or Storm Sewer
OTHER FEATURES	Levee, Dike, or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation
MAP PANELS	Coastal Transect
	Base Flood Elevation Line (BFE)
OTHER FEATURES	Limit of Study
	Jurisdiction Boundary
OTHER FEATURES	Coastal Transect Baseline
	Profile Baseline
OTHER FEATURES	Hydrographic Feature
	Digital Data Available
MAP PANELS	No Digital Data Available
	Unmapped

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 9/20/2023 at 5:41 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.

Source: FEMA FIRMette Map Panel 48491C0280E (effective 09/26/2008)



General Information Form (TCEQ-0587)

Attachment C: Project Description

Proposed Development

The 1.054 AC project site is located at 100 Woodlake Dr., Georgetown, Texas. The property is located inside the city limits of Georgetown in Williamson County. The project site is currently undeveloped land. The proposed development is a 5,000 SF retail property (two tenants) with associated paving, drainage, utility and water quality infrastructure. The property is within the Edwards Aquifer Recharge Zone and will therefore need a Water Pollution Abatement Plan (WPAP). The WPAP proposes a Batch Detention Pond BMP for permanent stormwater water quality control.

Site Description and History

The 1.054 AC project site is owned by Tailwind 303 Properties, LLC (Document #2021170384 dated 11/04/2021). Survey of the property includes Lot 3, Block A, Woodlake Phase 6, a subdivision in Williamsons County, Texas (Texas Land Surveying, Inc. dated 05/26/2021).

Total land area (1.05 AC) is on land with 0% - 15% slopes. On-site elevations are between 900 FT and 902 FT.

Access

Proposed access to the site is located at 100 Woodlake Drive.

Impervious Cover (IC)

Total existing area of impervious cover is approximately 0.016 acres.

Total proposed Project Site IC is 0.73 AC, or 69.2% of the project site. Of the proposed IC, 0.13 AC Existing and proposed areas of impervious cover will be treated as shown in the permanent stormwater section.

Watershed and FEMA Floodplain Information

The project site is within the Granger Lake-San Gabriel River Watershed, which drains to the Brazos River Basin. No surface streams run across the property. Drainage is generally to the east southeast, toward the San Gabriel River.



The project site is not located within the boundaries of the 100-year floodplain of any waterway that is within the limits of the study of the Federal Emergency Insurance Administration (FEMA) FIRM Panel # 48491C0280E (Effective date: 05-26-2021).

A Batch Detention Pond BMP is proposed for stormwater drainage and water quality at the developed project site.

Temporary Best Management Practices (BMPs)

Construction practices shall disturb the minimal amount of existing ground cover as required for land clearing, grading, and construction activity for the shortest amount of time possible to minimize the potential of erosion and sedimentation from the site.

Prior to soil disturbing construction activity, temporary BMPs will be installed. Silt fencing will be installed along the down-gradient sides of the property to intercept and detain waterborne sediment from unprotected areas. The silt fence shall remain in place until the disturbed area is permanently stabilized.

Permanent Best Management Practices (BMPs)

A Batch Detention Pond BMP is proposed for stormwater drainage and water quality at the developed project site. The Water Quality Drainage Area (DA) to control is 0.85 AC. Existing impervious cover (IC) within the DA is 0%.

After construction activities are complete, the Batch Detention permanent BMP will be maintained as described in Attachment G of the Permanent Stormwater Section. Permanent seeding, sodding or mulching will be utilized as described in Attachment J of the Temporary Stormwater Section. Permanent BMPs for trash, herbicide/pesticide use, and general maintenance of the Batch Detention Pond BMP are also described in Attachment G of the Permanent Stormwater Section.

Offsite Areas

No offsite areas are anticipated to be affected by pre and post construction activities at the site. Temporary BMPs will minimize any anticipated effects of the proposed construction activities. Permanent BMPs will address any anticipated stormwater issues at the developed site.

Area(s) to be Demolished

The site is undisturbed and undeveloped. No structures will be demolished.

Geologic Assessment
TCEQ-0585

Geologic Assessment

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Geologist: Chad M. Copeland,
P.G., PWS

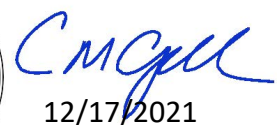
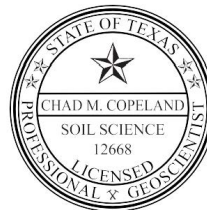
Telephone: 512-335-1785x124

Fax: 512-335-0527

Date: 12/17/2021

Representing: Ranger Environmental Services, LLC (TBPG #50140) (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:


12/17/2021

Regulated Entity Name: 303 Tailwind

Project Information

1. Date(s) Geologic Assessment was performed: 12/13/2021

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)
EaD - Eckrant Cobbly Clay, 1 to 8 percent slopes	D	0.33 - 1.67
DoC - Doss Silty Clay, 1 to 5 percent slopes	D	0.92 - 1.67

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" = 100'
 Site Geologic Map Scale: 1" = 66'
 Site Soils Map Scale (if more than 1 soil type): 1" = 125'
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.

ATTACHMENT A

Geological Assessment Table
TCEQ-0585 Table

GEOLOGIC ASSESSMENT TABLE						PROJECT NAME: 303 Tailwind														
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)	Q NO.	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY	CATCHMENT AREA (ACRES)		TOPOGRAPHY	
						X	Y	Z												
G-1	N 30° 41' 24.10"	W 97° 43' 33.29"	MB	30	Kgt	-	-	-	-	-	-	-	-	5	35	X	-	X	-	Hilltop
G-2	N 30° 41' 24.17"	W 97° 43' 33.23"	MB	30	Kgt	-	-	-	-	-	-	-	-	5	35	X	-	X	-	Hilltop
G-3	N 30° 41' 21.72"	W 97° 43' 33.13"	MB	30	Kgt	22	25	-	-	-	-	-	-	5	35	X	-	X	-	Hilltop

* DATUM WGS84

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

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

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

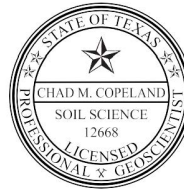
I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

CMC

Date 12/17/2021

Sheet 1 of 1

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



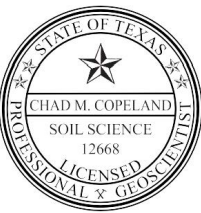
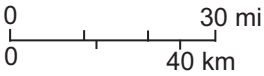
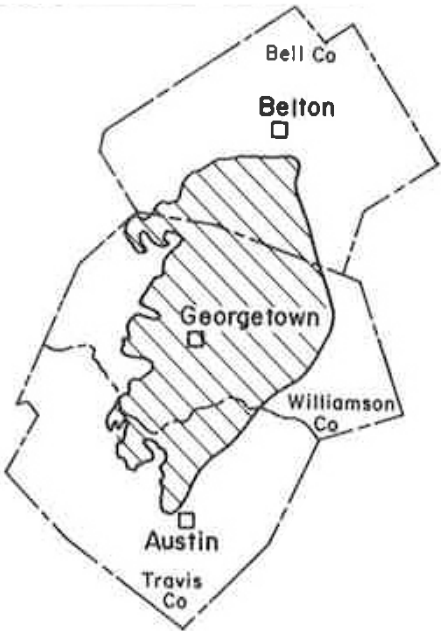
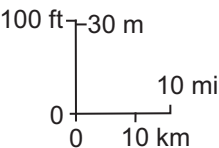
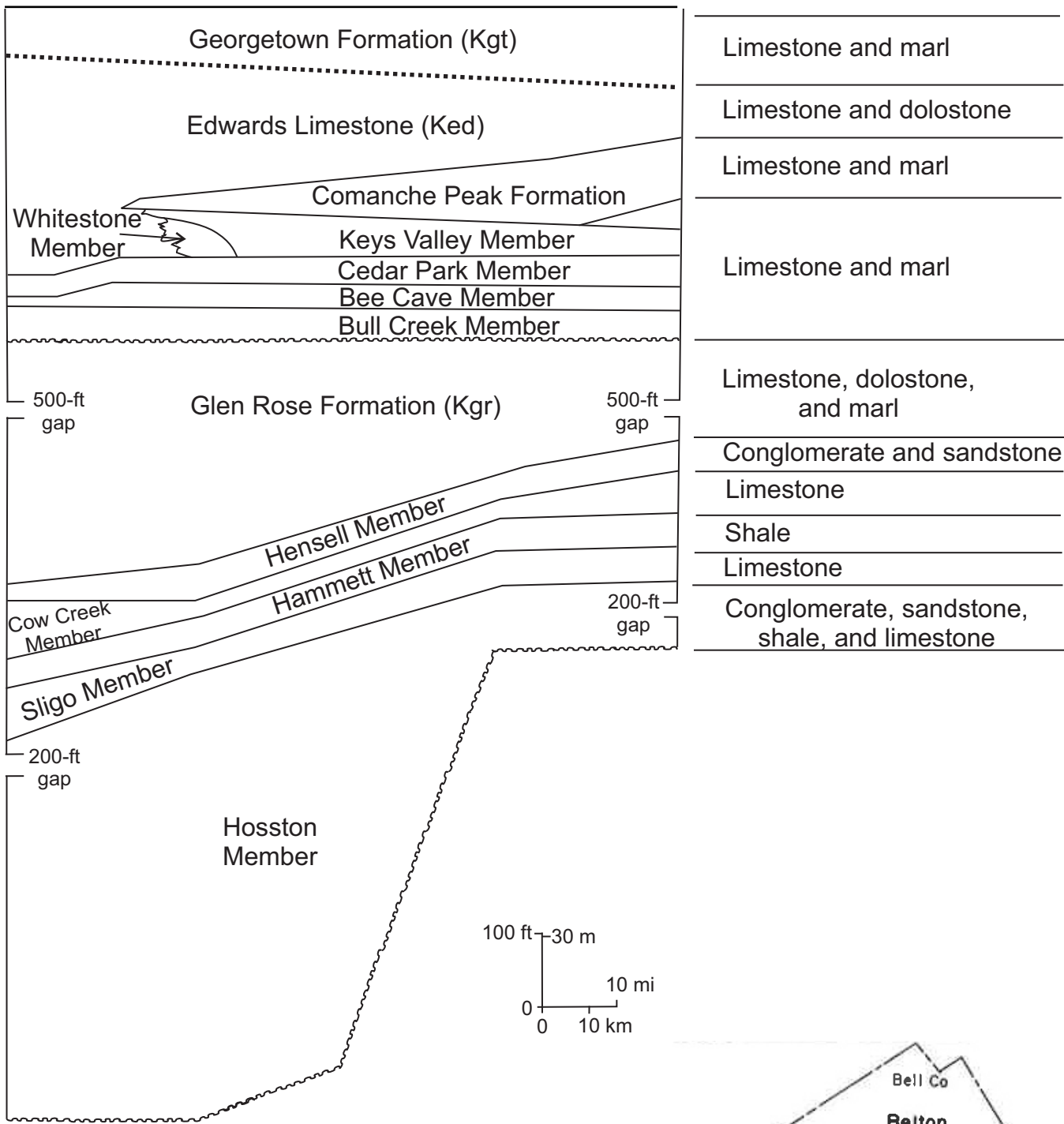
CMC
12/17/2021

ATTACHMENT B

Stratigraphic Column

STRATIGRAPHIC COLUMN

LITHOLOGY



CMC

12/17/2021

RANGER ENVIRONMENTAL SERVICES, INC.

STRATIGRAPHIC MAP
4808 Williams Drive
Georgetown, Texas

DATE: **RANGER REFERENCE # 6399**
COMMENTS:

ATTACHMENT C

Site Geology



GEOLOGIC ASSESSMENT

**303 Tailwind
4808 Williams Drive
Georgetown, Texas 78633
Williamson County
December 16, 2021**

INTRODUCTION

Ranger Environmental Services, Inc. (Ranger) was contracted to conduct a Geologic Assessment of the referenced property. This location lies within the designated Edwards Aquifer Recharge Zone. The subject property, rectangular in shape and listed to be approximately 2.074 acres in size, was observed to primarily support undeveloped or unimproved land. No surface water or drainage features were observed at the subject site. Since the subject site is located over the Edwards Aquifer Recharge Zone, site development should adhere to the Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program Rules in accordance with Title 30 of the Texas Administrative Code, Section 213 (30 TAC§ 213).

PROJECT DESCRIPTION

The subject site consists of one approximate 2.074-acre lot, more or less, located at 4808 Williams Drive, Georgetown, in Williamson County, Texas at approximate GPS coordinates 30.689940° N and -97.726047° W.

The property is surrounded by the following:

To the North	Williams Drive is located directly north, and across the street is a commercial business with multiple on-site structures.
To the East	Undeveloped land supporting native vegetation.
To the South	Undeveloped land supporting native vegetation. Further to the south is a child day care center with multiple structures and a parking lot.
To the West	Undeveloped land supporting native vegetation.

METHODOLOGY

This assessment follows general guidelines contained in Texas Commission on Environmental Quality (TCEQ) guidance “*Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones*” (TCEQ Guidance 0585). The site is located on an area of the recharge zone that may contain karst features within the outcropping limestone. Karst features may be expressed as surface features but more commonly tend to persist with depth.

A field geologic assessment was conducted by Chad M. Copeland, P.G., PWS on December 13, 2021. The subject property, rectangular in shape and listed to be approximately 2.074 acres in size, was observed to primarily support undeveloped or unimproved land. No structures other than a concrete pad for a power company were observed at the site. No surface water or drainage features were observed at the subject site.

The walking geologic survey was conducted on 50-foot center transects, where possible. No intrusive testing was conducted. If present, features identified in the field were photographed and recorded with a hand held global positioning system (GPS). Features include, but were not limited to, caves, solution cavities, solution-enlarged fractures, faults, manmade features in bedrock, swallow holes, sinkholes, non-karst closed depressions, and zone clustered or aligned features. The geologic assessment table, stratigraphic column, geologic, soils and topographic maps are included herein.

RESEARCH INFORMATION

Prior to conducting the geologic survey, Ranger conducted a review of existing geologic data and maps to prepare for the field survey. Reviewed references included, but are not limited to:

- Barnes, V.E. 1974. *Geologic Atlas of Texas, Austin Sheet*. The University of Texas at Austin, Bureau of Economic Geology.
- Senger, R.K., E.W. Collins and C.W. Kreidler. 1990. Hydrogeology of the Northern Segment of the Edwards Aquifer, Austin Region, Report of Investigations 192. The University of Texas at Austin, Bureau of Economic Geology.
- Texas Commission on Environmental Quality. 1999. Complying with the Edwards Aquifer Rules: Administrative Guidance.
- Texas Commission on Environmental Quality. Revised 2004. Instructions to Geologist for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones.
- Sellards, E.H., W.S. Adkins and F.B. Plummer. 1932. The University of Texas Bulletin No. 3232. The Geology of Texas. Volume 1, Stratigraphy.
- U.S. Department of Agriculture National Resources Conservation Services (www.nrcs.usda.gov).
- Texas Commission on Environmental Quality (www.tceq.state.tx.us).
- FEMA Flood Plain Maps.
- Center for Geospatial Technology, Texas Tech University, obtained from the Texas Geologic Atlas of Texas.
- USGS Topographic Maps – Terrain Navigator Pro 2015.
- Environmental Systems Research Institute (ESRI).

SITE GEOLOGY

The subject site is underlain by Cretaceous sedimentary strata. In general, the Cretaceous strata dip regionally one degree towards the southeast. The area lies within the Balcones Fault Zone, a geologic province characterized in this region by north-northeast trending en echelon normal faults with the downthrown side most commonly to the east of the fault planes.

Referencing the Geologic Atlas of Texas, Austin Sheet, and The University of Texas Bulletin No. 3232, The Geology of Texas, Volume 1, the local stratigraphic units that outcrop at the site are the Cretaceous age Georgetown Formation (Kgt), which unconformably overlies the Edwards Limestone (Ked) in Williamson County. The Georgetown Formation consists primarily of nodular, moderately indurated limestones interbedded with marls. Georgetown limestones are typically fine grained, massive, and fossiliferous. Small vugs may be present within the formation but are not common. The formation is approximately 30 feet to 80 feet in thickness and thins southward. The Georgetown limestones represent the uppermost Edwards aquifer strata.

During the on-site field investigation, Ranger personnel did not observe any outcrops within the boundaries of the property. The subject site was noted to be primarily undeveloped land assessed for future use. The natural soil found on-site appears to be Eckrant cobbly clay, shallow soil that overlies the limestone bedrock.

No vugs, faults, seeps, fractures, or solution cavities were observed during the site geologic inspection. The only site specific geologic features observed at the site were manmade features in bedrock described in the section below.

SITE SPECIFIC GEOLOGIC FEATURES

The following geologic features, as defined in Texas Commission on Environmental Quality (TCEQ) guidance “*Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones*” (TCEQ Guidance 0585), were observed at the site:

- G-1 MB: Manmade Feature in Bedrock – Fire Hydrant. The observed fire hydrant was located on the northeast portion of the property. The potential for rapid infiltration is low. The catchment area is less than 1.6 acres.
- G-2 MB: Manmade Feature in Bedrock – Water Main. The observed water main was located on the northeast portion of the property. The potential for rapid infiltration is low. The catchment area is less than 1.6 acres.
- G-3 MB: Manmade Feature in Bedrock – Atmos Energy Gas Line. The observed feature was located on the southeast portion of the property. The footprint of the facility was measured at approximately 22’ x 25’. The potential for rapid infiltration is low. The catchment area is less than 1.6 acres.

SOIL DESCRIPTION

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) *Web Soil Survey*, the site is noted to contain two soil units. The following are the mapped soil units:

- EaD – Eckrant cobbly clay, 1 to 8 percent slopes
- DoC – Doss silty clay, moist, 1 to 5 percent slopes.

Please see attached USDA NRCS Custom Soil Resource Report for the detailed soil description.
TOPOGRAPHY AND DRAINAGE

The elevation at the site was noted to be very flat on a topographic high hilltop. The direction of surface water flow could not be determine based upon the topography at the site or on the map, but it appears to be sheet flow in all directions (sheet flow).

CONCLUSIONS AND RECOMMENDATIONS

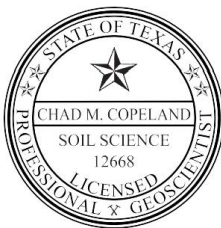
Ranger Environmental Services, Inc. conducted a Geologic Assessment of the site in accordance with 30 TAC§ 213. Ranger concludes that no sensitive features as defined by the TCEQ (30 TAC§ 213) were observed at the site.

This assessment does not address the possible presence of subsurface conditions that may be exposed during future construction and/or development. Should solution features or conditions be exposed during site construction activities that indicate a potential for hydraulic interconnectedness between the surface and the Edwards Aquifer, operations in the vicinity of the feature should be halted and the Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program should be contacted immediately in accordance with 30 TAC §213.5(f)(2).

LIMITATIONS

It should be noted that only areas readily accessible were inspected. There may be geologic features present that were not identified as part of this study. This non-intrusive visual field assessment cannot wholly eliminate the possibility of sensitive features at the site.

Prepared by:



CMC
12/17/2021

Chad M. Copeland, P.G.

ATTACHMENT D

Site Geologic Map(s)

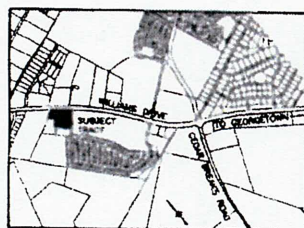
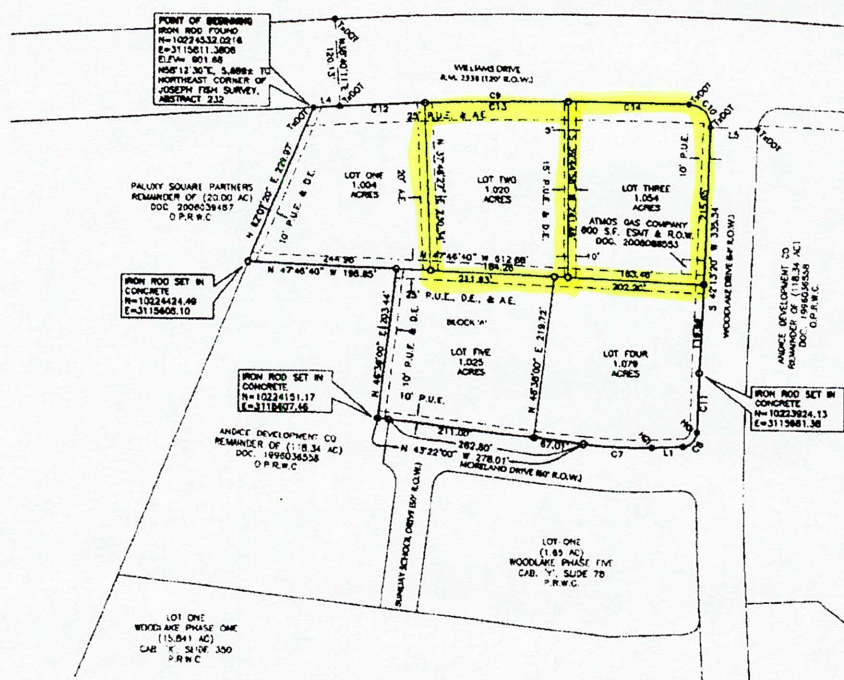
CABINET FF

SLIDE 363

FINAL PLAT OF

WOODLAKE PHASE 6

Doc #2009039231



AERIAL MAP 1"=2000'

LINE TABLE

NUMBER	DIRECTION	DISTANCE
L1	N 52°40'52" W	42.50'
L4	S 53°17'51" E	35.06'
L5	S 47°54'52" E	84.00'

CURVE TABLE

NUMBER	DELTA ANGLE	ARC LENGTH	CHORD LENGTH	CHORD BEARING	BACKSIGHT
C6	89°15'32"	30.12	27.35	S 89°03'11" W	20.01'
C7	89°18'32"	92.06	82.56	N 46°01'28" W	570.00'
C8	04°10'00"	486.87	486.83	S 00°58'07" E	5571.18'
C9	89°11'33"	47.35	42.96	S 07°55'27" E	30.54'
C10	01°17'54"	80.12	80.11	S 47°54'22" W	3534.00'
C12	01°10'54"	114.38	114.38	S 52°48'00" E	5571.18'
C13	01°56'31"	182.06	182.05	S 51°14'18" E	5571.18'
C14	01°40'55"	183.55	183.54	S 49°24'35" E	5571.18'

LEGEND

IRON ROD	3" IRON ROD WITH TEXAS DEPARTMENT OF TRANSPORTATION CAP FOUND
IRON ROD	3" IRON ROD WITH HAYNE CONSULTING CAP FOUND
IRON ROD	3" IRON ROD FOUND (UNLESS STATED)
A.E.	ACCESS EASEMENT
B.L.	BUILDING LINE
D.E.	DEBRIDGE & STORM SEWER EASEMENT
P.U.E.	PUBLIC UTILITY EASEMENT
()	RECORD INFORMATION
P.R.W.C.	PLAT RECORDS WILLIAMSON COUNTY
D.R.W.C.	DEED RECORDS OF WILLIAMSON COUNTY
O.P.R.W.C.	OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY

Area Summary

5.182	TOTAL ACRES
5.69	ACRES OF RIGHT-OF-WAY
5.182	ACRES OF DEVELOPMENT

LOTS BY SIZE CATEGORY

3-5 ACRES	6 LOTS
5-10 ACRES	1 LOT
10-15 ACRES	1 LOT
15-20 ACRES	1 LOT
20-25 ACRES	1 LOT
25-30 ACRES	1 LOT
30-35 ACRES	1 LOT
35-40 ACRES	1 LOT
40-45 ACRES	1 LOT
45-50 ACRES	1 LOT
50-55 ACRES	1 LOT
55-60 ACRES	1 LOT
60-65 ACRES	1 LOT
65-70 ACRES	1 LOT
70-75 ACRES	1 LOT
75-80 ACRES	1 LOT
80-85 ACRES	1 LOT
85-90 ACRES	1 LOT
90-95 ACRES	1 LOT
95-100 ACRES	1 LOT
100-105 ACRES	1 LOT
105-110 ACRES	1 LOT
110-115 ACRES	1 LOT
115-120 ACRES	1 LOT
120-125 ACRES	1 LOT
125-130 ACRES	1 LOT
130-135 ACRES	1 LOT
135-140 ACRES	1 LOT
140-145 ACRES	1 LOT
145-150 ACRES	1 LOT
150-155 ACRES	1 LOT
155-160 ACRES	1 LOT
160-165 ACRES	1 LOT
165-170 ACRES	1 LOT
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185-190 ACRES	1 LOT
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865-870 ACRES	1 LOT
870-875 ACRES	1 LOT
875-880 ACRES	1 LOT
880-885 ACRES	1 LOT
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890-895 ACRES	1 LOT
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940-945 ACRES	1 LOT
945-950 ACRES	1 LOT
950-955 ACRES	1 LOT
955-960 ACRES	1 LOT
960-965 ACRES	1 LOT
965-970 ACRES	1 LOT
970-975 ACRES	1 LOT
975-980 ACRES	1 LOT
980-985 ACRES	1 LOT
985-990 ACRES	1 LOT
990-995 ACRES	1 LOT
995-1000 ACRES	1 LOT

DATE: APRIL 7, 2009

OWNER: ANDRZEJ DEVELOPMENT CO.

ENGINEER & SURVEYOR:

HAYNE CONSULTING, INC.

1806 PROVIDENT LANE

ROUND ROCK, TEXAS 78664

JOSEPH FISH SURVEY

ABSTRACT NO. 232

NUMBER OF BLOCKS:

TOTAL NUMBER OF LOTS:

BUILDABLE LOTS:

L.P. OF NEW STREET:

THENCE, 85°17'51" E, ALONG THE SOUTHERLY LINE OF THE REMAINDER OF SAID 76.98 ACRE TRACT, ALONG THE WESTERLY R.O.W. OF SAID WILLIAMSON DRIVE, BEING THE SOUTHERLY LINE HEREOF, A DISTANCE OF 488.85 FEET TO A 12 INCH IRON ROD WITH TIEOUT CAP FOUND FOR THE POINT OF CURVATURE OF A CURVE TO THE RIGHT, AND BEING THE POINT OF INTERSECTION OF THE WESTERLY R.O.W. OF SAID WILLIAMSON DRIVE AND THE NORTHERLY R.O.W. OF WOODLAKE DRIVE (84 FOOT R.O.W.);

THENCE, DEPARTING THE WESTERLY R.O.W. OF SAID WILLIAMSON DRIVE AND ALONG THE NORTHERLY R.O.W. OF SAID WOODLAKE DRIVE, BEING THE SOUTHERLY LINE HEREOF, THE FOLLOWING THREE (3) COURSES AND DISTANCES:

1. ALONG SAID CURVE TO THE RIGHT HAVING A RADIUS OF 88.84 FEET, A CENTRAL ANGLE OF 89°17'51", AN ARC LENGTH OF 47.84 FEET, AND A CHORD WHICH BEARS 89°17'51" E, A DISTANCE OF 42.85 FEET TO A 12 INCH IRON ROD WITH TIEOUT CAP FOUND;

2. 84°17'51" W, A DISTANCE OF 184.34 FEET TO A 12 INCH IRON ROD WITH HAYNE CONSULTING CAP SET FOR THE POINT OF CURVATURE OF A CURVE TO THE LEFT;

3. ALONG SAID CURVE TO THE LEFT HAVING A RADIUS OF 384.89 FEET, A CENTRAL ANGLE OF 89°17'51", AN ARC LENGTH OF 88.11 FEET, AND A CHORD WHICH BEARS 89°17'51" W, A DISTANCE OF 88.11 FEET TO A 12 INCH IRON ROD WITH HAYNE CONSULTING CAP SET FOR THE POINT OF CURVATURE OF A CURVE TO THE RIGHT;

4. CONTINUING ALONG THE EASTERLY R.O.W. OF SAID WOODLAKE DRIVE, ALONG SAID CURVE TO THE RIGHT HAVING A RADIUS OF 878.85 FEET, A CENTRAL ANGLE OF 89°17'51", AN ARC LENGTH OF 82.84 FEET, AND A CHORD WHICH BEARS 89°17'51" W, A DISTANCE OF 82.84 FEET TO A 12 INCH IRON ROD WITH HAYNE CONSULTING CAP SET;

5. 84°17'51" W, AT A DISTANCE OF 382.84 FEET PASSING A 12 INCH IRON ROD WITH HAYNE CONSULTING CAP SET FOR THE END OF THE EASTERLY R.O.W. OF SAID WOODLAKE DRIVE, AND A DISTANCE OF 378.84 FEET TO A 12 INCH IRON ROD WITH HAYNE CONSULTING CAP SET FOR AN INTERIOR CORNER IN THE REMAINDER OF SAID 118.34 ACRE TRACT;

6. N 47°17'51" E, A DISTANCE OF 382.84 FEET TO A 12 INCH IRON ROD WITH HAYNE CONSULTING CAP SET;

7. N 47°17'51" E, A DISTANCE OF 188.85 FEET TO A 12 INCH IRON ROD WITH HAYNE CONSULTING CAP SET IN THE SOUTHERLY LINE OF THE REMAINDER OF SAID 38.84 ACRE TRACT, BEING A POINT IN THE NORTHERLY LINE OF THE REMAINDER OF SAID 118.34 ACRE TRACT AND THE NORTHERLY CORNER HEREOF;

THENCE, 85°17'51" E, ALONG THE NORTHERLY LINE OF THE REMAINDER OF SAID 38.84 ACRE TRACT, AND BEING THE NORTHERLY LINE HEREOF, A DISTANCE OF 234.85 FEET TO THE POINT OF BEGINNING; CONTAINING 5.182 ACRES OF LAND, MORE OR LESS.

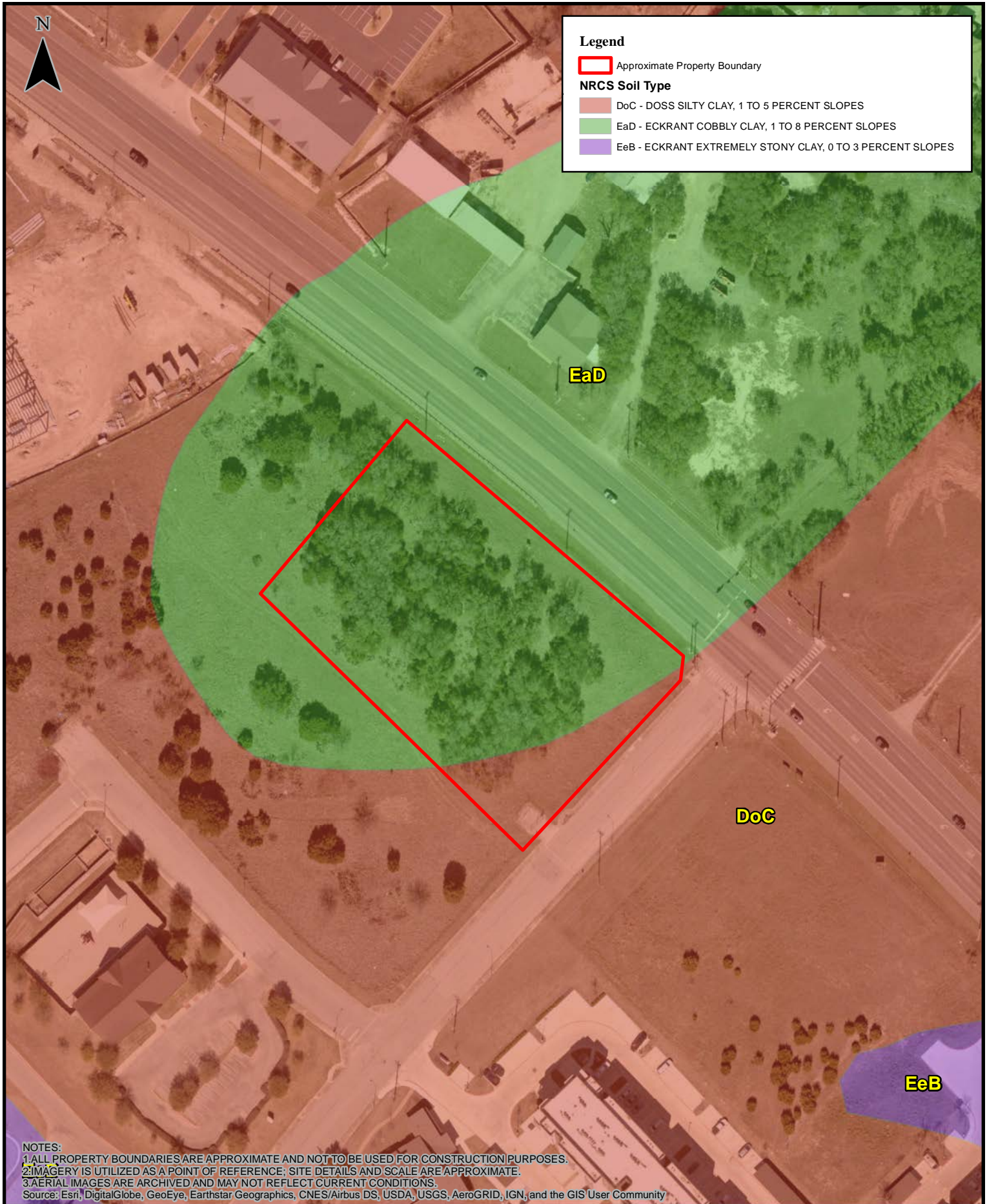
IN WITNESS WHEREOF, I, THE SURVEYOR, HAVE HEREUNTO SET MY HAND AND SEAL OF OFFICE, AT ROUND ROCK, TEXAS, THIS 3-17-09.

THOMAS HAYNE
REGISTERED PROFESSIONAL LAND SURVEYOR
No. 2386, STATE OF TEXAS
HAYNE CONSULTING, INC.
1806 PROVIDENT LANE
ROUND ROCK, TEXAS 78664

HAYNE CONSULTING, INC.
1806 PROVIDENT LANE
ROUND ROCK, TEXAS 78664
TEL: 512-257-1000
FAX: 512-257-1001
WWW.HAYNECONSULTING.COM

DATE	BY	DESCRIPTION
APRIL 7, 2009	THOMAS HAYNE	FINAL PLAT OF WOODLAKE PHASE 6
APRIL 7, 2009	JOSEPH FISH	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	OWNER
APRIL 7, 2009	HAYNE CONSULTING, INC.	ENGINEER & SURVEYOR
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
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APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
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APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
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APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
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APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY
APRIL 7, 2009	ANDRZEJ DEVELOPMENT CO.	ANDRZEJ DEVELOPMENT CO.
APRIL 7, 2009	HAYNE CONSULTING, INC.	HAYNE CONSULTING, INC.
APRIL 7, 2009	JOSEPH FISH SURVEY	JOSEPH FISH SURVEY





Legend

Approximate Property Boundary

NRCS Soil Type

DoC - DOSS SILTY CLAY, 1 TO 5 PERCENT SLOPES

EaD - ECKRANT COBBLY CLAY, 1 TO 8 PERCENT SLOPES

EeB - ECKRANT EXTREMELY STONY CLAY, 0 TO 3 PERCENT SLOPES

EaD

DoC

EeB

NOTES:

1. ALL PROPERTY BOUNDARIES ARE APPROXIMATE AND NOT TO BE USED FOR CONSTRUCTION PURPOSES.

2. IMAGERY IS UTILIZED AS A POINT OF REFERENCE; SITE DETAILS AND SCALE ARE APPROXIMATE.

3. AERIAL IMAGES ARE ARCHIVED AND MAY NOT REFLECT CURRENT CONDITIONS.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



0 35 70 140 210 280
Feet

1:1,500

Site Soil Map
303 Tailwind



Legend

- Approximate Property Boundary
- Edwards Aquifer Contributing Zone
- Edwards Aquifer Contributing Zone within the Transition Zone
- Edwards Aquifer Recharge Zone
- Edwards Aquifer Transition Zone

**Edwards Aquifer
Recharge Zone**

NOTES:

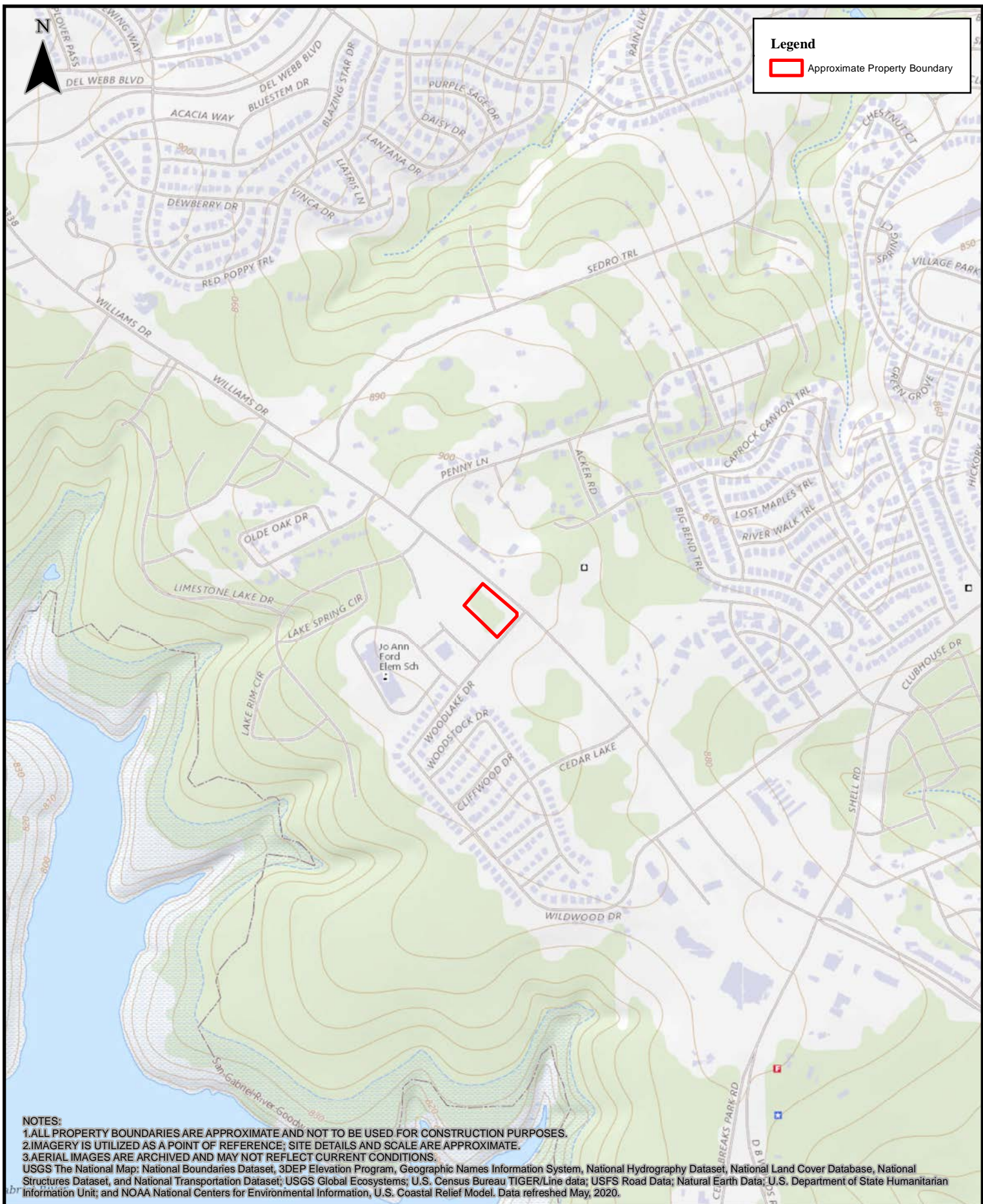
1. ALL PROPERTY BOUNDARIES ARE APPROXIMATE AND NOT TO BE USED FOR CONSTRUCTION PURPOSES.
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0 35 70 140 210 280
Feet

1:1,500

Edwards Aquifer Map
303 Tailwind



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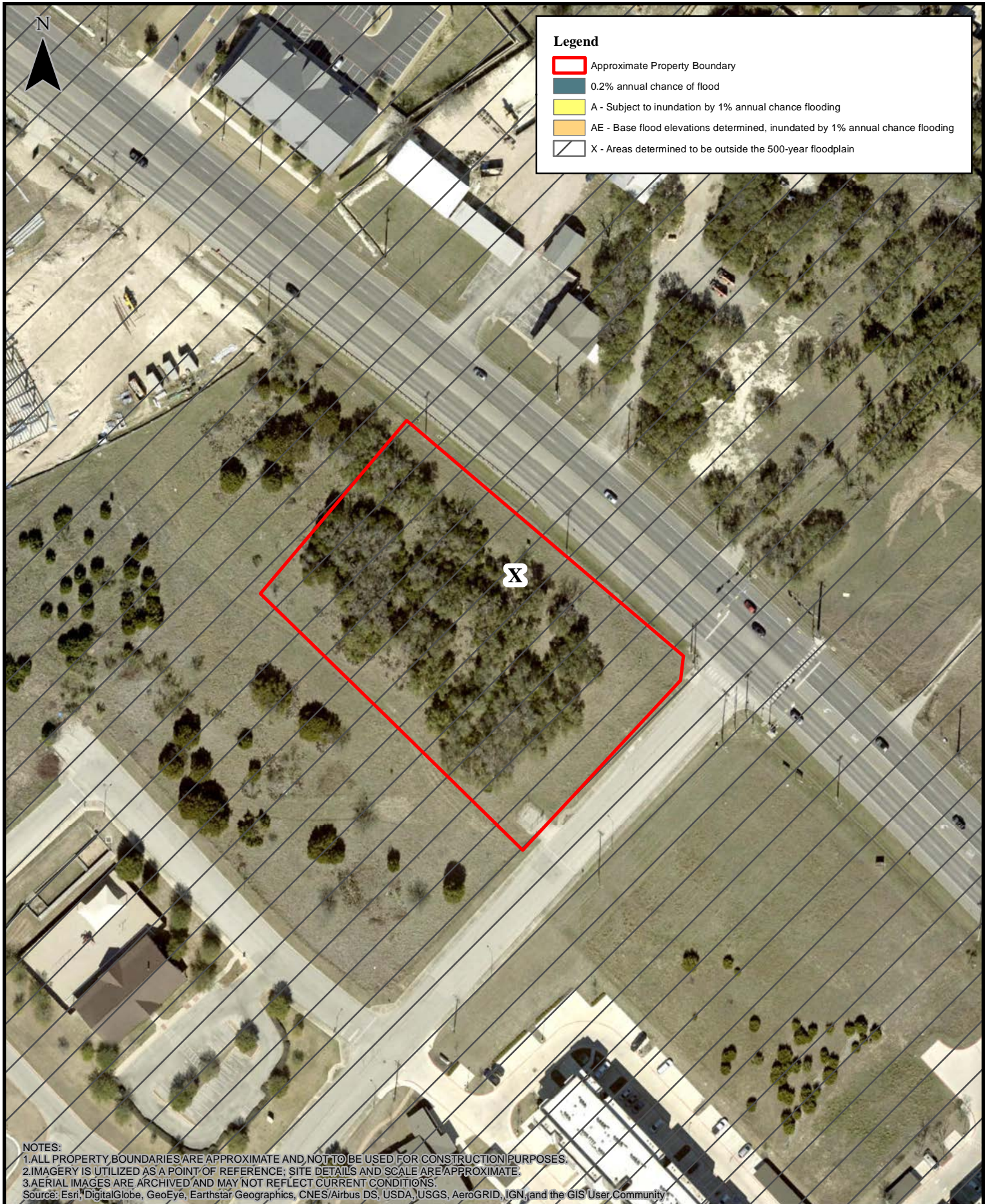
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed May, 2020.



0 300 600 1,200 1,800 2,400 Feet

1:12,000

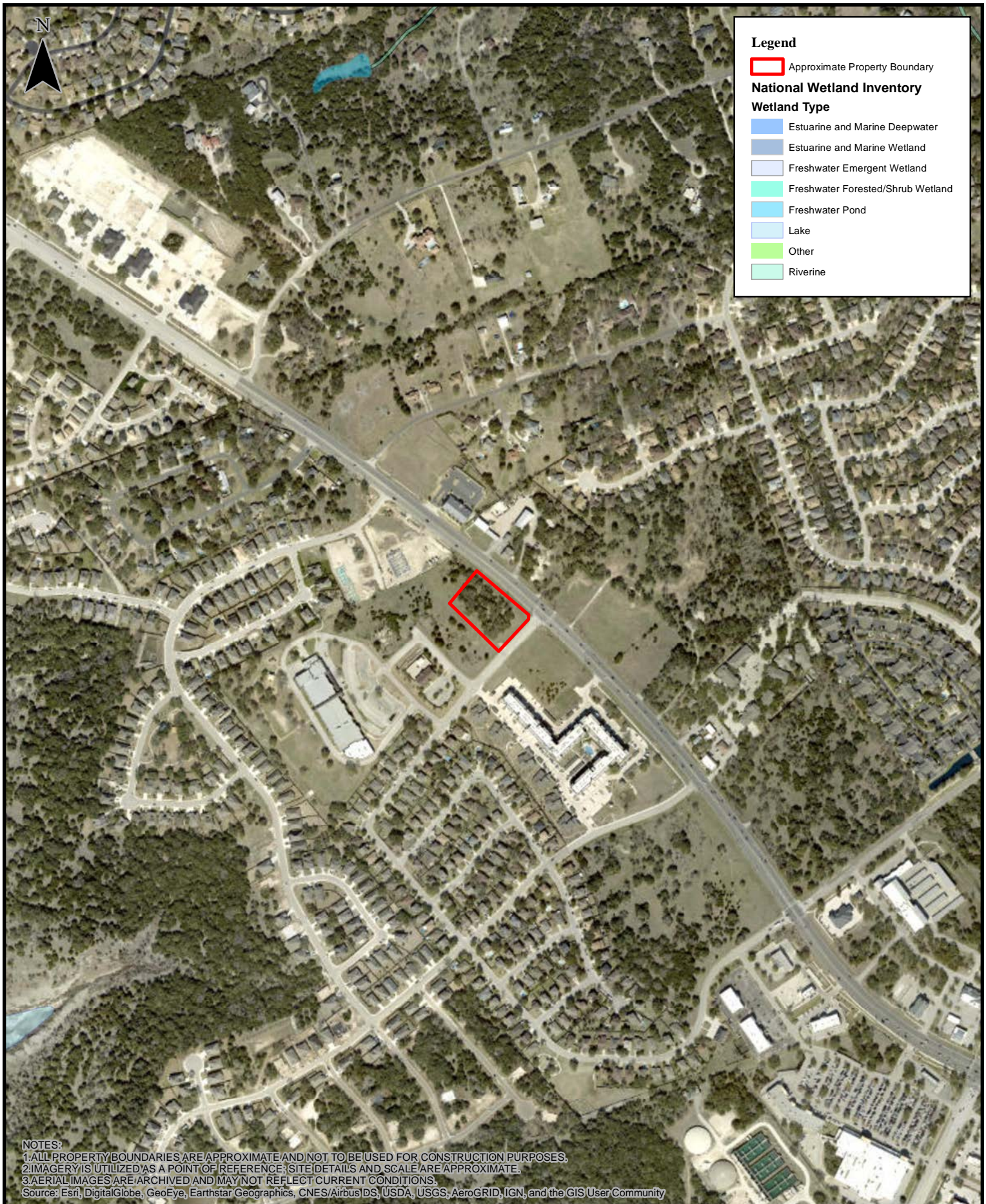
Topographic Map (Georgetown Quadrangle)
303 Tailwind



0 35 70 140 210 280 Feet

1:1,500

FEMA Floodplain Map
303 Tailwind



Legend

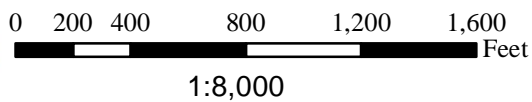
Approximate Property Boundary

National Wetland Inventory

Wetland Type

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

NOTES:
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2. IMAGERY IS UTILIZED AS A POINT OF REFERENCE; SITE DETAILS AND SCALE ARE APPROXIMATE.
3. AERIAL IMAGES ARE ARCHIVED AND MAY NOT REFLECT CURRENT CONDITIONS.
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus/DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



National Wetland Inventory Map
303 Tailwind



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Williamson County, Texas**

**4808 Williams Drive, Georgetown,
TX**



December 17, 2021

Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

Custom Soil Resource Report

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

Soil Map

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

Custom Soil Resource Report Soil Map



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Williamson County, Texas
Survey Area Data: Version 22, Sep 10, 2021

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

Date(s) aerial images were photographed: Nov 17, 2020—Dec 3, 2020

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DoC	Doss silty clay, moist, 1 to 5 percent slopes	0.3	14.1%
EaD	Eckrant cobbly clay, 1 to 8 percent slopes	1.9	85.9%
Totals for Area of Interest		2.2	100.0%

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

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

Williamson County, Texas

DoC—Doss silty clay, moist, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2s0st
Elevation: 630 to 1,840 feet
Mean annual precipitation: 30 to 36 inches
Mean annual air temperature: 66 to 68 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Doss

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A - 0 to 9 inches: silty clay
Bk - 9 to 17 inches: silty clay
Cr - 17 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: 11 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R081CY362TX - Steep Adobe 29-35 PZ
Hydric soil rating: No

Bolar

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Purves

Percent of map unit: 1 percent
Landform: Plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

Eckrant

Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Denton

Percent of map unit: 1 percent
Landform: Plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

EaD—Eckrant cobbly clay, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t0sg
Elevation: 650 to 1,900 feet
Mean annual precipitation: 30 to 35 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 210 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 4 inches: cobbly clay
A2 - 4 to 11 inches: very cobbly clay
R - 11 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Surface area covered with cobbles, stones or boulders: 2.3 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D

Custom Soil Resource Report

Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ

Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 7 percent

Landform: Ridges

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: R081CY355TX - Adobe 29-35 PZ

Hydric soil rating: No

Bexar

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R081CY361TX - Redland 29-35 PZ

Hydric soil rating: No

Krum

Percent of map unit: 3 percent

Landform: Ridges

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R081CY357TX - Clay Loam 29-35 PZ

Hydric soil rating: No

References

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Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

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*WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN*

Water Pollution Abatement Plan Application Form (TCEQ-0584)

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: NICK SANDLIN, P.E. (SANDLIN SERVICES, LLC)

Date: 2/13/2024

Signature of Customer/Agent:



Regulated Entity Name: WOODLAKE RETAIL

Regulated Entity Information

1. The type of project is:

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

2. Total site acreage (size of property): 1.054

3. Estimated projected population: 35

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

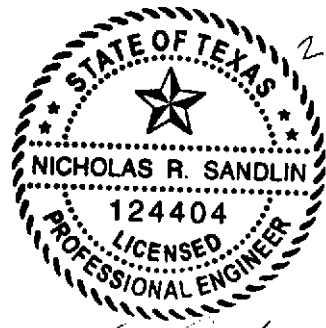


Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	5,700	÷ 43,560 =	0.131
Parking	5,610	÷ 43,560 =	0.129
Other paved surfaces	20,458	÷ 43,560 =	0.470
Total Impervious Cover	31,768	÷ 43,560 =	0.729

Total Impervious Cover 31,768 ÷ **Total Acreage** 45,903 X 100 = 69.2% **Impervious Cover**

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

For Road Projects Only

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

7. Type of project:

- ☐ TXDOT road project.
- ☐ County road or roads built to county specifications.
- ☐ City thoroughfare or roads to be dedicated to a municipality.
- ☐ Street or road providing access to private driveways.

8. Type of pavement or road surface to be used:

- ☐ Concrete
- ☐ Asphaltic concrete pavement
- ☐ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet.

Width of R.O.W.: _____ feet.

L x W = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.

10. Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

L x W = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.

Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

<u>100%</u> Domestic	<u>10,582</u> Gallons/day
<u> </u> % Industrial	<u> </u> Gallons/day
<u> </u> % Commingled	<u> </u> Gallons/day
TOTAL gallons/day <u>10,582</u>	

15. Wastewater will be disposed of by:

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

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

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

☒ Sewage Collection System (Sewer Lines):

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

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

☒ The SCS was previously submitted on Plat Date: 6/4/2009

☐ The SCS was submitted with this application.

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

☒ The sewage collection system will convey the wastewater to the City of Georgetown (name) Treatment Plant. The treatment facility is:

☒ Existing.

☐ Proposed.

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = 20'.

18. 100-year floodplain boundaries:

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

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

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM Panel # 48491C0280E (Effective date: 05-26-2021)

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

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

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

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

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

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

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

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

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

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

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

☐ **Attachment D - Exception to the Required Geologic Assessment.** A request and justification for an exception to a portion of the Geologic Assessment is attached.

- 22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.
- 23. ☒ Areas of soil disturbance and areas which will not be disturbed.
- 24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 25. ☒ Locations where soil stabilization practices are expected to occur.
- 26. ☐ Surface waters (including wetlands).
☒ N/A
- 27. ☐ Locations where stormwater discharges to surface water or sensitive features are to occur.
☒ There will be no discharges to surface water or sensitive features.
- 28. ☒ Legal boundaries of the site are shown.

Administrative Information

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



Water Pollution Abatement Plan Application Form (TCEQ-0584)

Attachment A: Factors Affecting Surface Water Quality

Potential pollution sources during the construction phase include increased sediment erosion from disturbed soil; oil, grease, fuel, and hydraulic fluid contamination from construction equipment and vehicles; concrete washout waste; and miscellaneous trash and litter from construction. Potential pollution sources at the developed site include oil, grease, fuel, and hydraulic fluid contamination from vehicles, trash, and litter.



Water Pollution Abatement Plan Application Form (TCEQ-0584)

Attachment B: Volume and Character of Stormwater

The proposed site is located within the Edwards Aquifer Recharge Zone. Stormwater from the developed IC will be conveyed to the proposed Batch Detention Pond BMP. Please see the water quality and drainage sheets of the construction plans for calculations and details. There are no anticipated off-site impacts.



**Water Pollution Abatement Plan Application Form
(TCEQ-0584)**

**Attachment C:
Suitability Letter from authorized Agent (if OSSF is proposed)**

NOT APPLICABLE



**Water Pollution Abatement Plan Application Form
(TCEQ-0584)**

**Attachment D:
Exception to the Required Geologic Assessment (if requested)**

NOT APPLICABLE

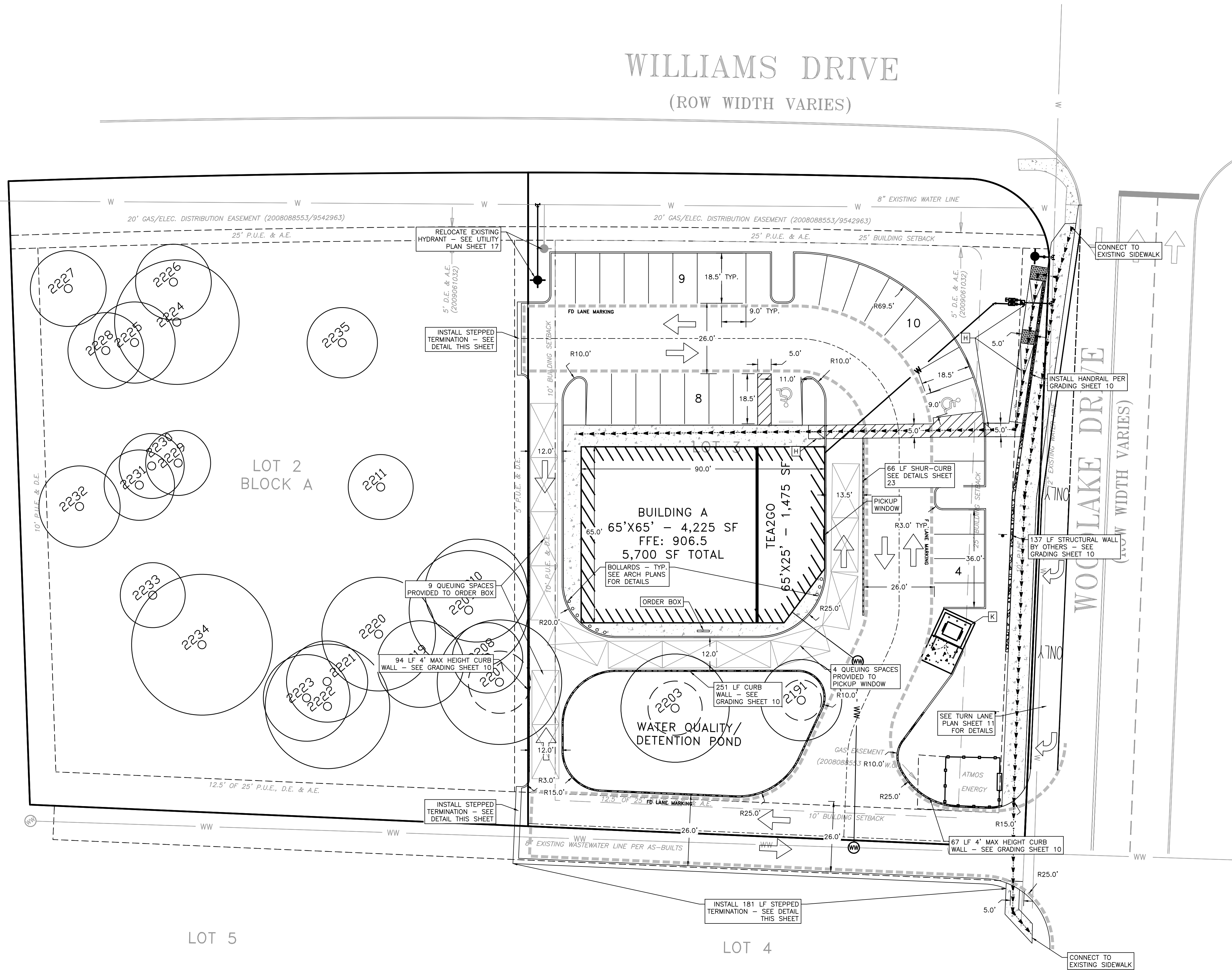


**Water Pollution Abatement Plan Application Form
(TCEQ-0584)**

Site Plan

G:\Shared drives\Sandlin Services Projects\Land Development Division\01-0041-003 Woodlake Retail\CAD\Construction Sheets\5 WLR SITE.dwg-SITE PLAN Plotted Feb 15, 2024 at 11:28am by Engineer | Last Saved by Engineer

1

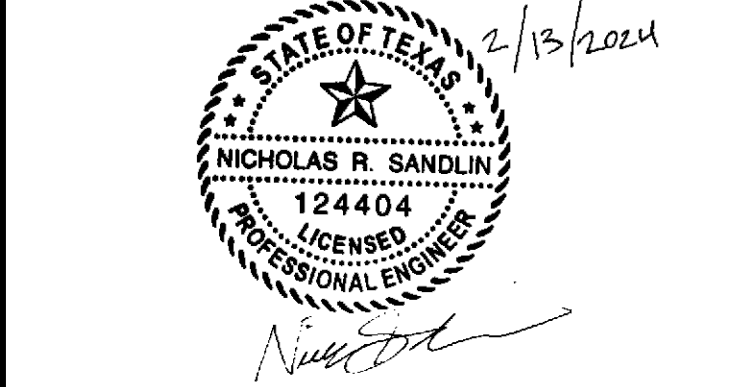
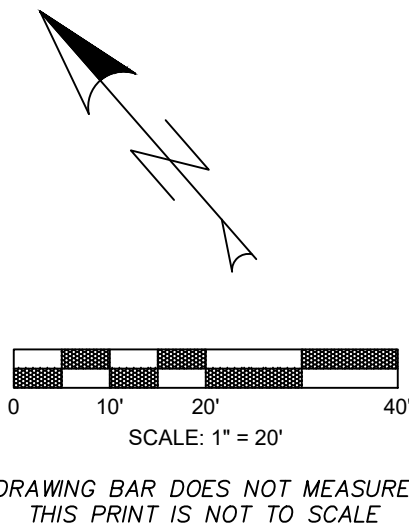
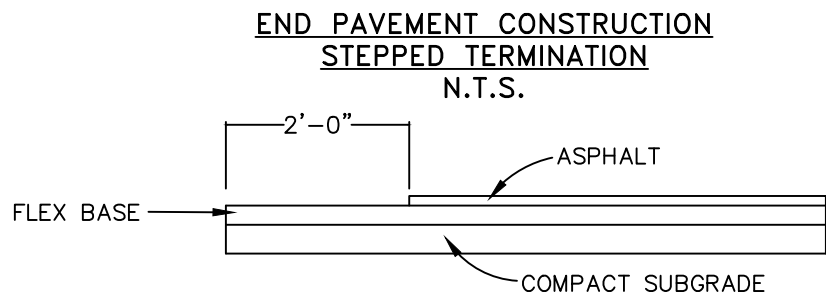


- NOTES**
- ALL LIGHTING FIXTURES SHALL BE DESIGNED TO COMPLETELY CONCEAL AND FULL SHIELD. WITHIN AN OPAQUE HOUSING, THE LIGHT SOURCE FROM VISIBILITY FROM ANY STREET RIGHT-OF-WAY. THE CONE OF LIGHT SHALL NOT CROSS ANY ADJACENT PROPERTY LINE. THE ILLUMINATION SHALL NOT EXCEED 2 FOOT CANDLES AT A HEIGHT OF THREE FEET AT THE PROPERTY LINE. ONLY INCANDESCENT, FLUORESCENT, COLOR-CORRECTED HIGH-PRESSURE SODIUM OR METAL HALIDE MAY BE USED. ALL VEHICLE OR PEDESTRIAN ACCESS SHALL BE SUFFICIENTLY LIGHTED TO ENSURE SECURITY OF PROPERTY AND PERSONS.
 - ALL ROOF, WALL AND GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED IN ACCORDANCE WITH CHAPTER 8 OF THE UDC. IF ROOF AND WALL MOUNTED EQUIPMENT OF ANY TYPE INCLUDING DUCT WORK AND LARGE VENTS IS PROPOSED IT SHALL BE SHOWN ON THE SITE PLAN AND SCREENING IDENTIFIED. SCREENING OF MECHANICAL EQUIPMENT SHALL RESULT IN THE MECHANICAL EQUIPMENT BLENDING IN WITH THE PRIMARY BUILDING AND NOT APPEARING SEPARATE FROM THE BUILDING AND SHALL BE SCREENED FROM VIEW OF ANY RIGHTS-OF-WAY OR ADJOINING PROPERTIES.
 - PER CHAPTER 8, THE DUMPSTER ENCLOSURES MUST BE ONE (1) FOOT ABOVE THE HEIGHT OF THE WASTE CONTAINER. USE PROTECTIVE POLES IN CORNERS AND AT IMPACT AREAS. FENCE POSTS OF RUST PROTECTED METAL OR CONCRETE. A MINIMUM 6" SLAB IS REQUIRED AND MUST BE SLOPED TO DRAIN. THE ENCLOSURE MUST HAVE STEEL FRAMED GATES WITH SPRING LOADED HINGES AND FASTENERS TO KEEP CLOSED. SCREENING MUST BE ON ALL FOUR SIDES BY MASONRY WALL OR APPROVED FENCE OR SCREENING WITH OPAQUE GATES.
 - ALL PARKING SPACES ARE 18.5' X 9' UNLESS OTHERWISE SHOWN.
 - ALL CURB IS "SPILL TYPE" UNLESS OTHERWISE NOTED
 - ELECTRIC TRANSFORMERS MUST NOT BE VISIBLE FROM THE ROW OR ADJACENT PROPERTIES AND ARE REQUIRED TO BE SCREENED UNDER 8.04.070.
 - WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC UTILITY LINES SHALL BE LOCATED ALONG THE STREET AND WITHIN THE SITE, WHERE EXISTING OVERHEAD INFRASTRUCTURE IS TO BE RELOCATED, IT SHALL BE RE-INSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER.
 - ALL ELECTRIC AND COMMUNICATION INFRASTRUCTURE SHALL COMPLY WITH UDC SECTION 13.06.
 - ALL PAVING SHALL BE PER GEOTECHNICAL RECOMMENDATIONS.
 - MONUMENT SIGNS WILL REQUIRE A SEPARATE PLAN AND PERMIT

PARKING TABLE	
TOTAL BUILDING AREA	5,700 SF
PARKING RATIO - RETAIL	1 SPACE/250 SF
PARKING REQUIRED	5,700/250 = 23 SPACES
PARKING PROVIDED	31 SPACES, INCLUDING 2 ADA SPACES (1 OF WHICH IS VAN ACCESSIBLE)

CITY OF GEORGETOWN SITE DATA	
	PROPOSED
TOTAL SITE AREA	1.054 AC 45,903 SF
BUILDING GROSS FLOOR AREA	5,700 SF
IMPERVIOUS COVER	0.73 AC 31,768 SF = 69.2%

ZONING SETBACKS
ZONING DISTRICT: C-1
FRONT SETBACK: 25'
SIDE SETBACK: 10'
MAXIMUM BUILDING HEIGHT: 35'



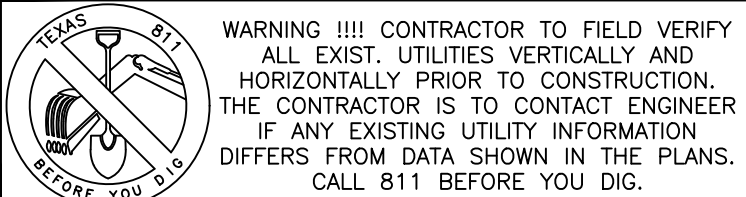
SITE PLAN LEGEND

- PROPOSED PROPERTY/PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER
- STREET CENTERLINE
- FENCE
- STRUCTURAL RETAINING WALL (BY OTHERS)
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PARKING SPACES
- TRANSFORMER PAD
- SITE WALLS
- PHASING
- TAS ACCESSIBLE ROUTE
- TAS ACCESSIBLE ROUTES MAY NOT EXCEED A CROSS SLOPE OF 1:50 (2%) OR EXCEED A RUNNING SLOPE OF 1:20 (5%) UNLESS DESIGNED AS A RAMP. THE MAXIMUM RUNNING SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12 (8.33%). THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 INCHES. REFER TO GRADING SHEET(S).

EX. WATER LINE
EX. WASTEWATER
EX. STORM SEWER LINE
EX. FIRE HYDRANT
EX. WATER METER
EX. WASTEWATER MANHOLE
FITTINGS AS NOTED
GATE VALVE AS NOTED
WW CLEAN OUT
BACK FLOW PREVENTER

PR. WATER LINE
FIRE LINE
PR. WASTEWATER
PR. STORM SEWER LINE
PR. FIRE HYDRANT
PR. WATER METER
PR. WASTEWATER MANHOLE
FLOW ARROW
EX. UTILITY POLE

- SITE LEGEND**
- A 6" CURB & GUTTER. SEE DETAIL SHEET.
 - B RIBBON CURB. SEE DETAIL SHEET.
 - C CASTELLATED CURB. SEE DETAIL SHEET.
 - D STANDARD CITY TYPE II DRIVEWAY. SEE DETAIL SHEET.
 - E CONCRETE SIDEWALK. SEE DETAIL SHEET.
 - F PEDESTRIAN CROSSWALK.
 - G HANDICAP SPACE W/SIGN. SEE DETAIL SHEET.
 - H PEDESTRIAN ADA RAMP OR AT GRADE ADA DOME PAVERS. SEE DETAIL SHEET.
 - I CONCRETE WHEEL STOP. SEE DETAIL SHEET.
 - J STANDARD CITY BIKE RACK. SEE DETAIL SHEET.
 - K DUMPSTER ENCLOSURE WITH CONCRETE PAD PER GEOTECHNICAL REPORT AND CITY STANDARDS



THESE PLANS COPYRIGHTED BY SANDLIN SERVICES, LLC



TBPCLS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

SITE PLAN

PROJECT CASE: XXXXXXXX

WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
				8
				OF
				29



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.

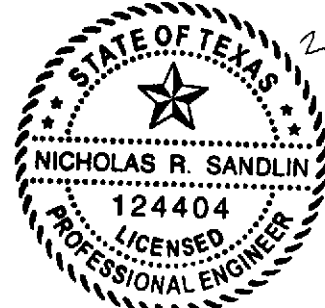
Signature

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:

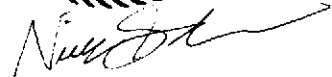
Print Name of Customer/Agent: NICK SANDLIN, P.E. (SANDLIN SERVICES, LLC)

Date: 2/13/2024

Signature of Customer/Agent:



2/13/2024



Regulated Entity Name: WOODLAKE RETAIL

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: Site drains SE to the North Fork of the San Gabriel River

Temporary Best Management Practices (TBMPs)

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

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

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

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

Soil Stabilization Practices

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

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

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

Administrative Information

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



Temporary Stormwater Section (TCEQ-0602)

Attachment A: Spill Response Actions

Spill Response Actions

In the event of an accidental spill, immediate action shall be undertaken by the General Contractor to contain and remove the spilled material. All hazardous materials, including contaminated soil and liquid concrete waste (if applicable), shall be disposed of by the Contractor in the manner specified by Federal, State and Local regulations and by the manufacturer of such products. As soon as possible, the spill shall be reported to the appropriate agencies. As required under the provisions of the Clean Water Act, any spill or discharge entering waters of the United States shall be properly reported. The General Contractor shall prepare a written record of any spill and associated clean-up activities of petroleum products or hazardous materials in excess of 1 gallon or reportable quantities, whichever is less. The General Contractor shall provide notice to the Owner immediately upon identification of a reportable spill.

All spills of petroleum products or hazardous materials in excess of Reportable Quantities as defined by EPA or the State or Local agency regulations, shall be immediately reported within 24 hours to the EPA National Response Center (1-800-424-8802), TCEQ (1-800-832-8224), and local Fire Department (911).

The reportable quantity for hazardous materials can be found in 40 CFR 302:

Reportable Quantities		
Material	Media Released to	Reportable Quantities
Engine Oil, Fuel, Hydraulic & Brake Fluid	Land	25 gallons
Engine Oil, Fuel, Hydraulic & Brake Fluid	Water	Visible sheen
Antifreeze	Land	100 lbs (13 gal.)
Battery Acid	Land, Water	100 lbs
Refrigerant	Air	1 lb
Gasoline	Air, Land, Water	100 lbs
Engine Degreasers	Air, Land, Water	100 lbs

Please visit https://www.tceq.texas.gov/response/spills/spill_rq.html for more information

In order to minimize the potential for a spill of petroleum product or hazardous materials to come in contact with stormwater, the following steps shall be implemented.

- 1) All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids paints, paint solvents, additives for soil stabilization,



concrete curing compounds and additives, etc.) shall be stored in a secure location, under cover and in appropriate, tightly sealed containers when not in use.

- 2) The minimum practical quantity of all such materials shall be kept on the job site and scheduled for delivery as close to the time of use as practical. Post Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- 3) A spill control and containment kit (containing for example: absorbent material such as kitty litter or sawdust, acid neutralizing agent, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) shall be provided on the construction site and construction employees shall be trained in when and how to use spill containment materials.
- 4) The contractor personnel will immediately clean up any oil, fuel or hydraulic fluid if observed being released from equipment or vehicles. Vehicles or equipment will cease operation until required repairs are made to the equipment.
- 5) All of the product in a container shall be used before the container is disposed of. All such containers shall be triple rinsed with water prior to disposal. The rinse water used in these containers shall be disposed of in a manner in compliance with State and Federal regulations and shall not be allowed to mix with stormwater discharges.
- 6) All products shall be stored in and used from the original container with the original product label.
- 7) All products shall be used in strict compliance with instructions on the product label.
- 8) The disposal of the excess or used products shall be in strict compliance with instructions on the product's label.

Spill Prevention and Control

Education

- 1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a “significant spill” is for each material they use, and what is the appropriate response for “significant” and “insignificant” spills. Employees should also be aware of when a spill must be reported to the TCEQ. Information is available in 30 TAC 327.4 and 40 CFR 302.4.
- 2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- 3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- 4) Establish a continuing education program to indoctrinate new employees.
- 5) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.



General Measures

- 1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110, 117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- 2) Store hazardous materials and wastes in covered containers and protect from vandalism.
- 3) Place a stockpile of spill cleanup materials where it will be readily accessible.
- 4) Train employees in spill prevention and cleanup.
- 5) Designate responsible individuals to oversee and enforce control measures.
- 6) Spills should be covered and protected from stormwater run-on during rainfall to the extent that it doesn't compromise cleanup activities.
- 7) Do not bury or wash spills with water.
- 8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- 9) Do not allow water used for leaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
- 10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- 11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- 12) Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

- 1) Clean up leaks and spills immediately.
- 2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
- 3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of it properly. See the waste management BMPs in this section for specific information.

Minor Spills

- 1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
- 2) Use absorbent materials on small spills rather than hosing down or burying the spill.
- 3) Absorbent materials should be promptly removed and disposed of properly.



- 4) Follow the practice below for a minor spill:
- 5) Contain the spread of the spill.
- 6) Recover spilled materials.
- 7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

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

- 1) Contain spread of the spill.
- 2) Notify the project foreman immediately.
- 3) If the spill occurs on paved or impermeable surfaces, clean up using “dry” methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
- 4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
- 5) If the spill occurs during rain, cover the spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

- 1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor’s responsibility to have all emergency phone numbers at the construction site.
- 2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,009, and 302, the contractor should notify the National Response Center at (800)424-8802.
- 3) Notification should first be made by telephone and followed up with a written report.
- 4) The services of a spill’s contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staff have arrived at the job site.
- 5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at:
<https://www.tceq.texas.gov/downloads/compliance/investigations/spills/spill-poster-x.pdf>

Vehicle and Equipment Maintenance

- 1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage course, to prevent the runoff of stormwater and the runoff of spills.



- 2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
- 3) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- 4) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- 5) Place drip pans or absorbent materials under paving equipment when not in use.
- 6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of them properly.
- 7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- 8) Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- 9) Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

- 1) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
- 2) Discourage 'topping off' of fuel tanks.

Always use secondary containment, such as a drain pan, when fueling to catch spills/leaks.

SPILL REPORT FORM

Notes to General Contractor:

- Control and contain the spill.
- Contact the appropriate regulatory agencies if the spill exceeds the applicable reportable quantity.
- Clean up the spill and dispose of waste according to federal, state and local regulations.
- Complete the Spill Report Form in full for each spill that exceeds the applicable reportable quantity and submit to the Owner.
- Call the Owner.
- Resolve as appropriate and as required by regulatory authorities.



SPILL REPORT FORM

DATE:
PROJECT:
PROJECT ADDRESS:

Spill Reported By: _____

Date / Time of Spill: _____

Describe spill location and events leading to spill: _____

Material Spilled: _____

Source of Spill: _____

Amount Spilled: _____

Amount Spilled to Waterway (Name Waterway): _____

Containment or Clean up Action: _____

Approximate depth (yards) of soil excavation: _____

List injuries or Personal Contamination: _____

Action to be taken to prevent future spills:

Agencies notified of spill:

Contractor Signature and Printed Name

Date

**AFTER NOTIFYING GOVERNING AUTHORITIES, IMMEDIATELY COMPLETE THIS FORM
AND CONTACT THE OWNER IF THE SPILL EXCEEDS THE REPORTABLE QUANTITY FOR
THE GOVERNING AGENCY**



Temporary Stormwater Section (TCEQ-0602)

Attachment B: Potential Sources of Contamination

Potential Sources of Contamination and Preventive Measures:

Potential Source: Concrete and concrete products used on-site during construction.

Preventive Measures: Concrete washout structure will be used if necessary.

Potential Source: Oil, grease, fuel, and hydraulic fluid contamination from construction equipment and vehicle dripping.

Preventative Measures: Vehicle maintenance will be performed at a local maintenance shop.

Potential Source: Miscellaneous trash and litter from construction workers and material wrappings.

Preventative Measures: Trash containers will be placed throughout the site to encourage proper disposal of trash.

Potential Source: Silt leaving the site.

Preventative Measures: Contractor will install all temporary best management practices prior to start of construction including the stabilized construction entrance to prevent tracking onto adjoining streets.

Potential Source: Construction debris

Preventative Measures: Construction debris will be monitored daily by contractor. Debris will be collected weekly and placed in disposal bins. Situations requiring immediate attention will be addressed on a case-by-case basis.

Potential Source: Soil and mud from construction vehicle tires as they leave the site.

Preventative Measures: a stabilized construction exit shall be utilized as vehicles leave the site. And soil, mud, etc. carried from the project onto public roads shall be cleaned up within 24 hours.

Potential Source: Sediment from soil, sand, gravel, and excavated materials stockpiled on site.

Preventative Measures: Silt fence shall be installed on the down gradient side of the stockpiled materials. Reinforced rock berms shall be installed at all downstream discharge locations.

Potential Source: Portable toilet spill

Preventative Measures: Toilets on the site will be emptied on a regular basis by the contracted toilet company.



Temporary Stormwater Section (TCEQ-0602)

Attachment C: Sequence of Major Activities

The installation of erosion and sedimentation controls shall occur prior to any excavation of materials or major disturbances on the site. The sequence of major construction activities will be as follows. Approximate acreage (AC) expected to be disturbed is listed in parentheses next to each activity.

Intended Schedule or Sequence of Major Activities:

1. Submit written notice of construction to TCEQ regional office at least 48 hours prior to the start of any regulated activities. (See Permanent Stormwater Section – Attachment F)
2. A pre-construction conference prior to commencement of construction. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.
3. Contractors must follow requirements as outlined in TCEQ General Construction Notes for the Water Pollution Abatement Plan (WPAP). WPAP Construction Notes are included on the Construction Plan sheets (See Permanent Stormwater Section – Attachment F).
4. Prior to beginning any construction activity, all temporary erosion and sedimentation BMPs and control measures must be properly installed and maintained in accordance with the approved plans and manufacturers specifications (1.40 Acres).
5. Evaluate temporary erosion control installation. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.
6. Review construction schedule and the Water Pollution Abatement Plan (WPAP) requirements.
7. Complete Permanent BMP construction and install landscaping (1.40 Acres).
8. Topsoil, Irrigation and Landscaping: Revegetate all disturbed areas according to plan.
9. Site cleanup and removal of temporary erosion/sedimentation BMP controls. (1.40 Acres)

Maximum total construction time is not expected to exceed 6 months.



Temporary Stormwater Section (TCEQ-0602)

Attachment D: Temporary Best Management Practices and Measures

1. There are approximately 0.0 AC of storm water that originate up gradient from the site and flow across the site through an onsite BMP. No upstream stormwater exists.
2. Temporary BMPs will be installed prior to soil disturbing construction activity. Silt fencing will be placed along the down-gradient sides of the property and limits of construction to prevent silt from escaping the construction area during permanent BMP construction.
3. A gravel construction entrance is proposed to reduce vehicle “tracking” onto adjoining streets. A concrete washout pit may be used to collect all excess concrete during construction, if needed.
4. Temporary BMPs for this project will protect surface water or groundwater from turbid water, phosphorus, sediment, oil and other contaminants, which may mobilize in stormwater flows by slowing the flow of runoff to allow sediment and suspended solids to settle out of the runoff.
5. Practices may also be implemented on site for interim and permanent stabilization. Stabilization practices may include but are not limited to establishment of temporary vegetation; establishment of permanent vegetation; mulching; geotextiles; sod stabilization; vegetative buffer strips; protection of existing trees and vegetation; and other similar measures.
6. There are no sensitive features or surface streams within the boundaries of the project that would require temporary BMPs. The temporary onsite BMPs will be used to treat stormwater runoff before it leaves the project and prevent pollutants from entering into surface streams or any sensitive features down gradient of the site.



**Temporary Stormwater Section
(TCEQ-0602)**

**Attachment E:
Request to Temporarily Seal a Feature
(NOT APPLICABLE)**



Temporary Stormwater Section (TCEQ-0602)

Attachment F: Structural Practices

Structural BMPs will be used to limit runoff discharge of pollutants from exposed areas of the site. BMPs will be installed prior to soil disturbing construction activity. Silt fencing will be placed along the down-gradient sides of the property to prevent silt from escaping the construction area. A temporary construction entrance will be placed at the site entry/exit point to reduce tracking onto adjoining streets. A construction staging area will be used onsite to perform all vehicle maintenance and for equipment and material storage. A concrete truck washout pit will be placed on site to provide containment and easier cleanup of waste from concrete operations. The location of all structural temporary BMPs are shown within the Site Plans.

Description of Temporary BMPs

Construction Entrance/Exit:

The purpose of a gravel construction entrance is to provide a stable entrance/exit condition from the construction site and keep mud and sediment off public roads. A stabilized construction entrance is a stabilized pad of crushed stone located at any point traffic will be entering or leaving the construction site from a public right-of-way. This practice should be used at all point of construction ingress and egress. Excessive amounts of mud can also present a safety hazard to roadway users. To minimize the amount of sediment loss to nearby roads, access to the construction site should be limited to as few points as possible and vegetation around the perimeter should be protected where access is not necessary. A rock stabilized construction entrance exists and will be used at all designated access points.

Silt Fence:

The purpose of a silt fence is to intercept and detain water-borne sediment from unprotected areas of a limited extent. Silt fence is used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. This fence should remain in place until the disturbed area is permanently stabilized. Silt fence should not be used where there is a concentration of water in a channel or drainage way. If concentrated flow occurs after installation, corrective action must be taken such as placing a rock berm in the areas of concentrated flow.

Silt fencing within the site may be temporarily moved during the day to allow construction activity provided it is replaced and properly anchored to the ground at the end of the day. Silt fences on the perimeter of the site or around drainage ways should not be moved at any time.

Triangular Sediment Filter Dikes

Triangular sediment filter dikes (18"x18"x18" filter material with 6" square folded wire mesh frame) will be installed downgradient of the AST construction area with filter cloth placed over any existing stormwater



collection drains. The dike and filter cloth will be held in place with cloth sandbags. The facility existing topography will not change as the AST will be placed on existing crushed rock.

Concrete Washout Area (if applicable)

The purpose of concrete washout areas is to prevent or reduce the discharge of pollutants to stormwater from concrete waste by conducting washout offsite, performing onsite washout in a designated area, and training employees and subcontractors.

The following steps will help reduce stormwater pollution from concrete wastes:

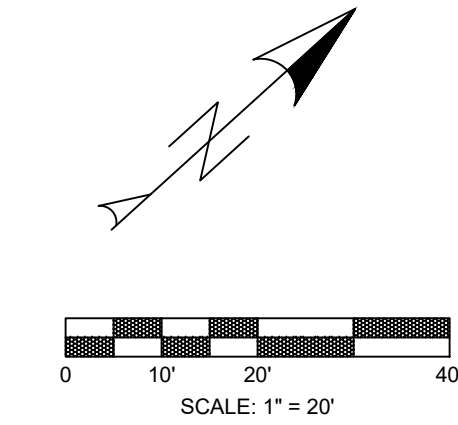
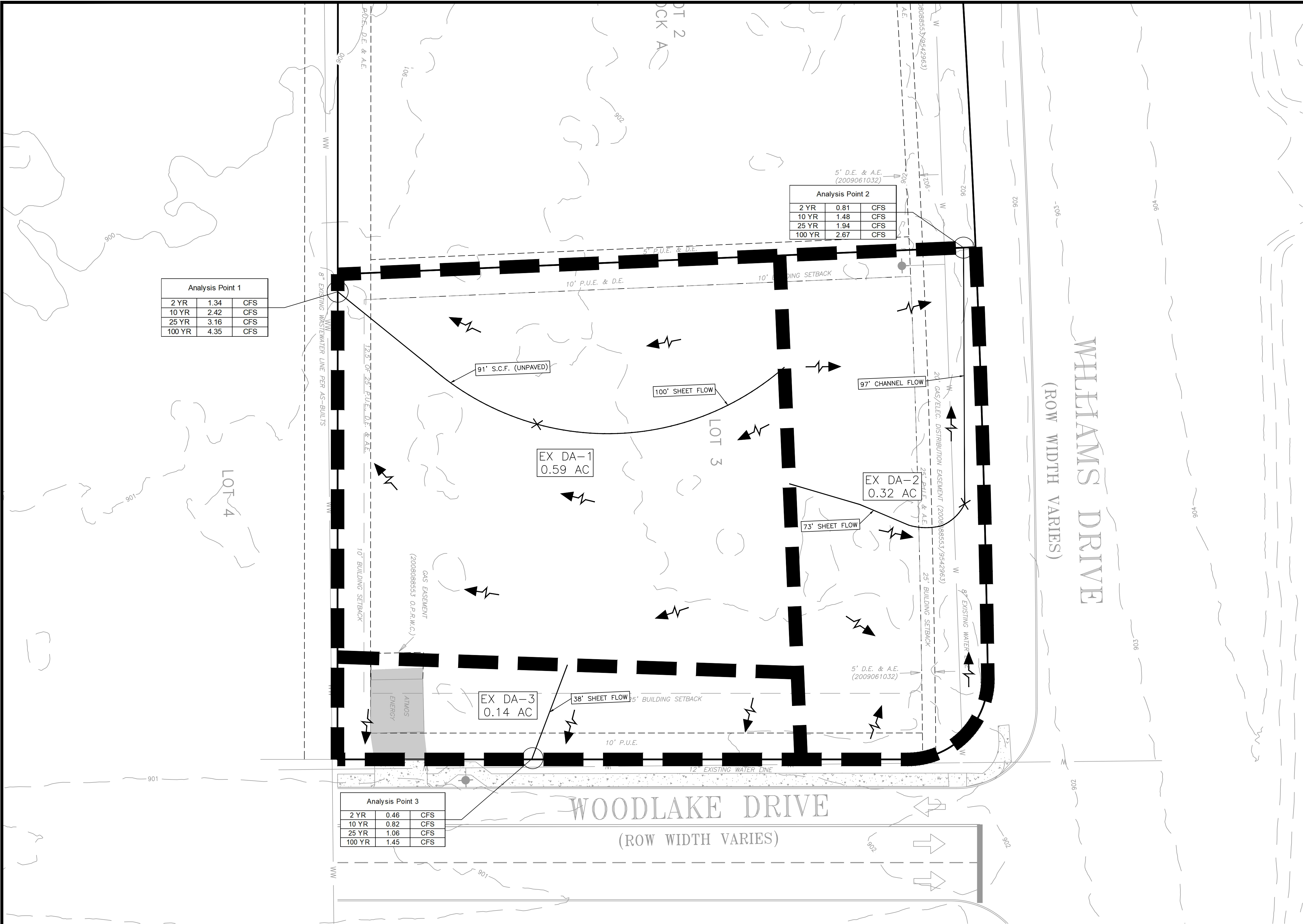
- Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.
- Avoid mixing excess amounts of fresh concrete.
- Perform washout of concrete trucks in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped onsite, except in designated areas.
- For onsite washout:
- Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
- Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.



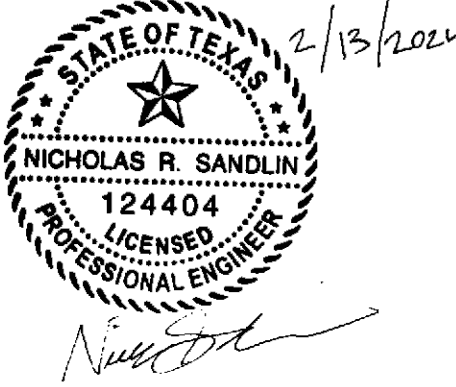
**Temporary Stormwater Section
(TCEQ-0602)**

**Attachment G:
Drainage Area Map**

C:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0041-003 Woodlake Retail\CAD\Construction Sheets\5 WLP EDAM.dwg-EXISTING DRAINAGE AREA MAP Plotted Feb 14, 2024 at 1:46pm by Engineer | Last Saved by: Admin



IF DRAWING BAR DOES NOT MEASURE 2"
THIS PRINT IS NOT TO SCALE



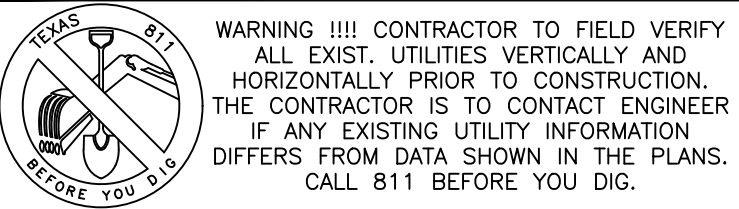
EXISTING DRAINAGE LEGEND

- PROPOSED PROPERTY / PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- EX DA-X
XXXX AC
- FLOW ARROW
- TIME OF CONCENTRATION LINE (SHEET FLOW)
- TIME OF CONCENTRATION LINE (SHALLOW CONCENTRATED FLOW)
- EXISTING CONTOURS
- PROPOSED CONTOURS

Drainage Basin Characteristics - Existing Conditions								
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
EX DA-1	0.59	0.00%	82.0	17.51	1.34	2.42	3.16	4.35
EX DA-2	0.32	0.00%	82.0	13.20	0.81	1.48	1.94	2.67
EX DA-3	0.14	11.25%	82.0	6.24	0.46	0.82	1.06	1.45

Drainage Area	EXISTING		IMPERVIOUS			GRASS		
	Total Area (Ac)	Total Area (sf)	Area Impervious	Area Impervious (Ac)	Area Impervious (%)	Area Grass (sf)	Area Grass (Ac)	Area Grass (%)
EX DA-1	0.59	25,700	0	0.00	0.0%	25,700	0.59	100.0%
EX DA-2	0.32	13,939	0	0.00	0.0%	13,939	0.32	100.0%
EX DA-3	0.14	6,098	686	0.02	11.2%	5,412	0.12	88.8%

Time of Concentration Calculations				Sheet Flow				Shallow Conc. Flow				Channel Flow				Total
Existing Flows		Area	Area	L	n	S	T _t	L	Surface Type	S	T _t	L	Vavg	T _t	T _c	
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	(ft/s)	(min)	(min)	
EX DA-1	Analysis Point 1	0.59	25,700	100	0.150	0.005	16.45	91	Unpaved	0.008	1.06	-	-	0.00	17.51	
EX DA-2	Analysis Point 2	0.32	13,939	73	0.150	0.005	12.79	-	-	-	0.00	97	4.00	0.40	13.20	
EX DA-3	Analysis Point 3	0.14	6,098	38	0.150	0.008	6.24	-	-	-	0.00	-	-	0.00	6.24	



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SERVICES, LLC

TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

EXISTING DRAINAGE
AREA MAP

PROJECT CASE: XXXXXXX

WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
				12
				OF
				29

C:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0041-003 Woodlake Retail\CAD\Construction Sheets\5 WLP PDAM.dwg-PROPOSED DRAINAGE AREA MAP Picked Feb 14, 2024 at 1:47pm by Engineer | Last Saved by Engineer

Analysis Point 1				
	Existing Flows		Proposed Flows	
2 YR	1.34	CFS	1.30	CFS
10 YR	2.42	CFS	2.27	CFS
25 YR	3.16	CFS	3.00	CFS
100 YR	4.35	CFS	4.26	CFS

NOTE: ALL FLOWS LEAVING THE PROPERTY ARE LESS THAN THOSE OF THE EXISTING CONDITION.

Analysis Point 2				
	Existing Flows		Proposed Flows	
2 YR	0.81	CFS	0.44	CFS
10 YR	1.48	CFS	0.80	CFS
25 YR	1.94	CFS	1.04	CFS
100 YR	2.67	CFS	1.44	CFS

NOTE: ALL FLOWS LEAVING THE PROPERTY ARE LESS THAN THOSE OF THE EXISTING CONDITION.

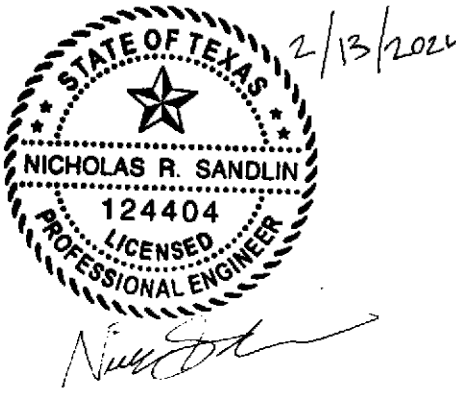
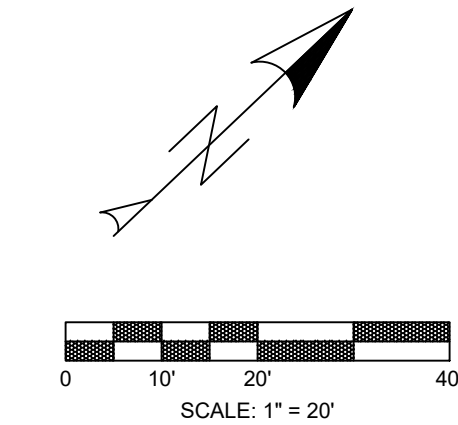
Analysis Point 3				
	Existing Flows		Proposed Flows	
2 YR	0.46	CFS	0.34	CFS
10 YR	0.82	CFS	0.52	CFS
25 YR	1.06	CFS	0.64	CFS
100 YR	1.45	CFS	0.84	CFS

NOTE: ALL FLOWS LEAVING THE PROPERTY ARE LESS THAN THOSE OF THE EXISTING CONDITION.

Drainage Basin Characteristics - Proposed Conditions								
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
PR DA-1	0.85	78.86%	82.0	5.00	4.09	6.28	7.73	10.15
PR DA-2	0.13	0.00%	82.0	5.00	0.44	0.80	1.04	1.44
PR DA-3	0.07	84.28%	82.0	5.00	0.34	0.52	0.64	0.84

PROPOSED			IMPERVIOUS			GRASS		
Drainage Area	Total Area	Total Area	Area Impervious	Area Impervious	Area Impervious	Area Grass	Area Grass	Area Grass
	(Ac)	(sf)	(sf)	(Ac)	(%)	(sf)	(Ac)	(%)
PR DA-1	0.85	37,026	29,198	0.67	78.9%	7,828	0.18	21.1%
PR DA-2	0.13	5,663	0	0.00	0.0%	5,663	0.13	100.0%
PR DA-3	0.07	3,049	2,570	0.06	84.3%	479	0.01	15.7%

Time of Concentration Calculations				Sheet Flow				Shallow Conc. Flow				Channel Flow		Total
Proposed Flows	Area	Area		L	n	S	T _t	L	Surface Type	S	T _t	L	Vavg	T _t
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	(ft/s)	(min)
PR DA-1	Analysis Point 1	0.85	37,026	-	-	-	-	-	-	-	-	-	-	5.00
PR DA-2	Analysis Point 2	0.13	5,663	-	-	-	-	-	-	-	-	-	-	5.00
PR DA-3	Analysis Point 3	0.07	3,049	-	-	-	-	-	-	-	-	-	-	5.00



PROPOSED DRAINAGE LEGEND	
	PROPOSED PROPERTY/PROJECT BOUNDARY LINE
	EXISTING R.O.W./PROPERTY LINE
	EXISTING EASEMENT LINE
	PROPOSED CURB & GUTTER
	DRAINAGE AREA BOUNDARY
	DRAINAGE AREA DESIGNATION AND AREA DRAINED
	FLOW ARROW
	TIME OF CONCENTRATION LINE (SHEET FLOW)
	TIME OF CONCENTRATION LINE (SHALLOW CONCENTRATED FLOW)
	EXISTING CONTOURS
	PROPOSED CONTOURS

WARNING !!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

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SERVICES, LLC

TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

PROPOSED DRAINAGE
AREA MAP

PROJECT CASE: XXXXXXX

WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
				13
				OF
				29



Temporary Stormwater Section (TCEQ-0602)

Attachment H: Temporary Sediment Pond(s) Plans and Calculations (NOT APPLICABLE)

There are no temporary sediment ponds associated with this project.



Temporary Stormwater Section (TCEQ-0602)

Attachment I: Inspection and Maintenance for BMPs

Inspection and Maintenance Guidelines for Construction BMPs

Silt Fence – Section 1.4.3

- (1) Inspect all fencing weekly, and after any rainfall.
- (2) Remove sediment when buildup reaches 6 inches.
- (3) Replace any torn fabric or install a second line of fencing parallel to the torn section.
- (4) Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
- (5) When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

Rock Berms – Section 1.4.5

- (1) Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.
- (2) Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause any additional siltation.
- (3) Repair any loose wire sheathing.
- (4) The berm should be reshaped as needed during inspection.
- (5) The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
- (6) The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

Temporary Construction Entrance/Exit – Section 1.4.2

- (1) 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.
- (2) All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
- (3) When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.



- (4) 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.
- (5) All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Personnel Responsible for Inspections

The agent that performs the inspections should be knowledgeable of this general permit, familiar with the construction site, and knowledgeable of the SWPPP for the site. Documentation of the inspector's qualifications is to be included in the attached Inspector Qualifications Log.

Inspection Schedule

The primary operator is required to choose one of the two inspections listed below.

- ☐ **Option 1:** Once every seven calendar days. If this alternative schedule is developed, then the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.
- ☐ **Option 2:** Once every 14 calendar days and within 24 hours of the end of a storm event of two inches or greater.

The inspections may occur on either schedule provided that documentation reflects the current schedule and that any changes to the schedule are conducted in accordance with the following provisions: the schedule may be changed a maximum of one time each month, the schedule change must be implemented at the beginning of a calendar month, and the reason for the schedule change must be documented (e.g., end of “dry” season and beginning of “wet” season).

If option 2 is the chosen frequency of inspections a rain gauge must be properly maintained on site or the storm event information from a weather station that is representative of the site location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, proper documentation of the total rainfall measured for that day must be recorded.

Personnel provided by the permittee must inspect:

- disturbed areas of the construction site that have not been finally stabilized,
- areas used for storage of materials that are exposed to precipitation,
- structural controls (for evidence of, or the potential for, pollutants entering the drainage system),
- sediment and erosion control measures identified in the SWP3 (to ensure they are operating correctly), and
- locations where vehicles enter or exit the site (for evidence of off-site sediment tracking).

Reductions in Inspection Frequency

Where sites have been finally or temporarily stabilized or where runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or frozen ground exists), inspections must be conducted at least once every month. In arid, semi-arid, or drought-stricken areas, inspections must be conducted at least once every month and within 24 hours after the end of a storm event of 0.5 inches or greater. A record of the total



rainfall measured, as well as the approximate beginning and ending dates of winter or drought conditions resulting in monthly frequency of inspections in the attached Rain Gauge Log.

In the event of flooding or other uncontrollable situations which prohibit access to the inspection sites, inspections must be conducted as soon as access is practicable.

Inspection Report Forms

Use the Inspection Report Forms given as a checklist to ensure that all required areas of the construction site are addressed. There is space to document the inspector's name as well as when the inspections regularly take place. The tables will document that the required area was inspected. (If there were any areas of concern, briefly describe them in this space with a more detailed description in the narrative section. Use the last table to document any discharges found during the inspections).

Describe how effective the installed BMPs are performing. Describe any BMP failures that were noted during the investigation and describe any maintenance required due to the failure. If new BMPs are needed as the construction site changes, the inspector can use the space at the bottom of the section to list BMPs to be implemented before the next inspection.

Describe the inspector's qualifications, how the inspection was conducted, and describe any areas of non-compliance in detail. If an inspection report does not identify any incidents of non-compliance, then it must contain a certifying signature stating that the facility or site is in compliance. The report must be signed by a person and in a manner required by 30 TAC 305.128. There is space at the end of the form to allow for this certifying signature.

Whenever an inspection shows that BMP modifications are needed to better control pollutants in runoff, the changes must be completed within seven calendar days following the inspection. If existing BMPs are modified or if additional BMPs are needed, you must describe your implementation schedule, and wherever possible, make the required BMP changes before the next storm event.

The Inspection Report Form functions as the required report and must be signed in accordance with TCEQ rules at 30 TAC 305.128.



Corrective Action

Personnel Responsible for Corrective Actions

Both Primary and Secondary Operators are responsible for maintaining all necessary Corrective Actions. If an individual is specifically identified as the responsible party for modifying the contact information for that individual should be documented in the attached Inspector Qualifications Log.

Corrective Action Forms

The Temporary BMPs must be modified based on the results of inspections, as necessary, to better control pollutants in runoff. Revisions must be completed within seven (7) calendar days following the inspection. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in the attached forms and wherever possible those changes implemented before the next storm event. If implementation before the next anticipated storm event is impracticable, these changes must be implemented as soon as practicable. Actions taken as a result of inspections must be properly documented by completing the corrective action forms given.



Inspector Qualifications Log*

Inspector Name: _____

Qualifications (Check as appropriate and provide description):

☐ Training Course _____

☐ Supervised Experience _____

☐ Other _____

Inspector Name: _____

Qualifications (Check as appropriate and provide description):

☐ Training Course _____

☐ Supervised Experience _____

☐ Other _____

Inspector Name: _____

Qualifications (Check as appropriate and provide description):

☐ Training Course _____

☐ Supervised Experience _____

☐ Other _____

Inspector Name: _____

Qualifications (Check as appropriate and provide description):

☐ Training Course _____

☐ Supervised Experience _____

☐ Other _____

Inspector Name: _____

Qualifications (Check as appropriate and provide description):

☐ Training Course _____

☐ Supervised Experience _____

☐ Other _____

Inspector Name: _____

Qualifications (Check as appropriate and provide description):

☐ Training Course _____

☐ Supervised Experience _____

☐ Other _____

*The agent that performs the inspections should be knowledgeable of this general permit, familiar with the construction site, and knowledgeable of the SWPPP for the site. The contractor is to provide an inspector with a CPESC, CESSWI, or CISEC certification.

Construction Activity Sequence Log*

Name of Operator	Projected Dates Month/Year	Activity Disturbing Soil clearing, excavation, etc.	Location on-site where activity will be conducted	Acreage being disturbed

*Construction activity sequences for linear projects may be conducted on a rolling basis. As a result, construction activities may be at different stages at different locations in the project area. The Contractor is required to complete and update the schedule and adjust as necessary.

[illegible]

Stabilization Activities Log*

Date Activity Initiated	Description of Activity	Description of Stabilization Measure and Location	Date Activity Ceased (Indicate Temporary or Permanent)	Date When Stabilization Measures Initiated

*Stabilization and erosion control practices may include, but are not limited to, establishing temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, and protecting existing trees and vegetation. List practices used where they are located, when they will be implemented, and whether they are temporary (interim) or permanent.

Inspection Frequency Log

[illegible]

General Information				
Name of Project		Tracking Number	Inspection Date	
Inspector Name, Title & Contact Information				
Present Phase of Construction				
Inspection Location (if multiple inspections are required, specify location where this inspection is being conducted)				
Inspection Frequency Standard Frequency: <input type="checkbox"/> Weekly <input type="checkbox"/> Every 14 days and within 24 hours of a 0.25" rain Increased Frequency: <input type="checkbox"/> Every 7 days and within 24 hours of a 0.25" rain Reduced Frequency: <input type="checkbox"/> Once per month (for stabilized areas) <input type="checkbox"/> Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought) <input type="checkbox"/> Once per month (for frozen conditions where earth-disturbing activities are being conducted)				
Was this inspection triggered by a 0.25" storm event? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, how did you determine whether a 0.25" storm event has occurred? <input type="checkbox"/> Rain gauge on site <input type="checkbox"/> Weather station representative of site. Specify weather station source. Total rainfall amount that triggered the inspection (in inches):				
Unsafe Conditions for Inspection Did you determine that any portion of your site was unsafe for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If "yes," complete the following: <ul style="list-style-type: none"> ○ Describe the conditions that prevented you from conducting the inspection in this location: ○ Location(s) where conditions were found: 				



**WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN**

Condition and Effectiveness of Erosion and Sediment (E&S) Controls				
Type / Location of E&S Control	Repairs or Other Maintenance Needed?	Corrective Action Required?	Date on Which Maintenance of Corrective Action First Identified?	Notes
1.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
6.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
7.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
8.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
9.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		



**WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN**

Condition and Effectiveness of Pollution Prevention (P ₂) Practices				
Type / Location of P ₂ Practices	Repairs or Other Maintenance Needed?	Corrective Action Required?	Identification Date	Notes
1.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
6.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
7.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
8.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
9.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Stabilization of Exposed Soil			
Stabilization Area	Stabilization Method	Have you Initiated Stabilization?	Notes



**WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN**

1.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
2.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
3.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
4.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	

Description of Discharges

Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? ☐ YES ☐ NO
If "YES," provide the following information for each point of discharge:

Discharge Locations	Observations
1.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and / or sediment accumulation that can be attributed to your discharge? <input type="checkbox"/> YES. <input type="checkbox"/> NO If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
2.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and / or sediment accumulation that can be attributed to your discharge? <input type="checkbox"/> YES. <input type="checkbox"/> NO If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
3.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and / or sediment accumulation that can be attributed to your discharge? <input type="checkbox"/> YES. <input type="checkbox"/> NO If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:

Contractor or Subcontractor Certification and Signature



**WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information, submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am, aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor: _____ **Date:** _____

Printed Name and Affiliation:

Certification and Signature by Permittee

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information, submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am, aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**Signature of Permittee or
"Duly Authorized Representative":** _____ **Date:** _____

Printed Name and Affiliation:



**WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN**

Section A – Initial Report (Complete this section within 24 hours of discovering the condition that triggered corrective action.)			
Name of Project:		Tracking Number:	Today's Date
Date Problem First Discovered:		Time Problem First Discovered:	
Name of Individual Completing this Form:		Contact Information:	
<p>What site conditions triggered the requirement to conduct corrective action:</p> <p><input type="checkbox"/> A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or Part 3</p> <p><input type="checkbox"/> The stormwater controls that have been installed and maintained are not effective enough for the discharge to meet applicable water quality standards</p> <p><input type="checkbox"/> A prohibited discharge has occurred or is occurring</p> <p>Provide a description of the problem:</p> <p>Deadline for completing corrective action (Enter date that is either: (1) no more than 7 calendar days after the date you discovered the problem, or (2) if it is infeasible to complete work within the first 7 days, enter the date that is as soon as practicable following the 7th day):</p> <p>If your estimated date of completion falls after the 7-day deadline, explain (1) why you believe it is infeasible to complete work within 7 days, and (2) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe:</p>			
Section B – Corrective Action Progress (Complete this section no later than 7 calendar days after discovering the condition that triggered corrective action.)			
Section B.1 – Why the Problem Occurred			
Cause(s) of Problem (Add an additional sheet if necessary)		How This Was Determined and the Date You Determined the Cause	
1.		1.	
2.		2.	
Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem			
List of Stormwater control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	Completion Date	SWPPP Update Necessary?	Notes
1.		<input type="checkbox"/> Yes <input type="checkbox"/> No Date:	
2.		<input type="checkbox"/> Yes <input type="checkbox"/> No Date:	



**WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN**

Section A – Initial Report (Complete this section within 24 hours of discovering the condition that triggered corrective action.)			
Name of Project:	Tracking Number:	Today's Date	
Date Problem First Discovered:	Time Problem First Discovered:		
Name of Individual Completing this Form:	Contact Information:		
<p>What site conditions triggered the requirement to conduct corrective action:</p> <p><input type="checkbox"/> A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or Part 3</p> <p><input type="checkbox"/> The stormwater controls that have been installed and maintained are not effective enough for the discharge to meet applicable water quality standards</p> <p><input type="checkbox"/> A prohibited discharge has occurred or is occurring</p> <p>Provide a description of the problem:</p> <p>Deadline for completing corrective action (Enter date that is either: (1) no more than 7 calendar days after the date you discovered the problem, or (2) if it is infeasible to complete work within the first 7 days, enter the date that is as soon as practicable following the 7th day):</p> <p>If your estimated date of completion falls after the 7-day deadline, explain (1) why you believe it is infeasible to complete work within 7 days, and (2) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe:</p>			
Section B – Corrective Action Progress (Complete this section no later than 7 calendar days after discovering the condition that triggered corrective action.)			
Section B.1 – Why the Problem Occurred			
Cause(s) of Problem (Add an additional sheet if necessary)	How This Was Determined and the Date You Determined the Cause		
1.	1.		
2.	2.		
Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem			
List of Stormwater control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	Completion Date	SWPPP Update Necessary?	Notes
1.		<input type="checkbox"/> Yes <input type="checkbox"/> No Date:	
2.		<input type="checkbox"/> Yes <input type="checkbox"/> No Date:	

Contractor or Subcontractor Certification and Signature
--



**WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information, submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am, aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor: _____ **Date:** _____

Printed Name and Affiliation:

Certification and Signature by Permittee

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information, submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am, aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**Signature of Permittee or
"Duly Authorized Representative":** _____ **Date:** _____

Printed Name and Affiliation:



Temporary Stormwater Section (TCEQ-0602)

Attachment J: Schedule of Interim and Permanent Soil Stabilization Practices

Interim Vegetative Stabilization

Interim soil stabilization will not be required.

Permanent Vegetative Stabilization

Construction practices shall disturb the minimal amount of existing ground cover as required for land clearing, grading, and construction activity for the shortest amount of time possible to minimize the potential of erosion and sedimentation from the site. Existing vegetation shall be maintained and left in place until it is necessary to disturb for construction activity. For this project, the following stabilization practices will be implemented:

1. Hydraulic Mulch and Seeding: Disturbed areas subject to erosion shall be stabilized with hydraulic mulch and/or seeded and watered to provide interim stabilization.
2. Sodding and Wood Mulch: As per the project landscaping plan, sodding and wood mulch will be applied to landscaped areas to provide permanent stabilization prior to project completion.

Records of the following shall be maintained:

1. The dates when major grading activities occur,
2. The dates when construction activities temporarily or permanently cease on a portion of the site, and
3. The dates when stabilization measures are initiated.

Stabilization measures must be initiated as soon as practical in portions of the site where construction activities have temporarily or permanently ceased, and except as provided in the following, must be initiated no more than fourteen (14) days after the construction activity in that portion of the site has temporarily or permanently ceased:

Permanent Stormwater Section

Texas Commission on Environmental Quality

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

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

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

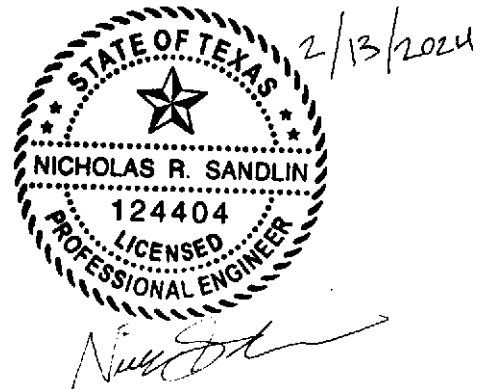
Signature

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

Print Name of Customer/Agent: NICK SANDLIN, P.E.
(SANDLIN SERVICES, LLC)

Date: 2/13/2024

Signature of Customer/Agent



Regulated Entity Name: WOODLAKE RETAIL

Permanent Best Management Practices (BMPs)

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

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

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

☐ N/A

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

☐ N/A

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

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

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

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

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

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

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

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

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

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

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

Responsibility for Maintenance of Permanent BMP(s)

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

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



**WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN**

Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practical.

Where construction activity on a portion of the site is temporarily ceased and earth disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures do not have to be initiated on that portion of the site.

In arid areas (areas with an average rainfall of 0-10 inches), semiarid areas (areas with an average annual rainfall of 10 to 20 inches), and areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonably arid conditions, stabilization measures must be initiated as soon as practical.



**Permanent Stormwater Section
(TCEQ-0600)**

**Attachment A:
20% or Less Impervious Cover Waiver (if requested for multi-
family, school, or small business site)**

(NOT APPLICABLE)



Permanent Stormwater Section (TCEQ-0600)

Attachment B: BMPs for Upgradient Stormwater

Per the Construction Plans and Drainage study, no upgradient stormwater for our site exists.



Permanent Stormwater Section (TCEQ-0600)

Attachment C: BMPs for On-Site Stormwater

The Commercial project will increase impervious cover (IC) and the volume of potential on-site stormwater. BMPs are designed to capture and mitigate potential onsite stormwater flows.

Runoff from the 0.85 AC developed area will convey to a proposed Batch Detention Pond BMP that is designed to capture and treat the required water quality volume. This BMP was designed to treat and reduce stormwater flows from the site in proposed conditions as analyzed in the attached construction plans. Refer to the Water Quality Details sheet for all load removal calculations for the proposed drainage area.



**Permanent Stormwater Section
(TCEQ-0600)**

**Attachment D:
BMPs for Surface Streams
(NOT APPLICABLE)**

No surface streams flow across the property.



**Permanent Stormwater Section
(TCEQ-0600)**

**Attachment E:
Request to Seal Features (if sealing a feature)
(NOT APPLICABLE)**



**Permanent Stormwater Section
(TCEQ-0600)**

**Attachment F:
Construction Plans**

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0041-003 Woodlake Retail\CAD\Construction Sheets\5 WLP CIV.dwg-COVER PAGE Plotted Feb. 15, 2024 at 11:27am by Engineer | Last Saved by: Engineer

PROJECT CONTACTS

OWNER:	ENGINEER:	LANDSCAPE ARCHITECT:
TAILWIND 303 PROPERTIES, LLC 8001 QUAKER AVE, SUITE K LUBBOCK, TX 79424 806-790-3822 BRAD@BRADANDREWSREALTY.COM CONTACT: BRAD ANDREWS BRADANDREWSREALTY.COM	SANDLIN SERVICES, LLC 4501 WHISPERING VALLEY DR. UNIT#27 AUSTIN, TEXAS 78727 806-679-7303 CONTACT: NICHOLAS SANDLIN, P.E. WWW.SANDLINSERVICES.COM	BLAIR LANDSCAPE ARCHITECTURE, LLC 2028 E. BEN WHITE BLVD #240-7873 AUSTIN, TX 78741 (512)522-8979
LAND SURVEYOR:	ARCHITECT:	WATER AND WASTEWATER:
TRIAD SURVEYING, INC. PO BOX 1489 ROCKDALE, TX 76576 512-446-3457 BRAD@TRIADSURVEYING.COM	3AXIS ARCHITECTS 6909 82ND ST. STE 100 LUBBOCK, TX 79424 806-777-7469 TYLER@3AXISARCHITECTS.COM	GEORGETOWN UTILITY SYSTEMS 300 INDUSTRIAL AVE. GEORGETOWN, TX 78626 (512) 930-3640 CONTACT: DAVID MUNK WWW.GUS.GEORGETOWN.ORG

SURVEY AND BENCHMARK

ALL ELEVATIONS SHOWN HEREON ARE BASED ON THE FOLLOWING BENCHMARKS AND INFORMATION.
CONTACT SURVEYOR LISTED IN PROJECT CONTACTS.
BEARINGS ARE BASED ON THE TEXAS STATE PLAN COORDINATE SYSTEM OF 1983, TEXAS CENTRAL ZONE (NAD 83)

LEGAL DESCRIPTION

S9883 - WOODLAKE PH 6, BLOCK A, Lot 3, ACRES 1.054
SEE PLAT SHEET

ZONING AND USE

JURISDICTION:	CITY OF GEORGETOWN
ZONING:	C-1 LOCAL COMMERCIAL
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	RETAIL

WATERSHED

WATERSHED: GRANGER LAKE - SAN GABRIEL RIVER

EDWARDS AQUIFER

THIS PROJECT LIES WITHIN THE EDWARDS AQUIFER RECHARGE ZONE AS DEFINED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)

FLOODPLAIN NOTE

NO PORTION OF THIS TRACT IS WITHIN THE BOUNDARIES OF THE 100-YEAR FLOODPLAIN OF ANY WATERWAY THAT IS WITHIN THE LIMITS OF THE STUDY OF THE FEDERAL INSURANCE ADMINISTRATION FIRM PANEL #48491C0280E, AND INCORPORATED AREAS EFFECTIVE DATE 09/26/2008 FOR WILLIAMSON COUNTY, TEXAS.

UTILITIES

WATER:	GEORGETOWN UTILITY SYSTEMS
WASTEWATER:	GEORGETOWN UTILITY SYSTEMS

FIRE DEMAND

FIRE FLOW:	1,500 GPM FOR DURATION OF 2 HOURS
LARGEST BUILDING FIRE AREA:	5,700 SF
BUILDING CONSTRUCTION:	TYPE II-B
HYDRANTS REQUIRED:	1
CODE OF RECORD:	2021 INTERNATIONAL FIRE CODE

CITY OF GEORGETOWN SITE DATA				
	PROPOSED			
TOTAL SITE AREA	1.054 AC	45,903 SF		
BUILDING GROSS FLOOR AREA		5,700 SF		
IMPERVIOUS COVER ALLOWED PER UDC 11.02.010	0.74 AC	32,132 SF = 70%		
IMPERVIOUS COVER PROPOSED	0.73 AC	31,768 SF = 69.2%		

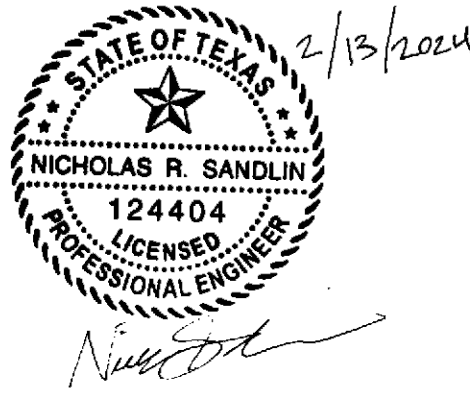
CITY OF GEORGETOWN NOTES:

- IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER, AND SUCCESSORS TO THE CURRENT PROPERTY OWNER, TO ENSURE THE SUBJECT PROPERTY AND ANY IMPROVEMENTS ARE MAINTAINED IN CONFORMANCE WITH THIS SITE DEVELOPMENT PLAN.
- THIS DEVELOPMENT SHALL COMPLY WITH ALL STANDARDS OF THE UNIFIED DEVELOPMENT CODE (UDC), THE CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL, THE DEVELOPMENT MANUAL AND ALL OTHER APPLICABLE CITY STANDARDS.
- THIS SITE DEVELOPMENT SHALL MEET THE UDC STORM WATER REQUIREMENTS
- ALL SIGNAGE REQUIRES A SEPARATE APPLICATION AND APPROVAL FROM THE INSPECTION SERVICES DEPARTMENT. NO SIGNAGE IS APPROVED WITH THE SITE DEVELOPMENT PLAN
- SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH THE UDC
- DRIVEWAYS WILL REQUIRE APPROVAL BY THE DEVELOPMENT ENGINEER OF THE CITY OF GEORGETOWN.
- OUTDOOR LIGHTING SHALL COMPLY WITH SECTION 7.04 OF THE UDC.
- SCREENING OF MECHANICAL EQUIPMENT DUMPSTER AND PARKING SHALL COMPLY WITH CHAPTER 8 OF THE UDC. THE SCREENING IS SHOWN ON THE LANDSCAPE AND ARCHITECTURAL DRAWINGS.
- THE COMPANION LANDSCAPE PLAN HAS BEEN DESIGNED AND PLANT MATERIALS SHALL BE INSTALLED TO MEET ALL REQUIREMENTS OF THE UDC.
- ALL MAINTENANCE OF REQUIRED LANDSCAPE PLAN SHALL COMPLY WITH THE MAINTENANCE STANDARDS OF CHAPTER 8 OF THE UDC.
- A SEPARATE IRRIGATION PLAN SHALL BE REQUIRED AT THE TIME OF BUILDING PERMIT APPLICATION.
- NO HERITAGE TREES ARE PROPOSED TO BE REMOVED WITH THESE PLANS. SEE TREE PROTECTION PLAN FOR DETAILS.
- THE CONSTRUCTION PORTION OF THESE PLANS WERE PREPARED, SEALED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE, BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR CONSTRUCTION OF THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS AND CODES.
- THIS PROJECT IS SUBJECT TO ALL CITY STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITAL OF THE PROJECT TO THE CITY.
- WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC UTILITY LINES SHALL BE LOCATED ALONG THE STREET AND WITHIN THE SITE. WHERE EXISTING OVERHEAD INFRASTRUCTURE IS TO BY RELOCATED, IT SHALL BE RE-INSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER.
- ALL ELECTRIC AND COMMUNICATION INFRASTRUCTURE SHALL COMPLY WITH UDC SECTION 13.06.
- SCREENING AND LOCATION OF OUTDOOR STORAGE SHALL COMPLY WITH SECTION 5.09 OF THE UDC.
- THE PROPERTY SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN.
- A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER REGULATIONS, WAS COMPLETED ON /2024 BY . ANY SPRINGS AND STREAMS AS IDENTIFIED IN THE GEOLOGIC ASSESSMENT ARE SHOWN HEREIN.
- TOLR REGISTRATION TABS#
- TCEQ WPAP #

CORRECTIONS RECORD

NO.	DESCRIPTION	REVISE (R) ADD (D) VOID (V) SHEET NO.'s	TOTAL # SHEETS IN PLAN SET	NET CHANGE IMP. COVER (sq.ft.)	TOTAL SITE IMP. COVER (sq.ft.)/%	APPROVAL/ DATE	DATE IMAGED

THIS PROPOSED DEVELOPMENT WILL NOT RESULT IN ANY IDENTIFIABLE ADVERSE IMPACT TO OTHER PROPERTIES. SEE DRAINAGE AREA MAPS AND CALCULATIONS FOR DETAILED ANALYSIS.

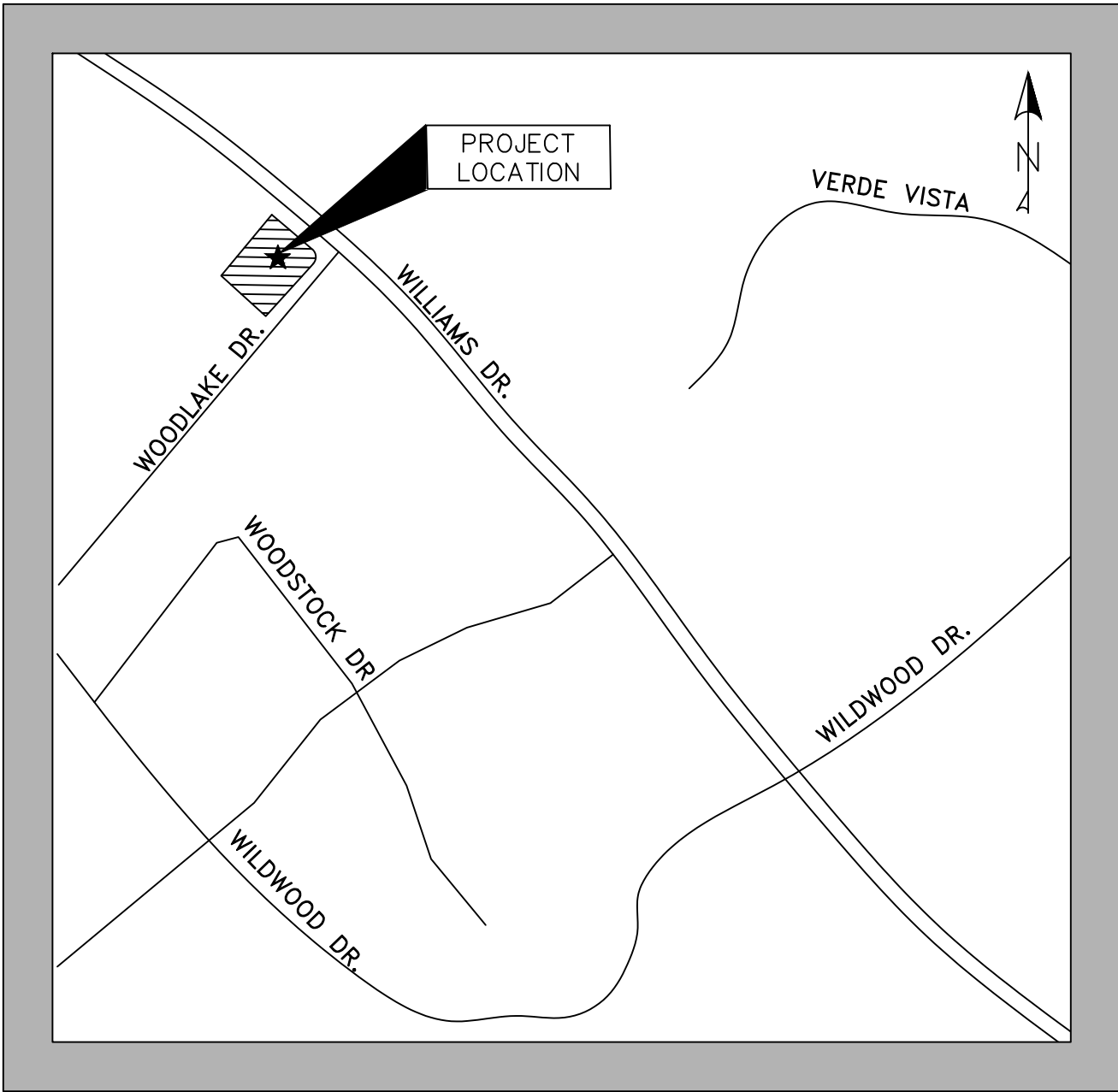


CONTRACTOR NOTES:

- THE CONTRACTOR SHALL OBTAIN A "NOTICE OF" PROPOSED INSTALLATION OF UTILITY LINE PERMIT FROM THE COUNTY FOR ANY WORK PERFORMED IN THE EXISTING COUNTY RIGHT-OF-WAY (DRIVEWAY APRON, WATER MAIN TIE-IN, ETC.) THIS PERMIT APPLICATION WILL REQUIRE A LIABILITY AGREEMENT, A CONSTRUCTION COST ESTIMATE FOR WORK WITHIN THE RIGHT-OF-WAY INCLUDING PAVEMENT REPAIR (IF NEEDED), A PERFORMANCE BOND, CONSTRUCTION PLANS AND, IF NECESSARY, A TRAFFIC CONTROL PLAN, AN INSPECTION FEE, AND A PRE-CONSTRUCTION MEETING MAY ALSO BE REQUIRED, DEPENDING ON THE SCOPE OF WORK. THE PERMIT WILL BE REVIEWED AND APPROVED BY THE COUNTY ENGINEER, AND MUST ALSO BE APPROVED BY THE COUNTY COMMISSIONERS COURT IF ANY ROAD CLOSURE IS INVOLVED.
- BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE, HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.
- THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM 1-800-245-4545, OR THE OWNER OF EACH INDIVIDUAL UTILITY, FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.
- ENVIRONMENTAL INSPECTION HAS THE AUTHORITY TO MODIFY/CHANGE EROSION AND SEDIMENTATION CONTROLS TO KEEP THE PROJECT IN COMPLIANCE.
- THE CONTRACTOR OR SURVEYOR WILL OBTAIN A DIGITAL COPY OF THE CAD FILES THAT REPRESENT THESE IMPROVEMENTS; SANDLIN SERVICES, LLC AND IT'S ASSOCIATES TAKE NO RESPONSIBILITY FOR THE LOCATION OF THESE IMPROVEMENTS IN ANY COORDINATE SYSTEM. DIGITAL FILES USED TO PRODUCE THESE PLANS WERE PARTIALLY CREATED BY PARTIES OTHER THAN SANDLIN SERVICES, LLC AND ARE NOT INTENDED FOR USE IN CONSTRUCTION STAKING. VERTICAL AND HORIZONTAL DATA SHALL BE INDEPENDENTLY VERIFIED BY CONTRACTOR'S R.P.L.S.
- SANDLIN SERVICES, LLC HAS ENDEAVORED TO DESIGN THESE PLANS COMPLIANT WITH ADA/TDLR AND OTHER ACCESSIBILITY REQUIREMENTS. HOWEVER, THE CONTRACTOR SHALL NOT BE RELIEVED OF ANY RESPONSIBILITY FOR CONSTRUCTING THESE IMPROVEMENTS COMPLIANT WITH ALL APPLICABLE ACCESSIBILITY STANDARDS. IF THE CONTRACTOR NOTICES ANY DISCREPANCIES BETWEEN THESE PLANS AND ACCESSIBILITY LAWS/RULES, HE IS TO STOP WORK IN THE AREA OF CONFLICT AND NOTIFY THE ENGINEER IMMEDIATELY FOR A RESOLUTION AND/OR REVISION TO THESE PLANS. SANDLIN SERVICES, LLC SHALL NOT BE HELD RESPONSIBLE FOR CONSTRUCTING THIS SITE COMPLIANT WITH ACCESSIBILITY LAWS/RULES REGARDLESS OF WHAT IS SHOWN IN THESE PLANS.

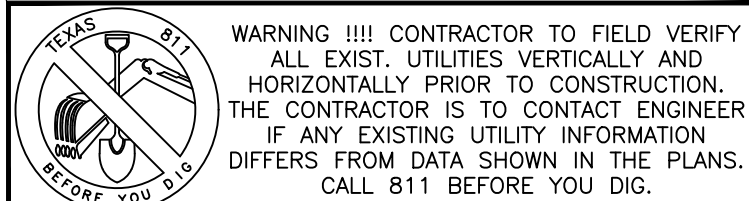
SITE PLAN/DEVELOPMENT PERMIT NUMBER AND DIGITAL APPROVAL STAMP

*APPROVAL OF THESE PLANS BY THE CITY OF GEORGETOWN INDICATES COMPLIANCE WITH APPLICABLE CITY REGULATIONS ONLY. APPROVAL BY OTHER GOVERNMENT ENTITIES MAY BE REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR DETERMINING WHAT ADDITIONAL APPROVALS MAY BE NECESSARY.



PROJECT LOCATION MAP
SCALE: 1"=500'

SHEET LIST	
NUMBER	TITLE
1	COVER PAGE
2	GENERAL NOTES (1 OF 2)
3	GENERAL NOTES (2 OF 2)
4	FINAL PLAT
5	TREE PRESERVATION, MITIGATION, AND EXISTING CONDITIONS PLAN
6	CRZ PROTECTION PLAN
7	EROSION CONTROL PLAN
8	SITE PLAN
9	FIRE PROTECTION PLAN
10	GRADING PLAN
11	TURN LANE PLAN
12	EXISTING DRAINAGE AREA MAP
13	PROPOSED DRAINAGE AREA MAP
14	POND PLAN
15	WATER QUALITY CALCS
16	WATER QUALITY DETAILS
17	WATER & WASTEWATER PLAN
18	EROSION CONTROL DETAILS
19	UTILITY DETAILS (1 OF 3)
20	UTILITY DETAILS (2 OF 3)
21	UTILITY DETAILS (3 OF 3)
22	CONSTRUCTION DETAILS (1 OF 2)
23	CONSTRUCTION DETAILS (2 OF 2)
24	ELECTRICAL SITE PLAN
25	PHOTOMETRIC PLAN
26	ARCHITECTURAL ELEVATIONS (1 OF 2)
27	ARCHITECTURAL ELEVATIONS (2 OF 2)
28	LANDSCAPE PLAN (1 OF 2)
29	LANDSCAPE PLAN (2 OF 2)



THESE PLANS COPYRIGHTED BY SANDLIN SERVICES, LLC



TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

COVER PAGE

PROJECT CASE: XXXXXXX

WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
				1
				OF
				29

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

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

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

- A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
 - the name of the approved project;
 - the activity start date; and
 - the contact information of the prime contractor.
- All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.
- If any sensitive feature(s) (caves, solution cavity, sink hole, etc.) is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. Construction activities may not be resumed until the TCEQ has reviewed and approved the appropriate protective measures in order to protect any sensitive feature and the Edwards Aquifer from potentially adverse impacts to water quality.
- No temporary or permanent hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.
- Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the approved plans and manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.

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

- Sediment must be removed from the sediment traps or sedimentation basins not later than

TCEQ-0592 (Rev. July 15, 2015)

Page 1 of 2

when it occupies 50% of the basin's design capacity.

- Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.
- All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.
- If portions of the site will have a temporary or permanent cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.
- The following records shall be maintained and made available to the TCEQ upon request:
 - the dates when major grading activities occur;
 - the dates when construction activities temporarily or permanently cease on a portion of the site; and
 - the dates when stabilization measures are initiated.
- The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
 - any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
 - any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
 - any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office
12100 Park 35 Circle, Building A
Austin, Texas 78753-1808
Phone (512) 339-2929
Fax (512) 339-3795

San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480
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Fax (210) 545-4329

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

TCEQ-0592 (Rev. July 15, 2015)

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GEOTECHNICAL RECOMMENDATIONS PER XXX
PROJECT #XXX DATED XXX

GEORGETOWN NOTES:

- 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.
 - THIS PROJECT IS SUBJECT TO ALL CITY STANDARD SPECIFICATIONS AND DETAILS AND UDC REGULATIONS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
 - THE SITE CONSTRUCTION PLANS SHALL MEET ALL REQUIREMENTS OF THE APPROVED SITE PLAN.
 - WASTEWATER MAINS AND SERVICE LINES SHALL BE SDR 26 PVC.
 - WASTEWATER MAINS SHALL BE INSTALLED WITHOUT HORIZONTAL OR VERTICAL BENDS.
 - MAXIMUM DISTANCE BETWEEN WASTEWATER MANHOLES IS 500 FEET.
 - WASTEWATER MAINS SHALL BE LOW PRESSURE AIR TESTED AND MANDREL TESTED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.
 - WASTEWATER MANHOLES SHALL BE VACUUM TESTED AND COATED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.
 - WASTEWATER MAINS SHALL BE CAMERA TESTED BY THE CONTRACTOR AND SUBMITTED TO THE CITY IN DVD FORMAT PRIOR TO PAVING THE STREETS.
 - PRIVATE WATER SYSTEM FIRE LINES SHALL BE TESTED BY THE CONTRACTOR TO 200 PSI FOR 2 HOURS.
 - PRIVATE WATER SYSTEM FIRE LINES SHALL BE DUCTILE IRON PIPING FROM THE WATER MAIN TO THE BUILDING SPRINKLER SYSTEM, AND 200 PSI 0900 PVC FOR ALL OTHERS.
 - PUBLIC WATER SYSTEM FIRE LINES SHALL BE 150 PSI #900 PVC AND TESTED BY THE CONTRACTOR AT 150 PSI FOR 4 HOURS.
 - ALL BENDS AND CHANGES IN DIRECTIONS ON WATER MAINS SHALL BE RESTRAINED AND THRUST BLOCKED.
 - LONG FIRE HYDRANT LEADS SHALL BE RESTRAINED.
 - ALL WATER LINES ARE TO BE BACTERIA TESTED BY THE CONTRACTOR ACCORDING TO THE CITY STANDARDS AND SPECIFICATIONS.
 - WATER AND SEWER MAIN CROSSINGS SHALL MEET ALL REQUIREMENTS OF THE TCEQ AND THE CITY.
 - FLEXIBLE BASE MATERIAL FOR PUBLIC STREETS SHALL BE TxDOT TYPE A GRADE 1.
 - 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.
 - ALL SIDEWALK RAMP AND PUBLIC AREA SIDEWALKS (L.E., NOT ADJACENT TO INDIVIDUAL LOTS) ARE TO BE INSTALLED WITH THE PUBLIC INFRASTRUCTURE.
 - A MAINTENANCE BOND IS REQUIRED TO BE SUBMITTED TO THE CITY
- PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS, THIS BOND SHALL BE ESTABLISHED FOR 2 YEARS IN THE AMOUNT OF 10% OF THE COST OF THE PUBLIC IMPROVEMENTS AND SHALL FOLLOW THE CITY FORMAT.
- THE CITY OF GEORGETOWN SHALL BE CONTACTED 48 HOURS IN ADVANCE FOR CONNECTIONS AND TESTING.

SPECIAL NOTES, AS APPLICABLE, FOR SITE DEVELOPMENT OR STREETS AND DRAINAGE

- THE SUBGRADE MATERIAL IN (NAME OF SUBDIVISION) WAS TESTED BY (NAME OF PROFESSIONAL SOIL LAB) IN (DAY, MONTH, AND YEAR) AND THE STREET SECTION DESIGNED ACCORDING TO APPROVED DESIGN CRITERIA. THE STREET SECTIONS ARE TO BE CONSTRUCTED AS FOLLOWS: [GIVE STREET NAMES, WIDTH OF RIGHT-OF-WAY, OR OTHER METHODS TO IDENTIFY PROPOSED DESIGN OF DIFFERENT PAVEMENT THICKNESSES. IN WRITING OR GRAPHICALLY, DESCRIBE THE STREET SECTION(S) TO BE CONSTRUCTED.]
- MANHOLE FRAMES, COVERS, AND WATER VALVE COVERS WILL BE RAISED TO FINISHED PAVEMENT GRADE AT THE OWNER'S EXPENSE BY A QUALIFIED CONTRACTOR WITH COUNTY INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION.
- ALL COLLECTOR AND ARTERIAL STREETS SHALL HAVE AUTOMATIC SCREED CONTROL ON ASPHALTIC CONCRETE PAVEMENT CONSTRUCTION, PLACED AS PER ITEM 350.6 OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS.
- AT INTERSECTIONS WHICH HAVE VALLEY DRAINAGE, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40' FROM THE INTERSECTING CURB LINE UNLESS OTHERWISE NOTED. INLETS ON THE INTERSECTING STREET SHALL NOT BE CONSTRUCTED WITHIN 40' OF THE VALLEY GUTTER.
- AT THE INTERSECTION OF TWO 44' STREETS OR LARGER, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40' FROM INTERSECTING CURB LINE UNLESS OTHERWISE NOTED.
- WHEN USING LIME STABILIZATION OF SUBGRADE, IT SHALL BE PLACED IN SLURRY FORM.
- IF APPLICABLE, A LICENSE AGREEMENT FOR LANDSCAPING, MAINTENANCE AND IRRIGATION IN STREET RIGHT-OF-WAY SHALL BE EXECUTED BY THE DEVELOPER WITH TRAVIS COUNTY PRIOR TO FINAL ACCEPTANCE OF THE ROADWAY SYSTEM FOR MAINTENANCE.

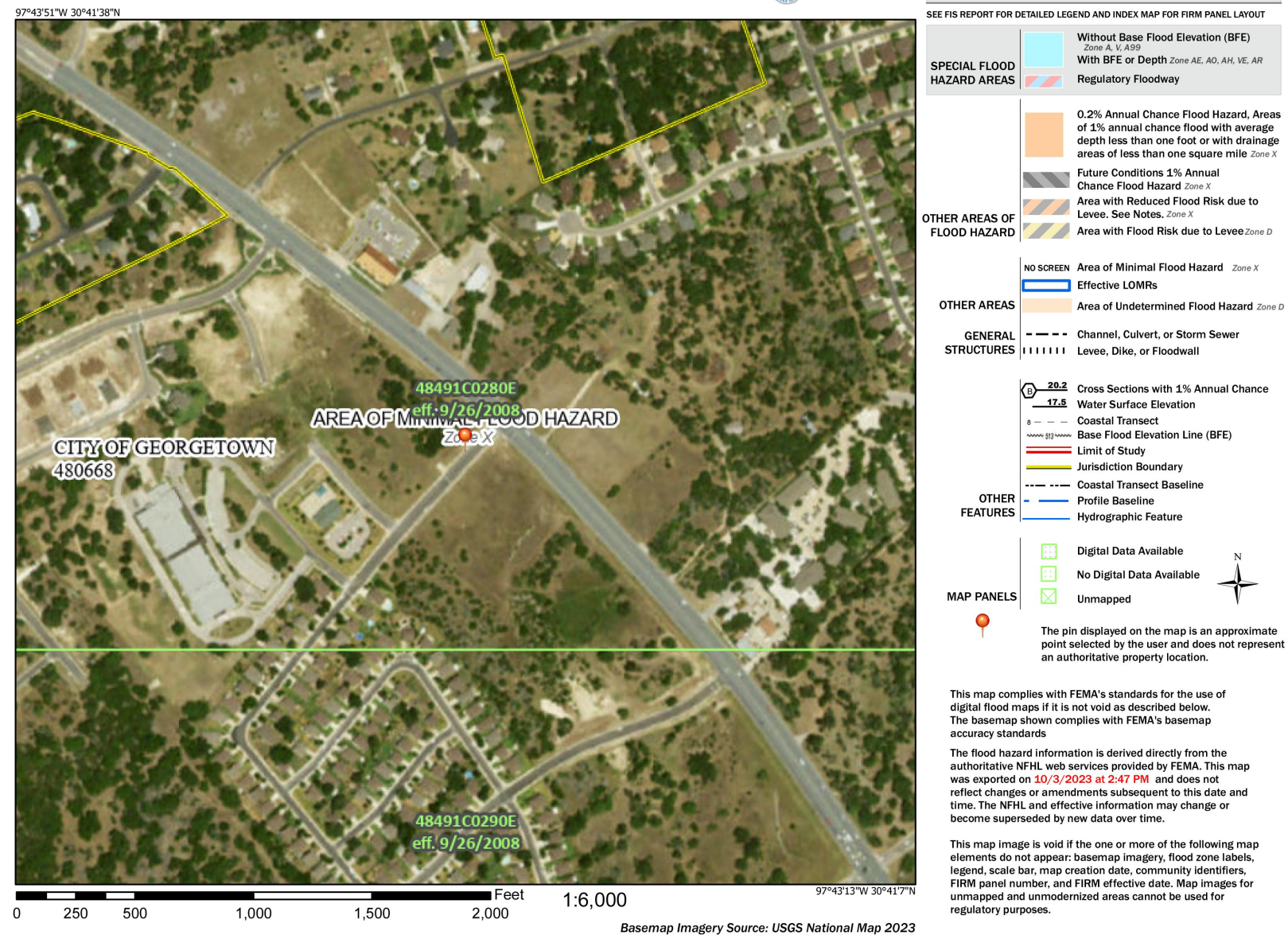
PAVING NOTES:

- ALL CONSTRUCTION SHALL BE IN GENERAL ACCORDANCE WITH THESE PLANS, CITY OF GEORGETOWN, TX STANDARD SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS.
- TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN APPROVED AGENCY FOR TESTING MATERIALS. THE NOMINATION OF THE TESTING LABORATORY AND THE PAVEMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE CONTRACTOR. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY STANDARD TESTING PROCEDURES, THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE CITIES SPECIFICATIONS AND THESE PLANS.
- BARRIER FREE RAMPS SHALL BE CONSTRUCTED AT ALL DRIVEWAY APPROACHES PER CITY STANDARD.
- ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS FOR FIRE LANES, PARKING STALLS, HANDICAPPED PARKING SYMBOLS AND MISCELLANEOUS STRIPING WITHIN PARKING LOT AND AROUND BUILDINGS AS SHOWN ON THE PLANS. ALL PAINT FOR PAVEMENT MARKINGS SHALL ADHERE TO CITY OF GEORGETOWN STANDARD DETAILS AND SPECIFICATIONS.
- REFER TO GEOTECHNICAL REPORT FOR PAVING JOINT LAYOUT PLAN, REINFORCEMENT STEEL, AND SOIL COMPACTION SPECIFICATIONS.
- ALL HANDICAP RAMPING, STRIPING AND PAVEMENT MARKINGS SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT THAT IS MOST CURRENT. SEE GEORGETOWN STANDARD CONSTRUCTION DETAILS.
- CONTRACTOR RESPONSIBLE FOR PREPARATION, SUBMITTAL AN APPROVAL BY CITY OF GEORGETOWN, TX OF TRAFFIC CONTROL PLAN PRIOR TO START OF CONSTRUCTION.
- SIDEWALKS ADJACENT TO CURB SHALL BE CONNECTED TO BACK OF CURB USING LONGITUDINAL BUTT JOINT.
- UNLESS THE PLANS SPECIFICALLY DICTATE OTHERWISE, ON-SITE AND OTHER DIRECTIONAL SIGNS SHALL BE LOCATED OUT OF THE PEDESTRIAN AND AUTOMOBILE ROUTES AND SHALL BE LOCATED BETWEEN THREE TO FIVE FEET BEHIND THE NEAREST BACK OF CURB. SIGN HEIGHT, LOCATION AND STRUCTURE SHALL BE SUCH THAT THE SIGN POSE TO THREAT TO PUBLIC SAFETY. ALSO, ON-SITE AND OTHER DIRECTIONAL SIGNS SHALL BE ORIENTED SO THEY ARE READILY VISIBLE TO THE ONCOMING TRAFFIC FOR WHICH THEY ARE INTENDED. FIELD ADJUSTMENTS OF LOCATION AND ORIENTATION OF THE SIGNS ARE TO BE MADE TO ACCOMPLISH THIS.
- THE CONTRACTOR SHALL NOT PLACE ANY PERMANENT PAVEMENT UNTIL ALL SLEEVING FOR ELECTRIC, GAS, TELEPHONE, CABLE, SITE IRRIGATION OR ANY OTHER UNDERGROUND UTILITY HAS BEEN INSTALLED. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO CONFIRM THAT ALL SLEEVING IS IN PLACE PRIOR TO PLACEMENT OF PERMANENT PAVEMENT.
- BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE HANDICAPPED ROUTES, PER A.D.A. AND T.A.S., EXIST TO AND FROM EVERY DOOR. HANDICAP RAMP SLOPES SHALL NOT EXCEED 1 VERTICAL TO 12 HORIZONTAL. SIDEWALK CROSS SLOPES SHALL NOT EXCEED 2.0 PERCENT AND LONGITUDINAL SLOPE 5.0 PERCENT. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR A.D.A. AND T.A.S. COMPLIANCE ISSUES.
- STREETS, SIDEWALKS, DRIVEWAYS, AND STORM DRAINAGE FACILITIES IN THE PUBLIC RIGHT-OF WAY SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CITY OF GEORGETOWN INFRASTRUCTURE DESIGN AND DEVELOPMENT STANDARDS MANUAL, LATEST EDITION.
- FIRE LANES SHALL REMAIN OPEN/ACCESSIBLE AT ALL TIMES DURING CONSTRUCTION. FIRE LANE SHALL BE INSTALLED AND ACCEPTED BY THE CITY PRIOR TO ANY CONSTRUCTION ABOVE THE FOUNDATION.

SEQUENCE OF CONSTRUCTION NOTES:

- INSTALL TEMPORARY SILT FENCE, TREE PROTECTION AND STABILIZED CONSTRUCTION ENTRANCE ACCORDING TO THE CONSTRUCTION PLANS PRIOR TO CLEARING, GRADING, EXCAVATION, ETC. CONTRACTOR SHALL INSPECT AND REPAIR TEMPORARY EROSION CONTROLS ON A REGULAR BASIS AND REMOVE ACCUMULATED SEDIMENT WHEN SIX (6) INCHES OF SEDIMENT HAS BEEN TRAPPED.
- INSTALL TREE PROTECTION AND INITIATE TREE MITIGATION MEASURES WHERE APPLICABLE.
- THE CONTRACTOR SHALL CONTACT CITY OF GEORGETOWN AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION TO ARRANGE A PRE-CONSTRUCTION MEETING.
- PRE-CONSTRUCTION MEETING ONSITE
- EVALUATE TEMPORARY EROSION CONTROL INSTALLATION.
- BEGIN SITE CLEARING/DEMOLITION
- ESTABLISH SUB-GRADE FOR PARKING, BUILDING PAD, DETENTION AND WATER QUALITY POND.
- INSTALLATION OF UTILITIES (TRENCHING).
- CONSTRUCTION OF BUILDING AND PAVED AREAS.
- COMPLETE TESTING REQUIREMENTS
- COMPLETE CONSTRUCTION AND INSTALL LANDSCAPING
- CLEAN SITE AND REVEGETATE ALL DISTURBED AREAS IN ACCORDANCE WITH RESTORATION REQUIREMENTS SHOWN ON THE CONSTRUCTION PLANS.
- PROJECT ENGINEER INSPECTS JOB AND WRITES CONCURRENCE LETTER TO THE CITY. FINAL INSPECTION IS SCHEDULED UPON RECEIPT OF THE LETTER.
- RECEIVE OPERATING PERMIT AND CITY CLEARANCE FOR OCCUPANCY
- REMOVE TEMPORARY EROSION CONTROL MEASURES AND TREE PROTECTION AFTER ALL DISTURBED AREAS ARE COMPLETELY RESTORED AND REVEGETATED.

National Flood Hazard Layer FIRMette



WARNING !!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

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ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC

TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

GENERAL NOTES (1 OF 2)

PROJECT CASE: XXXXXX
WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
1				2
2				OF
3				29

ABBREVIATIONS AND DEFINITIONS	
A	AREA
ADA	AMERICANS WITH DISABILITIES ACT
AWWA	AMERICAN WATER WORKS ASSOCIATION
B-B	BACK TO BACK
BC	BEGIN CURVE
BC	BACK OF CURB
BCR	BEGIN CURB RETURN
BMP	BEST MANAGEMENT PRACTICE
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
BW	BOTTOM OF WALL
CFS	CUBIC FEET PER SECOND
CITY	CITY, TOWN, OR OTHER LOCAL APPLICABLE JURISDICTION
CL	CENTERLINE
CONC	CONCRETE
CY	CUBIC YARD
DEMO	DEMOLITION
DG	DECOMPOSED GRANITE
EA	EASEMENT
EC	END CURVE
ECR	END CURB RETURN
EG	EXISTING GROUND/GRADE
EL	ELEVATION
ELEC	ELECTRICAL/ELECTRICITY
EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ESMT	EASEMENT
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EX	EXISTING
F-F	FACE TO FACE
FG	FINISHED GRADE/GROUND
FH	FIRE HYDRANT
FL	FLOWLINE
FC	FACE OF CURB
FT	FEET
HGL	HYDRAULIC GRADE LINE
LF	LINEAR FEET
LT	LEFT
MH	MANHOLE
MN	MINUTE/MINIMUM
NOI	NOTICE OF INTENT, REF. TC&O GENERAL PERMIT
NOT	NOTICE OF TERMINATION, REF. TC&O GENERAL PERMIT
NTS	NOT TO SCALE
OC	ON CENTER
OFF	OFFSET
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE/POINT OF COMPOUND CURVE
PG	PROPOSED GRADE
PI	POINT OF INFLECTION
PMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
RT	RIGHT
SF	SQUARE FEET
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SY	SQUARE YARD
TAS	ARCHITECTURAL BARRIERS TEXAS ACCESSIBILITY STANDARDS
TC	TOP OF CURB
TC&O	TEXAS COMMISSION OF ENVIRONMENTAL QUALITY
TEMP	TEMPORARY
TXDOT	TEXAS DEPARTMENT OF TRANSPORTATION
TXMUTCD	TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
TW	TOP OF WALL
TYP	TYPICAL
VC	VERTICAL CURVE
WTR	WATER
WW	WASTEWATER

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE ENGINEER OF RECORD IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICES ACT

TRENCH EXCAVATION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA, FOR ALL TRENCHES. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.
2. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN / GEOTECHNICAL / SAFETY / EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
3. BRACING OF UTILITY POLES MAY BE REQUIRED WHEN TRENCHING OR EXCAVATING IN CLOSE PROXIMITY TO THE POLES AND IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. ALL TRENCH BACKFILL SHALL BE IMPORTED GRANULAR MATERIAL UNLESS EXISTING GRANULAR MATERIALS ARE SPECIFICALLY APPROVED BY THE OWNER'S REPRESENTATIVE.

STORM WATER DISCHARGE AUTHORIZATION

THE CONTRACTOR AND WHERE APPLICABLE SUBCONTRACTORS ARE RESPONSIBLE FOR:

1. COMPLIANCE WITH ALL TC&O AND EPA STORM WATER POLLUTION PREVENTION REQUIREMENTS.
2. ENSURING THAT ALL PRIMARY OPERATORS SUBMIT A NOI TO TC&O AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. AND THEY PROVIDE A COPY OF ALL SIGNED NOI'S TO THE OPERATOR OF ANY MS4 RECEIVING DISCHARGE FROM THE SITE.
3. IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP), IF IT APPLIES, IE. POST SITE NOTICE, INSPECTIONS, DOCUMENTATION AND SUBMISSION OF ANY INFORMATION, SUCH AS NOI, REQUIRED BY TC&O AND EPA.
4. SIGNING THE REQUIRED CERTIFICATION STATEMENT ACKNOWLEDGING THEIR RESPONSIBILITIES AS STATED IN THE SWPPP IF PROVIDING SERVICES RELATED TO SWPPP.
5. SUBMITTING TO THE CITY, AND RETAINING ON SITE DURING CONSTRUCTION, A COPY OF THE SWPPP INCLUDING NOI, SITE NOTICE, CONTRACTOR CERTIFICATION, AND ANY REVISIONS.
6. PRIMARY OPERATOR IS RESPONSIBLE FOR SUBMITTING A NOTICE OF TERMINATION (NOT) TO TC&O WITH 30 DAYS AFTER ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A VEGETATIVE COVER HAS BEEN ESTABLISHED ON ALL UNPAVED AREA AND ALL AREAS NOT COVERED BY STRUCTURES. A TRANSFER OF OPERATIONAL CONTROL HAS OCCURRED OR THE OPERATOR HAS AN ALTERNATIVE AUTHORIZATION UNDER A DIFFERENT PERMIT. A COPY OF THE NOT SHALL BE PROVIDED TO THE OPERATOR OF ANY MS4 RECEIVING DISCHARGE FROM THE SITE.

CONSTRUCTION MEANS METHODS& SAFETY PROTECTION NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, INCLUDING OSHA STANDARDS AND WITH ANY OTHER APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS OR ORDINANCES OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR TO PROTECT THEM FROM DAMAGE, INJURY OR LOSS. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES, AND PROTECTIVE EQUIPMENT AND SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS UTILIZED BY THE CONTRACTOR AND HIS SUB-CONTRACTORS IN THE PERFORMANCE OF THEIR WORK AND SHALL TAKE ANY OTHER ACTIONS NECESSARY TO PROTECT THE LIFE AND HEALTH OF EMPLOYEES ON THE JOB AND THE SAFETY OF THE PUBLIC AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES, EQUIPMENT, AND FOR SAFETY PRECAUTIONS OR PROGRAMS, UNLESS SUCH MEANS, METHODS, TECHNIQUES OR PROCEDURES ARE SPECIFICALLY IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL COMPLY WITH SECTION 108.06 LABOR, METHODS, AND EQUIPMENT OF THE "STANDARD SPECIFICATIONS".

INDEMNIFICATION

THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER, THE CITY, AND SANDLIN SERVICES, LLC, FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING FROM THE PERFORMANCE OF THE CONTRACTOR'S WORK, IN ANY AND ALL CLAIMS AGAINST THE OWNER OR SANDLIN SERVICES, LLC, BY ANY EMPLOYEE OF THE CONTRACTOR OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY THE CONTRACTOR OR ANYONE FOR WHOM THE CONTRACTOR MAY BE LIABLE. THE INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OF DAMAGES, COMPENSATION, OR BENEFITS PAYABLE BY OR FOR THE CONTRACTOR UNDER WORKER'S COMPENSATION ACTS, DISABILITY BENEFIT ACTS OR OTHER EMPLOYEE BENEFIT ACTS.

SAFETY

1. CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL, AND UTILITY OWNER REGULATIONS PERTAINING TO WORK SETBACKS FROM POWER LINES.
2. ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED. STENCIL THE WORDS, "FIRE ZONE/TOW-AWAY ZONE", IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MY BE APPROVED BY THE FIRE CHIEF PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET.
3. WARNING ARE REQUIRED TO BE PLACED UNDER THE OVERHEAD ELECTRIC LINES TO MAKE ALL PERSONNEL AWARE OF THE ELECTRIC HAZARD.
4. ALL FDC'S TO BE TWO 2 1/2 INCH SIAMESE CONNECTIONS.
5. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN MARKINGS AND ASSOCIATED HAZARD WARNING LIGHTS, DELINEATOR FENCE, AND OTHER PROTECTIVE FACILITIES AS REQUIRED FOR OPEN TRENCHES, EXCAVATIONS, TEMPORARY STOCK PILES, AND PARKED CONSTRUCTION EQUIPMENT THAT MAY POSE A POTENTIAL HAZARD AS PART OF THE DAILY OPERATIONS AT THIS SITE. CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY.

ACCESSIBLE PARKING NOTE:

1. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE HANDICAPPED ROUTES (PER ADA) EXIST TO AND FROM DESIGNATED DOORS. IN NO CASE SHALL HANDICAP RAMP SLOPES EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPES EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPES EXCEED 5.0 PERCENT. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA COMPLIANCE ISSUES.
2. ALL ACCESSIBLE SPACES AND ACCESSIBLE ROUTES SHALL COMPLY WITH THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND THE CITY REQUIREMENTS.
3. PARKING SPACES AND ACCESSIBLE SPACES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS. CURB RAMPS COMPLYING WITH TAS SHALL BE PROVIDED AT ALL PASSENGER LOADING ZONES.
4. EACH ACCESSIBLE PARKING SPACE SHALL BE DESIGNATED AS RESERVED BY A VERTICALLY MOUNTED OR SUSPENDED SIGN SHOWING THE SYMBOL OF ACCESSIBILITY PER TAS. SPACES COMPLYING WITH TAS SHALL HAVE AN ADDITIONAL SIGN "VAN ACCESSIBLE" MOUNTED BELOW THE SYMBOL OF ACCESSIBILITY WHEN REQUIRED.
 - (A) CHARACTERS AND SYMBOLS ON SUCH SIGNS SHALL BE LOCATED 60" MINIMUM ABOVE THE GROUND, FLOOR, OR PAVING SURFACE SO THEY CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.
 - (B) SIGNS LOCATED WITHIN AN ACCESSIBLE ROUTE SHALL COMPLY WITH TAS.
 - (C) CHARACTERS AND SYMBOLS ON OVERHEAD SIGNS SHALL COMPLY WITH TAS.
5. SLOPES OF CURB RAMPS SHALL COMPLY WITH TAS. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.
6. SURFACES OF CURB RAMPS SHALL COMPLY WITH TAS.
 - (A) TEXTURES SHALL CONSIST OF EXPOSED CRUSHED STONE AGGREGATE, ROUGHENED CONCRETE, RUBBER, RAISED ABRASIVE STRIPS, OR GROOVES EXTENDING THE FULL WIDTH AND DEPTH OF THE CURB RAMP. SURFACES THAT ARE RAISED, ETCHED, OR GROOVED IN A WAY THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED.
 - (B) FOR PURPOSES OF WARNING, THE FULL WIDTH AND DEPTH OF CURB RAMPS SHALL HAVE A LIGHT REFLECTIVE VALUE AND TEXTURE THAT SIGNIFICANTLY CONTRASTS WITH THAT OF ADJOINING PEDESTRIAN ROUTES.
7. EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC AND ANSI.
8. SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP.
9. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 IN.
10. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE, NO GREATER THAN 1:30.
11. GROUND SURFACES ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM, AND SLIP RESISTANT.

TRAFFIC CONTROL NOTES:

1. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 14' VERTICAL CLEARANCE.
3. ALL PARKING SPACES SHALL HAVE A MINIMUM 7'-0" VERTICAL CLEARANCE.
4. ALL LANDSCAPED AREAS ARE TO BE PROTECTED BY SIX-INCH WHEEL CURBS, WHEELSTOPS, OR OTHER APPROVED BARRIERS AS PER E&O EPA.
5. ADEQUATE BARRIERS BETWEEN ALL VEHICULAR USE AREAS AND ADJACENT LANDSCAPE AREAS, SUCH AS A 6" CONCRETE CURB ARE REQUIRED. IF A STANDARD 6" CURB AND GUTTER ARE NOT PROVIDED FOR ALL VEHICULAR USE AREAS AND ADJACENT LANDSCAPE AREAS, COMPLY WITH E&M.
6. EACH CONTACT PARKING SPACE/ASLE WILL BE SIGNED "SMALL CAR ONLY".
7. PRIOR TO PERFORMING ANY WORK IN OR ON THE RIGHT OF WAY OF ANY CITY OR STATE ROADWAY, THE CONTRACTOR SHALL NOTIFY THE CITY/STATE TRAFFIC ENGINEER'S OFFICE. THE CONTRACTOR SHALL ERECT WARNING SIGNS AND BARRICADES TO PROTECT THE TRAVELING PUBLIC. THE SIGNING AND BARRICAADING SHALL CONFORM TO THE APPROPRIATE APPLICATIONS OUTLINED IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES OR AS OTHERWISE DIRECTED BY THE CITY/STATE TRAFFIC ENGINEER. IF PERMITS ARE REQUIRED TO CONDUCT THE WORK, THE CONTRACTOR SHALL SECURE THE PERMITS AND SUPPLY THEM TO THE OWNER AT NO ADDITIONAL COST. ALL FULCROST, LANE CLOSURES, AND PARTIAL LANE CLOSURES, OR CONSTRUCTION ADJACENT TO PAVEMENT, SHALL BE IDENTIFIED, SIGNED, AND BARRICADES ERECTED IN CONFORMANCE WITH THE APPLICABLE ARTICLES OF THE STANDARD SPECIFICATIONS AND THE MUNICIPALITY'S REQUIREMENTS. ALL TRAFFIC PROTECTION, BOTH ONSITE AND OFFSITE SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

EARTHWORK NOTES AND REQUIREMENTS:

1. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIALS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL MATERIALS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND COMPLY WITH CITY STANDARD SPECIFICATIONS AND GEOTECHNICAL REPORT. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING MATERIALS. OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR MATERIALS TESTING.
2. ALL COPIES OF MATERIALS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE MATERIALS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
4. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO THE GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.
5. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL AND WATER QUALITY REQUIREMENTS.
6. A RETAINING WALL OVER 4 FEET IN HEIGHT MEASURED FROM THE BOTTOM OF THE FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT.
7. CONTRACTOR SHALL REMOVE EARTHEN MATERIAL, EXISTING SURFACES, AND STRUCTURES AS REQUIRED, ALL WASTE MATERIAL SHALL BE PROPERLY DISPOSED OFF-SITE AND SHALL BE INCIDENTAL TO THE CONTRACT.
8. ALL AGGREGATE BASE COURSE SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY MAXIMUM DRY DENSITY WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT.

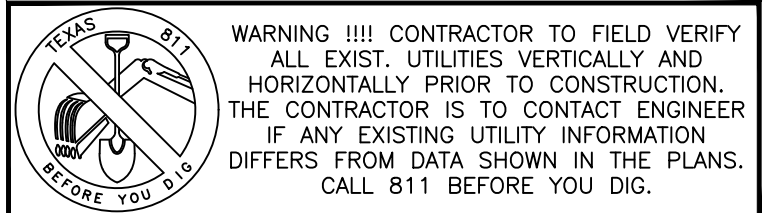
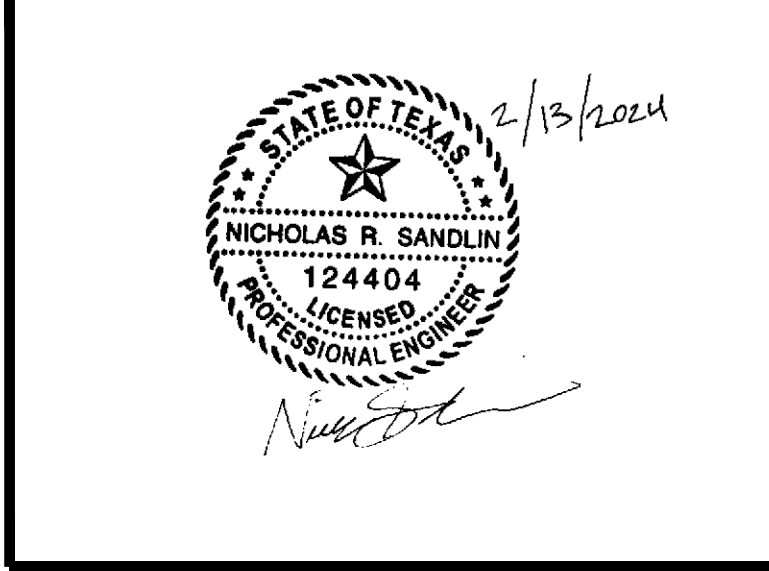
GENERAL NOTES AND REQUIREMENTS:

1. ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS OUTSIDE OF THE WORK AREA WILL BE ALLOWED. ANY DAMAGE RESULTING THEREFROM SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR.
2. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, MANHOLES, POLES, GUY WIRES, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, COMMUNICATION BOXES/PEDESTALS, AND OTHER FACILITIES TO REMAIN, AND SHALL REPAIR ANY DAMAGES AT NO COST TO THE OWNER.
3. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY OR PUBLIC IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCES, WALLS, SIGNS, PAVEMENT, CURBS, UTILITIES, SIDEWALKS, GRASS/TREES, LANDSCAPING, AND IRRIGATION SYSTEMS, ETC.... TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER.
4. ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY SITE CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER, INCLUDING AS NECESSARY, GRADING, LANDSCAPING, CULVERTS, AND PAVEMENT.
5. THE CONTRACTOR SHALL SALVAGE ALL EXISTING POWER POLES, SIGNS, WATER VALVES, FIRE HYDRANTS, METERS, ETC... THAT ARE TO BE RELOCATED DURING CONSTRUCTION.
6. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES.
7. SITE SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
8. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE ENGINEER'S SEAL HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SAFETY PROCEDURES AND PROGRAMS.
9. SIGNS RELATED TO SITE OPERATION OR SAFETY ARE NOT INCLUDED IN THESE PLANS.
10. CONTRACTOR OFFICE AND STAGING AREA SHALL BE AGREED ON BY THE OWNER AND CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING REQUIREMENTS FOR THE CONSTRUCTION OFFICE, TRAILER, STORAGE, AND STAGING OPERATIONS AND LOCATIONS.
11. LIGHT POLES, SIGNS, AND OTHER OBSTRUCTIONS SHALL NOT BE PLACED IN ACCESSIBLE ROUTES.
12. TOP RIM ELEVATIONS OF ALL EXISTING AND PROPOSED MANHOLES SHALL BE COORDINATED WITH TOP OF PAVEMENT OR FINISHED GRADE AND SHALL BE ADJUSTED TO BE FLUSH WITH THE ACTUAL FINISHED GRADE AT THE TIME OF PAVING.
13. CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED VALVES, FIRE HYDRANTS, AND OTHER UTILITY APPURTENANCES TO MATCH ACTUAL FINISHED GRADES AT THE TIME OF PAVING.
14. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND PHASING AND SHALL CONTACT THE APPROPRIATE CITY OFFICIALS, INCLUDING BUILDING OFFICIAL, ENGINEERING INSPECTOR, AND FIRE MARSHALL TO LEARN OF ANY REQUIREMENTS.
15. CONTRACTOR IS RESPONSIBLE FOR PREPARING, SUBMITTING, AND APPROVAL BY THE CITY OF A TRAFFIC CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION, AND THEN THE IMPLEMENTATION OF THE PLAN.
16. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXISTING CONDITIONS.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION.
18. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL AND WATER QUALITY REQUIREMENTS.
19. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITION AT THE PROJECT SITE. IN THE EVENT OF A DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS, AND/OR DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. IF THE CONTRACTOR FAILS TO SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT THEIR OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL.
20. THE CONTRACTOR SHALL COMPLY WITH JURISDICTIONAL "GENERAL NOTES" FOR CONSTRUCTION, JURISDICTIONAL NOTES SHALL SUPERCEDE ANY CONFLICT WITH THE SANDLIN SERVICES, LLC, NOTES.
21. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK TO HAVE THEM LOCATE THEIR EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL USE EXTREME CAUTION AS THE SITE CONTAINS VARIOUS KNOWN AND UNKNOWN PUBLIC AND PRIVATE UTILITIES.
22. CONTRACTOR SHALL COORDINATE ALL UTILITY LINE CROSSINGS TO ENSURE ALL PIPES MAINTAIN MINIMUM COVER, MINIMUM CLEARANCES, AND PROPER SEPARATION.
23. THE LOCATIONS, ELEVATIONS, DEPTH, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANY MAPS AND PLANS, AND ARE CONSIDERED APPROXIMATE. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY.
24. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY ADJUSTMENTS AND RELOCATIONS OF EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS THAT MAY BE ENCOUNTERED THAT ARE UNKNOWN AT THIS TIME AND NOT SHOWN ON THESE PLANS. CONTRACTOR SHALL ARRANGE FOR OR PROVIDE, ALL GAS, TELECOMMUNICATIONS, CABLE, OVERHEAD AND UNDERGROUND POWER LINE, AND UTILITY POLE ADJUSTMENTS NEEDED. CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF FRANCHISE UTILITIES THAT ARE NECESSARY FOR ON-SITE AND OFF-SITE CONSTRUCTION, AND SERVICE TO THE PROPOSED DEVELOPMENT.
25. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUCTED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVE GROUND UTILITY LOCATION, IDENTIFICATION AND LOCATION RESPONSIBILITY OF THE CONTRACTOR, RELOCATIONS, DISCONTINUED, OR REMOVAL OF UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY LOCATIONS SHOWN ON THESE PLANS.
26. THE CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
27. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES.
21. ALL SHOP DRAWINGS AND OTHER DOCUMENTS THAT REQUIRE ENGINEER REVIEW SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF CONSTRUCTION OF THAT ITEM, SO THAT NO LESS THAN 10 BUSINESS DAYS FOR REVIEW AND RESPONSE IS AVAILABLE.
22. ALL NECESSARY AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES, AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO USE OF THE FACILITY AND THE FINAL CONNECTION OF SERVICES.
23. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
24. CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEE.
25. ALL SYMBOLS SHOWN ON THESE PLANS ARE FOR PRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE. CONTRACTOR SHALL COORDINATE FINAL SIZES AND LOCATIONS WITH APPROPRIATE CITY INSPECTOR. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL FINAL BUILDING DIMENSIONS.
26. COMPLIANCE WITH COMMERCIAL AND MULTI-FAMILY RECYCLING ORDINANCE IS MANDATORY FOR MULTI-FAMILY COMPLEXES WITH 100 OR MORE UNITS AND BUSINESSES WITH 100 OR MORE EMPLOYEES.
27. CONTRACTOR PARKING AND LAYDOWN AREAS SHALL BE COORDINATED WITH THE OWNER.
28. THE CONTRACTOR SHALL PROVIDE ANY FINANCIAL SURETIES REQUIRED AS PART OF ANY PERMIT.
29. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING ELECTRONIC AS-BUILT DRAWINGS FOR UTILITIES AND DETENTION AREAS TO THE OWNER AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PROJECT ACCEPTANCE.
30. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL ITEMS INCORPORATED INTO THE WORK FOR ENGINEER REVIEW AND APPROVAL OF MINIMUM OF 4 WEEKS PRIOR TO ORDERING.
31. REFERENCES TO "INSPECTION" OR "INSPECTOR" IN THE SPECIFICATIONS SHALL NOT CREATE, IMPOSE, OR GIVE RISE TO ANY DUTY OWED BY THE OWNER OR ENGINEER TO THE CONTRACTOR, OR TO ANY SUBCONTRACTOR, OR TO ANY SUPPLIER. ALL IMPROVEMENTS SHALL BE SUBJECT TO INSPECTION BY A FULLY AUTHORIZED AND QUALIFIED OWNER'S REPRESENTATIVE BOTH DURING THE COURSE OF CONSTRUCTION AND AFTER CONSTRUCTION IS COMPLETE. THE INSPECTOR SHALL HAVE AUTHORITY OVER MATERIALS OF CONSTRUCTION, METHODS OF CONSTRUCTION, AND WORKMANSHIP. TO ENSURE COMPLIANCE WITH WORKING DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL PROVIDE FOR REASONABLE TESTS AND PROOF OF QUALITY OF MATERIALS AS REQUESTED BY THE INSPECTOR. UPON DUE CAUSE, WHICH SHALL INCLUDE WEAR CONDITION, WORKMANSHIP OR NON-ADHERENCE TO THE APPROVED PLANS AND SPECIFICATIONS, THE INSPECTOR SHALL HAVE THE AUTHORITY TO STOP CONSTRUCTION.
32. WHERE SECTION, SUB-SECTION, SUBDIVISION, OR PROPERTY MONUMENTS ARE ENCOUNTERED, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS UNTIL AN OWNER OR AUTHORIZED SURVEYOR HAS WITNESSED OR REFERENCED THEIR LOCATION.
33. CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCY A MINIMUM OF 48 HOURS PRIOR TO CONNECTING TO OR INSTALLING ANY PUBLIC SEWER OR WATER MAINS.

BUILDING COORDINATION & CONSTRUCTION NOTES:

1. THE SCOPE OF WORK FOR THE CIVIL IMPROVEMENTS SHOWN ON THESE PLANS TERMINATES 5- FEET FROM THE BUILDING. REFERENCE THE BUILDING PLANS (E.G. ARCHITECTURAL, STRUCTURAL, MEP) FOR AREAS WITH 5- FEET OF THE BUILDING AND WITHIN THE BUILDING FOOTPRINT.
2. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL FINAL BUILDING DIMENSIONS.
3. THE PROPOSED BUILDING FOOTPRINT(S) SHOWN IN THESE PLANS WAS PROVIDED TO SANDLIN SERVICES, LLC, BY THE PROJECT ARCHITECT AT THE TIME THESE PLANS WERE PREPARED. IT MAY NOT BE THE FINAL CORRECT VERSION BECAUSE THE BUILDING DESIGN ONGOING. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFIRMING THE FINAL CORRECT VERSION OF THE BUILDING FOOTPRINT WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO LAYOUT. DIMENSIONS AND/OR COORDINATES SHOWN ON THESE PLANS WERE BASED ON THE ABOVE STATED PRELIMINARY AND THEREFORE A PRELIMINARY. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY WHAT PART OF THE BUILDING THE ARCHITECT'S FOOTPRINT REPRESENTS (E.G. SLAB, OUTSIDE WALL, MASONRY LEDGE, ETC....) AND TO CONFIRM ITS FINAL POSITION ON THE SITE BASED ON THE FINAL ARCHITECTURAL FOOTPRINT, CIVIL DIMENSION CONTROL PLAN, SURVEY BOUNDARY AND/OR PLAT. ANY DIFFERENCES FOUND SHALL BE REPORTED TO SANDLIN SERVICES, LLC, IMMEDIATELY.
4. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE PLANS, LOCATIONS, DIMENSIONS, AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT, AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE SPECIFICATION AND DETAILS SHALL BE FOLLOWED.
5. THE CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH ALL APPROPRIATE AUTHORITIES' SPECIFICATIONS AND REQUIREMENTS.
6. THE EXISTING CONDITIONS SHOWN ON THESE PLANS WERE PROVIDED BY THE TOPOGRAPHIC SURVEY PREPARED BY THE PROJECT SURVEYOR, AND ARE BASED ON THE BENCHMARKS SHOWN. THE CONTRACTOR SHALL REFERENCE THE SAME BENCHMARKS. THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THESE PLANS REPRESENTS THE EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION, AND SHALL REPORT ANY DISCREPANCIES FOUND TO THE OWNER AND ENGINEER IMMEDIATELY.
7. ALL CONSTRUCTION SURVEYING AND STAKING SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
8. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL CONTROL, INCLUDING BENCHMARKS, PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS.
9. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITION AT THE PROJECT SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, THE CONTRACTOR MUST IMMEDIATELY PROVIDE THE INFORMATION TO THE ENGINEER BEFORE DOING ANY WORK. OTHERWISE, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF A DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS, AND/OR DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. IF THE CONTRACTOR FAILS TO SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT THEIR OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL.
10. THE CONTRACTOR SHALL REVIEW ALL DIMENSIONS, ELEVATIONS, AND FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.
11. NO FIELD CHANGES OR DEVIATION FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ARCHITECT, ENGINEER, OWNER, AND IF APPLICABLE THE CITY.
12. THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER PRIOR TO COMMENCING CONSTRUCTION OF CIVIL, LANDSCAPE, MEP, CONSTRUCTION AND NOTIFY OWNER/ENGINEER OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS, APPROVALS, AND BONDS PRIOR TO CONSTRUCTION.
14. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CITY OF AUSTIN'S INCLUDING PLANS, GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND CITY SPECIFICATIONS, AND SPECIAL CONDITIONS. COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP, AND INSPECTION REPORTS.
15. THE CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF CONSTRUCTION, INCLUDING ANY DEVIATIONS OR VARIANCES FROM THE PLANS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION.
17. THE CONTRACTOR TO COORDINATE WITH PROJECT ARBORIST TO TRIM TREES TO ENSURE VISIBILITY NEAR PARKING AREAS.
18. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
19. ALL RADII TO BE 2' UNLESS OTHERWISE NOTED.
20. ALL ON-SITE UTILITIES SHALL BE LOCATED UNDERGROUND UNLESS REQUIRED BY THE UTILITY TO BE OTHERWISE LOCATED.
21. SIDEWALKS CITY PARK ROAD ARE REQUIRED TO BE CONSTRUCTED BY THE PROPERTY OWNER AFTER THE ABUTTING ROADWAY IS IMPROVED AND CONCRETE CURBS ARE IN PLACE.
22. WHEN CONCRETE IS PLACED ABUTTING STRUCTURES, FOUNDATIONS OR EXISTING SIDEWALKS, A BOND BREAKER CONSISTING OF 1" P/JF AND ELASTOMERIC SEALANT SHALL BE USED FULL DEPTH UNTIL OTHERWISE NOTED.
23. SIDEWALK RAMPS FOR ADA SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
24. CONSTRUCTION STAKING, LAYOUT, AND GRADING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR USING THE BASIC TOPOGRAPHIC SURVEY CONTROLS. CONTRACTOR SHALL VERIFY SURVEY CONTROLS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES IN THE SURVEY CONTROLS SHALL BE REPORTED TO THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION. ANY ADDITIONAL SURVEY CONTROLS REQUIRED FOR CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
25. ANY SIDEWALKS, FENCES, AND OTHER ITEMS NOT SHOWN TO BE REMOVED, BUT DAMAGED DURING CONSTRUCTION, SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.

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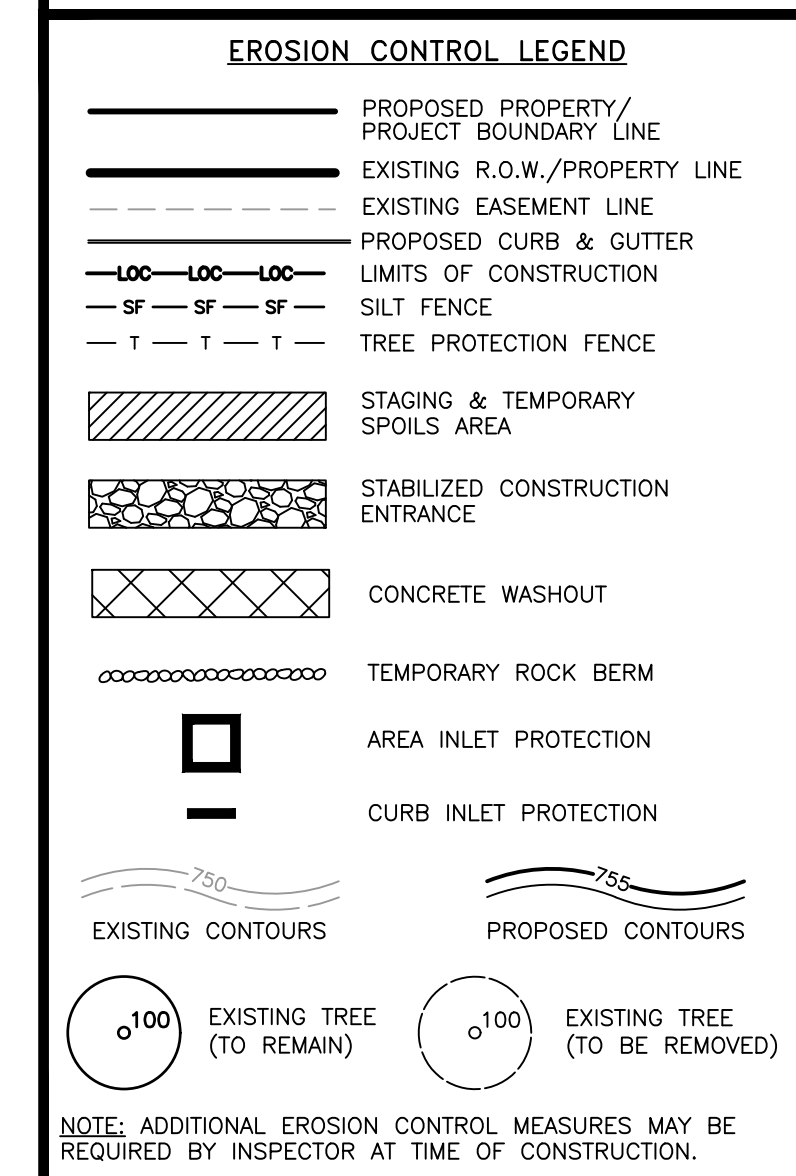


TPPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

GENERAL NOTES (2 OF 2)

PROJECT CASE: XXXXXXX

WOODLAKE RETAIL



- ## EROSION CONTROL NOTES:
1. LIMITS OF CONSTRUCTION 1.40 AC
 2. ALL STAGING & STORAGE SHALL OCCUR WITHIN THE BOUNDARIES OF THE PROPERTY AND LIMITS OF CONSTRUCTION.
 3. INSTALL EROSION CONTROLS PER PLAN, WITH THE APPROVAL OF THE ENVIRONMENTAL INSPECTOR, ADJUST AS NEEDED DURING CONSTRUCTION.
 4. CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS FROM ALL EXISTING OR NEWLY PAVED SURFACES AT THE END OF CONSTRUCTION.
 5. TEMPORARY STAGING & STORAGE AREA/TEMPORARY SPOIL AREA IS TO BE USED DURING NORMAL WORK HOURS (7 A.M. TO 7 P.M.). ONCE CONSTRUCTION IS COMPLETE, CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS FROM AREA AND RESTORE TO ORIGINAL CONDITION OR BETTER.
 6. IN AREAS WHERE SILT FENCE IS TO BE INSTALLED CROSSING CONTOURS, J-HOOKS SHALL BE ADDED TO THE SILT FENCE EVERY 100 FEET.
 7. STABILIZATION OF ALL SLOPES 3:1 OR GREATER, SUITABLE MATTING (TYPE I) WILL BE UTILIZED IN CONJUNCTION WITH VEGETATIVE EFFORTS ONSITE. CHANNEL STABILIZATION WILL USE TYPE II.



WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

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EROSION CONTROL PLAN

PROJECT CASE: XXXXXXXX

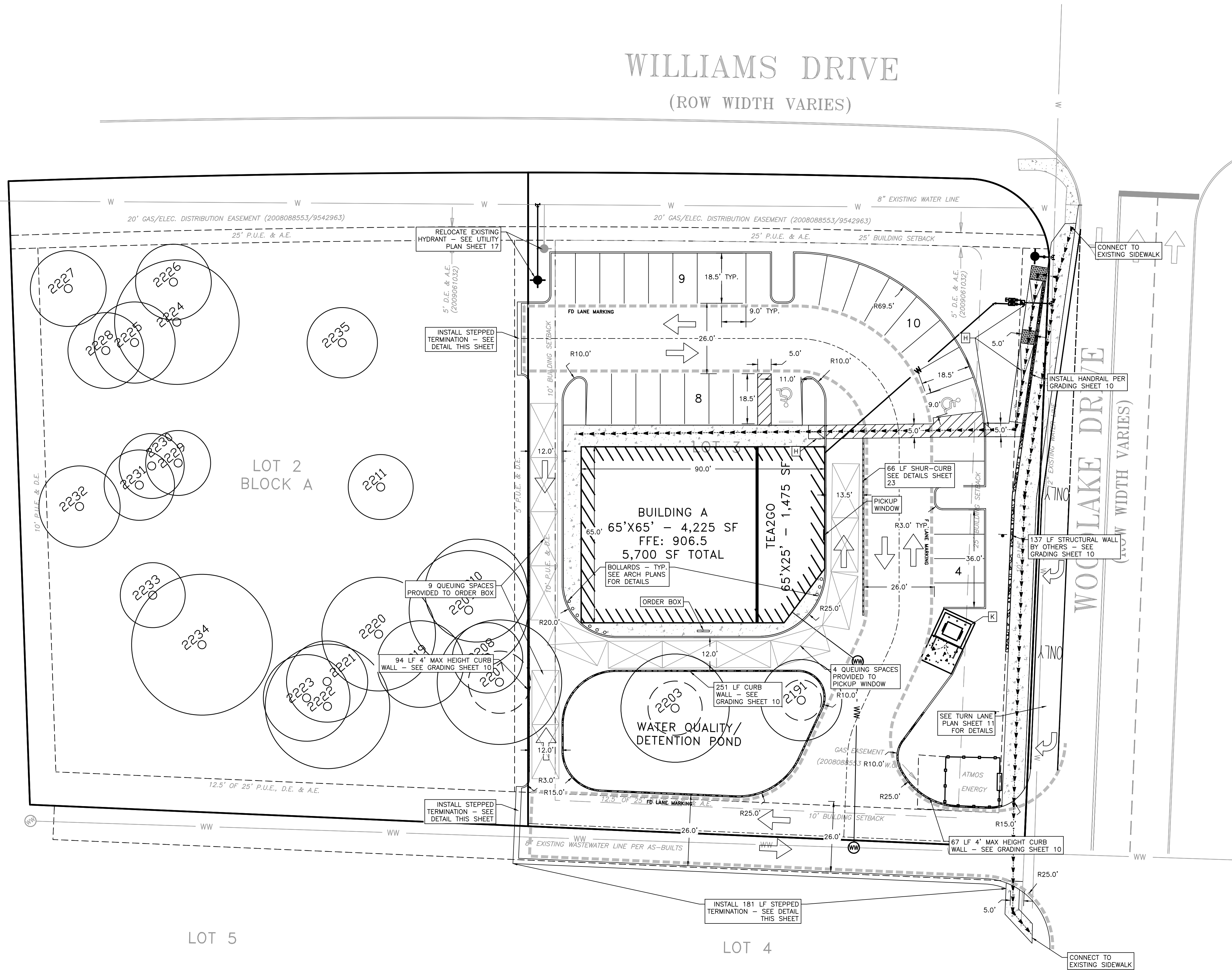
WOODLAKE RETAIL

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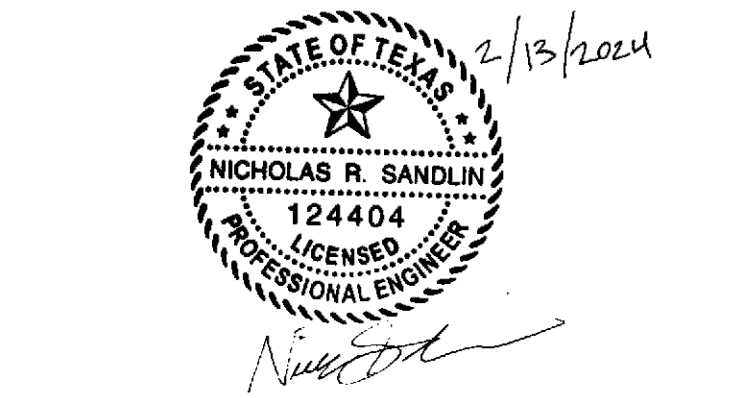
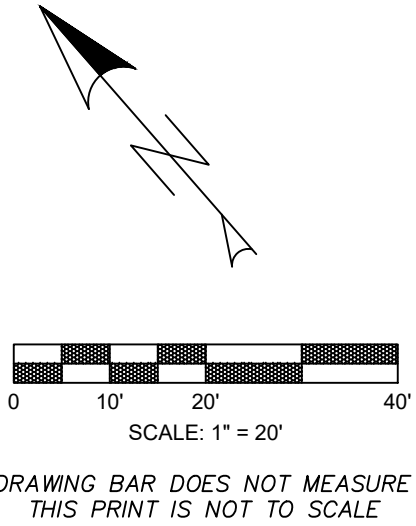
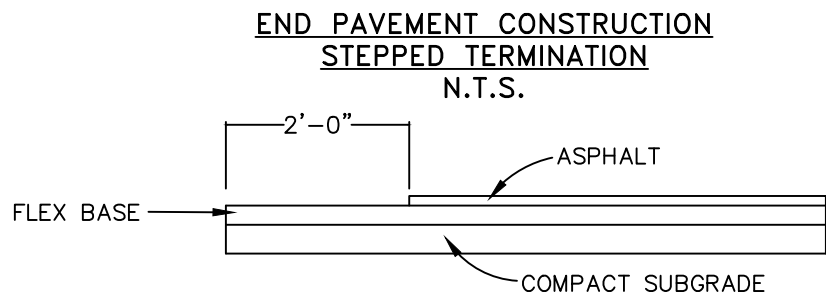


- NOTES**
1. ALL LIGHTING FIXTURES SHALL BE DESIGNED TO COMPLETELY CONCEAL AND FULL SHIELD. WITHIN AN OPAQUE HOUSING, THE LIGHT SOURCE FROM VISIBILITY FROM ANY STREET RIGHT-OF-WAY. THE CONE OF LIGHT SHALL NOT CROSS ANY ADJACENT PROPERTY LINE. THE ILLUMINATION SHALL NOT EXCEED 2 FOOT CANDLES AT A HEIGHT OF THREE FEET AT THE PROPERTY LINE. ONLY INCANDESCENT, FLUORESCENT, COLOR-CORRECTED HIGH-PRESSURE SODIUM OR METAL HALIDE MAY BE USED. ALL VEHICLE OR PEDESTRIAN ACCESS SHALL BE SUFFICIENTLY LIGHTED TO ENSURE SECURITY OF PROPERTY AND PERSONS.
 2. ALL ROOF, WALL AND GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED IN ACCORDANCE WITH CHAPTER 8 OF THE UDC. IF ROOF AND WALL MOUNTED EQUIPMENT OF ANY TYPE INCLUDING DUCT WORK AND LARGE VENTS IS PROPOSED IT SHALL BE SHOWN ON THE SITE PLAN AND SCREENING IDENTIFIED. SCREENING OF MECHANICAL EQUIPMENT SHALL RESULT IN THE MECHANICAL EQUIPMENT BLENDING IN WITH THE PRIMARY BUILDING AND NOT APPEARING SEPARATE FROM THE BUILDING AND SHALL BE SCREENED FROM VIEW OF ANY RIGHTS-OF-WAY OR ADJOINING PROPERTIES.
 3. PER CHAPTER 8, THE DUMPSTER ENCLOSURES MUST BE ONE (1) FOOT ABOVE THE HEIGHT OF THE WASTE CONTAINER. USE PROTECTIVE POLES IN CORNERS AND AT IMPACT AREAS. FENCE POSTS OF RUST PROTECTED METAL OR CONCRETE. A MINIMUM 6" SLAB IS REQUIRED AND MUST BE SLOPED TO DRAIN. THE ENCLOSURE MUST HAVE STEEL FRAMED GATES WITH SPRING LOADED HINGES AND FASTENERS TO KEEP CLOSED. SCREENING MUST BE ON ALL FOUR SIDES BY MASONRY WALL OR APPROVED FENCE OR SCREENING WITH OPAQUE GATES.
 4. ALL PARKING SPACES ARE 18.5' X 9' UNLESS OTHERWISE SHOWN.
 5. ALL CURB IS "SPILL TYPE" UNLESS OTHERWISE NOTED
 6. ELECTRIC TRANSFORMERS MUST NOT BE VISIBLE FROM THE ROW OR ADJACENT PROPERTIES AND ARE REQUIRED TO BE SCREENED UNDER 8.04.070.
 7. WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC UTILITY LINES SHALL BE LOCATED ALONG THE STREET AND WITHIN THE SITE, WHERE EXISTING OVERHEAD INFRASTRUCTURE IS TO BE RELOCATED, IT SHALL BE RE-INSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER.
 8. ALL ELECTRIC AND COMMUNICATION INFRASTRUCTURE SHALL COMPLY WITH UDC SECTION 13.06.
 9. ALL PAVING SHALL BE PER GEOTECHNICAL RECOMMENDATIONS.
 10. MONUMENT SIGNS WILL REQUIRE A SEPARATE PLAN AND PERMIT

PARKING TABLE	
TOTAL BUILDING AREA	5,700 SF
PARKING RATIO - RETAIL	1 SPACE/250 SF
PARKING REQUIRED	5,700/250 = 23 SPACES
PARKING PROVIDED	31 SPACES, INCLUDING 2 ADA SPACES (1 OF WHICH IS VAN ACCESSIBLE)

CITY OF GEORGETOWN SITE DATA	
	PROPOSED
TOTAL SITE AREA	1.054 AC 45,903 SF
BUILDING GROSS FLOOR AREA	5,700 SF
IMPERVIOUS COVER	0.73 AC 31,768 SF = 69.2%

ZONING SETBACKS
ZONING DISTRICT: C-1
FRONT SETBACK: 25'
SIDE SETBACK: 10'
MAXIMUM BUILDING HEIGHT: 35'



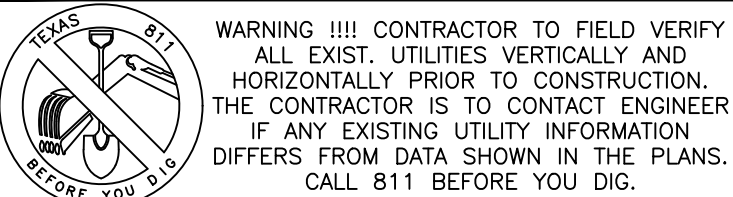
SITE PLAN LEGEND

- PROPOSED PROPERTY/PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER
- STREET CENTERLINE
- FENCE
- STRUCTURAL RETAINING WALL (BY OTHERS)
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PARKING SPACES
- TRANSFORMER PAD
- SITE WALLS
- PHASING
- TAS ACCESSIBLE ROUTE
- TAS ACCESSIBLE ROUTES MAY NOT EXCEED A CROSS SLOPE OF 1:50 (2%) OR EXCEED A RUNNING SLOPE OF 1:20 (5%) UNLESS DESIGNED AS A RAMP. THE MAXIMUM RUNNING SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12 (8.33%). THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 INCHES. REFER TO GRADING SHEET(S).

EX. WATER LINE
EX. WASTEWATER
EX. STORM SEWER LINE
EX. FIRE HYDRANT
EX. WATER METER
EX. WASTEWATER MANHOLE
FITTINGS AS NOTED
GATE VALVE AS NOTED
WW CLEAN OUT
BACK FLOW PREVENTER

PR. WATER LINE
FIRE LINE
PR. WASTEWATER
PR. STORM SEWER LINE
PR. FIRE HYDRANT
PR. WATER METER
PR. WASTEWATER MANHOLE
FLOW ARROW
EX. UTILITY POLE

- SITE LEGEND**
- A 6" CURB & GUTTER. SEE DETAIL SHEET.
 - B RIBBON CURB. SEE DETAIL SHEET.
 - C CASTELLATED CURB. SEE DETAIL SHEET.
 - D STANDARD CITY TYPE II DRIVEWAY. SEE DETAIL SHEET.
 - E CONCRETE SIDEWALK. SEE DETAIL SHEET.
 - F PEDESTRIAN CROSSWALK.
 - G HANDICAP SPACE W/SIGN. SEE DETAIL SHEET.
 - H PEDESTRIAN ADA RAMP OR AT GRADE ADA DOME PAVERS. SEE DETAIL SHEET.
 - I CONCRETE WHEEL STOP. SEE DETAIL SHEET.
 - J STANDARD CITY BIKE RACK. SEE DETAIL SHEET.
 - K DUMPSTER ENCLOSURE WITH CONCRETE PAD PER GEOTECHNICAL REPORT AND CITY STANDARDS



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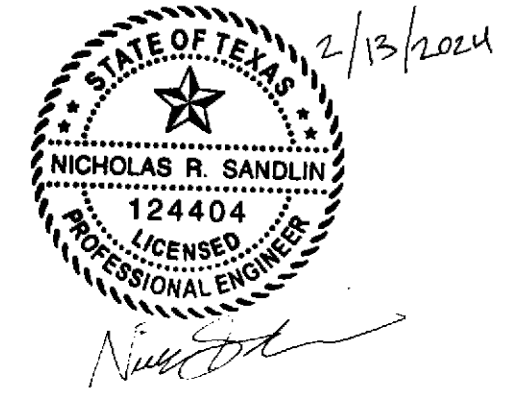
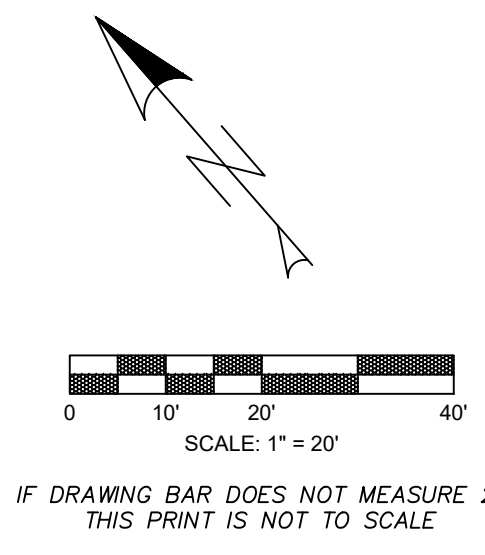
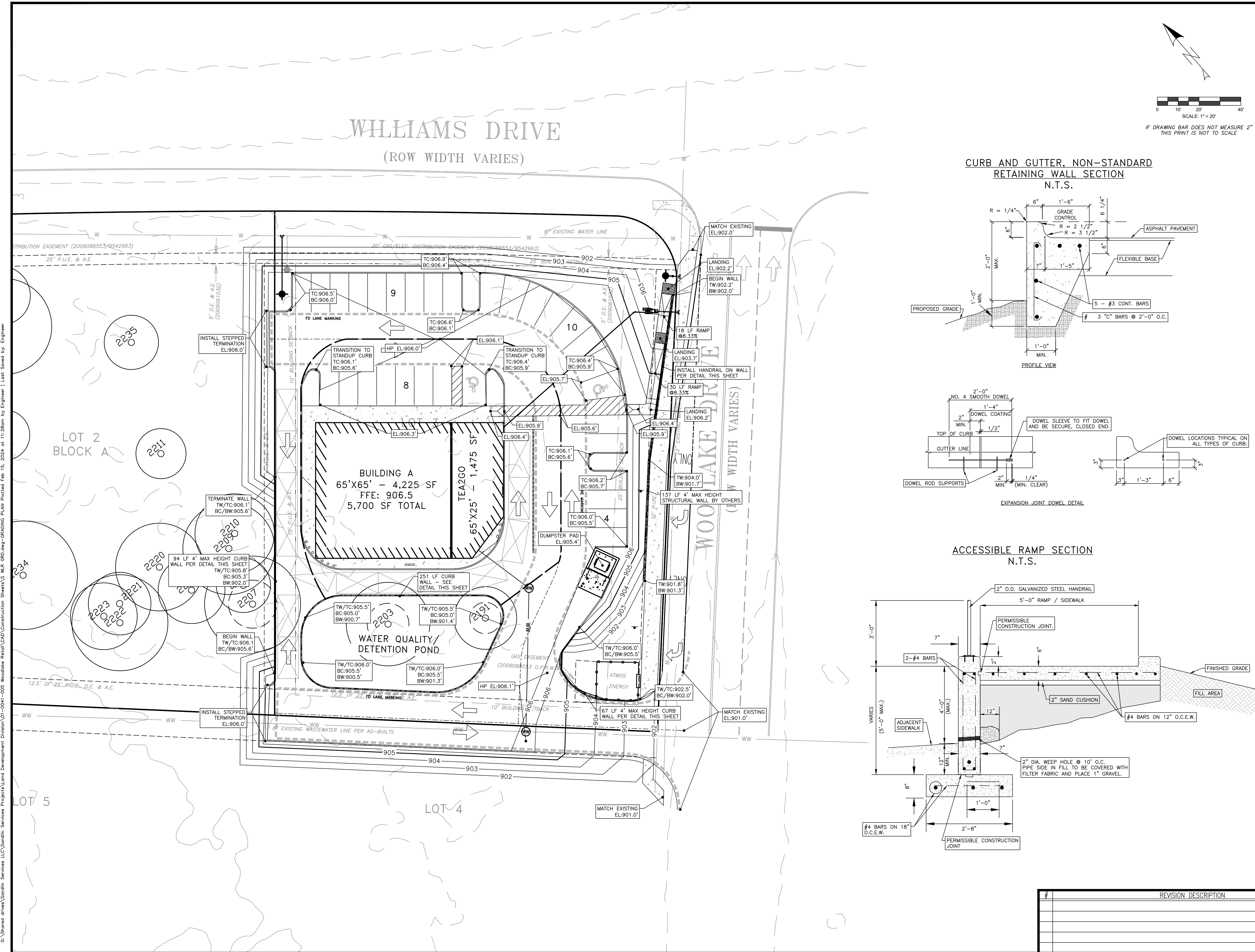
TBPCLS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

SITE PLAN

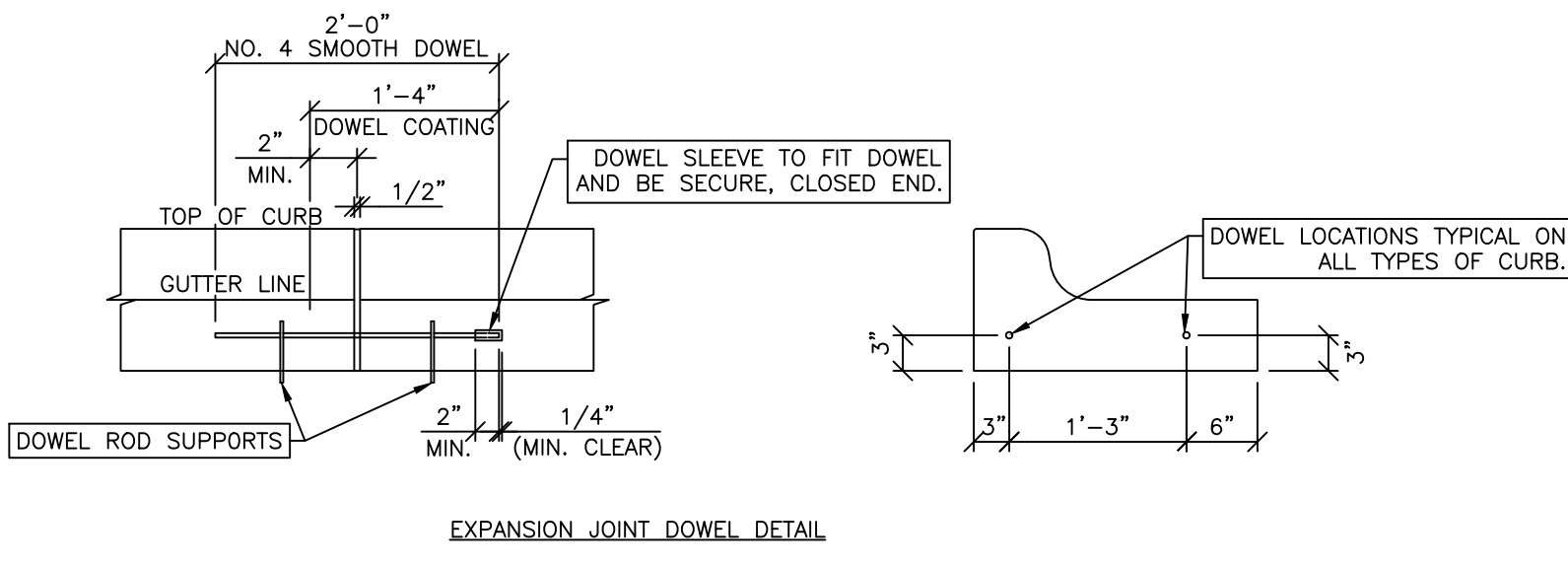
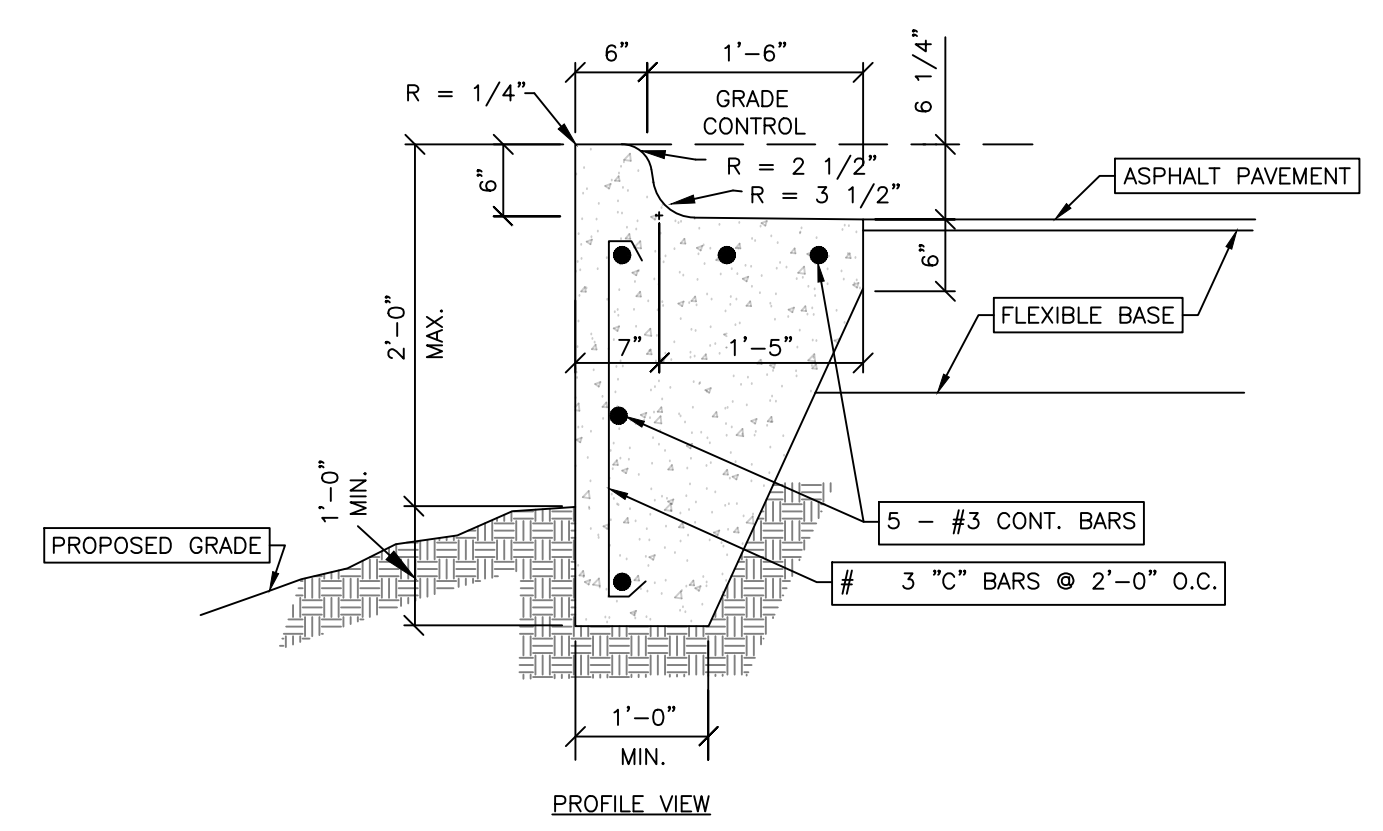
PROJECT CASE: XXXXXXX
WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
				8
				OF
				29

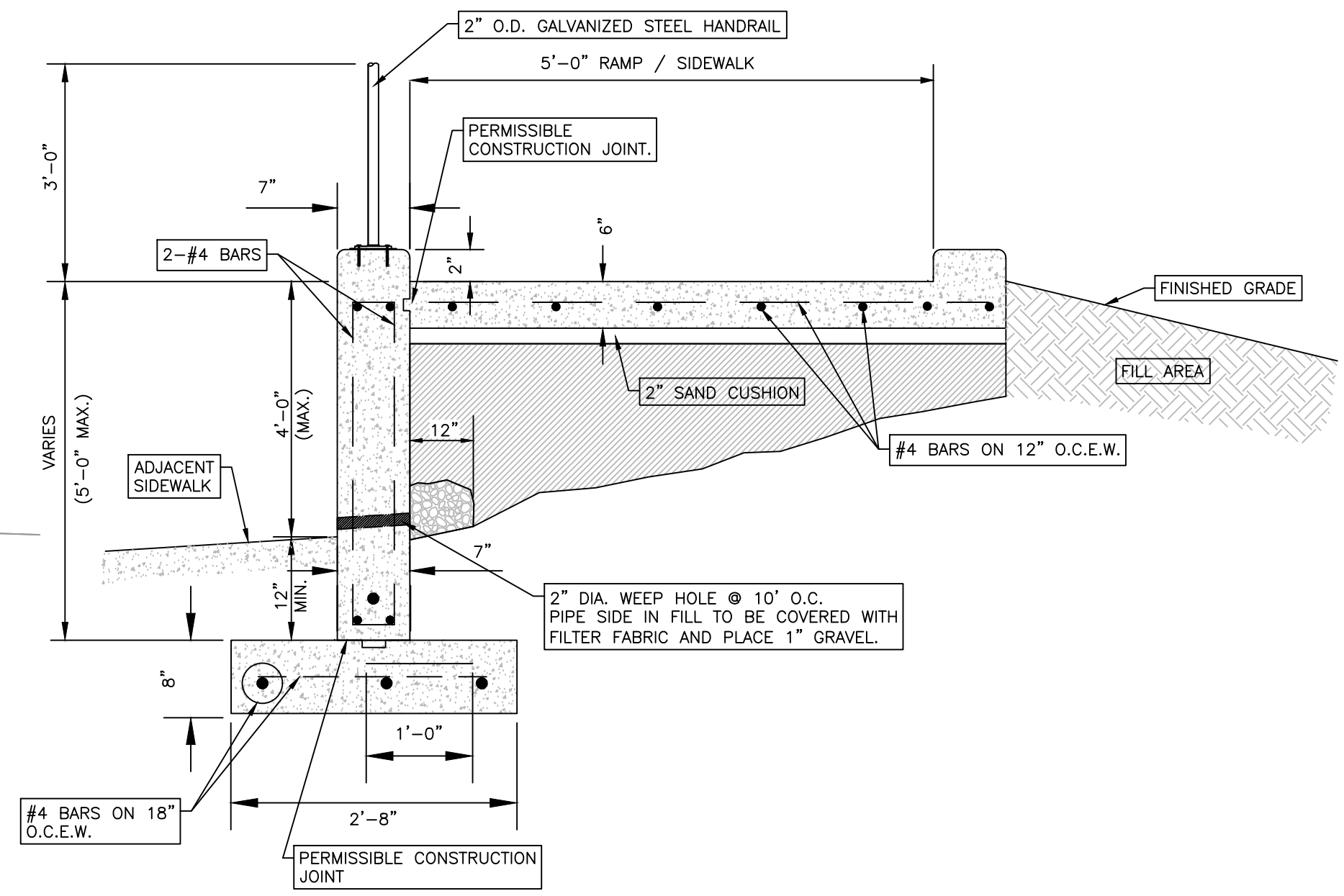
G:\Shared drives\Sandlin Services\Projects\Land Development\Division\01-0041-003 Woodlake Retail\CAD\Construction Sheets\5-WL-RD.dwg-GRADING PLAN Plotted Feb 15, 2024 at 11:28am by Engineer | Last Saved by Engineer



CURB AND GUTTER, NON-STANDARD RETAINING WALL SECTION N.T.S.



ACCESSIBLE RAMP SECTION N.T.S.



GRADING LEGEND

PROPOSED PROPERTY / PROJECT BOUNDARY LINE
EXISTING R.O.W./PROPERTY LINE
EXISTING EASEMENT LINE
GRADE CONTROL LINE
PROPOSED CURB & GUTTER

EXISTING CONTOURS
EX. WATER LINE
EX. WASTEWATER
EX. STORM SEWER LINE
EX. FIRE HYDRANT
EX. WATER METER
EX. WASTEWATER MANHOLE
EXISTING TREE (TO REMAIN)
EXISTING GROUND ELEVATION

PROPOSED CONTOURS
PR. WATER LINE
PR. WASTEWATER
PR. STORM SEWER LINE
PR. FIRE HYDRANT
PR. WATER METER
PR. WASTEWATER MANHOLE
EXISTING TREE (TO BE REMOVED)
PROPOSED Curb & Gutter
PROPOSED FLOW LINE
PROPOSED SLOPE (SLOPE DOWN)

- GRADING NOTES**
1. ALL MATERIALS AND CONSTRUCTION PROCEDURE WITHIN THE SCOPE OF THIS CONTRACT WHERE NO SPECIFICALLY COVERED IN THE CONSTRUCTION DOCUMENTS SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS.
 2. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL CONDITION ANY DAMAGE DONE TO EXISTING IMPROVEMENTS OR UTILITIES.
 3. EARTHWORK FOR THE BUILDING FOUNDATION, CONCRETE SLABS AND CONCRETE AND ASPHALT PAVEMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
 4. ADJUST PAVEMENT, CURB ELEVATIONS, AND/OR SIDEWALK ELEVATIONS AS NECESSARY TO ENSURE A CONTINUOUS GRADE WITH EXISTING ELEVATIONS.
 5. EXISTING AND PROPOSED GRADE CONTOUR INTERVALS SHOWN ARE ONE FOOT (1').
 6. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE FOUR (4) INCHES OF TOPSOIL.
 7. REFER TO GEOTECHNICAL REPORT FOR PAVING SECTION RECOMMENDATIONS.

WARNING !!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

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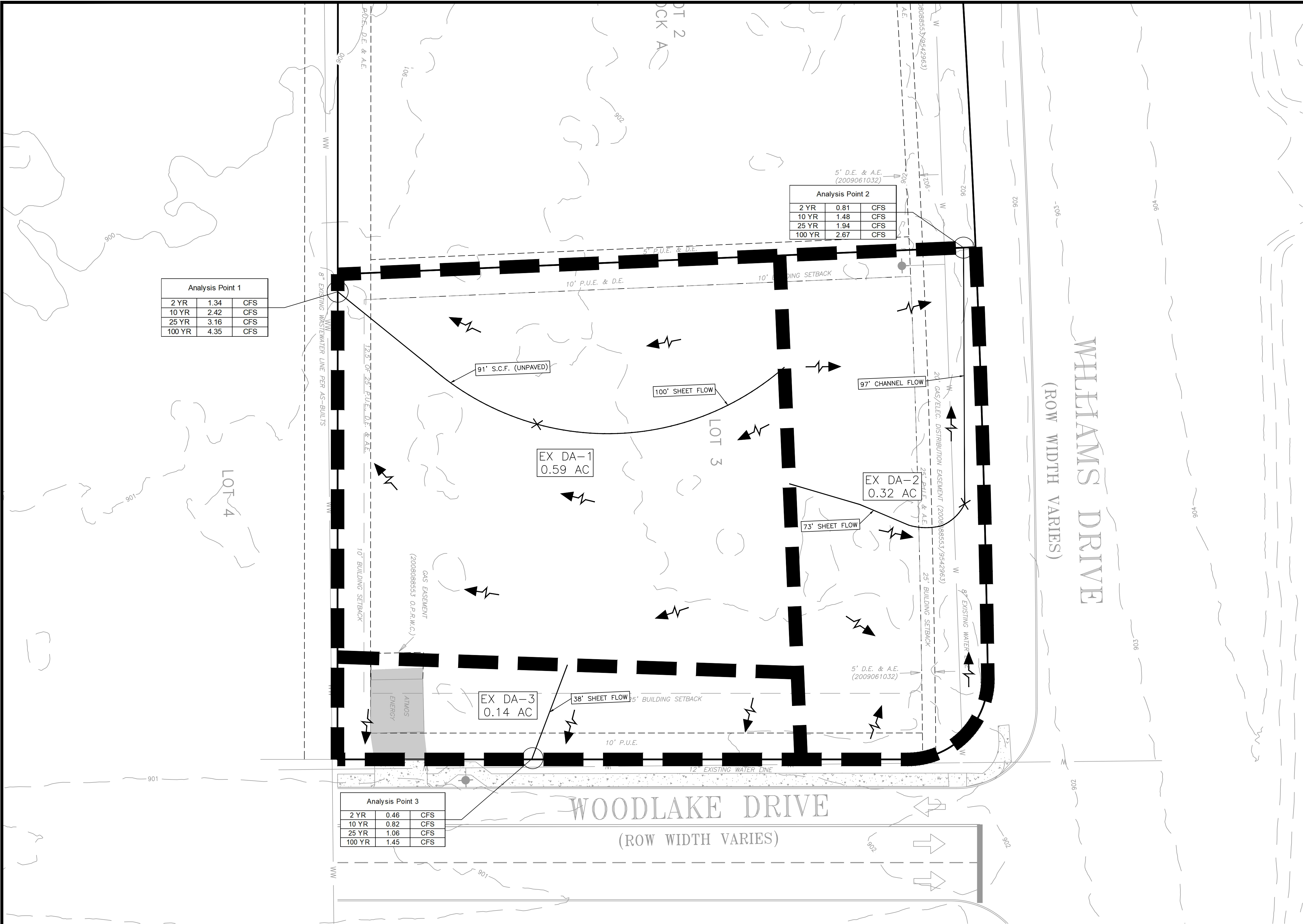
GRADING PLAN

PROJECT CASE: XXXXXXX

WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
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				OF
				29

C:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development\Division\01-0041-003 Woodlake Retail\CAD\Construction Sheets\5 WLP EDAM.dwg-EXISTING DRAINAGE AREA MAP Plotted Feb 15, 2024 at 11:29am by Engineer | Last Saved by: Admin



Analysis Point 1			
2 YR	1.34	CFS	
10 YR	2.42	CFS	
25 YR	3.16	CFS	
100 YR	4.35	CFS	

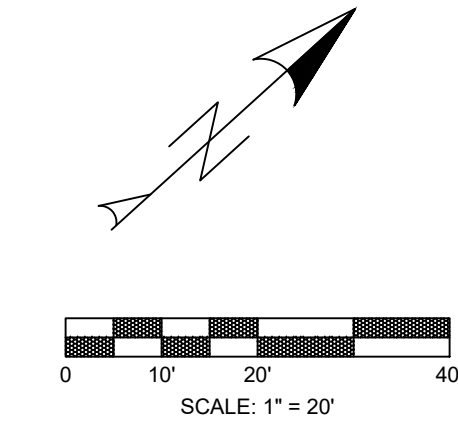
Analysis Point 2			
2 YR	0.81	CFS	
10 YR	1.48	CFS	
25 YR	1.94	CFS	
100 YR	2.67	CFS	

Analysis Point 3			
2 YR	0.46	CFS	
10 YR	0.82	CFS	
25 YR	1.06	CFS	
100 YR	1.45	CFS	

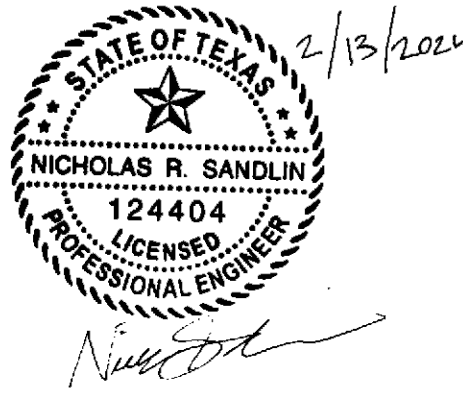
Drainage Basin Characteristics - Existing Conditions								
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
EX DA-1	0.59	0.00%	82.0	17.51	1.34	2.42	3.16	4.35
EX DA-2	0.32	0.00%	82.0	13.20	0.81	1.48	1.94	2.67
EX DA-3	0.14	11.25%	82.0	6.24	0.46	0.82	1.06	1.45

Drainage Area	EXISTING		IMPERVIOUS			GRASS		
	Total Area (Ac)	Total Area (sf)	Area Impervious	Area Impervious (Ac)	Area Impervious (%)	Area Grass (sf)	Area Grass (Ac)	Area Grass (%)
EX DA-1	0.59	25,700	0	0.00	0.0%	25,700	0.59	100.0%
EX DA-2	0.32	13,939	0	0.00	0.0%	13,939	0.32	100.0%
EX DA-3	0.14	6,098	686	0.02	11.2%	5,412	0.12	88.8%

Time of Concentration Calculations				Sheet Flow				Shallow Conc. Flow				Channel Flow			Total
Existing Flows		Area	Area	L	n	S	T _t	L	Surface Type	S	T _t	L	Vavg	T _t	T _c
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	(ft/s)	(min)	(min)
EX DA-1	Analysis Point 1	0.59	25,700	100	0.150	0.005	16.45	91	Unpaved	0.008	1.06	-	-	0.00	17.51
EX DA-2	Analysis Point 2	0.32	13,939	73	0.150	0.005	12.79	-	-	-	0.00	97	4.00	0.40	13.20
EX DA-3	Analysis Point 3	0.14	6,098	38	0.150	0.008	6.24	-	-	-	0.00	-	-	0.00	6.24

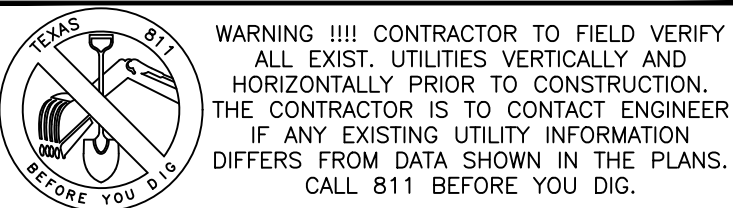


IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE



EXISTING DRAINAGE LEGEND

- PROPOSED PROPERTY / PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- EX DA-X
XXXX AC
- FLOW ARROW
- TIME OF CONCENTRATION LINE (SHEET FLOW)
- TIME OF CONCENTRATION LINE (SHALLOW CONCENTRATED FLOW)
- EXISTING CONTOURS
- PROPOSED CONTOURS



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EXISTING DRAINAGE
AREA MAP

PROJECT CASE: XXXXXXX

WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
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				OF
				29

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Analysis Point 1				
	Existing Flows		Proposed Flows	
2 YR	1.34	CFS	1.30	CFS
10 YR	2.42	CFS	2.27	CFS
25 YR	3.16	CFS	3.00	CFS
100 YR	4.35	CFS	4.26	CFS

NOTE: ALL FLOWS LEAVING THE PROPERTY ARE LESS THAN THOSE OF THE EXISTING CONDITION.

Analysis Point 2			
	Existing Flows		Proposed Flows
2 YR	0.81	CFS	0.44 CFS
10 YR	1.48	CFS	0.80 CFS
25 YR	1.94	CFS	1.04 CFS
100 YR	2.67	CFS	1.44 CFS

NOTE: ALL FLOWS LEAVING THE PROPERTY ARE LESS THAN THOSE OF THE EXISTING CONDITION.

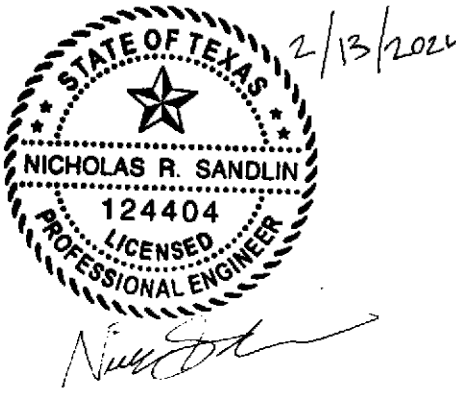
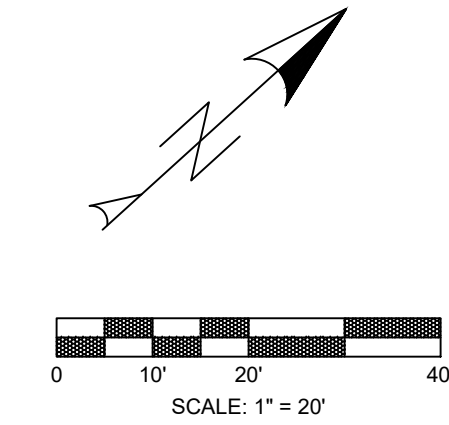
Analysis Point 3				
	Existing Flows		Proposed Flows	
2 YR	0.46	CFS	0.34	CFS
10 YR	0.82	CFS	0.52	CFS
25 YR	1.06	CFS	0.64	CFS
100 YR	1.45	CFS	0.84	CFS

NOTE: ALL FLOWS LEAVING THE PROPERTY ARE LESS THAN THOSE OF THE EXISTING CONDITION.

Drainage Basin Characteristics - Proposed Conditions								
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
PR DA-1	0.85	78.86%	82.0	5.00	4.09	6.28	7.73	10.15
PR DA-2	0.13	0.00%	82.0	5.00	0.44	0.80	1.04	1.44
PR DA-3	0.07	84.28%	82.0	5.00	0.34	0.52	0.64	0.84

PROPOSED			IMPERVIOUS			GRASS		
Drainage Area	Total Area	Total Area	Area Impervious	Area Impervious	Area Impervious	Area Grass	Area Grass	Area Grass
	(Ac)	(sf)	(sf)	(Ac)	(%)	(sf)	(Ac)	(%)
PR DA-1	0.85	37,026	29,198	0.67	78.9%	7,828	0.18	21.1%
PR DA-2	0.13	5,663	0	0.00	0.0%	5,663	0.13	100.0%
PR DA-3	0.07	3,049	2,570	0.06	84.3%	479	0.01	15.7%

Time of Concentration Calculations				Sheet Flow				Shallow Conc. Flow				Channel Flow		Total
Proposed Flows	Area	Area		L	n	S	T _t	L	Surface Type	S	T _t	L	Vavg	T _t
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	(ft/s)	(min)
PR DA-1	Analysis Point 1	0.85	37,026	-	-	-	-	-	-	-	-	-	-	5.00
PR DA-2	Analysis Point 2	0.13	5,663	-	-	-	-	-	-	-	-	-	-	5.00
PR DA-3	Analysis Point 3	0.07	3,049	-	-	-	-	-	-	-	-	-	-	5.00



PROPOSED DRAINAGE LEGEND

- PROPOSED PROPERTY / PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- DRAINAGE AREA DESIGNATION AND AREA DRAINED
- PR DA-X
XXXX AC
- FLOW ARROW
- TIME OF CONCENTRATION LINE (SHEET FLOW)
- TIME OF CONCENTRATION LINE (SHALLOW CONCENTRATED FLOW)
- EXISTING CONTOURS
- PROPOSED CONTOURS

WARNING !!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

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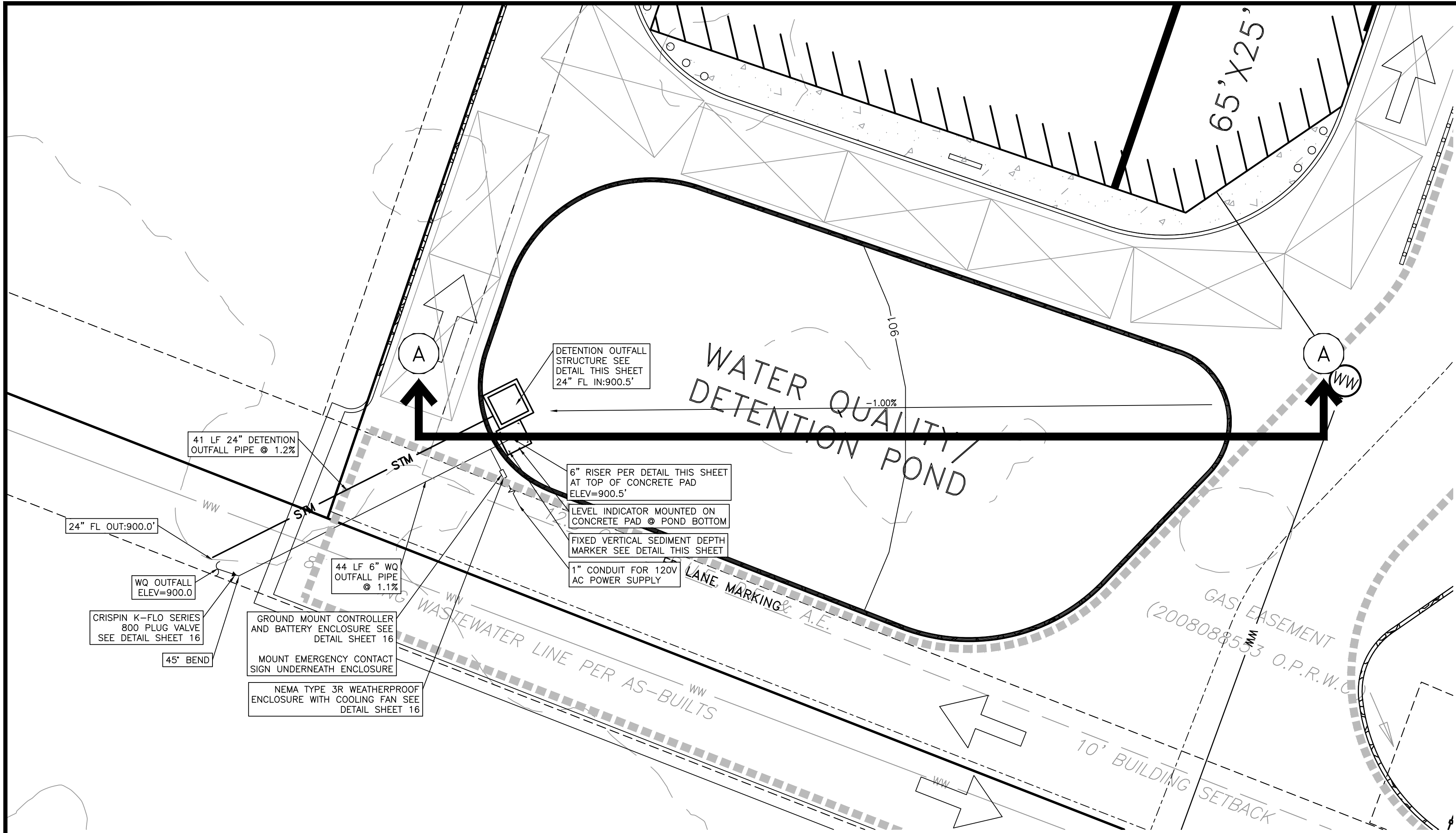
PROPOSED DRAINAGE AREA MAP

PROJECT CASE: XXXXXXX

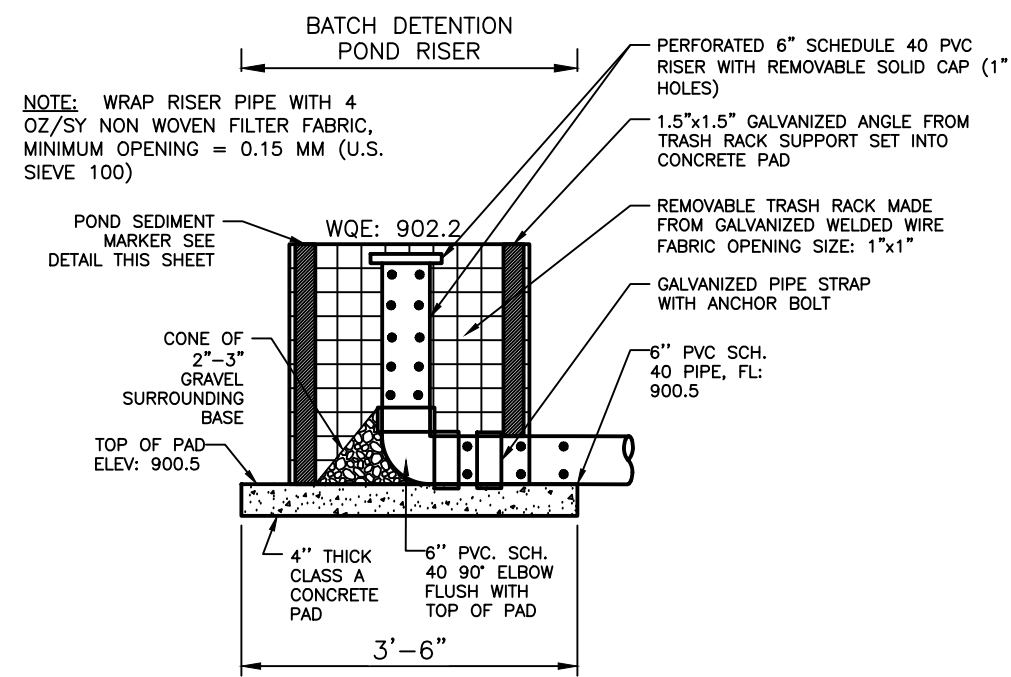
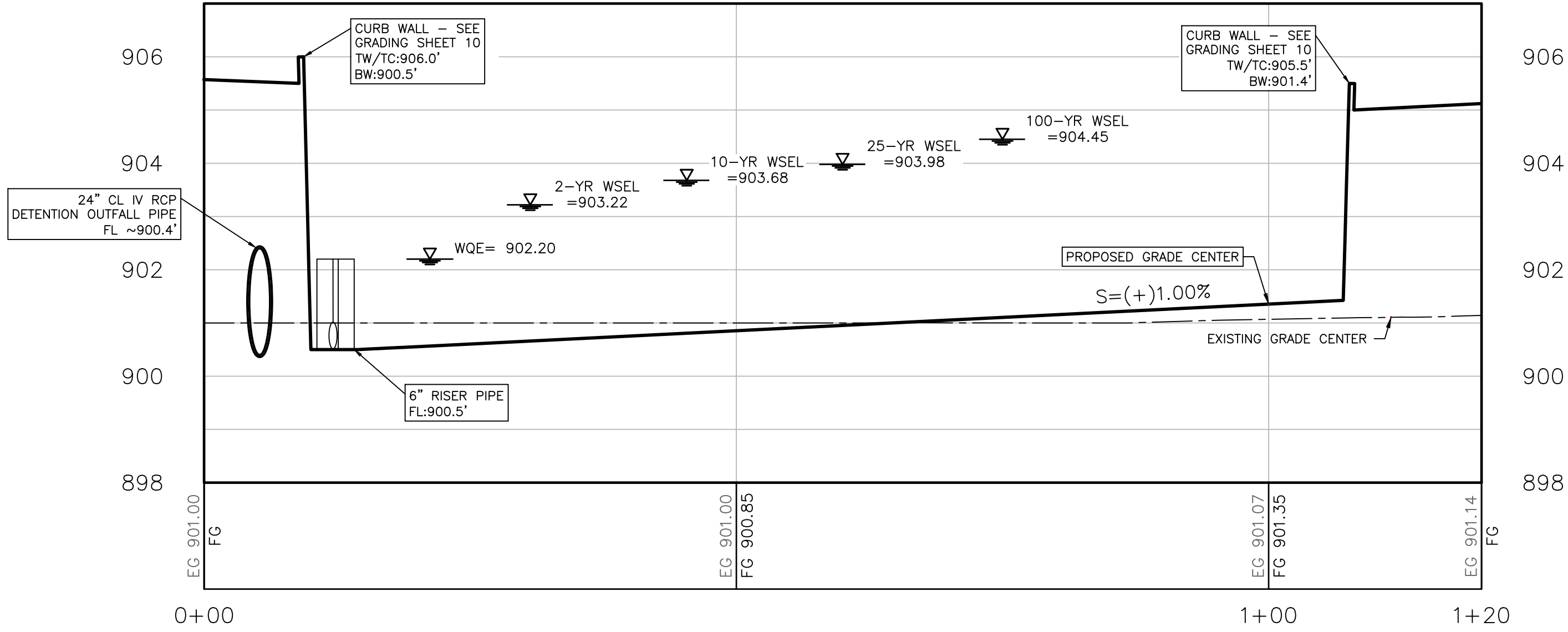
WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
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				OF
				29

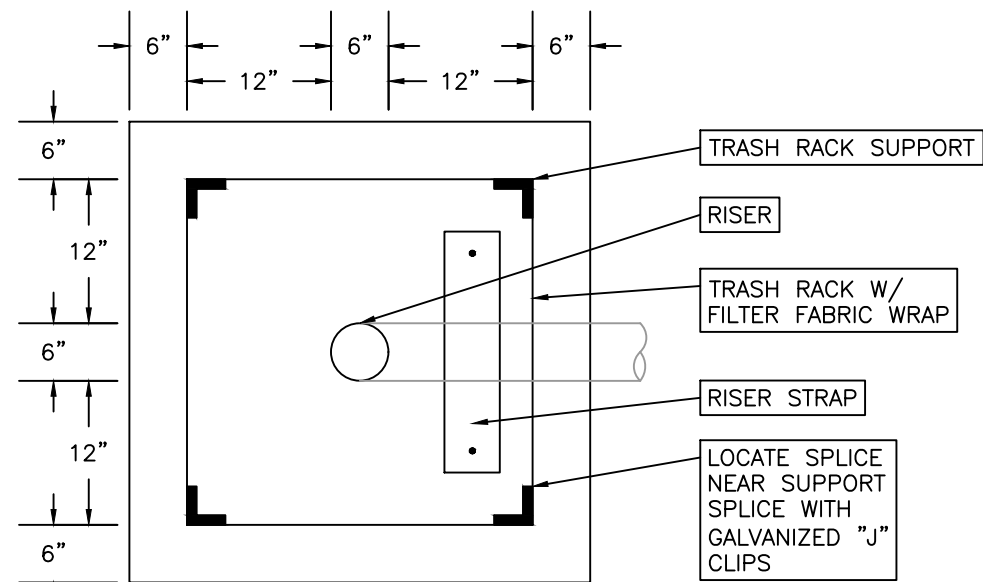
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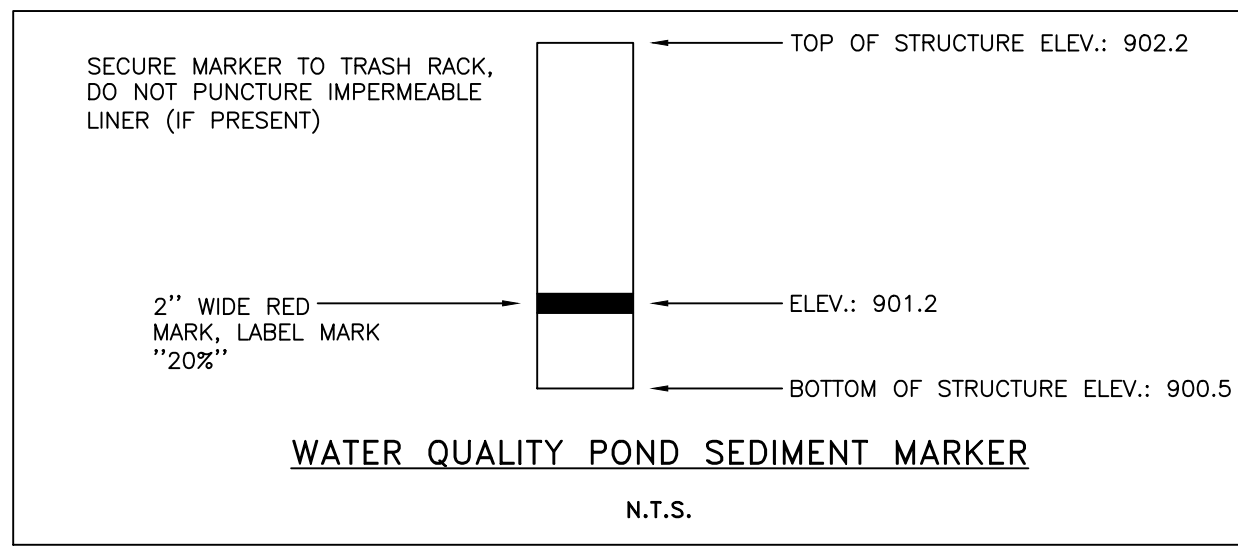
POND SECTION A-A PROFILE
1" = 20' HORZ. - 1" = 2' VERT.



WATER QUALITY RISER PIPE
SECTION
N.T.S.



BATCH DETENTION
POND RISER PIPE
N.T.S.



WATER QUALITY POND SEDIMENT MARKER
N.T.S.

Woodlake Retail					
DETENTION POND STAGE-STORAGE					
Stage (ft msl)	Area (sf)	Area (acres)	Storage Incremental (cf)	Storage Cumulative (cf)	Storage Cumulative (ac-ft)
902.20 (WQE)	3,911	0.0898	N/A	0	0.000
902.50	3,921	0.0900	1,175	1,175	0.027
903.00	3,936	0.0904	1,964	3,139	0.072
903.50	3,952	0.0907	1,972	5,111	0.117
904.00	3,967	0.0911	1,980	7,091	0.163
904.50	3,983	0.0914	1,988	9,078	0.208
905.00	3,998	0.0918	1,995	11,073	0.254

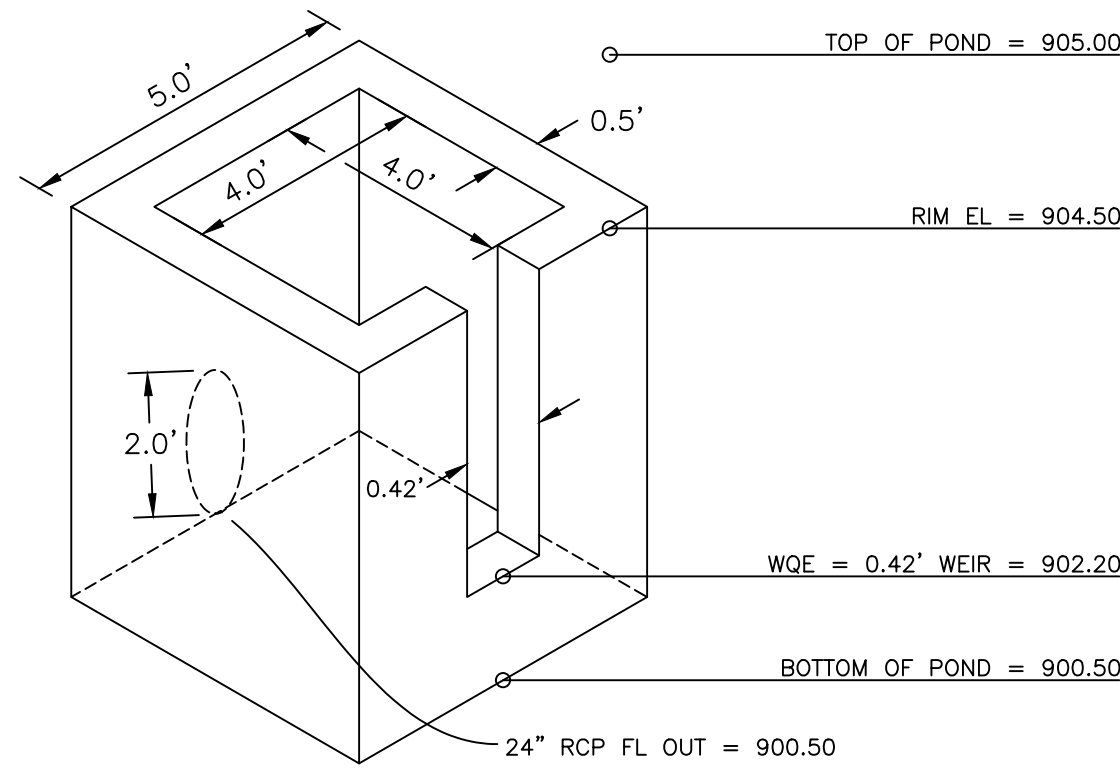
Woodlake Retail					
DETENTION POND ELEVATION-VOLUME					
Storm Event	Peak Flow IN (cfs)	Peak Flow OUT (cfs)	WSEL (ft msl)	Freeboard	Peak Storage (ac-ft)
2-year	4.09	1.30	903.22	1.78	0.09
10-year	6.28	2.27	903.68	1.32	0.13
25-year	7.73	3.00	903.98	1.02	0.16
100-year	10.15	4.26	904.45	0.55	0.20

Detention Pond Outfall - 24" RCP	
Q ₂₅	3.00 cfs
Q ₁₀₀	4.26 cfs
Pipe Diameter	2.0 ft
Mannings "n"	0.012
Length	41.0 ft
FL _{IN}	900.50
FL _{OUT}	900.00
Slope	0.012 ft/ft
Q _{CAPACITY}	27.1 cfs
Q _{CAPACITY} = (0.3117)*(1.49/n)*(D ^{4/3})*(S ^{4/5})	

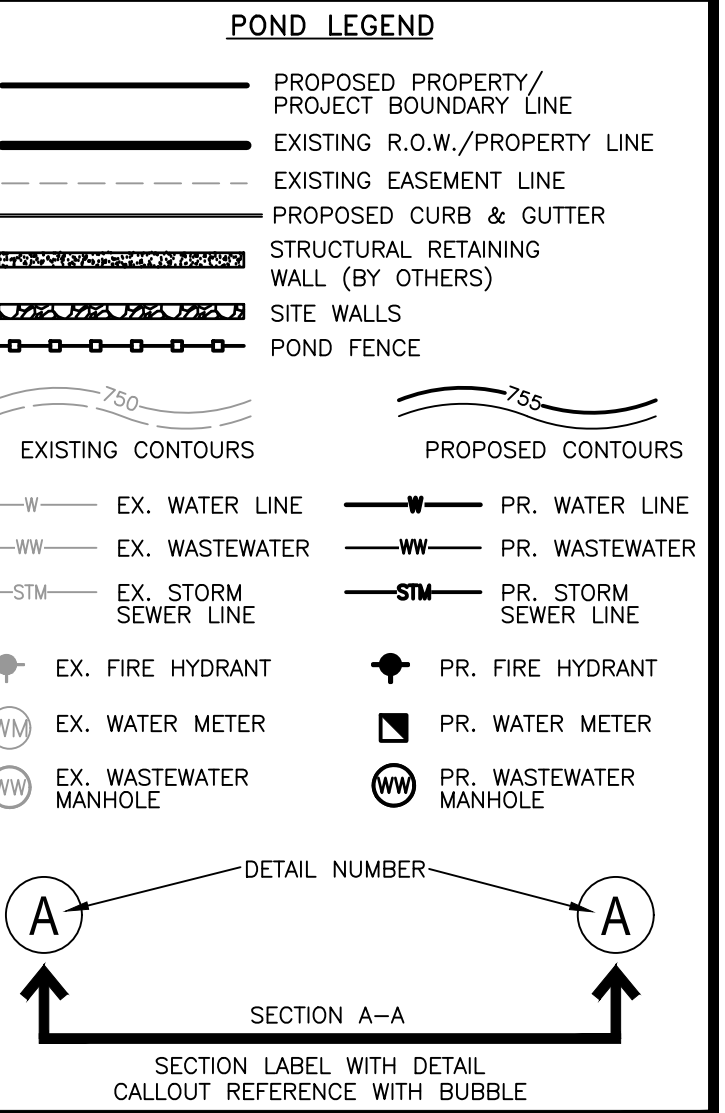
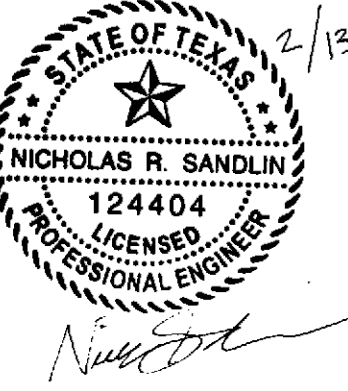
Grate Inlet Calculations	
Grate Inlet Equation - weir Q=Cw*P*d*1.5*Cf	
Cw	1 - 4'x4' Inlet
Size of Inlet (length)	3
Size of Inlet (width)	4 ft
Ag= Area of Inlet	16 ft ²
d= avg. depth across grate	0.5 ft
Cf= Clogging factor	0.65
Q ₂₅ from Drainage Calcs	7.73 cfs
Q ₁₀₀ from Drainage Calcs	10.15 cfs
Inlet Capacity	11.03 cfs

BATCH DETENTION POND	
Contributing Drainage Area =	"PR DA-1"
Total Drainage Area =	1.05 acre
Pre-Development I.C. =	0.02 acre
Post-Development I.C. =	0.73 acre
Post-Development I.C. Fraction =	0.69
LM TOTAL PROJECT =	681 lbs
A _C =	0.85 acre
A _I =	0.67 acre
A _P =	0.18 acre
L _R =	678 lbs
Fraction of Annual Runoff (F) =	0.92
Rainfall Depth =	2.00 inch
Post Development Runoff Coefficient =	0.61
On-site Water Quality Volume =	3754 cubic ft
Off-site area draining to BMP =	0.00 acre
Off-site Impervious cover draining to BMP =	0.00 acre
Impervious fraction of off-site area =	-
Off-site Runoff Coefficient =	-
Off-site Water Quality Volume =	0 cubic ft
Storage for Sediment =	751 cubic ft
Total Capture Volume Required =	4505 cubic ft
Total Capture Volume Provided =	4906 cubic ft

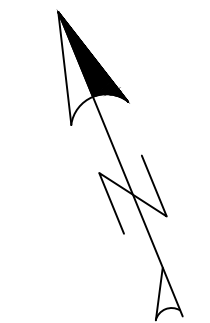
BATCH DETENTION - DRAWDOWN CALCULATIONS					
Stage (ft amsl)	Storage (cf)	Head (ft)	Relative Volume (cf)	Time To Drain (hr)	Outflow Velocity (fps)
900.50	0	0.50	0	0.00	0.00
901.00	511	1.00	511	0.15	4.98
901.50	2,175	1.50	1664	0.39	6.09
902.00	4,124	2.00	1949	0.39	7.04
902.20	4,906	2.20	782	0.15	7.38
Complete Drawdown Time				1.07	
*Elevation of Downstream WSE = 900 ft amsl					
*Orifice Diameter (inches) = 6 in					
*24-Hour Drawdown Volume = 84407 cf					



OUTFALL DETAIL
N.T.S.

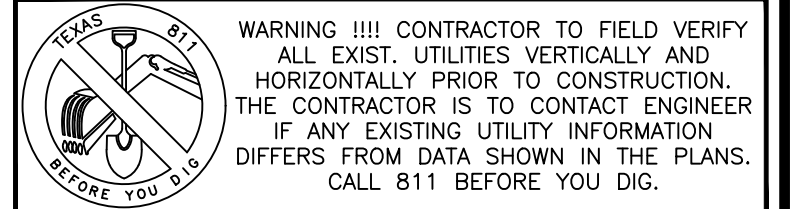


- NOTES:
- POST THE FOLLOWING SIGN UNDER THE VISIBLE ALARM FOR EMERGENCY CONTACT:
EMERGENCY CONTACT:
OWNER: 806-790-3822
TCEQ: 512-339-2929
 - POND BOTTOM SHALL BE VEGETATED PER THE SEEDING SPECIFICATION ON THE EROSION CONTROL PLAN SHEET.



SCALE: 1" = 10'

IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE



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4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

POND PLAN

PROJECT CASE: XXXXXXX
WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
				14
				OF
				29

G:\Shared drives\Sandlin Services Projects\Land Development Division\01-0041-003 Woodlake Retail\CAD\Construction Sheets\5 WLP PWD.dwg - WATER QUALITY CALCS Plotted Feb 15, 2024 at 11:28am by Engineer | Last Saved by Engineer

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Woodlake Retail**
Date Prepared: **12/22/2023**

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.

Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.

Characters shown in red are data entry fields.

Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 28.93(A_N \times P)$ <-- Increased to 28.93 per Georgetown standard of 85% removal efficiency

where:

L_M TOTAL PROJECT = Required TSS removal resulting from the proposed development = 85% of increased load

A_N = Net increase in impervious area for the project

P = Average annual precipitation, inches

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

County = **Williamson**

Total project area included in plan = **1.05** acres

Predevelopment impervious area within the limits of the plan = **0.02** acres

Total post-development impervious area within the limits of the plan = **0.73** acres

Total post-development impervious cover fraction = **0.69**

P = **32** inches

L_M TOTAL PROJECT = **661** lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = **3**

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

Drainage Basin/Outfall Area No. = **1** "PR DA-1"

Total drainage basin/outfall area = **0.85** acres

Predevelopment impervious area within drainage basin/outfall area = **0.00** acres

Post-development impervious area within drainage basin/outfall area = **0.67** acres

Post-development impervious fraction within drainage basin/outfall area = **0.79**

L_M THIS BASIN = **621** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**

Removal efficiency = **91** percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

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

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

where:

A_C = Total On-Site drainage area in the BMP catchment area

A_i = Impervious area proposed in the BMP catchment area

A_p = Pervious area remaining in the BMP catchment area

L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **0.85** acres

A_i = **0.67** acres

A_p = **0.18** acres

L_R = **678** lbs

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

Desired L_M THIS BASIN = **621** lbs.

F = **0.92**

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = **2.00** inches

Post Development Runoff Coefficient = **0.61**

On-site Water Quality Volume = **3754** cubic feet

Calculations from RG-348

Pages 3-36 to 3-37

Off-site area draining to BMP = **0.00** acres

Off-site Impervious cover draining to BMP = **0.00** acres

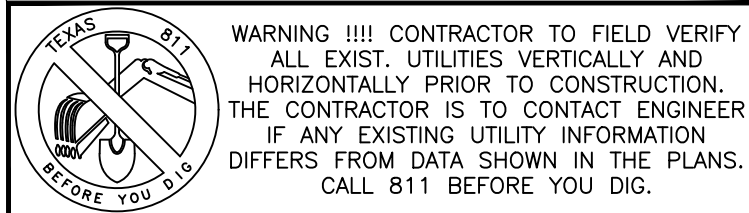
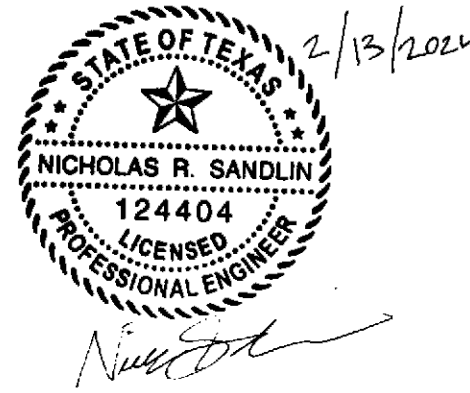
Impervious fraction of off-site area = **0**

Off-site Runoff Coefficient = **0.00**

Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **751**

Total Capture Volume (required water quality volume(s) x 1.20) = **4505** cubic feet



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WATER QUALITY CALCS

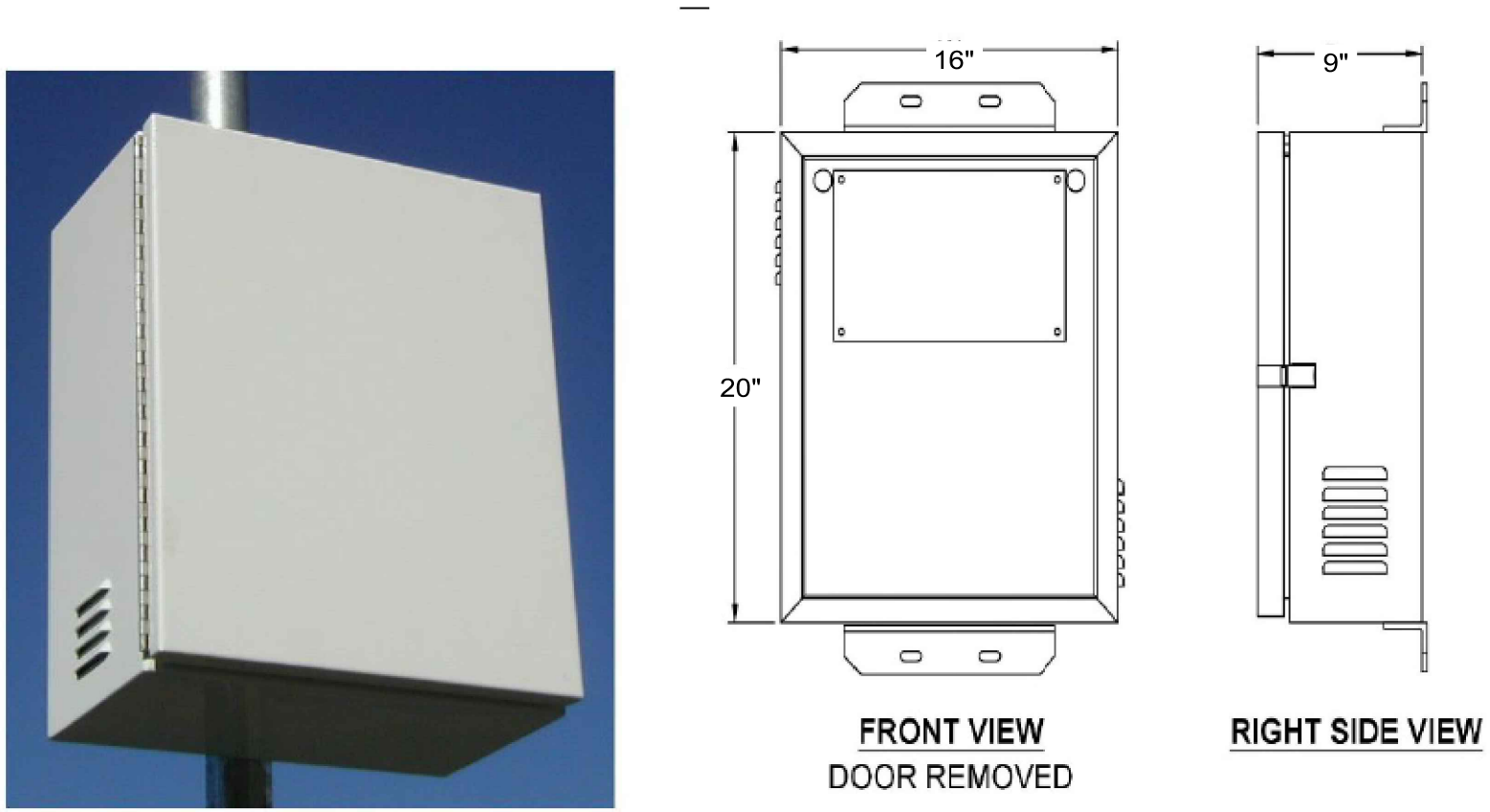
PROJECT CASE: XXXXXXX

WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
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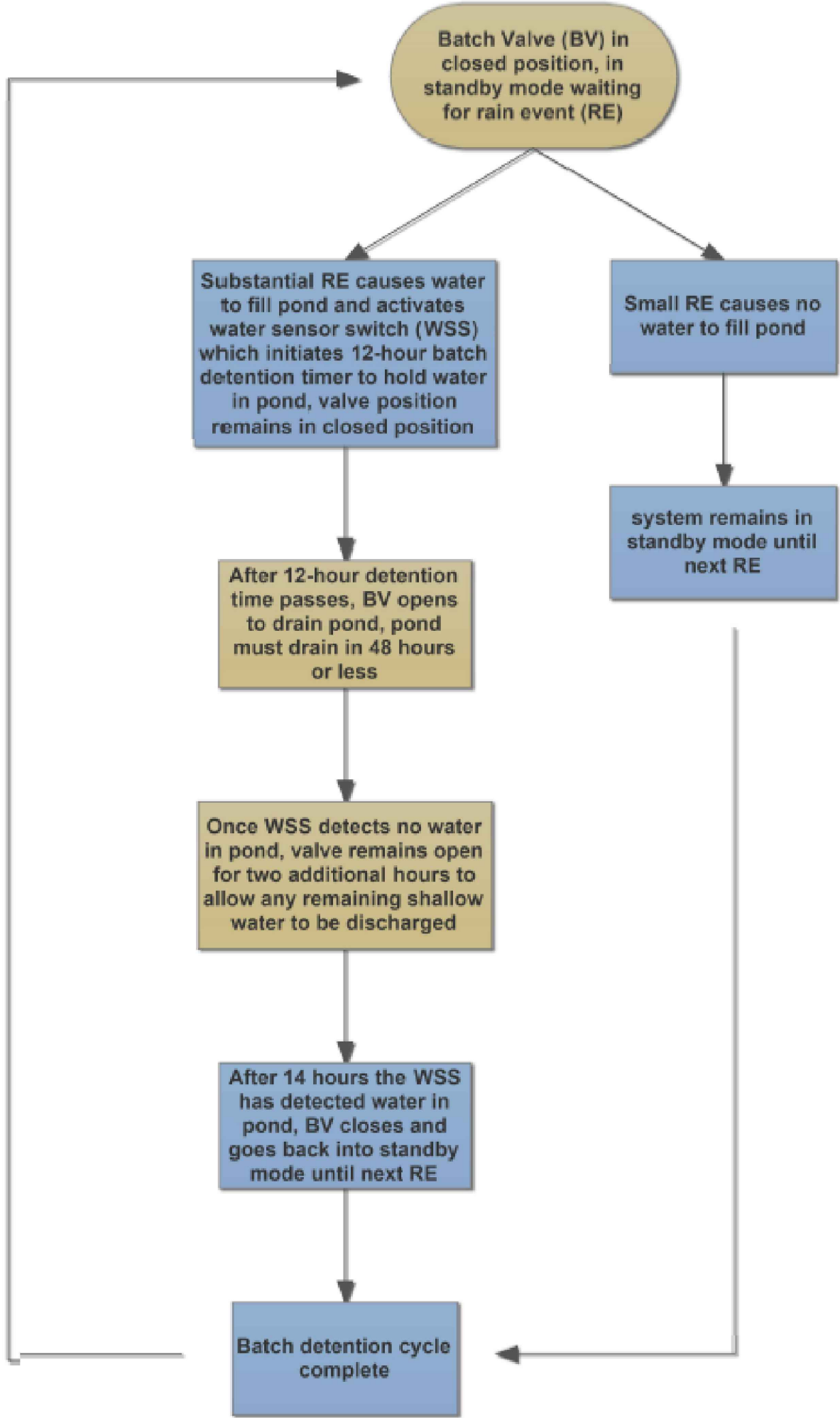
C:\Shared drives\Sandlin Services Projects\Land Development Division\01-0041-003 Woodlake Retail\CAD\Construction Sheets\5_WQP_PWD.dwg - WATER QUALITY DETAILS Plotted Feb 15, 2024 at 11:29am by Engineer | Last Saved by: Engineer

Ground Mount Controller and Battery Enclosure



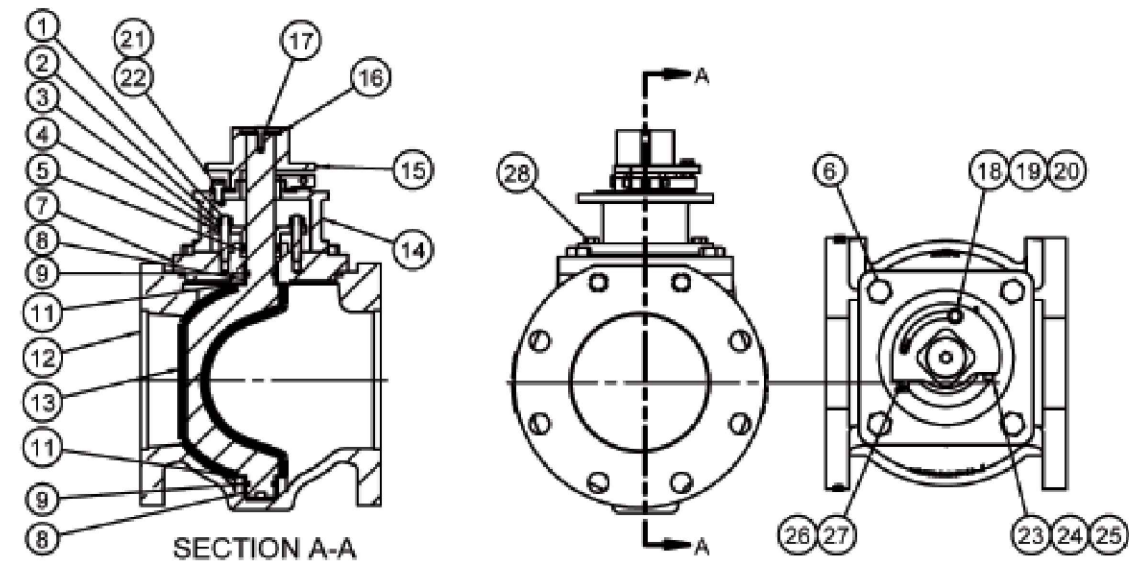
- Standard boxes are fabricated from .125" thick 5052-H32 aluminum
- Heavy-duty stainless steel continuous
- Heavy-duty stainless steel continuous hinge
- Seams are continuously welded and then sanded smooth
- Adjustable tension stainless steel padlock hasp
- Removable component mounting plate
- Standard finish is a bright white polyester powder-coat inside and out
- Two 7/8" diameter wire holes
- Built to NEMA 3R specifications
- Filtered or screened ventilation louvers
- Hinged front door with PORON door gasket
- Supplied with u-bolts (when pole specified)

Batch Valve Programmable Logic Flow Chart



800 SERIES MATERIAL LIST

2.5" to 12", 212F Max Temp., 175 psi Max Press, Bi-Directional



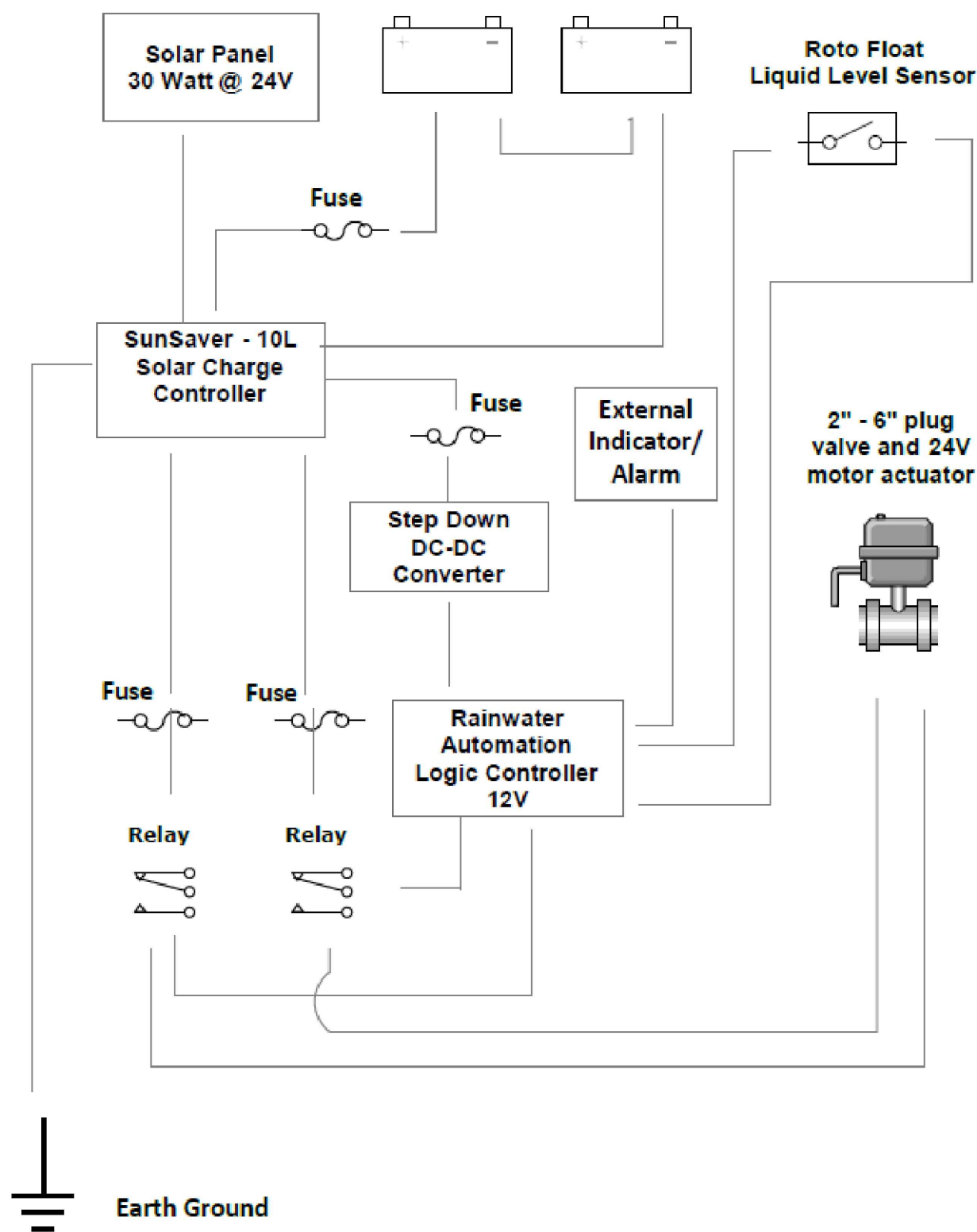
Item	Description	Material	Item	Description	Material
1	Gland Stud	Stainless Steel	15	Torque Collar	A536 GR 65-45-12
2	Hex Nut	Stainless Steel	16	Flat Washer	Q235-A Zinc Plated
3	Flat Washer	Stainless Steel	17	Socket Head Capscrew	Stainless Steel
4	Gland	ASTM A126 CL B	18	Hex Head Capscrew	Stainless Steel
5	V-Ring Set	NBR	19	Hex Nut	Stainless Steel
6	Hex Head Capscrew	Stainless Steel	20	Flat Washer	Stainless Steel
7	Cover	ASTM A126 CL B	21	Socket Head Capscrew	Stainless Steel
8	Bearing	SST, Sintered	22	Lock Washer	Stainless Steel
9	O-Ring	NBR	23	Socket Head Capscrew	Stainless Steel
10	O-Ring	NBR	24	Hex Nut	Stainless Steel
11	Thrust Washer	PTFE	25	Flat Washer	Stainless Steel
12	Body	ASTM A126 CL B	26	Hex Head Capscrew	Stainless Steel
13	Plug Molded	A536 GR 65-45-12 +NBR	27	Hex Nut	Stainless Steel
14	Torque Collar Adapter (Buried)	ASTM A126 CL B	28	Hex Head Capscrew	Stainless Steel

800 SERIES Cv Data (GPM@1PSI)

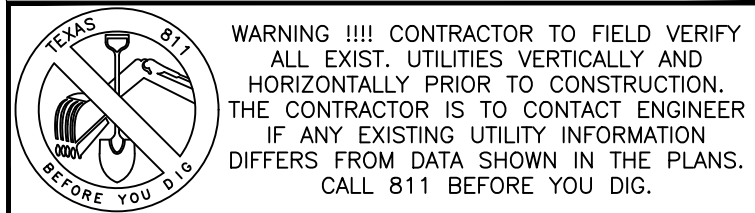
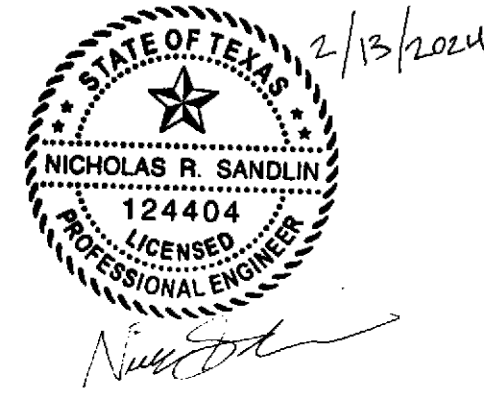
Size	2.5	3	4	5	6	8	10	12
Cv	425	680	1190	2000	2400	4600	5800	9100

Crispin/K-Flo Valves, 600 Fowler Ave., Berwick PA 18603 T: 800-247-VALV W: www.kflovalves.com

Circuit Block Diagram



Actuator Specifications	P4	P5	P6
Torque "lb/Nm	3500"lbs/400Nm	4400"lbs/500Nm	5750"lbs/650Nm
Supply Voltage	12vac/vdc 24vac/vdc	12vac/vdc 24vac/vdc	12vac/vdc 24vac/vdc
Max Inrush Current	16.1A 9.2A	13.5A 9.0A	12.5A 8.5A
Running Current	16.1A 8.5A	14.1A 7.5A	12.3A 7.0A
Motor	DC Brush Type		
Runtime (90°@60Hz/vdc)	16 sec	22 sec	28 sec
Runtime (90°@50Hz)	16 sec	22 sec	28 sec
Duty Cycle	75%		
Motor Starts	1200 per hour		
Weight	47lbs/22kg		
Mechanical Connections	ISO5211 F10 8pt 35mm		
Electrical Entry	(2) 3/4" NPT		
Electrical Terminations	12-16ga		
Environmental Rating	NEMA 4/4X		
Manual Override	7.6" Handwheel		
Control	On/Off-Jog, Proportional		
Actuator Case material	Aluminum Alloy, Powder coated		
Motor Protection	230°F/110°C Thermal F* Class		
Ambient Temperature Operating Range	-22°F to +125°F -30°C to +52°C		



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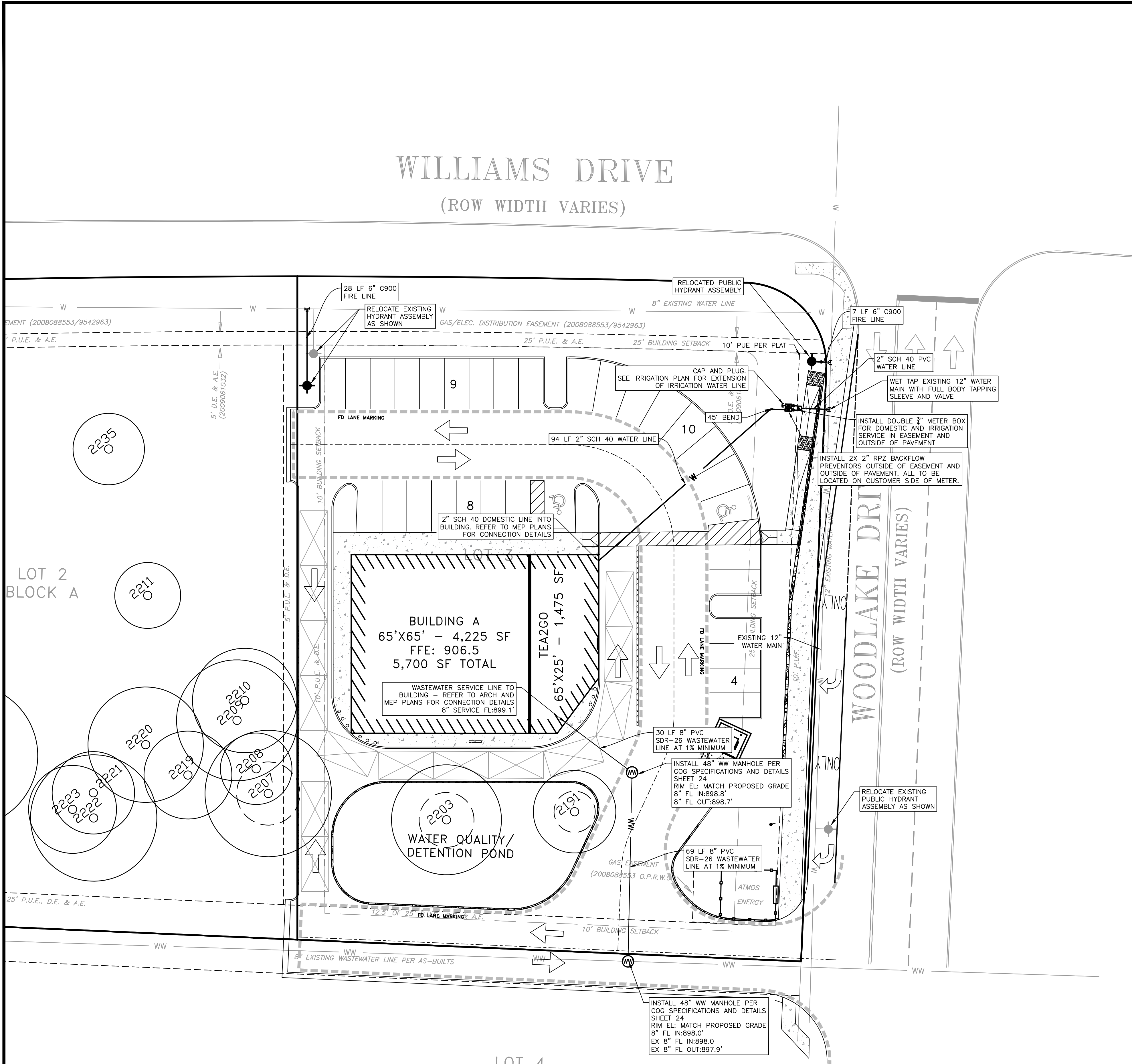
WATER QUALITY DETAILS

PROJECT CASE: XXXXXXX

WOODLAKE RETAIL

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				OF
				29

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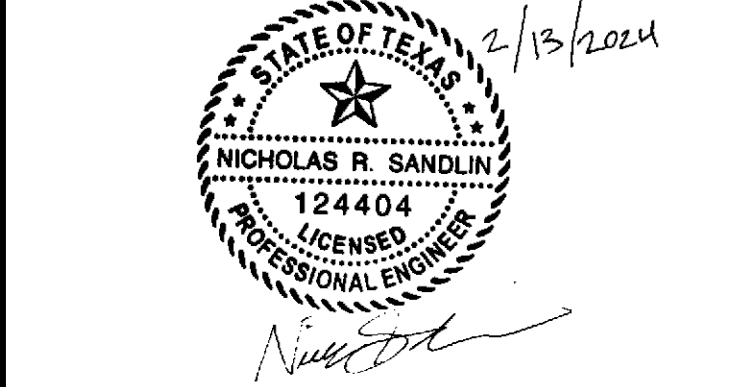
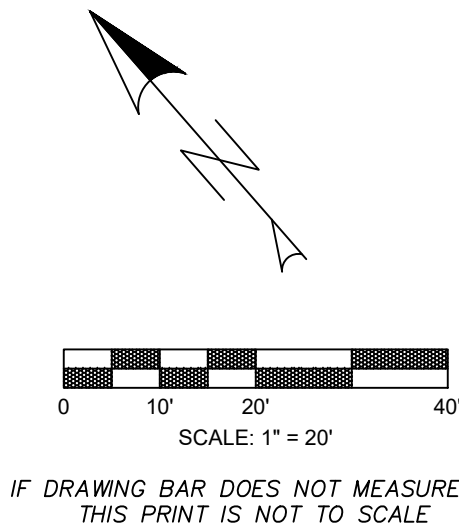


NOTES:

- CLEANOUTS IN SIDEWALK MUST BE FLUSH TO PREVENT TRIPPING HAZARD.
- SEE BUILDING PLAN FOR CONNECTIONS TO BUILDINGS.
- DO NOT PLANT TREES OVER CAPS. ALL CAPS TO HAVE 6" PVC STAND PIPES 6" ABOVE PROPOSED GRADE.
- SEE BUILDING PLAN FOR WATER AND WASTEWATER INTERNAL DESIGN
- WASTEWATER MANHOLES OUTSIDE OF PAVEMENT, SEE SPECIFIC DETAIL. ALL GRINDER PUMPS ARE PRIVATE AND CONNECT VIA A FORCE MAIN.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- ALL WATER LINES AND SERVICE LINES WILL BE INSTALLED WITH TRACER TAPE.
- NO WATER METERS LOCATED IN SIDEWALK OR DRIVEWAY AREAS.
- FIRE HYDRANTS ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. SEE DETAIL SHEET FOR PLACEMENT OF APPURTENANCES. FIRE HYDRANTS ASSEMBLY CONSISTS OF, BUT NOT LIMITED TO, 514" FIRE HYDRANT, 6" GATE VALVE, 6" D.I. FIRE LEAD.
- ALL HORIZONTAL AND VERTICAL WATER LINE BENDS, TEE'S AND DEAD-END'S SHALL BE RESTRAINED TO THE WATER MAIN USING MECHANICAL JOINT RESTRAINT DEVICES.
- ALL WATERLINE 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. 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 SINGLE DEFLECTION IS GREATER THAN 80% OF THE MAXIMUM.
- ALL FILL AREAS SHALL BE COMPACTED TO 95% PRIOR TO UTILITY INSTALLATION. CONTRACTOR TO INSTALL PRESSURE REDUCING VALVES AT EACH BUILDING TO CONTROL PRESSURE TO MAXIMUM 80 PSI PER BUILDING CODE.
- CONTRACTOR TO INSTALL PRESSURE REDUCING VALVES AT EACH BUILDING TO CONTROL PRESSURE TO MAXIMUM 80 PSI PER BUILDING CODE.
- A RPZ BACKFLOW PREVENTOR IS TO BE INSTALLED ON ALL SERVICES OUTSIDE OF PAVEMENT, SIDEWALKS, ROW, & EASEMENTS. ALL TO BE LOCATED ON THE CUSTOMER SIDE OF THE METERS

Wastewater Utility Requirements			
Existing building	10,100.00	square feet	
Proposed buildings	26,550.00	square feet	
Total	36,650.00	square feet	
Living Unit Equivalent (LUE - Office)	= 12.22	LUE	Assume 1 LUE:3000 sf
Standard Population Factor	= 3.50	people/LUE	
Population	= 42.76	people	
Acres Served	= 4.40	acres	
COA Average Flow	= 245.00	gallons/day	
COA Inflow/Infiltration	= 750.00	gallons/day/acre	
Average Dry Weather Flow, F	= 2.08	gpm	Formula: F = 70 gal/person/day x population/1440
Peak Dry Weather Flow, Qpd	= 9.00	gpm	Formula: Qpd = [(18+(0.0206 x F)*0.5)] / (4+(0.0206 x F)*0.5)] x F
Daily flow	= 3,185.00	gpd	Formula: Daily flow = COA Average Flow * LUE
Inflow/Infiltration	= 2.29	gpm	Formula: Inflow/Infiltration = COA Inflow/Infiltration*Acres Served*1/1440
Peak Wet Weather Flow	= 11.29	gpm	Formula: Qpd + Inflow/Infiltration

* Grinder pumps to be designed with actual building flow during permitting process. This is required to fall within the current allocation of 5,384 gallons per day and an average daily flow of 5.6 gallons per minute.



UTILITY LEGEND

PROPOSED PROPERTY/
PROJECT BOUNDARY LINE

EXISTING R.O.W./PROPERTY LINE

EXISTING EASEMENT LINE

PROPOSED CURB & GUTTER

EXISTING CONTOURS

PROPOSED CONTOURS

EX. WATER LINE

EX. WASTEWATER

EX. STORM
SEWER LINE

EX. FIRE HYDRANT

EX. WATER METER

EX. WASTEWATER
MANHOLE

PR. WATER LINE

PR. WASTEWATER

PR. STORM
SEWER LINE

PR. FIRE HYDRANT

PR. WATER METER

PR. WASTEWATER
MANHOLE

FITTINGS AS NOTED

GATE VALVE AS NOTED

WW CLEAN OUT

BACK FLOW PREVENTER

FLOW ARROW

ELECTRIC TRANSFORMER

UTILITY POLE

FIRE LINE

EXISTING TREE
(TO REMAIN)

EXISTING TREE
(TO BE
REMOVED)

NOTES:

- WARNING:**
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
- IMPORTANT:**
A MINIMUM 24" SEPARATION DISTANCE IS REQUIRED AT ALL WATER AND WASTEWATER CROSSINGS. CENTER ONE JOINT OF WATER PIPE AT EACH CROSSING IN ACCORDANCE WITH TAC 290.44(a)(4)(B)(i). NOTIFY ENGINEER IMMEDIATELY IF NOT ABLE TO MAINTAIN.
- IMPORTANT:**
WHERE A NINE FOOT SEPARATION DISTANCE BETWEEN WATER AND WASTEWATER CANNOT BE ACHIEVED, PVC WITH MINIMUM PRESSURE RATING OF 150 PSI SHALL BE USED. A MINIMUM SEPARATION DISTANCE OF 6 INCHES BETWEEN OUTSIDE DIAMETERS OF PIPES SHALL BE ACHIEVED. WASTEWATER SHALL BE BELOW WATER, AND JOINTS SHALL BE LOCATED AS FAR AS POSSIBLE FROM THE INTERSECTION, IN ACCORDANCE WITH TAC TITLE 30 217.53(d).
- ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRICAL, CABLE AND TELECOMMUNICATIONS, SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18"
- DRY UTILITIES ARE NOT PROPOSED OR DEPICTED WITHIN THIS PLAN SET.

TEXAS

BEFORE YOU DIG

WARNING !!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

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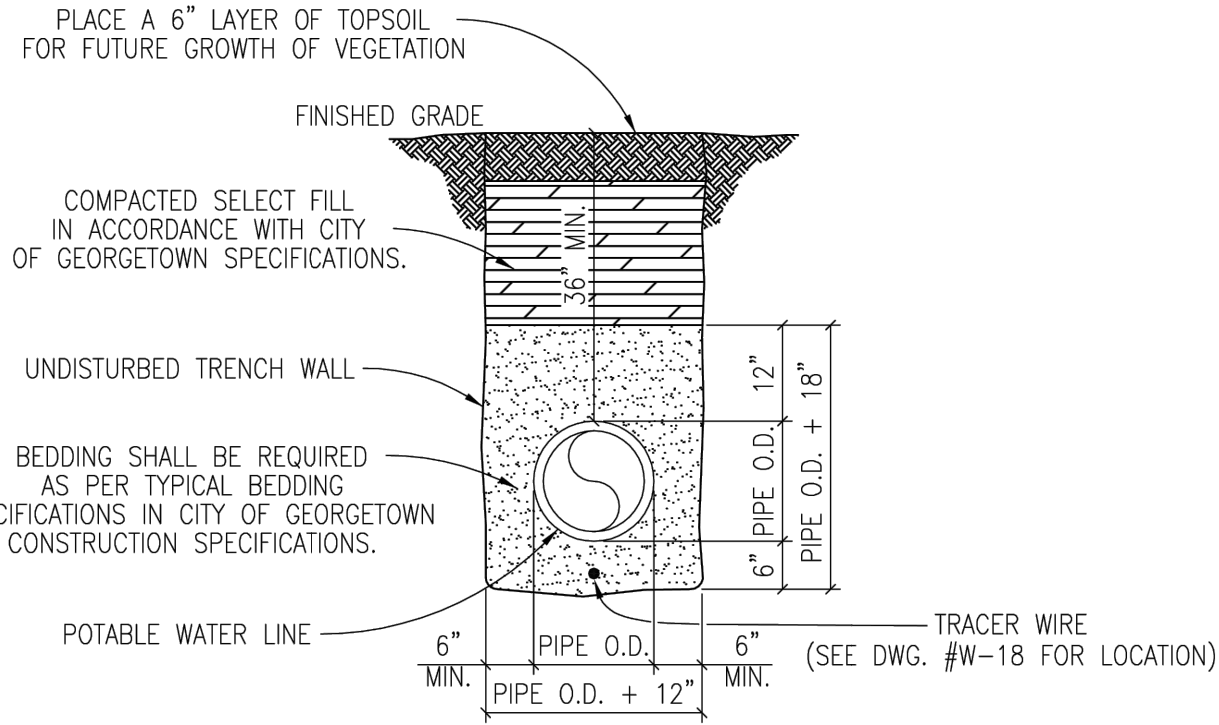
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WATER & WASTEWATER PLAN

PROJECT CASE: XXXXXXXX
WOODLAKE RETAIL

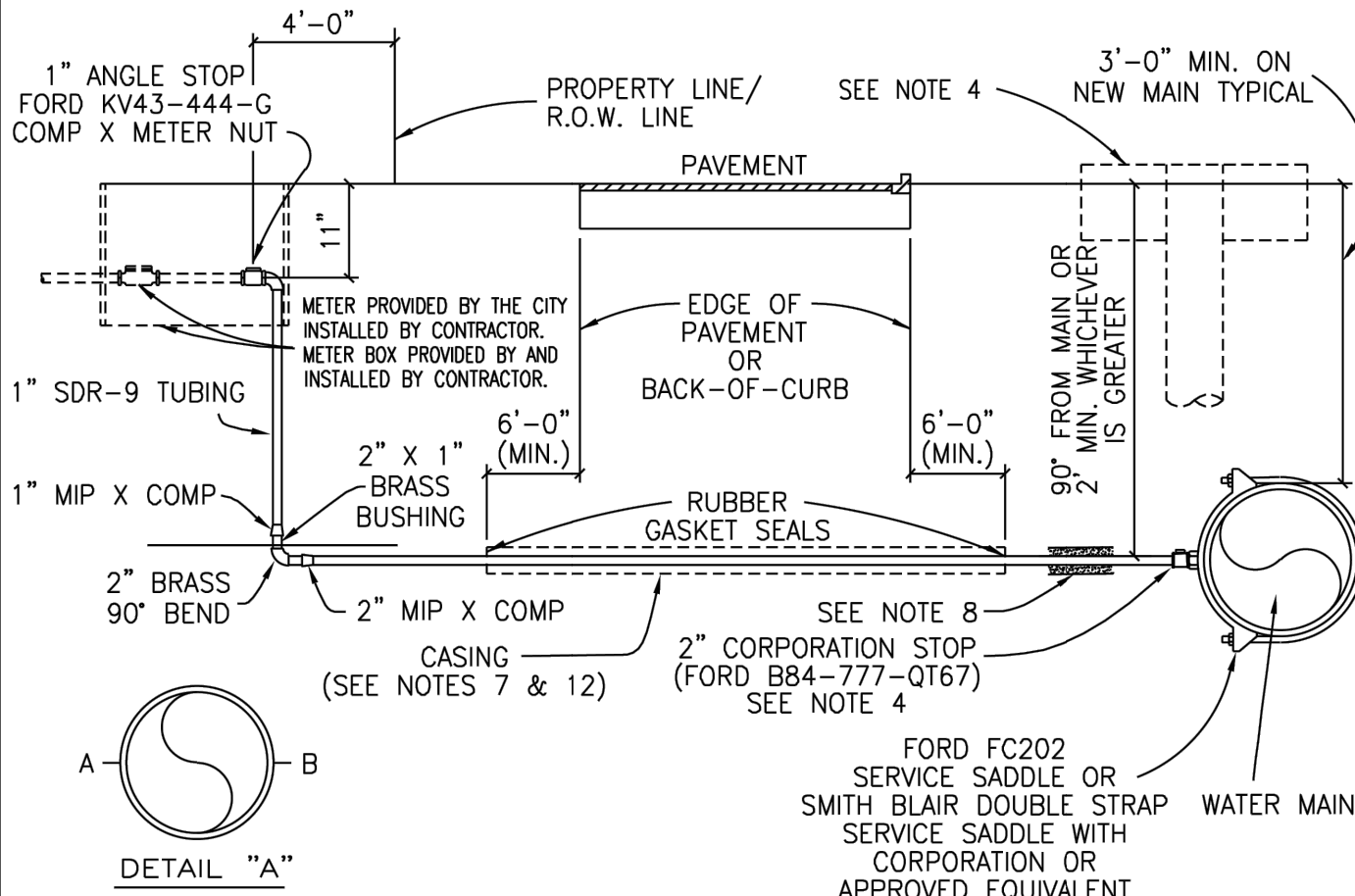
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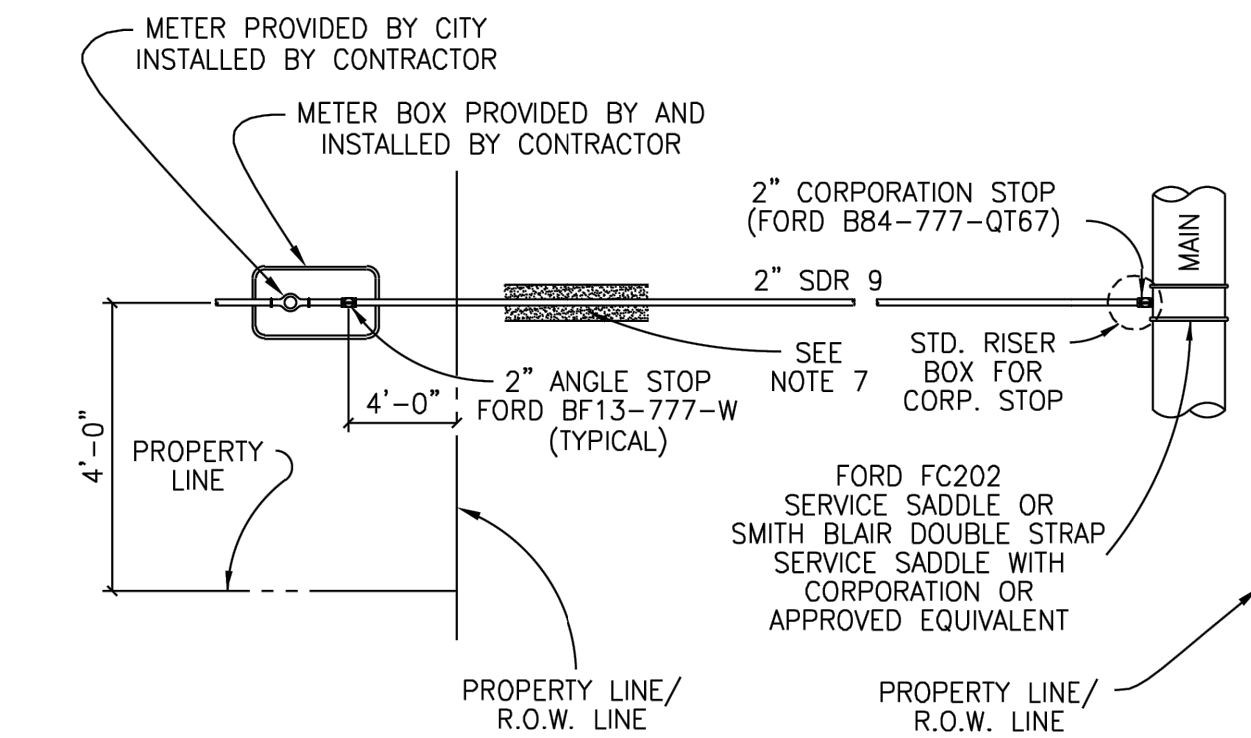
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

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



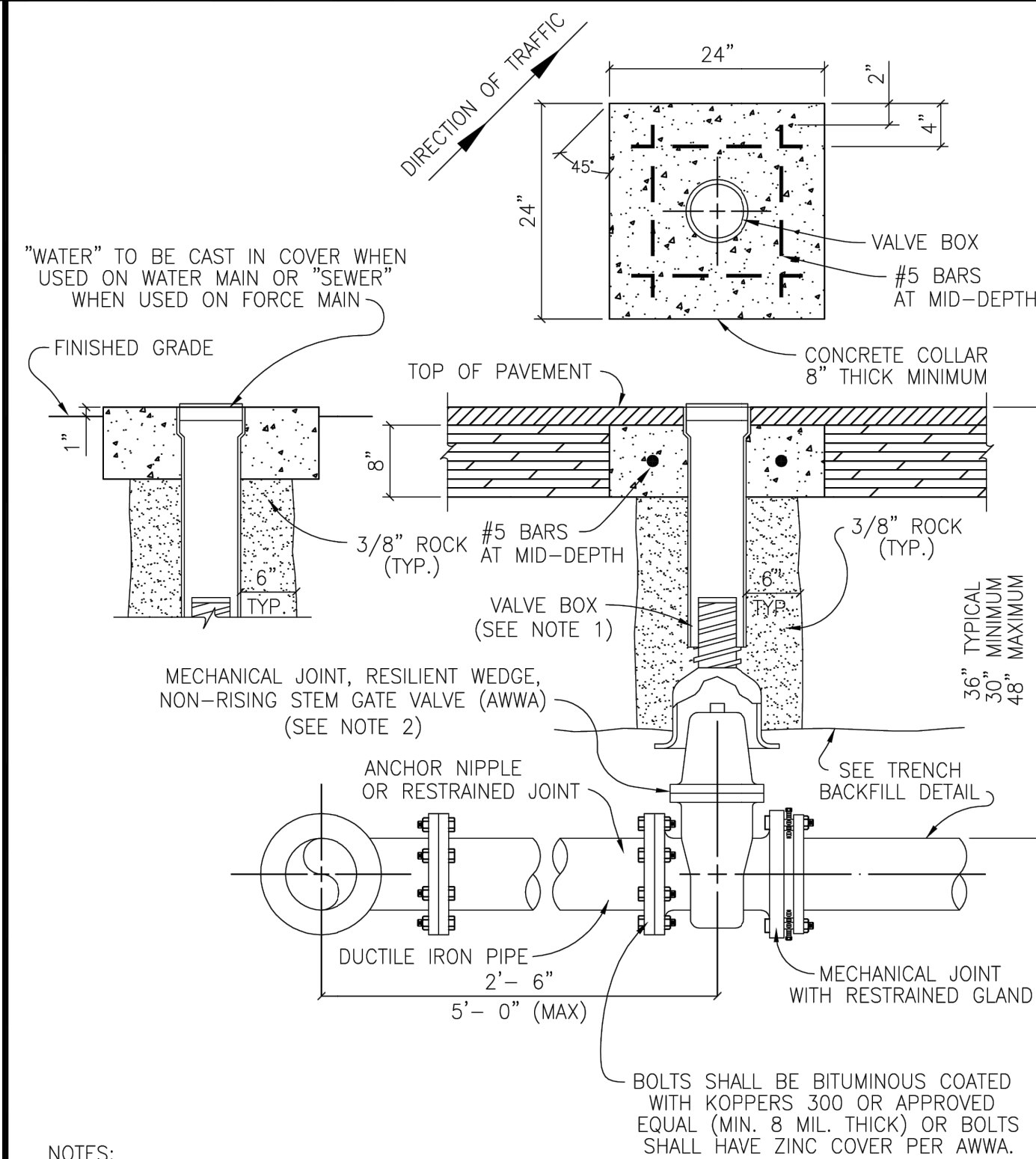
- NOTES:
- SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET AND AT THE CENTERLINE AS SHOWN ON DETAIL "A".
 - WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE.
 - AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR-9, CLASS 200,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

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



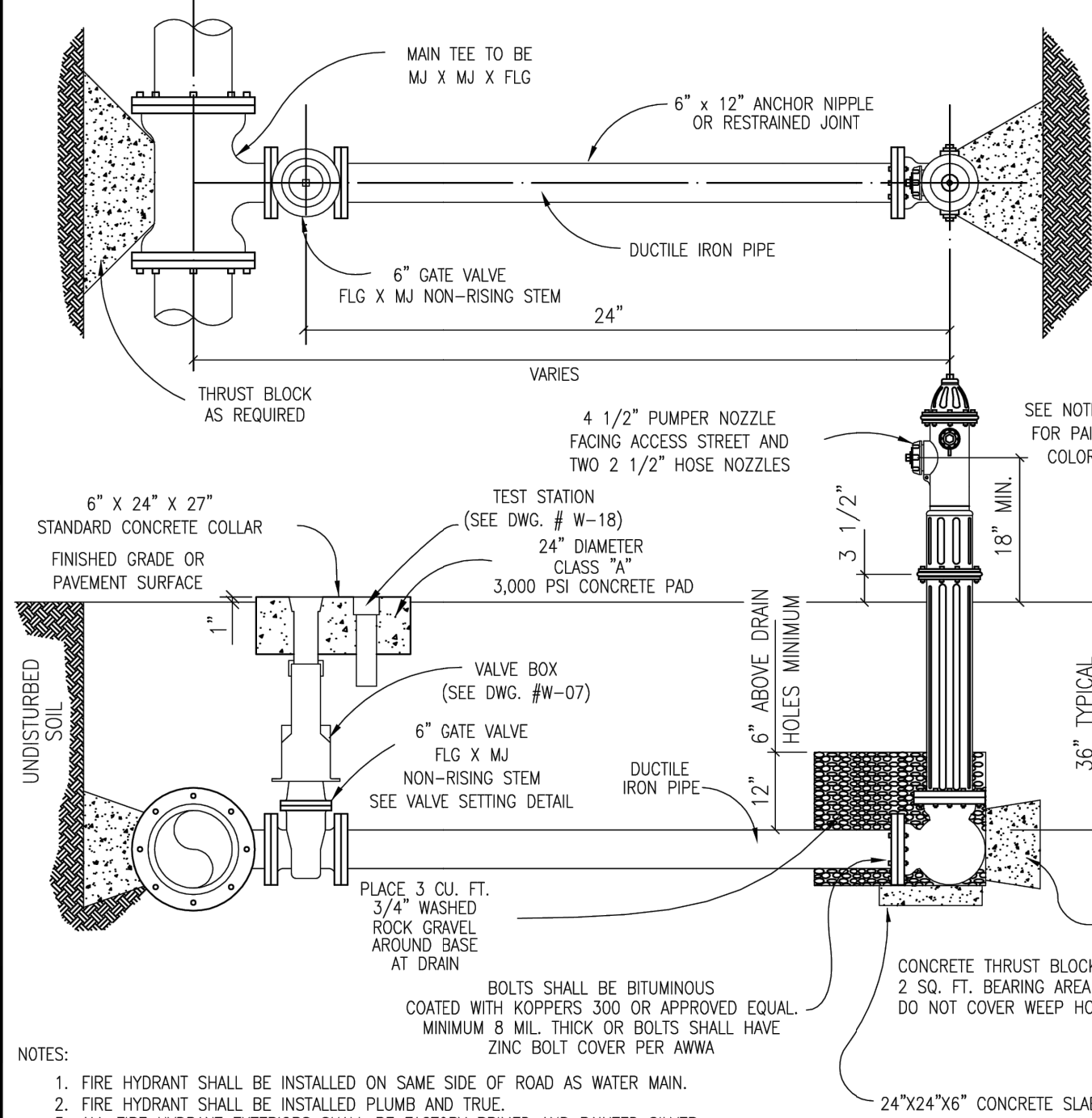
- NOTES:
- AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR-9, CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
 - ANGLE STOP SHALL BE 1" MINIMUM.
 - 1" ANGLE STOPS WITH 3/4" VALVES SHALL NOT BE PERMITTED.
 - MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN 4 METERS PER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

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



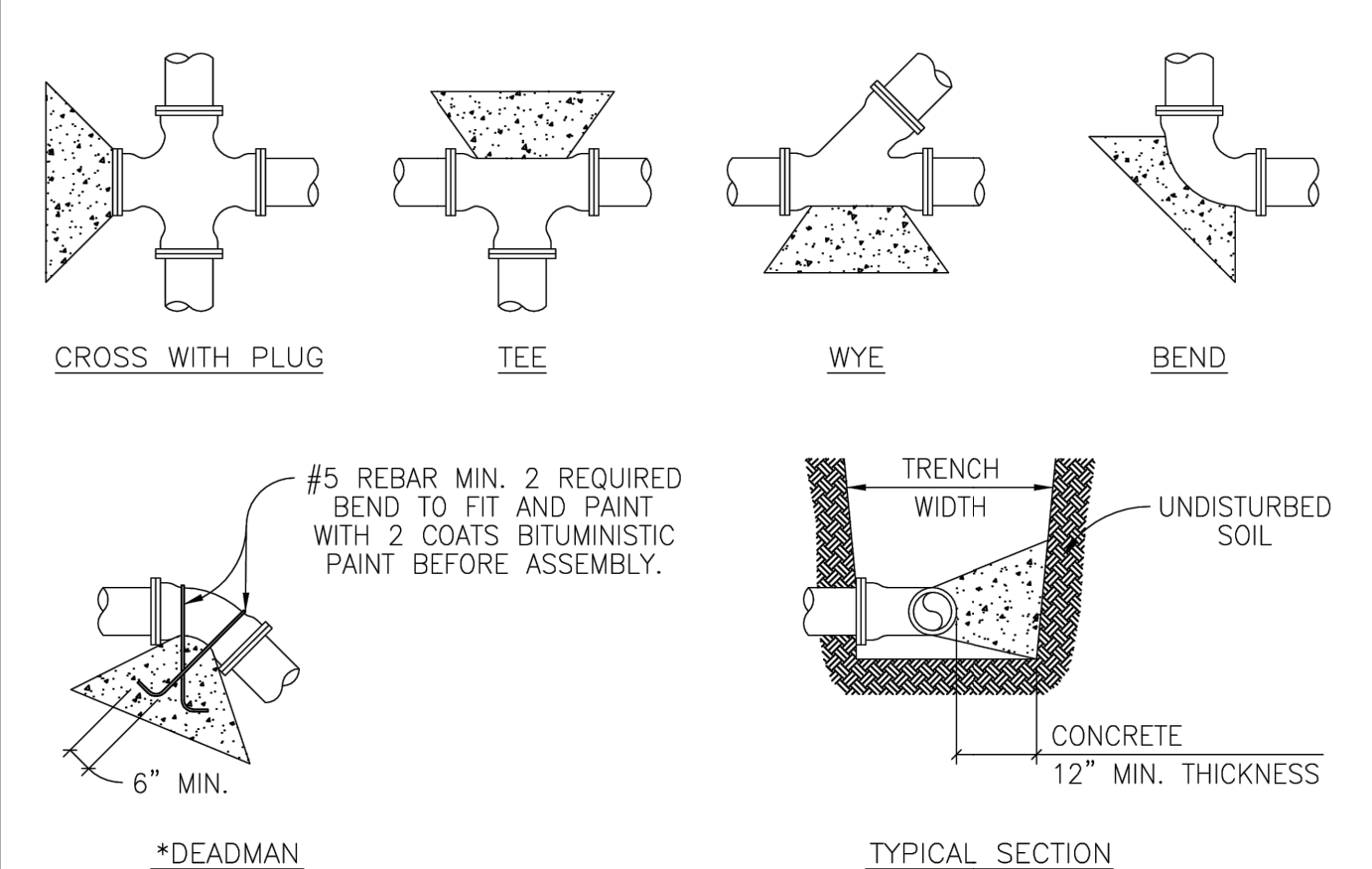
- NOTES:
- VALVE BOX SHALL BE 5 1/4" CAST IRON ADJUSTABLE HAVING AN ADJUSTABLE RANGE OF + OR - 6 INCHES FROM INSTALLED FINISH GRADE.
 - ACCEPTABLE GATE VALVES ARE:
A. AMERICAN FLOW CONTROL - SERIES 2500
B. MUELLER - 2360 SERIES
C. CLOW

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



- NOTES:
- FIRE HYDRANT SHALL BE INSTALLED ON SAME SIDE OF ROAD AS WATER MAIN.
 - FIRE HYDRANT SHALL BE INSTALLED PLUMB AND TRUE.
 - ALL FIRE HYDRANT EXTERIORS SHALL BE FACTORY PRIMED AND PAINTED SILVER USING A HIGH GRADE ENAMEL.
 - HEEL AND THRUST BLOCKS TO REST IN UNDISTURBED SOIL.
 - THE ONLY FIRE HYDRANTS ACCEPTABLE ARE:
A. KENNEDY - K81
B. AMERICAN DARLING - BB4B
C. CLOW MEDALLION
 - DOUBLE BLUE REFLECTOR "HYE-LITES" BRAND, MANUFACTURED BY PAVEMENT MARKERS INC. TO BE INSTALLED AT CENTERLINE OF STREET PERPENDICULAR TO HYDRANT.
 - ALL METALLIC PIPES AND FITTINGS SHALL BE WRAPPED WITH 8 MILL. POLYETHYLENE FILM.

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



*DEADMAN

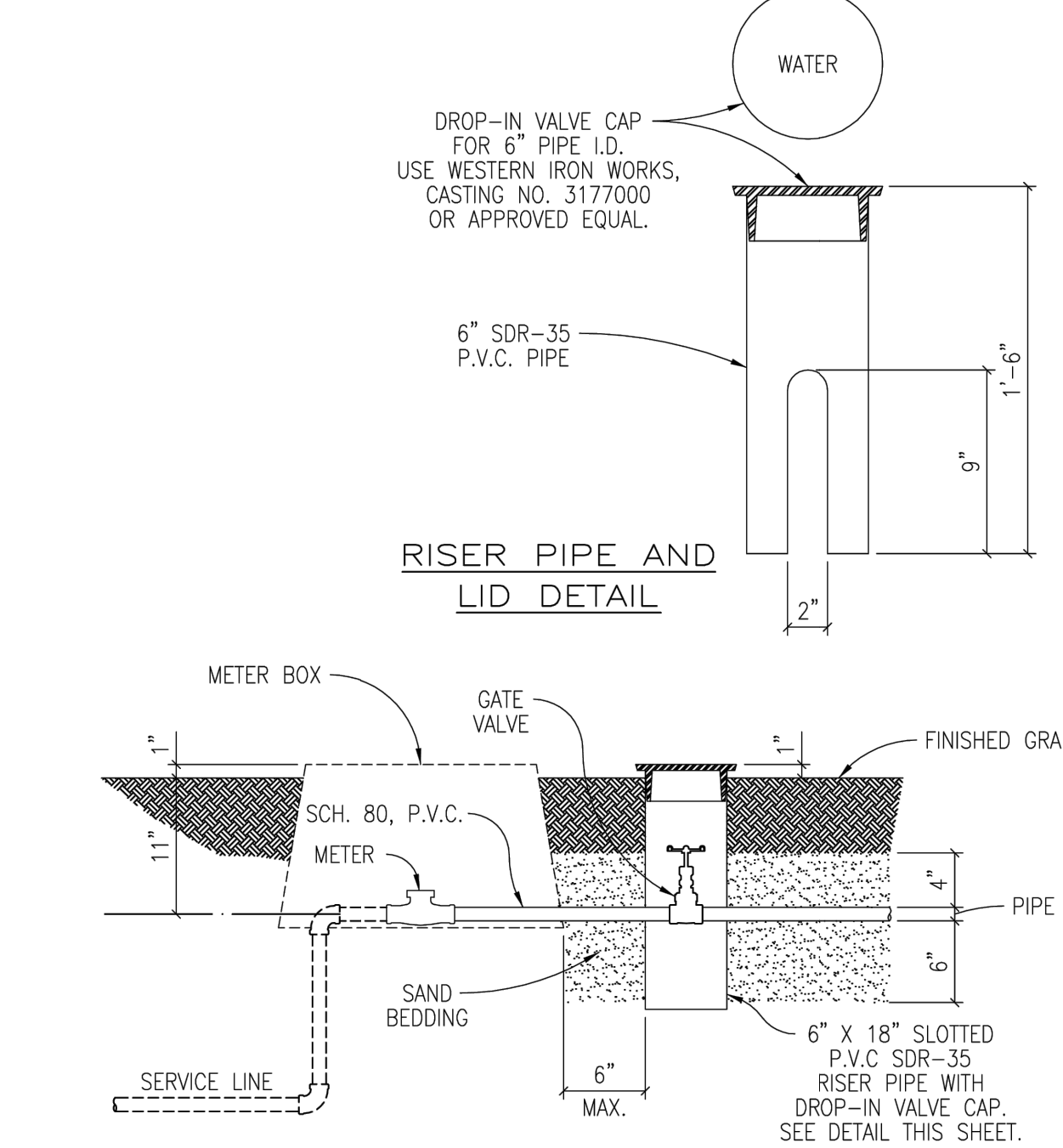
TYPICAL SECTION

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.	
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.			

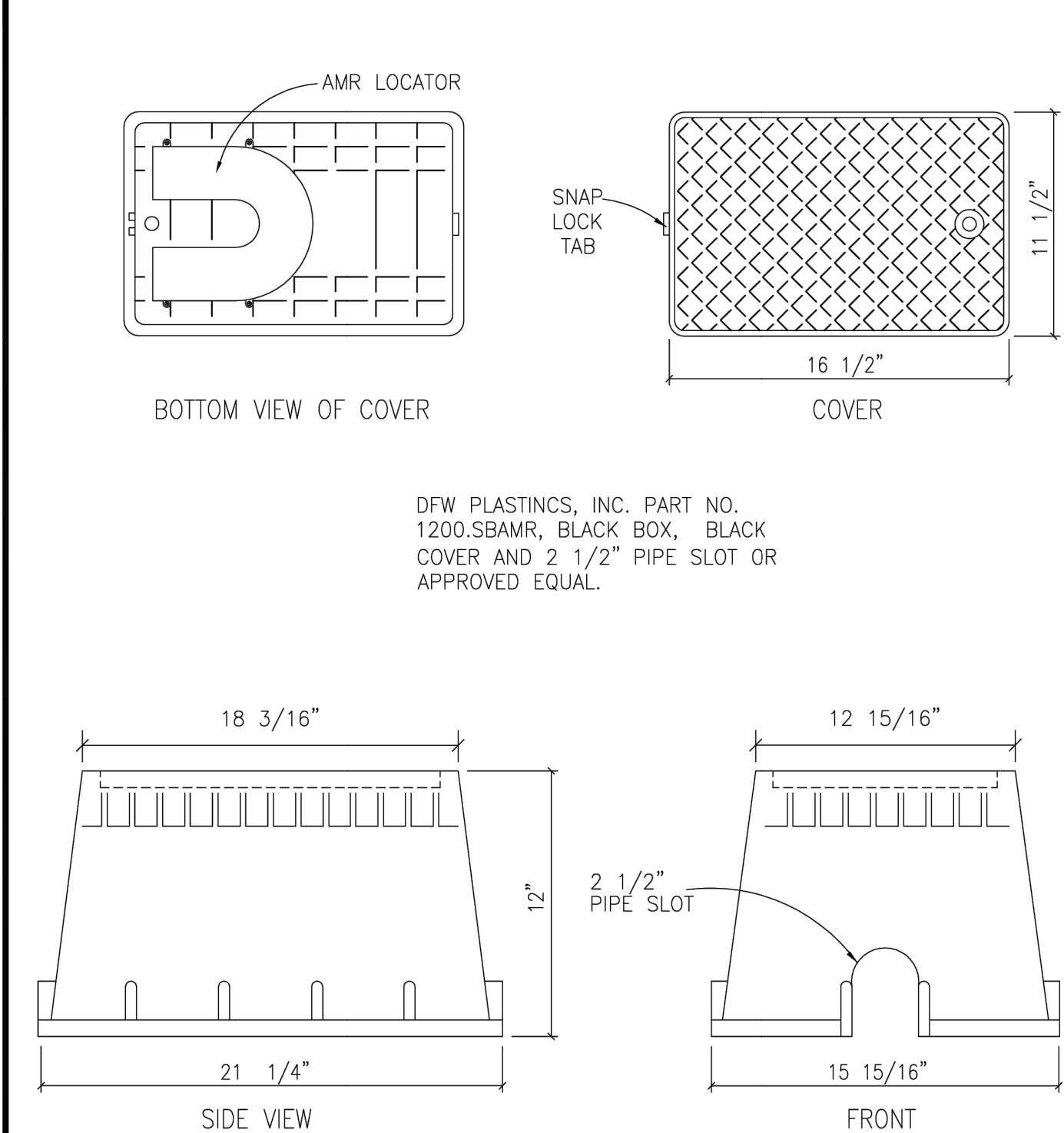
* THE ENGINEER OF RECORD SHALL CALCULATE THE SIZE OF THE DEADMAN REQUIRED AS WELL AS ANY INSTALLATION WHICH IS NOT COVERED BY THE ABOVE.

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



- NOTES:
- GATE VALVE SHALL BE A HAMMOND IB645, CLASS 125, BRONZE GATE, SCREWED BONNET, NON-RISING STEM, SOLID WEDGE DISC WITH THREADED ENDS OR APPROVED EQUAL.
 - DROP-IN VALVE CAP SHALL BE CAST WITH THE WORD "WATER" ON TOP.
 - USE SCHEDULE 80, M.I.P. ADAPTER AS REQUIRED.

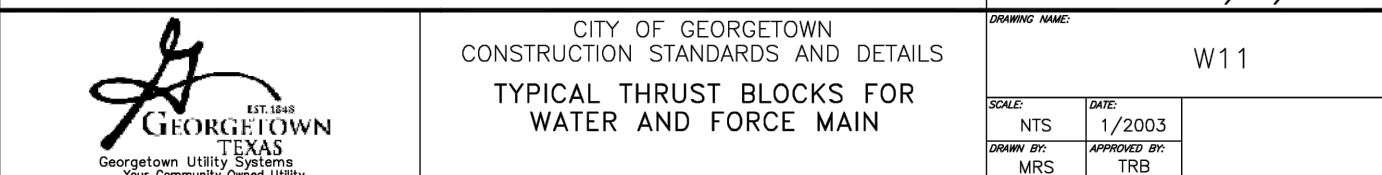
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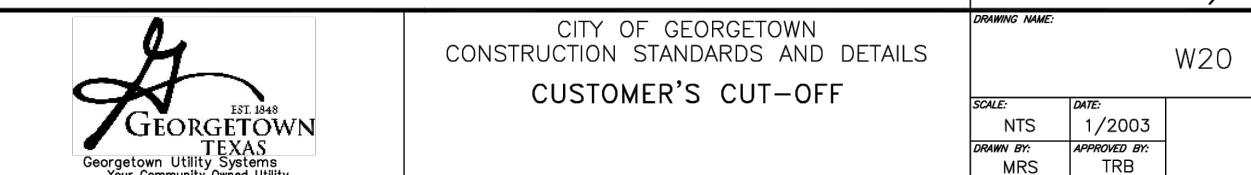
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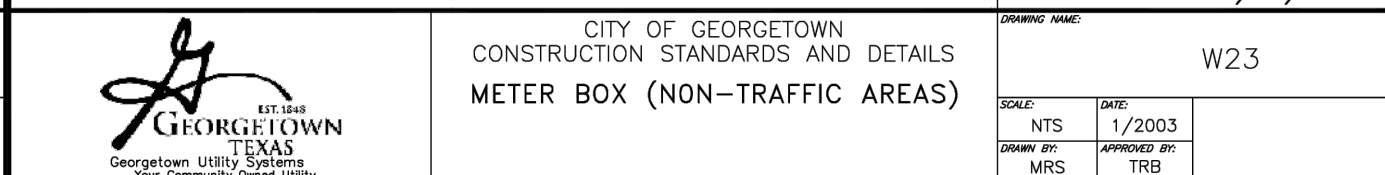
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL FIRE HYDRANT
INSTALLATION



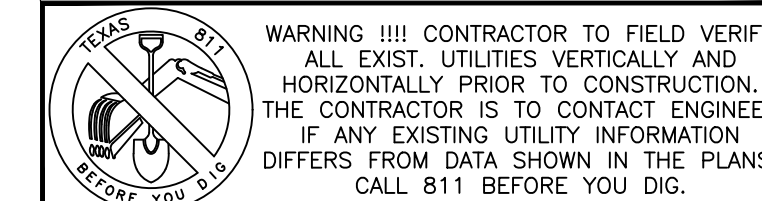
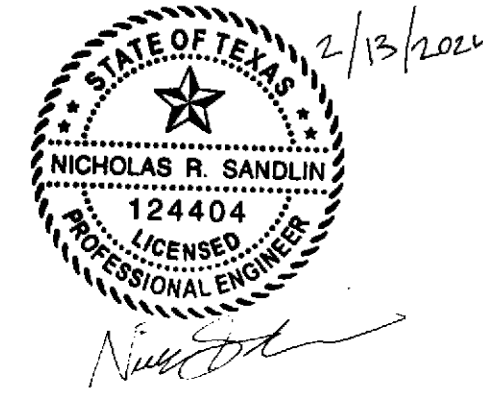
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL THRUST BLOCKS FOR
WATER AND FORCE MAIN



CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CUSTOMER'S CUT-OFF



CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
METER BOX (NON-TRAFFIC AREAS)



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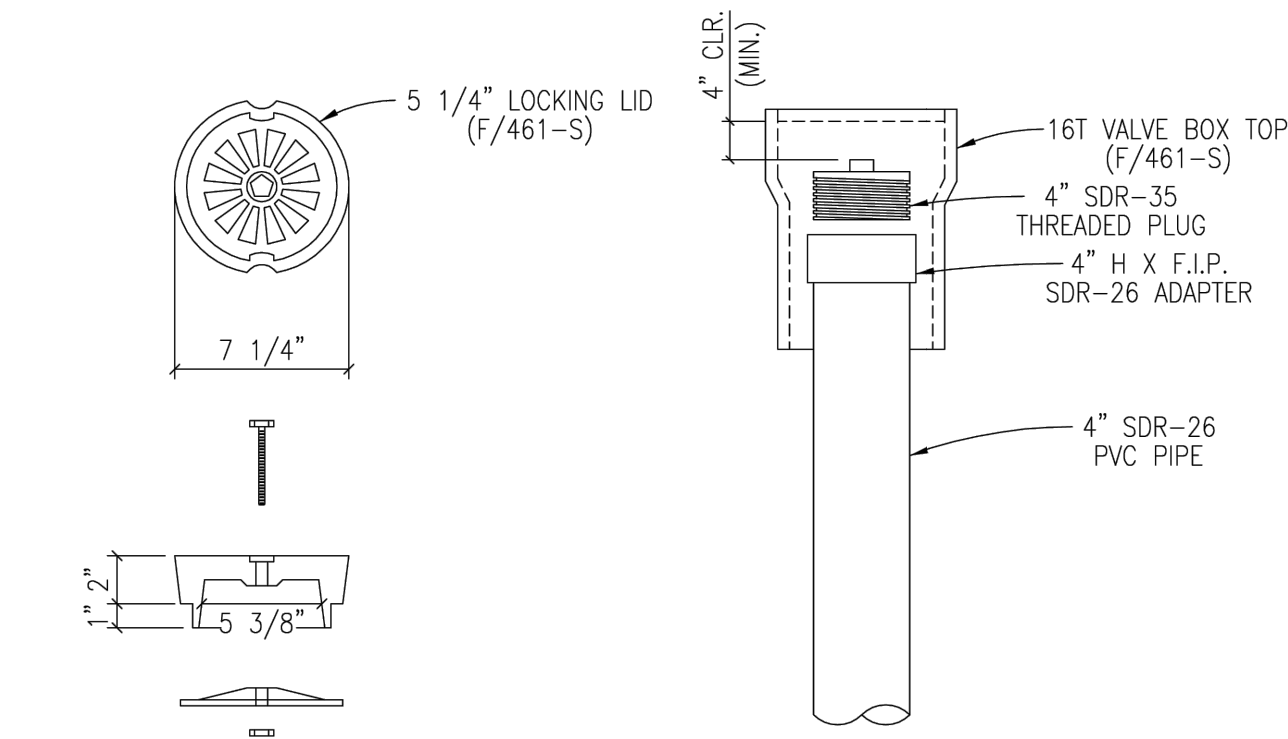
TBPCLS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

UTILITY DETAILS (1 OF 3)

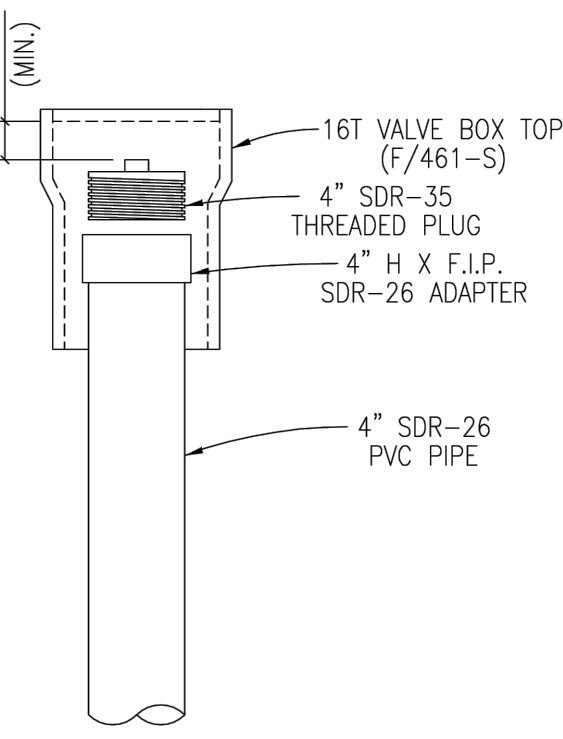
PROJECT CASE: XXXXXXX
WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
1				19
2				OF
3				29

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0041-003 Woodlake Retail\CAD\Construction Sheets\5 WLR DT-Long-UTILITY DETAILS (2 OF 3) Plotted Feb 15, 2024 at 11:29am by Engineer | Last Saved by: Engineer



5 1/4" LOCKING LID
(F/461-S)



SEWER CLEAN-OUT
CITY OF GEORGETOWN
(RESIDENTIAL SERVICE)

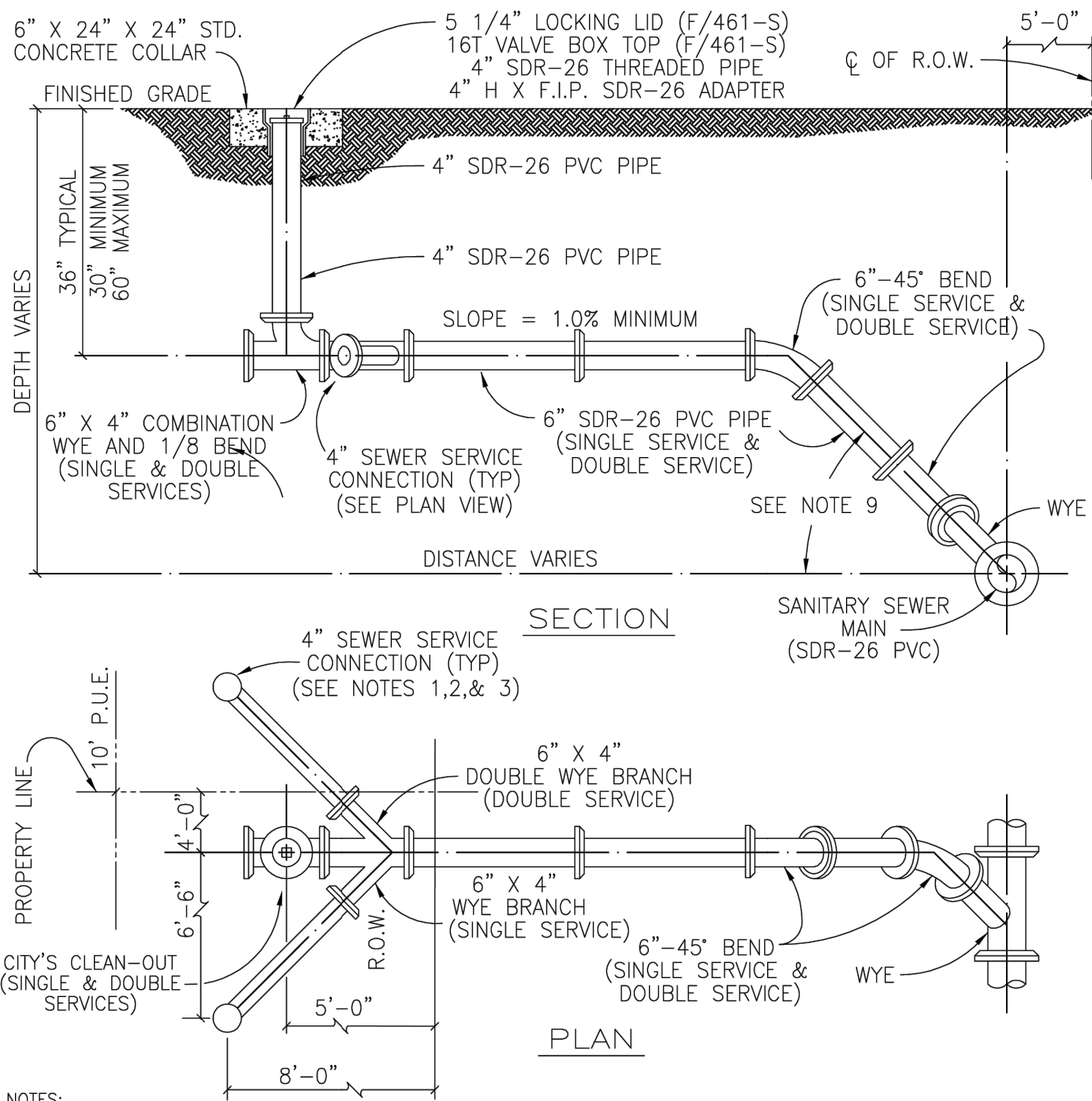
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CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEWER CLEAN-OUT DETAIL

SCALE:	NTS	DATE:	1/2003
DRAWN BY:	MRS	APPROVED BY:	TRB



NOTES:

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

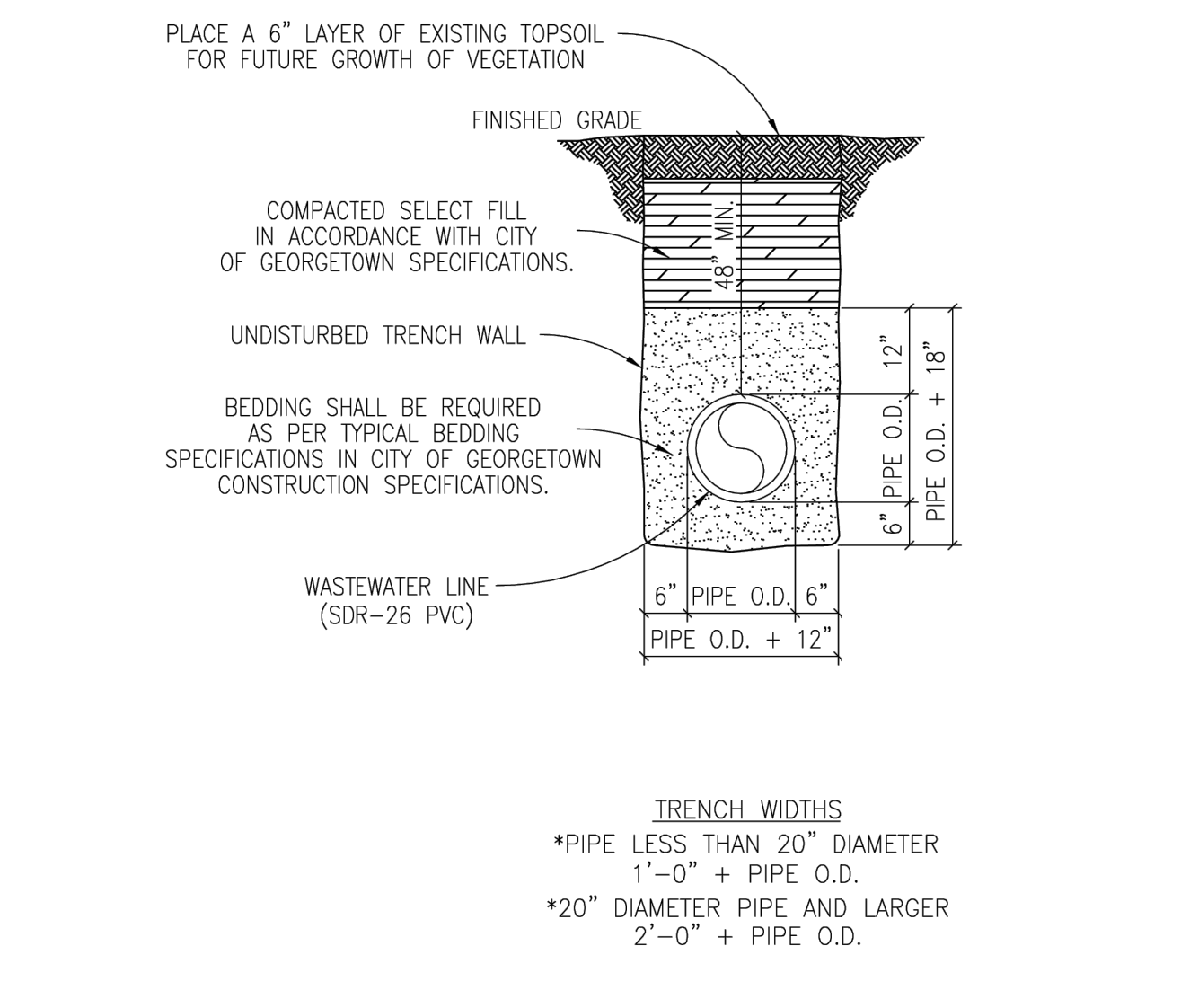
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CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEWER SERVICE CONNECTIONS

SCALE:	NTS	DATE:	1/2003
DRAWN BY:	MRS	APPROVED BY:	TRB



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

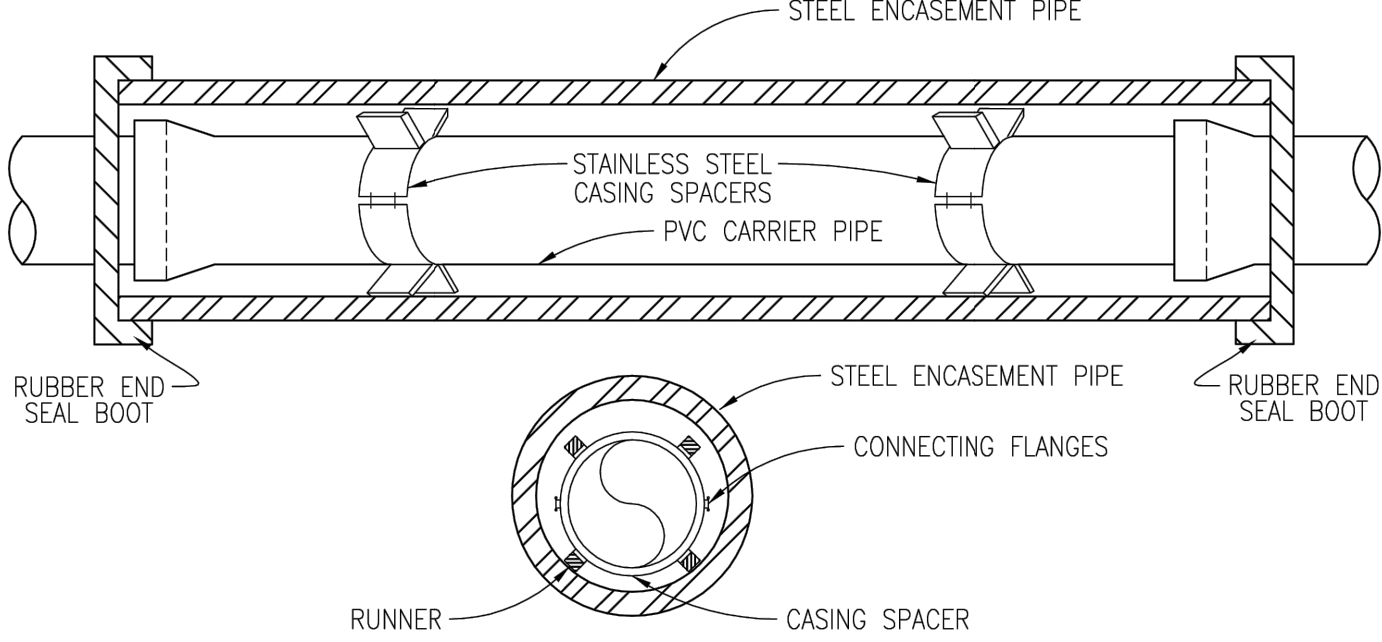
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CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL
UNDER NON-PAVED AREAS

SCALE:	NTS	DATE:	1/2003
DRAWN BY:	MRS	APPROVED BY:	TRB



NOTES:

- CASING SPACERS SHALL BE BOLT ON STYLE WITH A SHELL MADE IN TWO SECTIONS OF HEAVY T-304 STAINLESS STEEL. CONNECTING FLANGES SHALL BE RIBBED FOR EXTRA STRENGTH. CASING SPACERS SHALL BE MADE BY CASCADE WATERWORKS MFG. CO. OR APPROVED EQUAL.
- CASING SPACERS SHALL HAVE RUNNERS MADE OF ULTRA HIGH MOLECULAR WEIGHT POLYMER, WITH A MINIMUM HEIGHT OF 2 INCHES.
- DO NOT USE WEDGES BETWEEN TOP OF PVC CARRIER PIPE AND INSIDE OF CASING TO KEEP PVC FROM MOVING.
- PRIOR TO INSERTING PVC CARRIER PIPE, ANY WATER SHOULD BE PUMPED OUT OF THE CASING PIPE SO THAT NO MORE THAN A FEW INCHES OF WATER REMAINS.
- SPACERS WILL BE REQUIRED WITHIN AT LEAST 3 FEET FROM BOTH OPENINGS OF THE ENCASEMENT PIPE AND SPACED NO GREATER THAN 6 FEET THROUGHOUT THE ENCASEMENT PIPE.
- ENCASEMENT PIPE SHALL BE SMOOTH STEEL 35,000 PSI YIELD STRENGTH WITH THICKNESS ACCORDING TO THE FOLLOWING TABLE:
- WHEN CASING IS REQUIRED UNDER PAVEMENT WITHIN THE R.O.W., THE CASING SHALL EXTEND OUT TO WITHIN 4' INSIDE OF THE R.O.W. LINE, ON BOTH SIDES.
- ALL JOINTS SHALL BE RESTRAINED ON PVC CARRIER PIPE.

PIPE SIZE-CARRIER (DIAMETER)	PIPE SIZE-CASING (DIAMETER)(MIN.)	MINIMUM PIPE THICKNESS (INCHES)
6"	16"	1/4
8"	18"	0.2500
10"	20"	5/16
12" - 14"	24"	0.3125
16" - 18"	30"	3/8
20"	36"	7/16
24"	42"	1/2
30"	48"	0.5000
		1/2
		0.5000

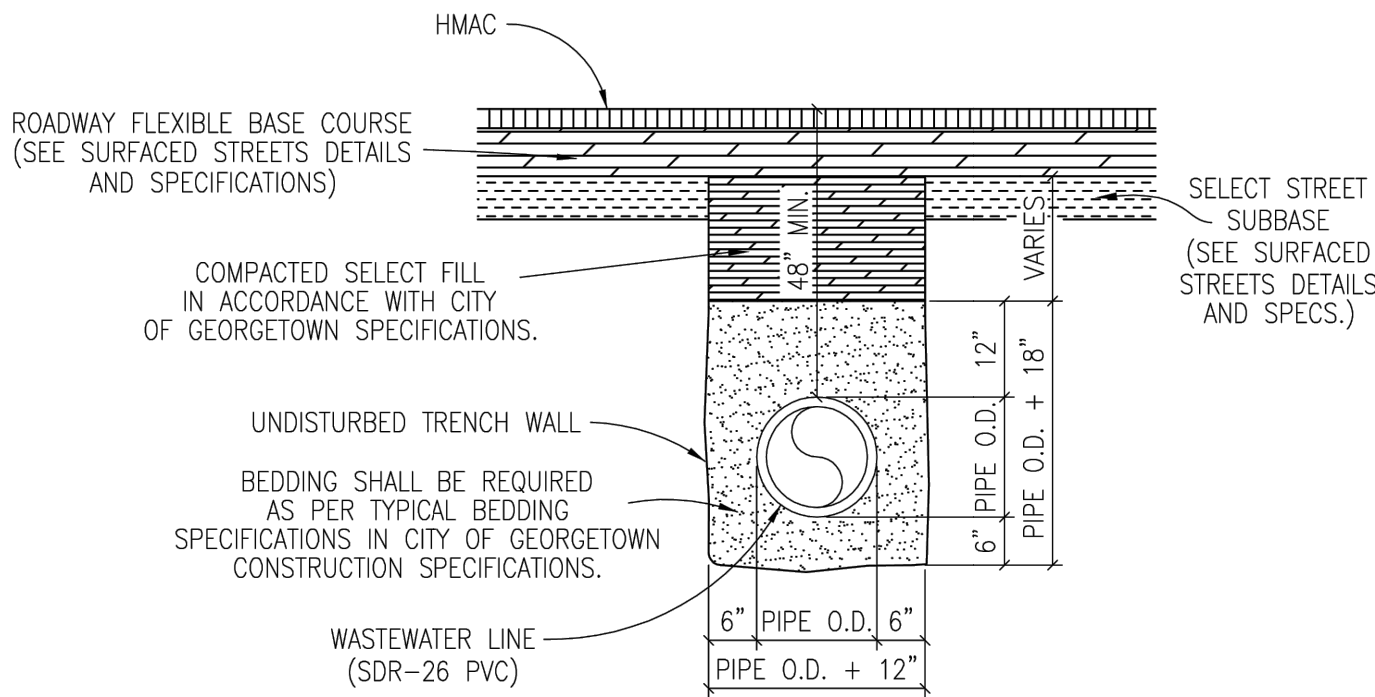
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CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
INSTALLATION OF P.V.C. PIPE
THROUGH CASING

SCALE:	NTS	DATE:	1/2003
DRAWN BY:	MRS	APPROVED BY:	TRB



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

NOTES:

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

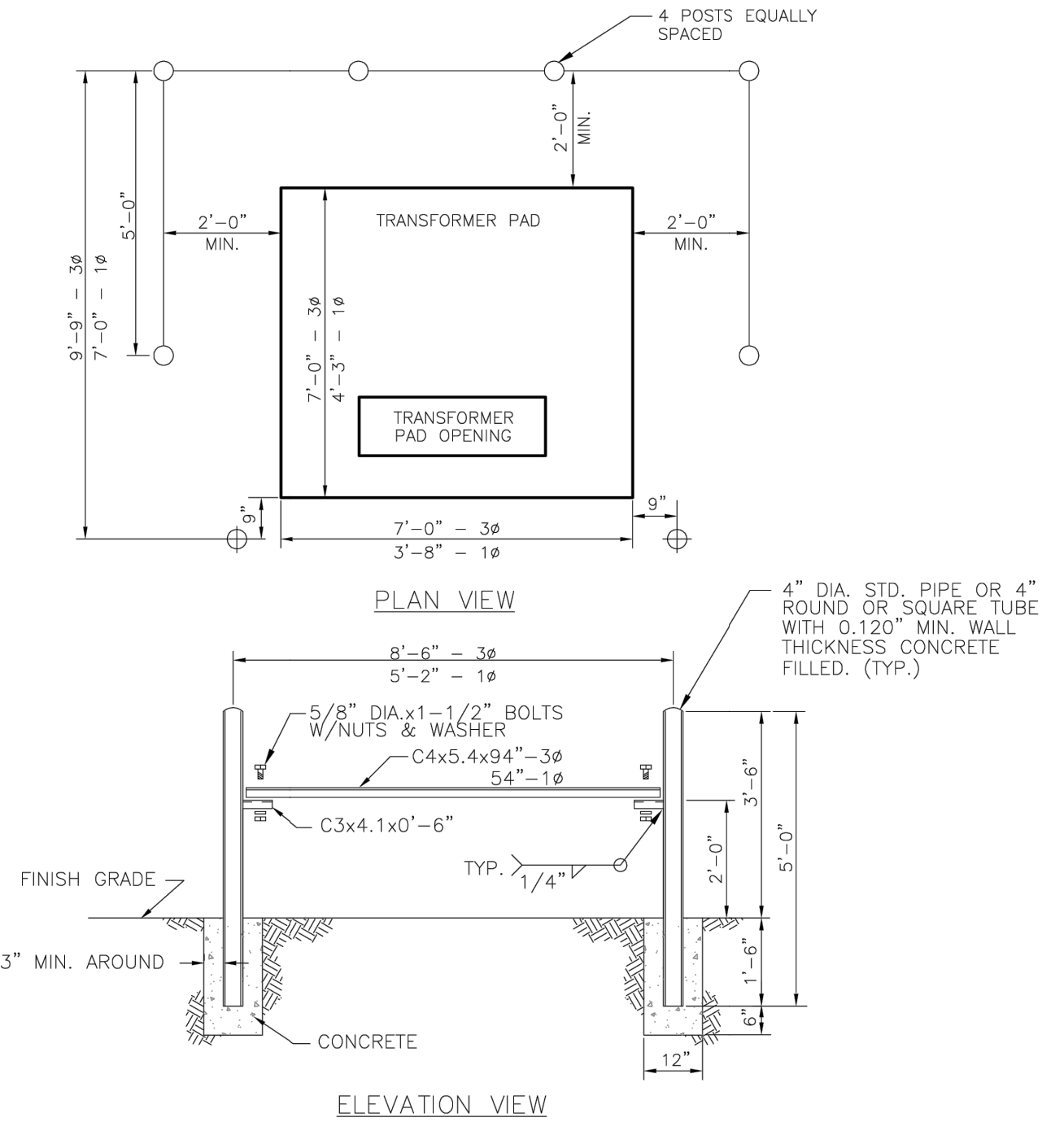
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CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL
UNDER PROPOSED ROADWAY

SCALE:	NTS	DATE:	1/2003
DRAWN BY:	MRS	APPROVED BY:	TRB



- NOTES:
- IF A BUILDING IS USED AS ANY PORTION OF THIS GUARD, THE TRANSFORMER PAD SHALL BE SO LOCATED THAT THE PAD SIDE OR SIDES ADJACENT TO THE SURFACE OF THE BUILDING SHALL HAVE A CLEARANCE OF NOT LESS THAN 5 FEET. FOR TRANSFORMERS 750 KVA AND ABOVE CONTACT GEORGETOWN UTILITY SERVICES ABOUT SPECIAL CLEARANCE REQUIREMENTS.
 - 10'-0" CLEARANCE SHALL BE PROVIDED IN FRONT OF THE EQUIPMENT TO PERMIT HOT STICK OPERATION.

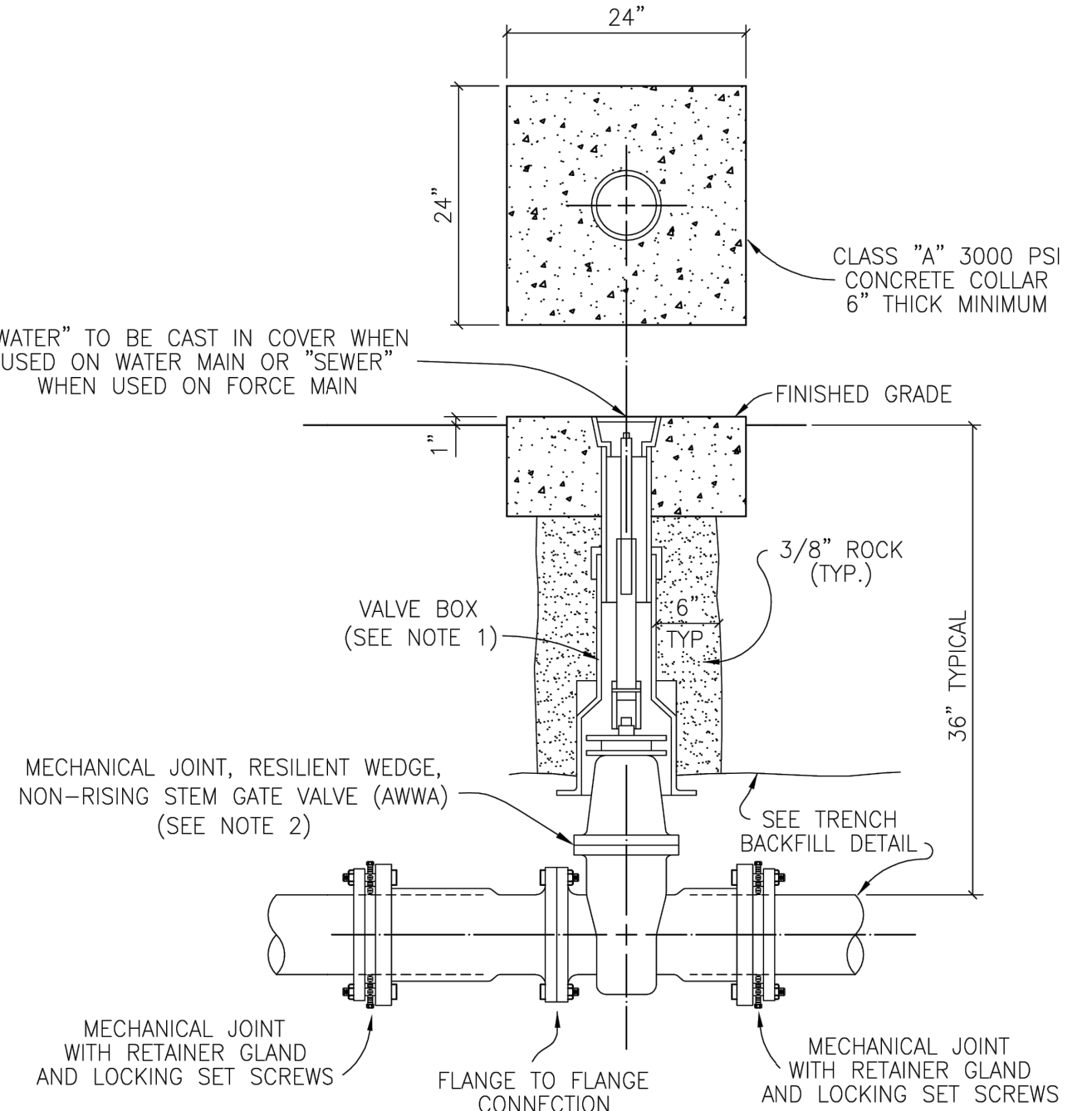
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CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
PROTECTIVE BOLLARD INSTALLATION FOR
PADMOUNT XFMRs, JUNCTION BOXES
AND SWITCHGEAR

SCALE:	NTS	DATE:	7/05
DRAWN BY:	JWL	APPROVED BY:	WMA



NOTES:

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

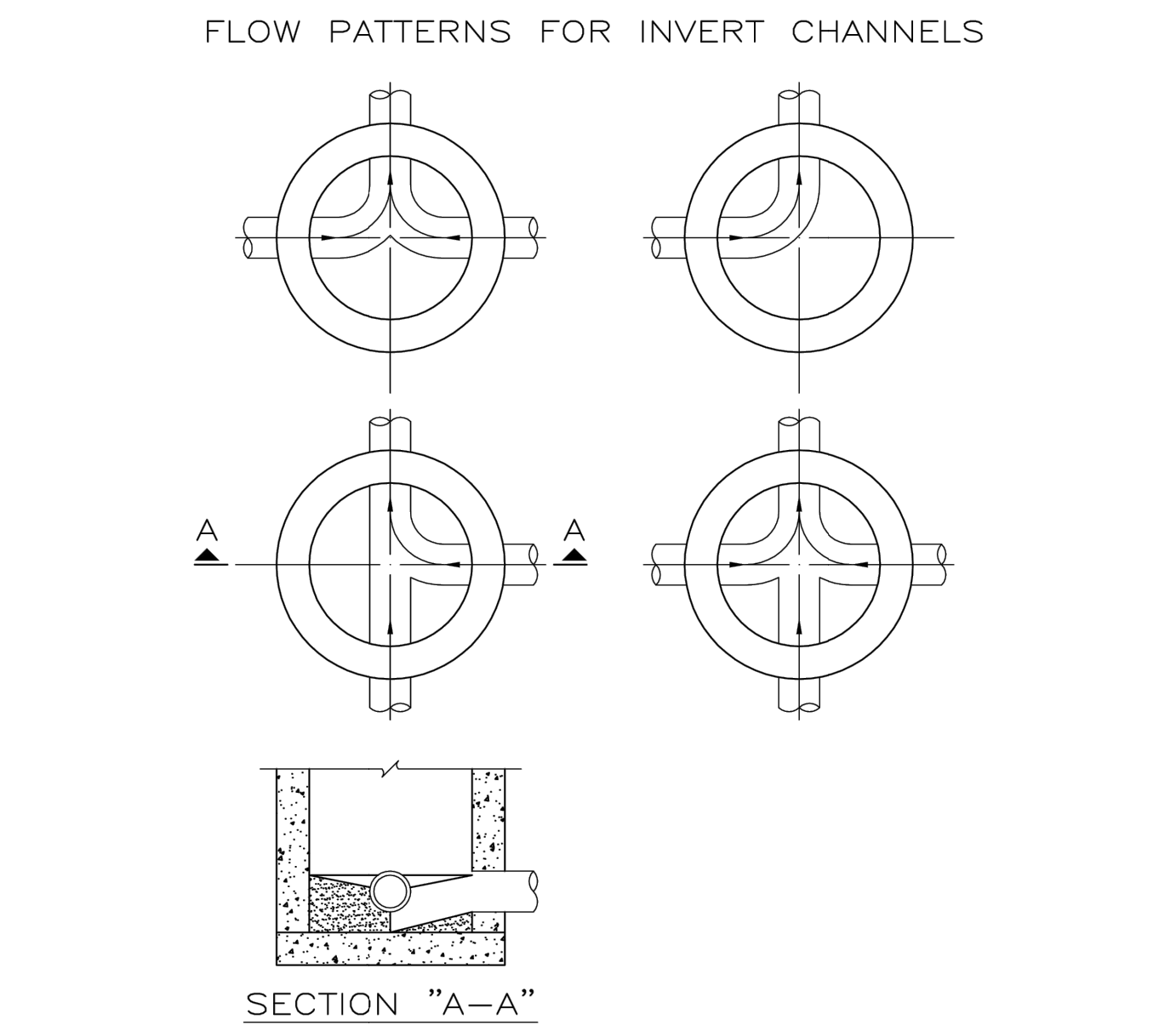
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CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
INLINE VALVE INSTALLATION

SCALE:	NTS	DATE:	1/2003
DRAWN BY:	MRS	APPROVED BY:	TRB



NOTES:

- INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
- SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOW.
- CHANNELS FOR FUTURE CONSTRUCTIONS (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND, AND COVERED WITH 1" OF MORTAR.
- SLOPE MANHOLE ITSELF WITH A 1:2 SLOPE FROM MANHOLE WALL TO CHANNEL.
- INVERT SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR 4" DEEP.

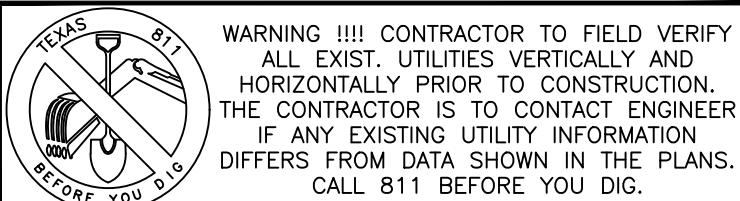
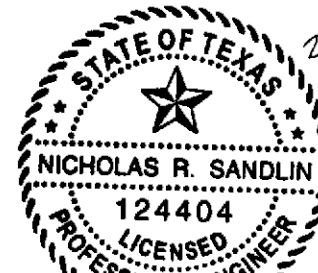
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REVISION NOTE: ADOPTED 6/21/2006



CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
FLOW PATTERNS FOR
INVERT CHANNELS

SCALE:	NTS	DATE:	1/2003
DRAWN BY:	MRS	APPROVED BY:	TRB



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TBPELS FIRM #21356
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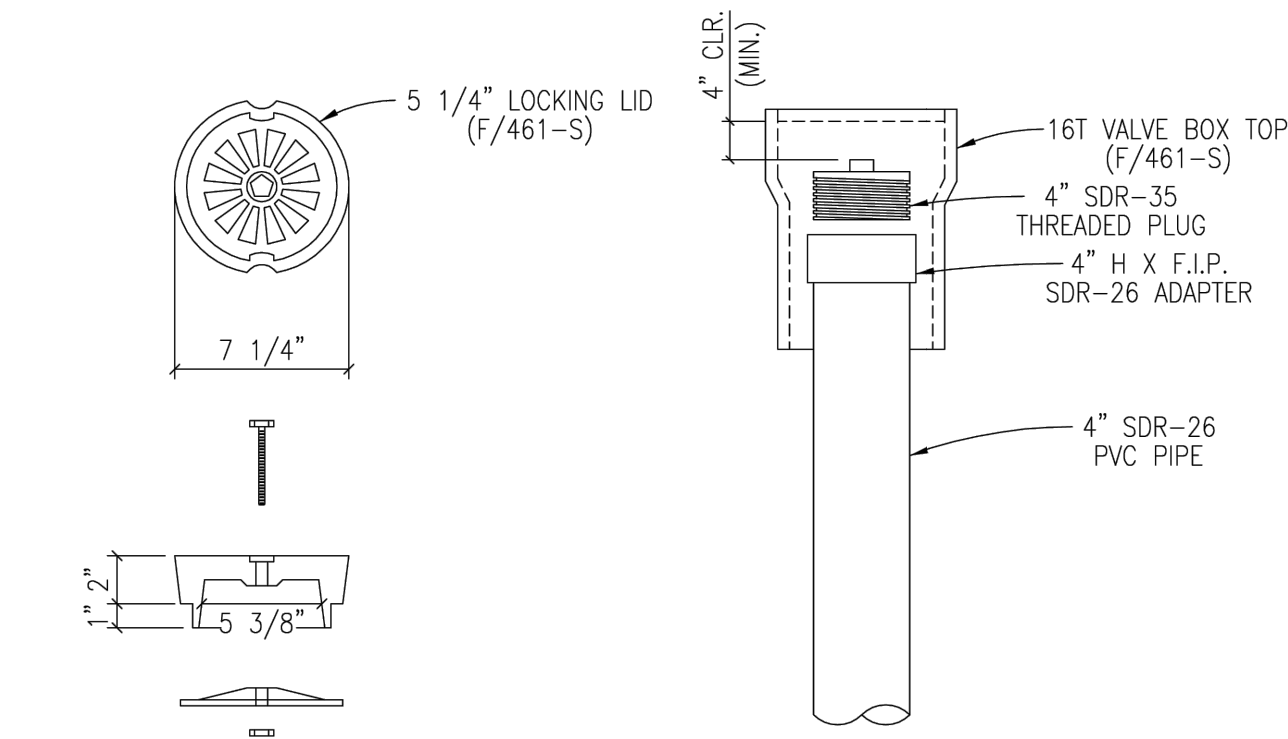
UTILITY DETAILS (2 OF 3)

PROJECT CASE: XXXXXXX

WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
1				20
2				OF
3				29

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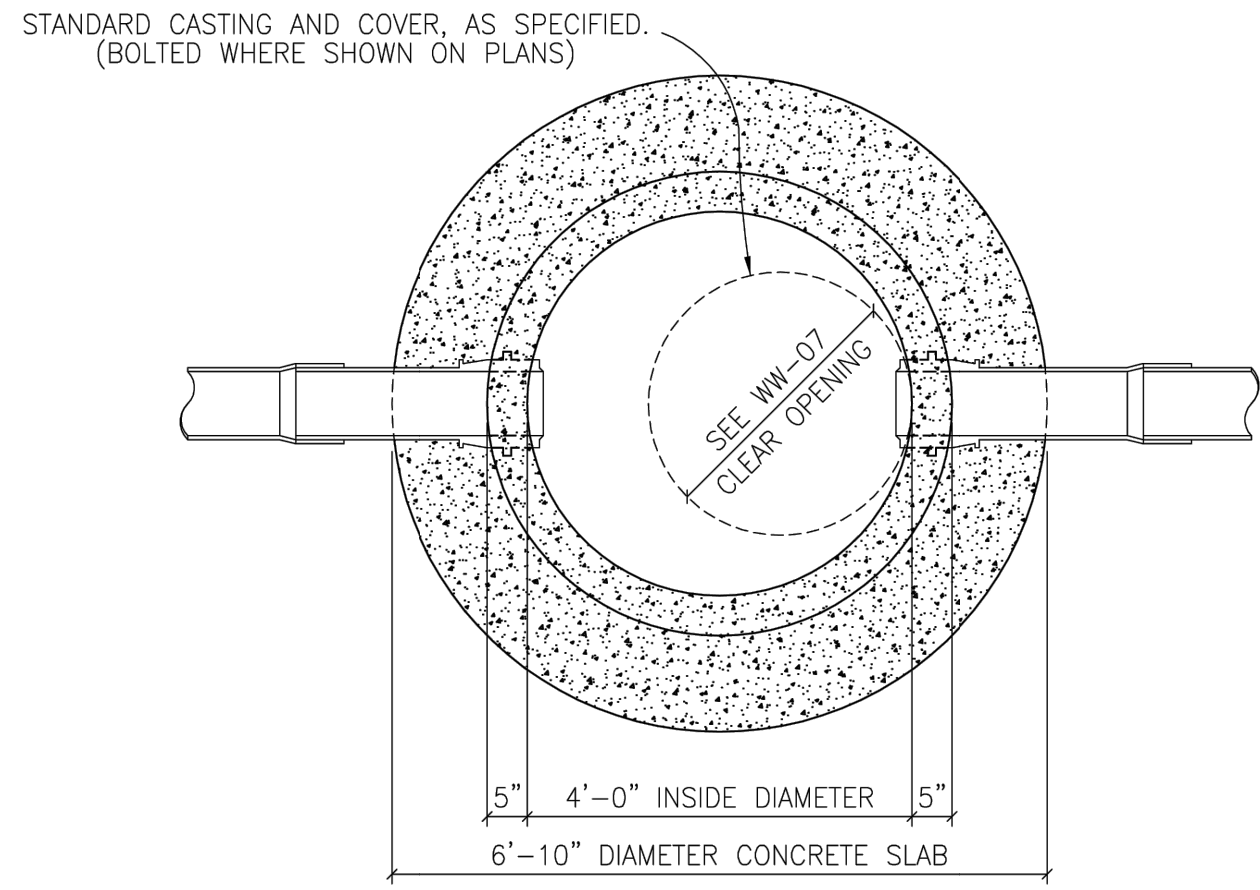
5 1/4" LOCKING LID
(F/461-S)

SEWER CLEAN-OUT
CITY OF GEORGETOWN
(RESIDENTIAL SERVICE)

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	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS SEWER CLEAN-OUT DETAIL	DRAWING NAME: WW12	
		SCALE: NTS	DATE: 1/2003
		DRAWN BY: MRS	APPROVED BY: TRB



MANHOLE PLAN


CITY OF GEORGETOWN NOTES:

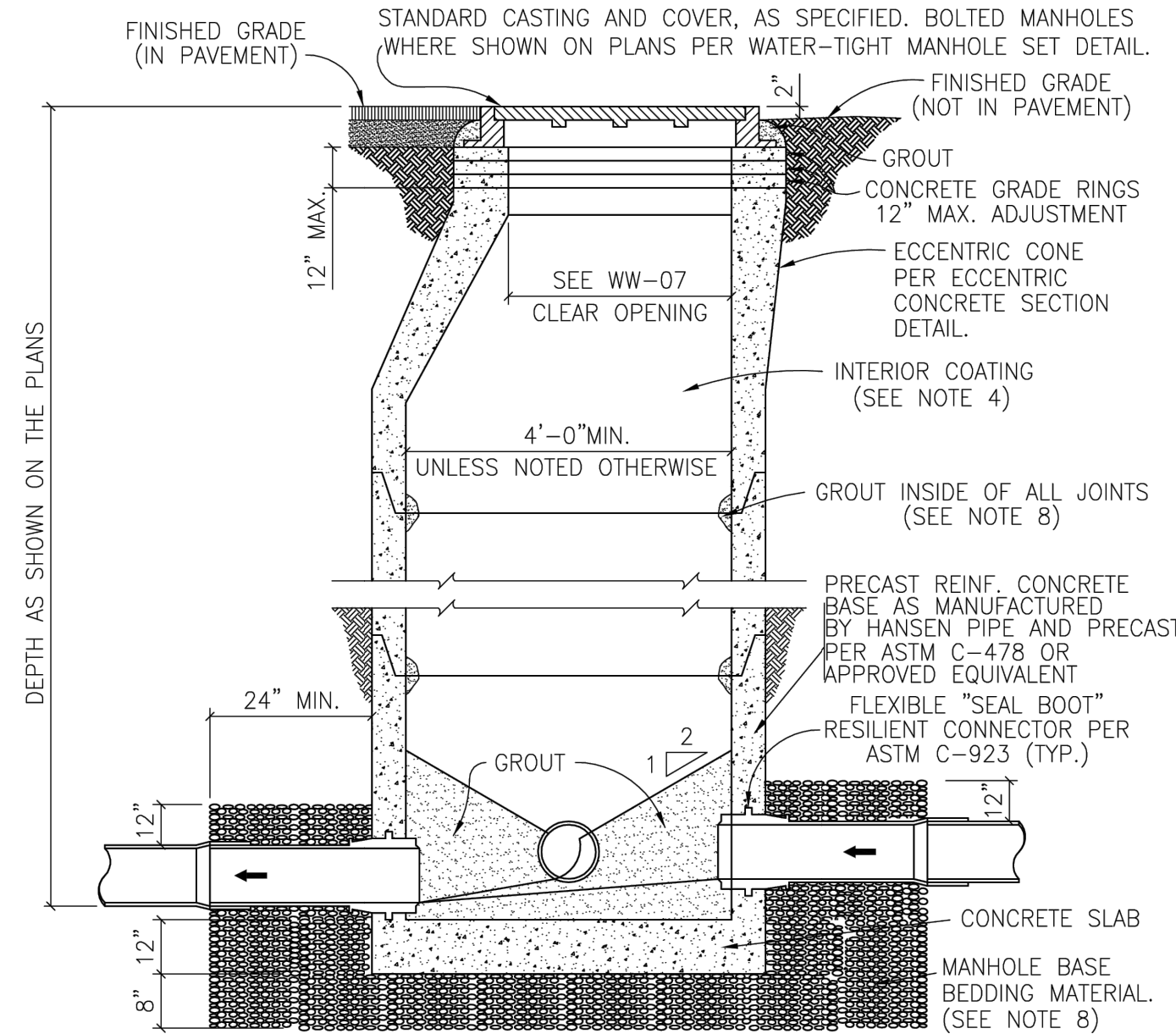
MANHOLE DETAILS SHALL REFLECT THE CITY'S MINIMUM SPECIFICATIONS, AS STATED BELOW:

- ALL MANHOLES SHALL BE 48" I.D., R.C.P., CLASS III, WITH RUBBER PROFILE GASKET - SINGLE OFF-SET JOINT CONFORMING TO ASTM C478, C433 AND C76.
- ALL MANHOLES SHALL HAVE FRAME AND COVER, AS MANUFACTURED BY EAST JORDAN IRON WORKS (AS PER DETAIL # WW-07) OR APPROVED EQUIVALENT.
- ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON FRAME AND COVER.
- ALL MANHOLES SHALL HAVE AN ECCENTRIC CONE.
- MANHOLES MAY HAVE A FLAT LID, IF APPROVED BY CITY OF GEORGETOWN, BEING 12" THICK WITH A MINIMUM 30" OPENING, AS MANUFACTURED BY HANSEN PIPE AND PRECAST OR APPROVED EQUAL M.F.G. CONFORMING TO ASTM C478, 5000 P.S.I. CONCRETE, TRAFFIC BEARING AND WITH PROFILE GASKET - SINGLE OFF-SET JOINT CONFORMING TO ASTM C443.
- INVERTS AND FLEXIBLE SEAL BOOTS, PER ASTM C-923, SHALL BE CAST INTO BASE SECTION.
- MINIMUM DROP BETWEEN INVERTS SHALL BE ONE-TENTH OF A FOOT (0.1').
- GRADE RINGS WITH AN I.D. TO MATCH FRAMES CLEAR OPENING WITH A MAXIMUM ADJUSTMENT OF 12" ARE ALLOWED.

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	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS STANDARD MANHOLE - PLAN	DRAWING NAME: WW02	
		SCALE: NTS	DATE: 1/2003
		DRAWN BY: MRS	APPROVED BY: TRB




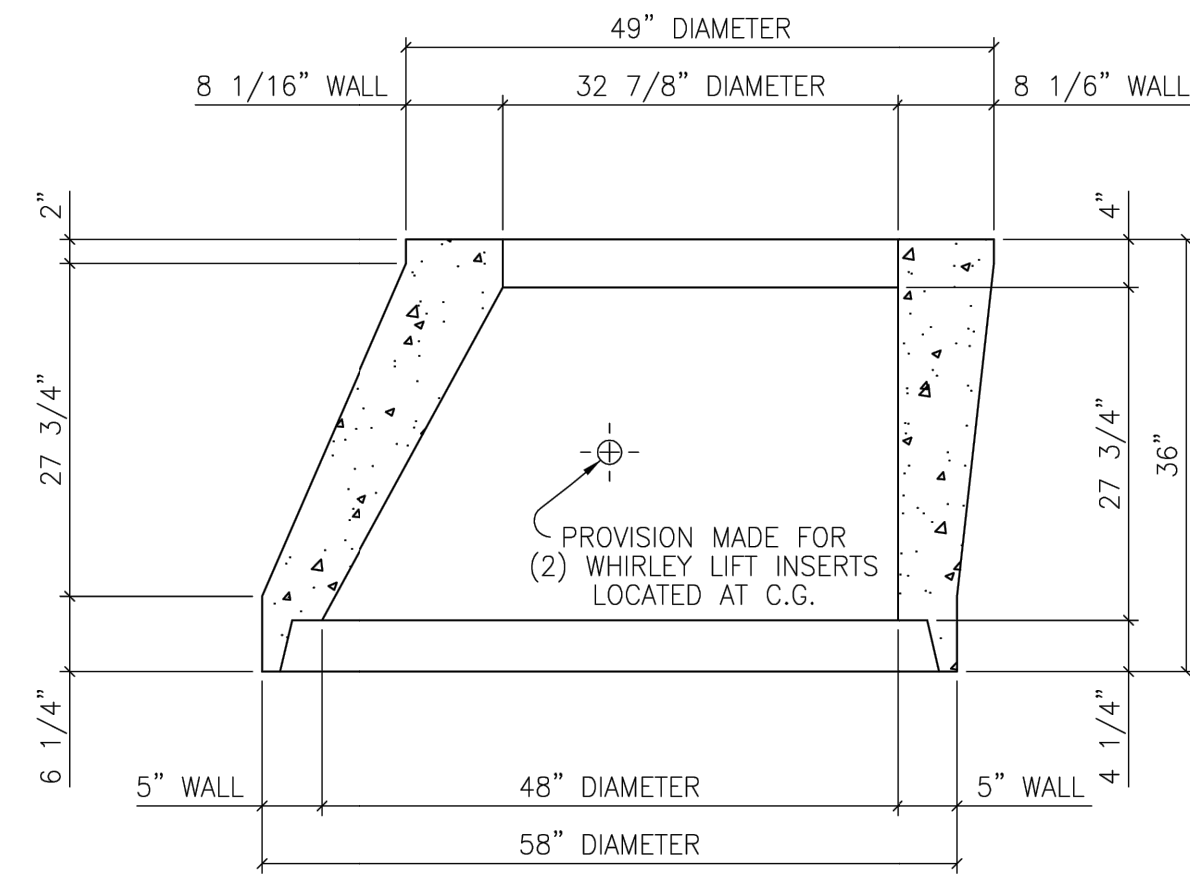
NOTES:

- MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET - SINGLE OFF-SET JOINTS.
- SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
- SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
- AN 80 MIL. COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH WASTEWATER MANHOLE AND UNDERSIDE OF FLAT TOPS.
- ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
- MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
- MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS-20 TRAFFIC LOADS.
- GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
- MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL:
SIEVE SIZE 2", PERCENT (%) RETAINED 0
SIEVE SIZE 1 1/2", % RETAINED 0-10
SIEVE SIZE 1", % RETAINED 45-80
SIEVE SIZE 3/4", % RETAINED 85-100
SIEVE SIZE 3/8", % RETAINED 95-100

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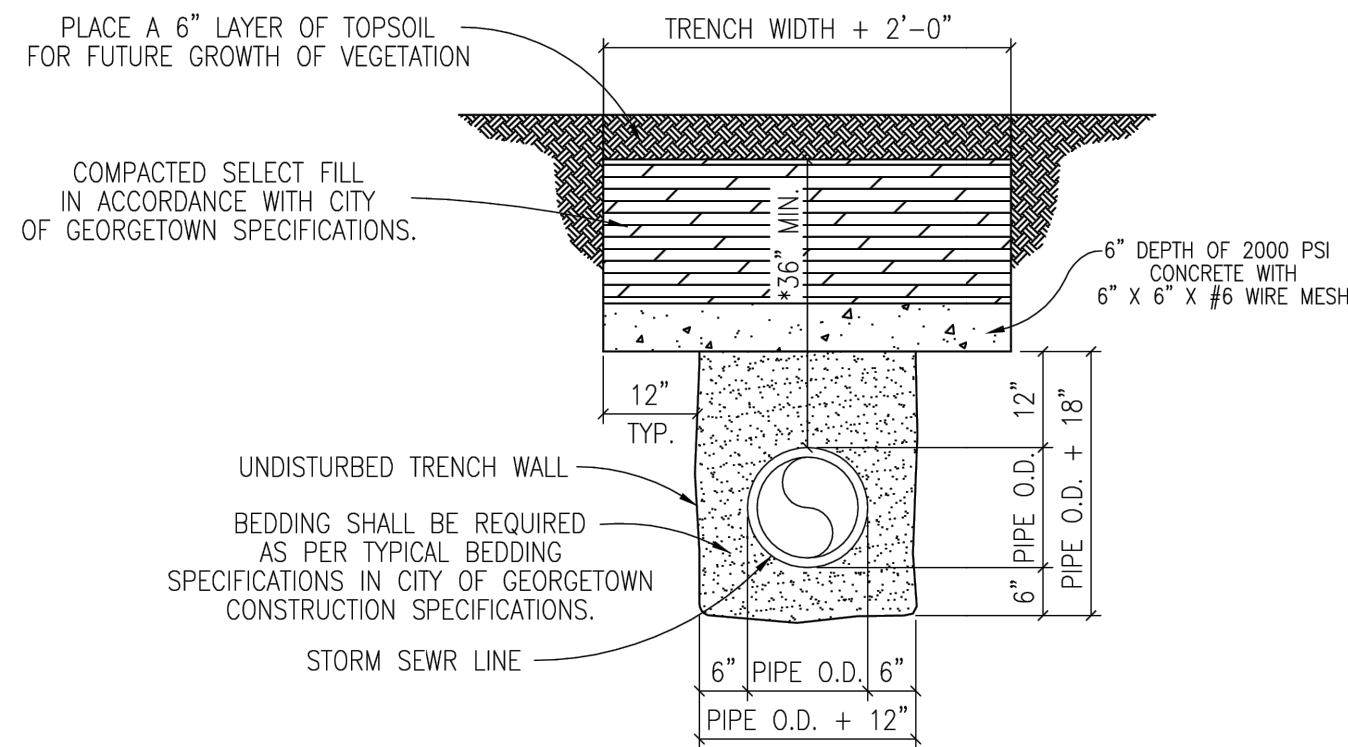
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		SCALE: NTS	DATE: 1/2003
		DRAWN BY: MRS	APPROVED BY: TRB



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	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS 48"X5" TO 33"X8"X36" TALL ECCENTRIC CONCRETE SECTION	DRAWING NAME: WW08	
		SCALE: NTS	DATE: 1/2003
		DRAWN BY: MRS	APPROVED BY: TRB

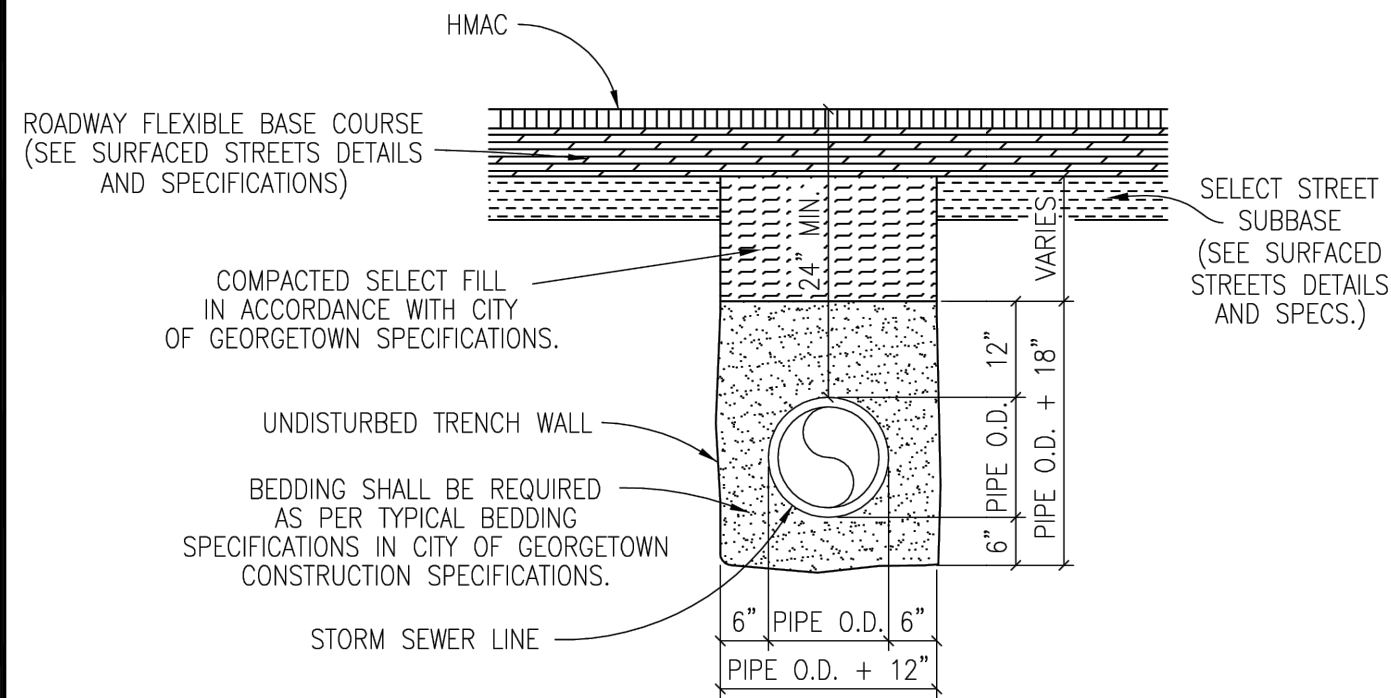


- TRENCH WIDTHS
- *PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
 - *20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

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	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS CONCRETE TRANCH CAP DETAIL FOR STORM SEWER	DRAWING NAME: SD39	
		SCALE: NTS	DATE: 1/2003
		DRAWN BY: MRS	APPROVED BY: TRB




NOTES:

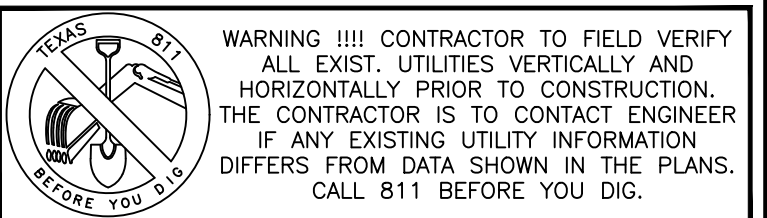
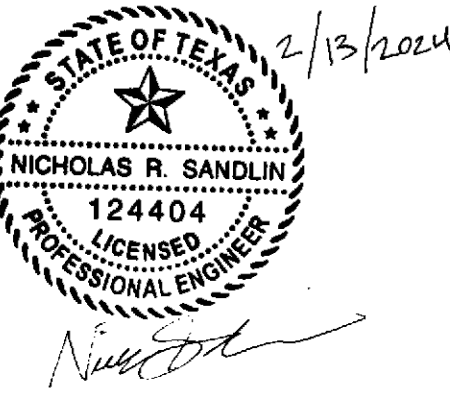
- DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
- CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

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

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REVISION NOTE: ADOPTED 6/21/2006

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY FOR STORM SEWER	DRAWING NAME: SD41	
		SCALE: NTS	DATE: 1/2003
		DRAWN BY: MRS	APPROVED BY: TRB



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TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

UTILITY DETAILS (3 OF 3)

PROJECT CASE: XXXXXXX
WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
				21
				OF
				29



- ### EXAMPLE WROUGHT-IRON OPEN FENCE

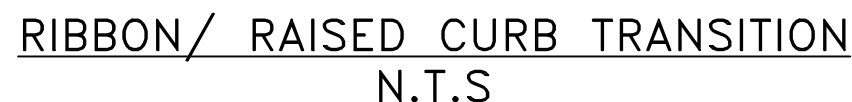
SITE WROUGHT-IRON FENCE SHALL NOT IMPEDE THE FLOW OF
DRAINAGE AS DESIGNED WITHIN THIS PLAN.



ALL CONCRETE SHALL BE
CLASS "A" (3000 P.S.I . MIN.



LOCATE AT EDGE OF PARKING SPACE
UNLESS ACCOMPANIED BY "VAN" LETTERING

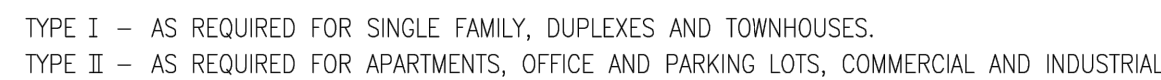


THIS DETAIL APPLICABLE AT THE END OF ANY
PROPOSED RAISED CURB WHICH TRANSITIONS OUT (NO
CURB) OR TRANSITIONS TO LAYDOWN CURB. CONSULT
ENGINEER IF APPROPRIATE. NO VERTICAL TRIP
HAZARDS PERMITTED. PAINT FACE OF TRANSITION
CONTRASTING COLOR IN PEDESTRIAN AREAS, OR AS
INSTRUCTED BY ADA/TDLR CONSULTANT.



1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C109, C109M, D1752, BROOK FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MIN.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIDEWAY.
5. TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL BE 24" MIN. LONG AND SHALL BE APPROVED BY THE ENGINEER OR THE CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. THE FOLLOWING SCHEME OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF CONSTRUCTION AND LOCATION SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
 - A. ALL CURB AND CURB AND GUTTER (REINFORCED) SHALL HAVE TWO #4 LONGITUDINAL REINFORCING BARS
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SPACED WITH REINFORCING OR OTHER APPROVED METHODS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THE CURB IS PROPERLY CURED AND THE CURB SECTION.

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



1. FOR ROLLER STATED SIDEWALK: MATCH TO SPECIFICATIONS.
2. STANDARD LOCATION OF SIDEWALK IS OFF BACK OF CURB. SPECIAL DESIGNS MAY BE APPROVED BY THE CITY ENGINEER, PRIOR TO FINAL DESIGN.
3. SIDEWALK SHALL CONFORM TO CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS
4. IF REQUIRED ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION BY THE ENGINEER RECORD.
5. ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT MUST BE APPROVED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION.

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

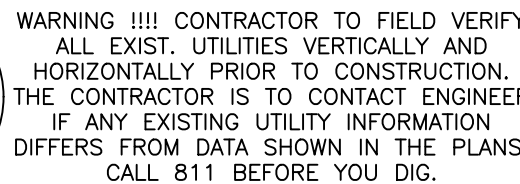


1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C393, C393M, A1752, BROOM FINISH EXPANDED SURFACE.
2. CONTRACTION JOINT SPACING 10'
3. EXPANSION JOINTS PER SQ. YD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE USED WHERE CURBS ARE ADJACENT TO SIDEWALK OR DRIVE.
5. DIFFERENCES BETWEEN CURBS OR TRANSFERS CROSS SECTIONS SHALL BE 20 INCHES OR LESS AS APPROVED BY THE ENGINEER OR THE CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. ONE OF THE FOLLOWING SCHEMES OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF PLACING AND LOCATING SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
 - A. CURB AND GUTTER (REINFORCED) SHALL HAVE LONGITUDINAL REINFORCING BARS AS FOLLOWS: THREE #4.
 - B. ALL TYPES OF CURBS SHALL HAVE 4" #4 BAR FOR LONGITUDINAL REINFORCEMENT.
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED MEANS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THE CURB IS PROPERLY GUIDED IN THE CURB SECTION.

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



#	REVISION	DESCRIPTION	SIGNATURE	DATE	SHEET 22 OF 29



THESE PLANS COPYRIGHTED BY SANDLIN SERVICES, LLC



CONSTRUCTION DETAILS
(1 OF 2)

PROJECT CASE: XXXXXXXX

WOODLAKE RETAIL

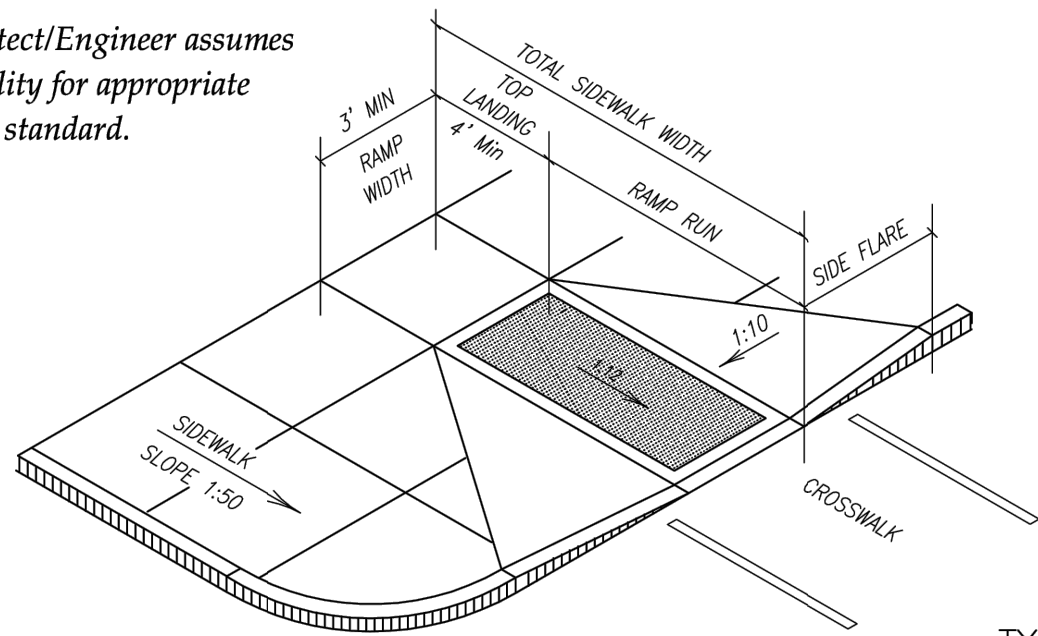
G:\Shared drives\Sandlin Services Projects\Land Development Division\01-0041-003 Woodlake Retail\CAD\Construction Sheets\WLR DT-Long-Construction Details (2 of 2) Plotted Feb 15, 2024 at 11:30am by Engineer | Last Saved by Engineer

NOTES:

1. COMMERCIAL SIDEWALKS WIDTHS - 6'
RESIDENTIAL SIDEWALKS WIDTHS - 5'
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. FLATTER SLOPES THAT WILL STILL DRAIN PROPERLY ARE ENCOURAGED.
3. ALL CONCRETE SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
4. FOR PURPOSES OF WARNING, THE CURB RAMPS SHALL HAVE A LIGHT REFLECTIVE VALUE AND TEXTURE THAT SIGNIFICANTLY CONTRASTS WITH THAT OF ADJOINING PEDESTRIAN ROUTES.
5. TEXTURES MAY CONSIST OF PAVERS WITH TRUNCATED DOME SURFACES OR GROOVES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED.
6. COLOR CONTRAST, FOR EXAMPLE, CAN BE ACCOMPLISHED WITH COLORED CONCRETE PAVERS THAT HAVE TRUNCATED DOMES OR BY COLORED STAINED CONCRETE WITH GROOVES, EITHER OF WHICH WOULD PROVIDE A CONTRAST WITH TYPICALLY LIGHT COLORED CONCRETE.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, VISIBILITY AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).
8. RAISED MEDIANS SEPARATE OPPOSING DIRECTIONS OF TRAFFIC AND PROVIDE A REFUGE AREA FOR PEDESTRIANS IF THEY ARE UNABLE TO CROSS THE ENTIRE ROADWAY IN THE ALLOTTED SIGNAL PHASE. TO SERVE AS A REFUGE AREA, THE MEDIAN SHOULD BE A MINIMUM OF 4 FEET WIDE. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR THROUGH THEM.
9. ALL SIDEWALK PLANS AND DETAILS SHALL BE SUBMITTED AND APPROVED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).
10. ANY PART OF THE ACCESSIBLE ROUTE WITH A SLOPE GRATER THAN 1:20 (5%) SHALL BE CONSIDERED A RAMP. IF A RAMP HAS A RISE GREATER THAN 6 INCHES OR A HORIZONTAL PROJECTION GREATER THAN 72 INCHES, THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES. THE ONLY EXCEPTION IS AT CURB RAMPS. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. CURB RAMPS SHALL BE PROVIDED WHERE EVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB. CURB RAMPS ARE GENERALLY INTERPRETED AS ONLY THE PORTION TYING DIRECTLY INTO THE ROADWAY.
11. TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SHALL BE PLACED SO NOT TO OBSTRUCT THE ACCESSIBLE ROUTE.
12. ALL SIDEWALKS WILL BE DOWELED INTO EXISTING SIDEWALKS, DRIVEWALKS, DRIVEWAYS, INLET BOXES, RETAINING WALLS, ETC.
13. ALL SIDEWALK CROSS-SLOPES SHALL NOT EXCEED 1:50, UNLESS A VARIANCE IS PROVIDED BY TDLR.

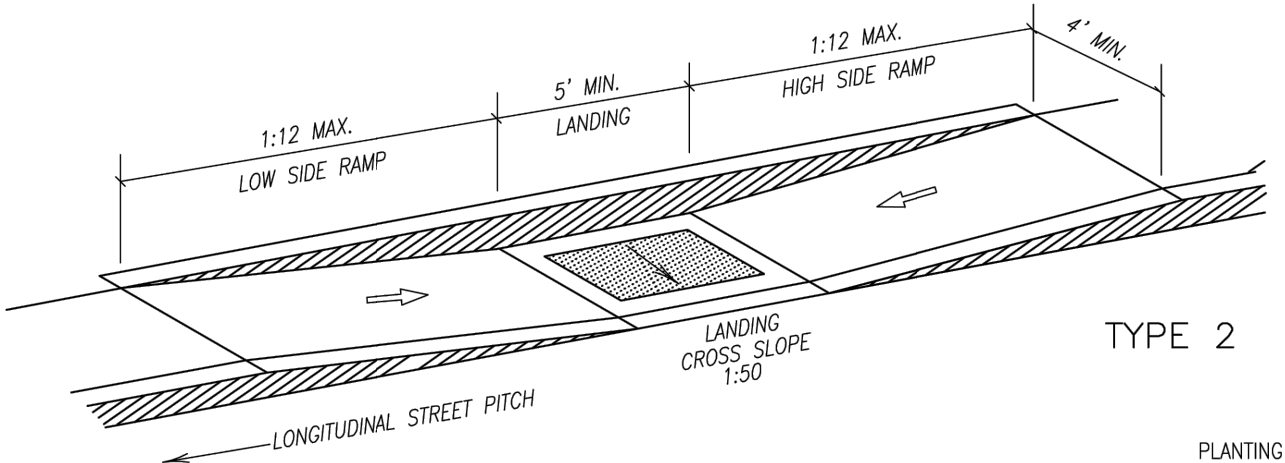
The Architect/Engineer assumes responsibility for appropriate use of this standard.

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

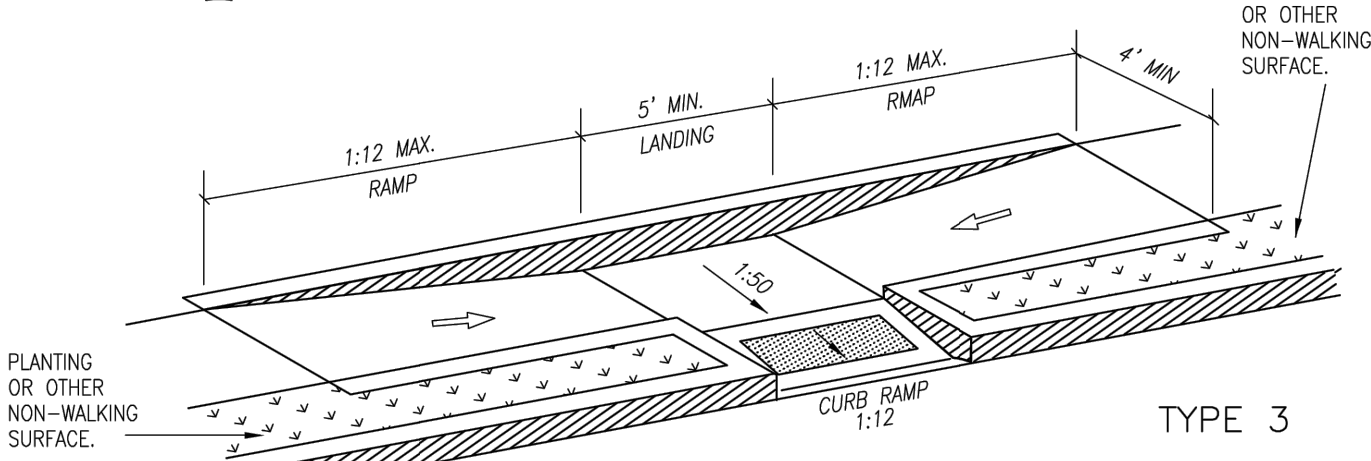


PERPENDICULAR CURB RAMPS

TYPE 1

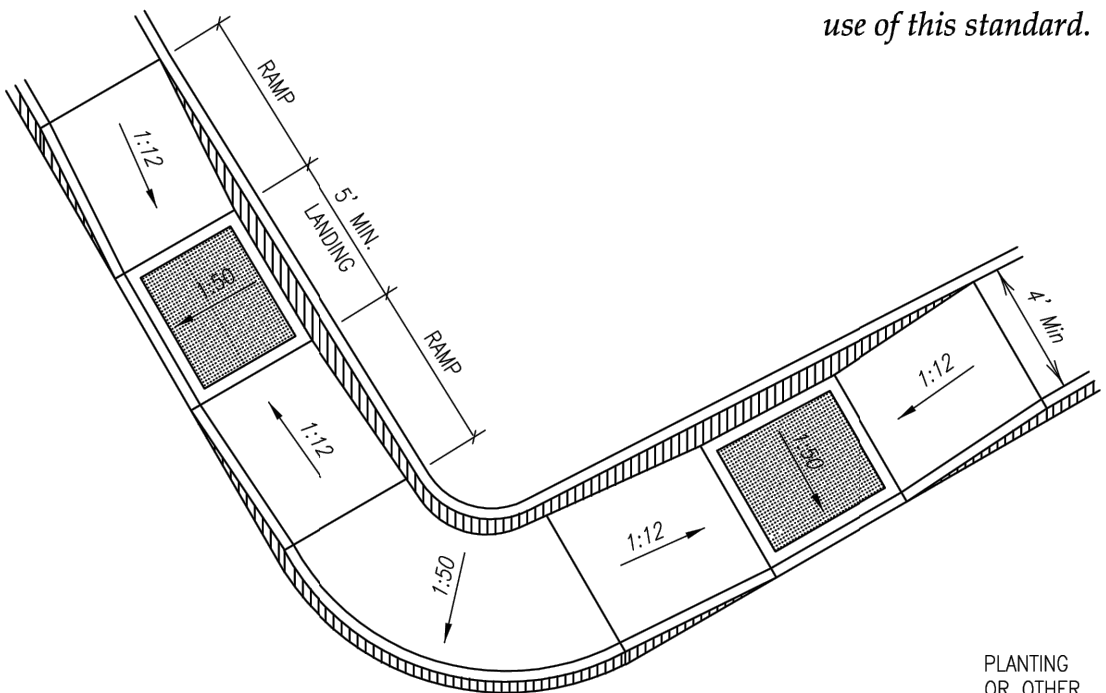


TYPE 2



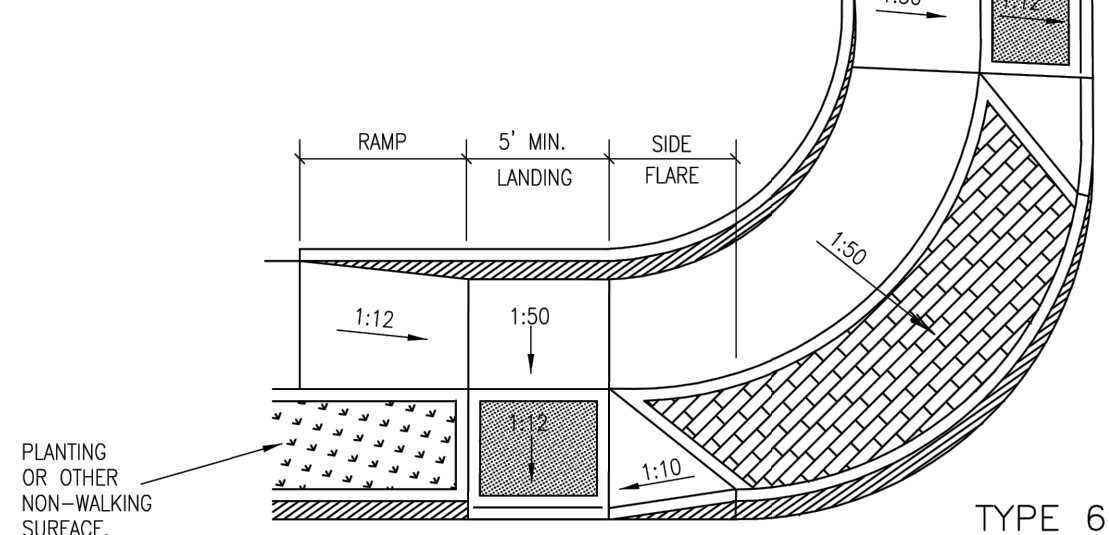
TYPE 3

PARALLEL CURB RAMPS



TYPE 5

COMBINATION (PERPENDICULAR/PARALLEL) CURB RAMPS

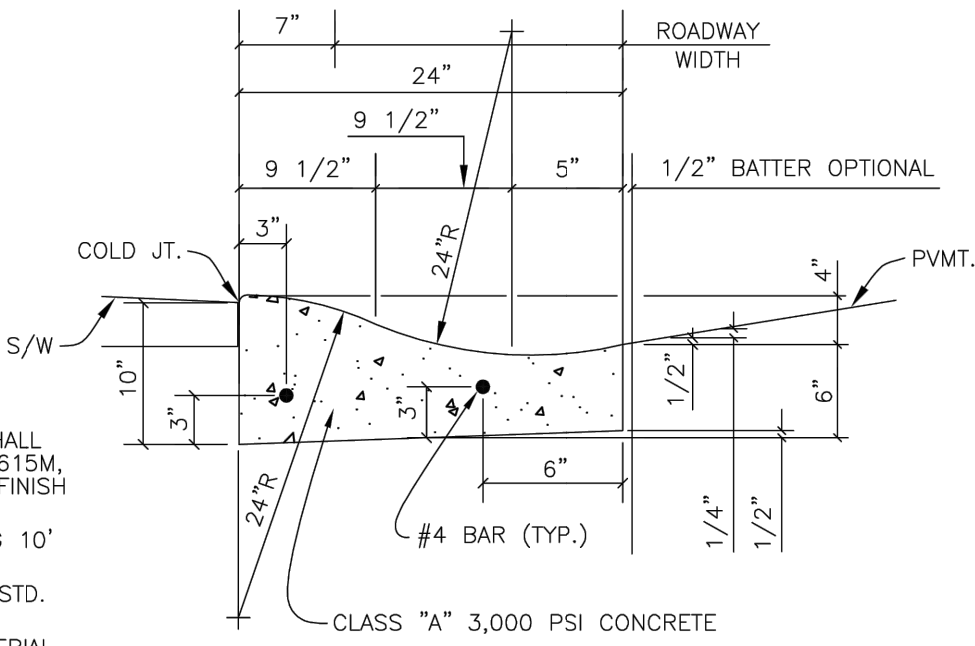


TYPE 6

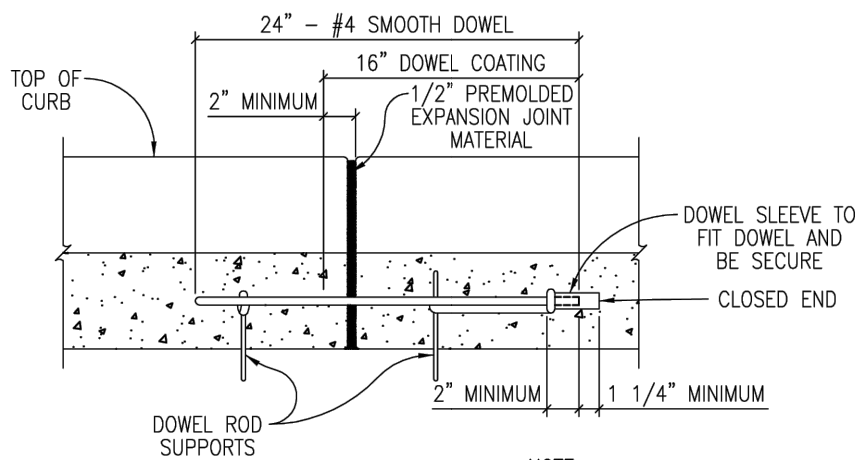
The Architect/Engineer assumes responsibility for appropriate use of this standard.

NOTES:

1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP-RAP.
5. TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL OCCUR OVER A 20 FOOT LENGTH AS APPROVED BY THE ENGINEER OR TH CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. ONE OF THE FOLLOWING SCHEMES OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF PLACEMENT AND LOCATION SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
A. CURB AND GUTTER (REINFORCED) SHALL HAVE LONGITUDINAL REINFORCING BARS AS FOLLOWS: THREE #4.
B. ALL TYPES OF CURB (REINFORCED) SHALL HAVE #4 BAR FOR LONGITUDINAL REINFORCEMENT.
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED METHODS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THAT REBAR IS PROPERLY GUIDED INTO THE CURB SECTION.



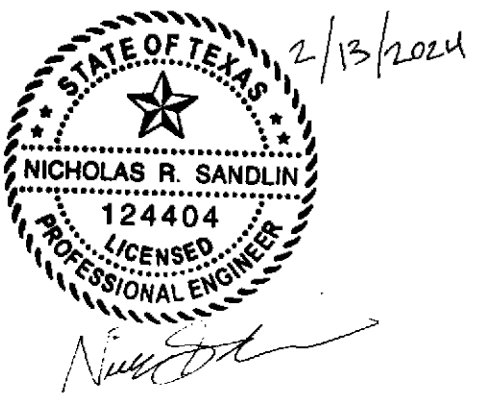
MOUNTABLE CURB



CURB DOWEL DETAIL

NOTE: EXPANSION JOINT INTERVALS NOT TO EXCEED 40'-0".

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



CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
PEDESTRIAN RAMPS GENERAL NOTES

REVISION NOTE: ADOPTED 6/21/2006
PROJECT NAME: SD28
DATE: 1/2003
DRAWN BY: MRS
APPROVED BY: TRB



CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SIDEWALK RAMP DETAILS
TYPE 1-3

REVISION NOTE: ADOPTED 6/21/2006
PROJECT NAME: SD31
DATE: 1/2003
DRAWN BY: MRS
APPROVED BY: TRB



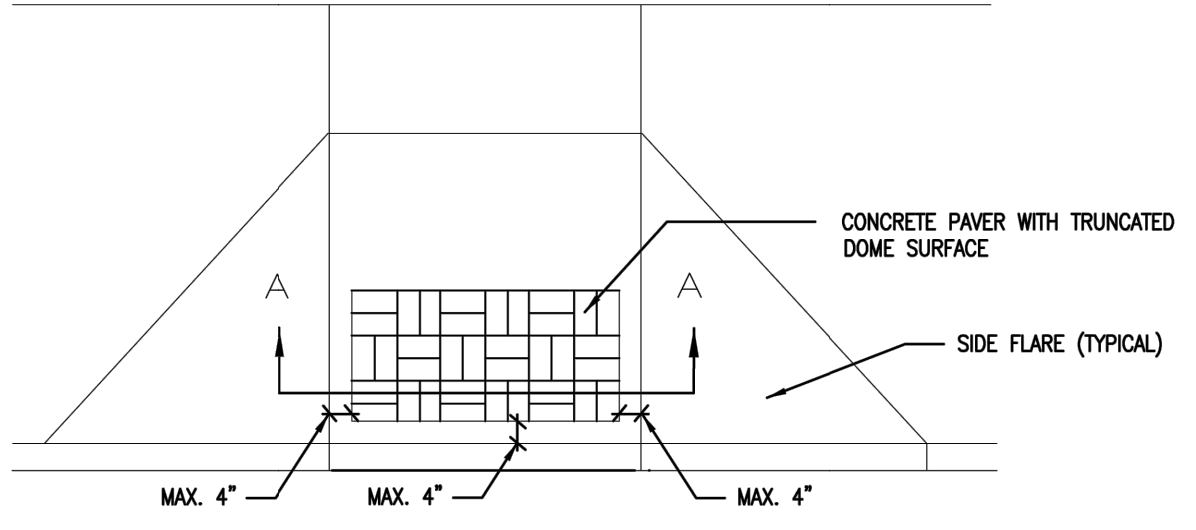
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SIDEWALK RAMP DETAIL TYPES 5 & 6

REVISION NOTE: ADOPTED 6/21/2006
PROJECT NAME: SD33
DATE: 1/2003
DRAWN BY: MRS
APPROVED BY: TRB



CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
MOUNTABLE CURB
AND GUTTER DETAILS

REVISION NOTE: ADOPTED 6/21/2006
PROJECT NAME: SD07
DATE: 1/2003
DRAWN BY: MRS
APPROVED BY: TRB



TRUNCATED DOME PATTERN CURB RAMP

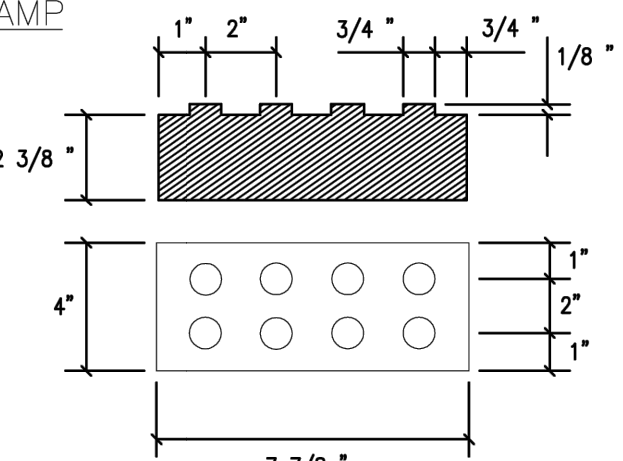
GENERAL NOTES

CONCRETE PAVEMENT UNITS SHALL MEET ALL REQUIREMENTS OF ASTM C-836, C-833, AND SHALL BE LAID IN A TWO BY TWO UNIT BASKET WEAVE PATTERN, UNLESS SHOWN OTHERWISE IN THE PLANS.

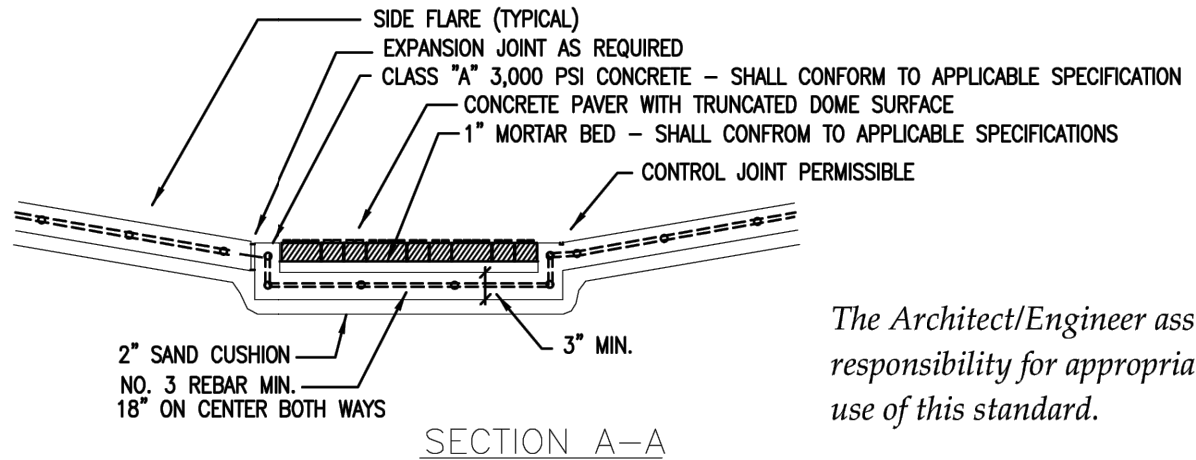
CONCRETE PAVEMENT UNIT SHALL HAVE A TRUNCATED DOME TOP SURFACE FOR DETECTABLE WARNING TO PEDESTRIANS.

CONCRETE PAVEMENT UNIT COLOR FOR THE RAMP SHALL BE A CONTRASTING COLOR TO THE ADJACENT SURFACES. THE COLOR OF THE CONCRETE PAVEMENT UNITS SHALL BE SHOWN ELSEWHERE IN THE PLANS. (ADJACENT SURFACES INCLUDE SIDE FLARES).

CONCRETE PAVEMENT UNITS SHALL BE SAW CUT ONLY AND ANY CUT UNIT SHALL BE NOT LESS THAN 25 PERCENT OF A FULL UNIT.



CONCRETE PAVER WITH TRUNCATED DOME SURFACE



SECTION A-A

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



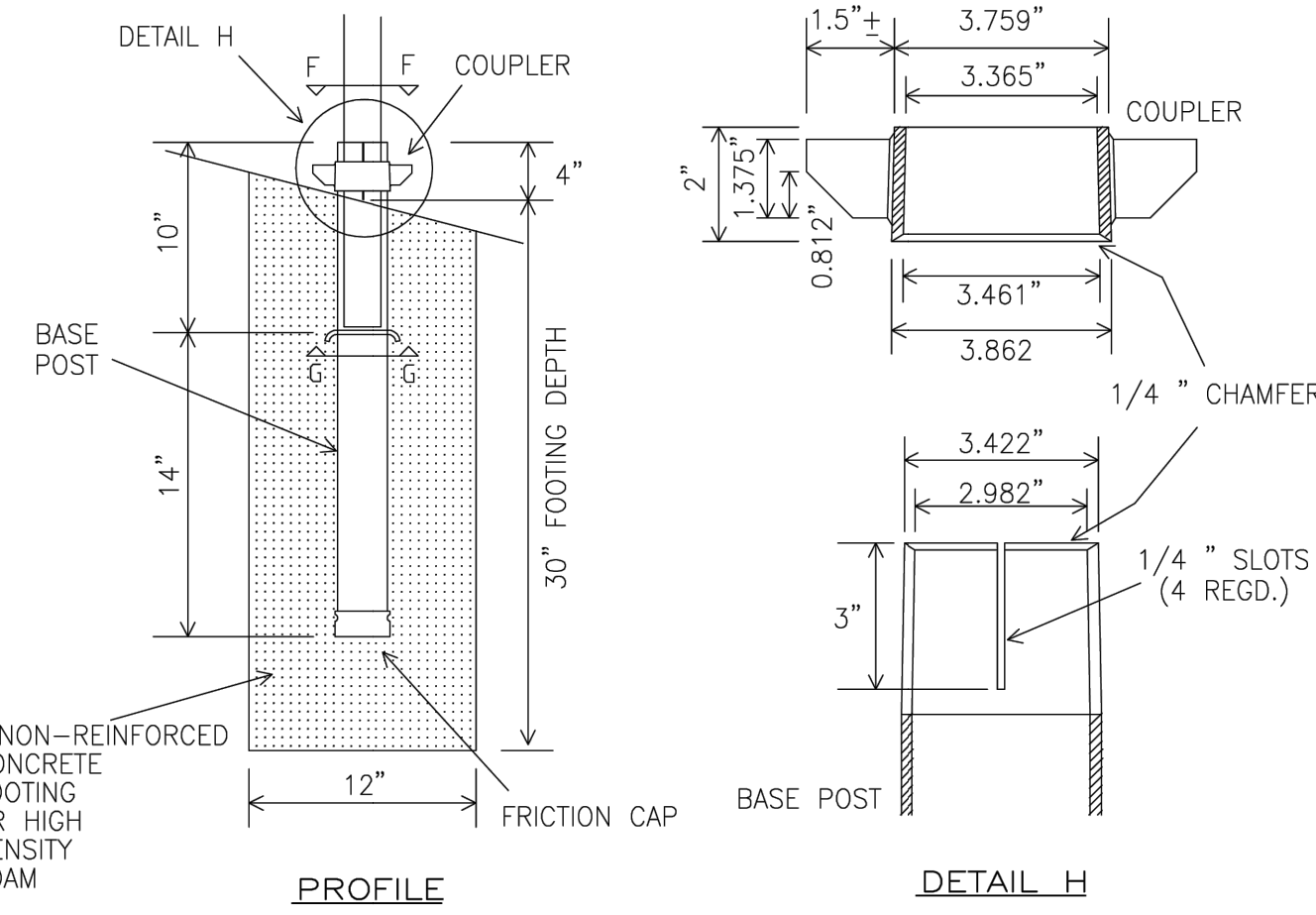
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CURB RAMP TEXTURES TYPE A

REVISION NOTE: REVISED 3/14/2014 WBO
PROJECT NAME: SD37
DATE: 1/2003
DRAWN BY: MRS/AP
APPROVED BY: TRB

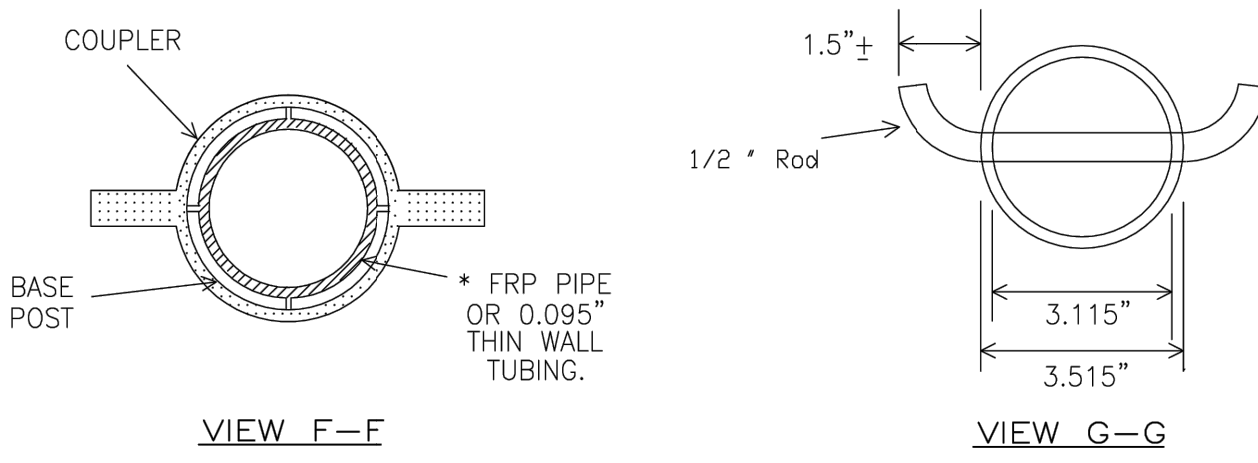


CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
UNIVERSAL ANCHOR SYSTEM

REVISION NOTE: ADOPTED 6/21/2006
PROJECT NAME: SD23
DATE: 1/2003
DRAWN BY: MRS
APPROVED BY: TRB



PROFILE



VIEW F-F

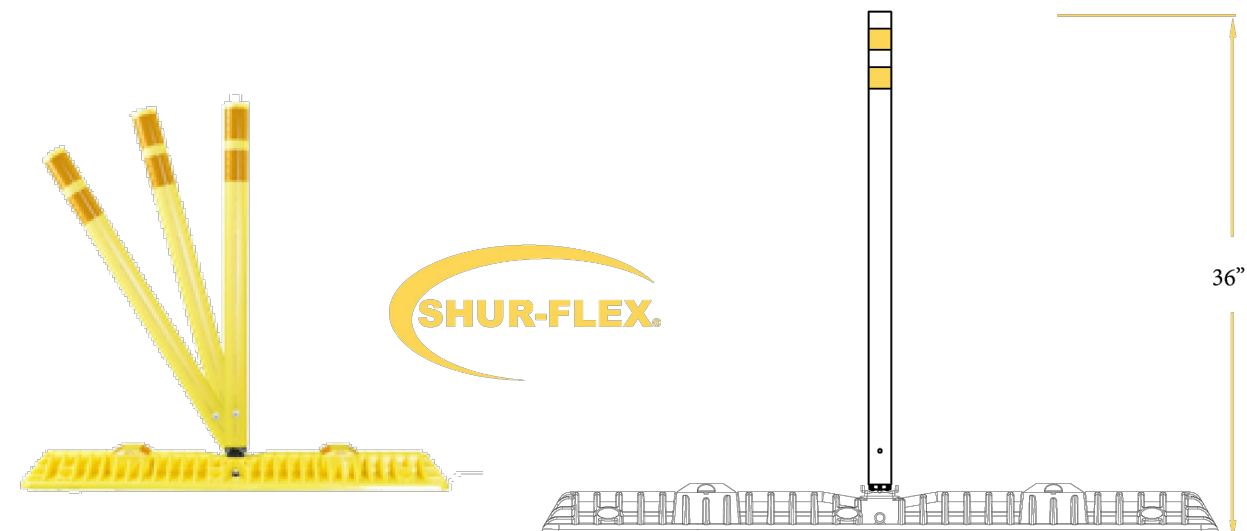
VIEW G-G

* PLASTING INSERT MUST BE USED WITH 1/16" THIN WALL TUBING.
** FOOTING SHALL BE REMOVED AND BACKFILLED WHEN BARRICADE IS REMOVED.

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

SHUR-CURB® TRAFFIC SEPARATOR

CONTRACTOR TO USE SHUR-CURB OR APPROVED EQUAL



FEATURES

- Utilizes the patented Shur-Flex® system
- Non-mechanical flexible design is self-righting upon impact
- 360° post reflectivity & raised pavement markers added for base reflectivity
- Premium UV added for long lasting color
- Easy bolt down design
- Quick and easy installation and post replacement
- MUTCD compliant; FHWA accepted

SPECIFICATIONS

Shur-Flex® System - 3 Component Design

- The flexible square to round joint is a simple one piece, non-metallic molded design that withstands multiple impacts assuring long-life in corrosive environments.
- Posts are manufactured with greater wall thickness to provide structural integrity.
- Standard posts are round top providing 360° degrees of reflectivity.
- All Post colors or styles are interchangeable with any product utilizing the Shur-Flex® system.
- One pin - one minute! We've made it quick and easy to install or replace a post.
- Ideal for mounting object markers and other panel products for even greater visibility.
- The Shur-Curb® base is 10" x 40" and has a low profile design.

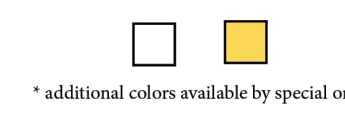
AVAILABLE POST COLORS



TECHNICAL INFORMATION

Post Diameter: 2.25" OD
Post Heights: 18" up to 48"
Materials: High Density Thermoplastic

AVAILABLE BASE COLORS



* additional colors available by special order

Office: 512.218.9500

Email: sales@shur-tite.com

www.shur-tite.com

Shur-Tite Products
PO Box 2283
Round Rock, TX 78680



WARNING !!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

THESE PLANS COPYRIGHTED BY SANDLIN SERVICES, LLC

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC

TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

CONSTRUCTION DETAILS
(2 OF 2)

PROJECT CASE: XXXXXX

WOODLAKE RETAIL

#	REVISION DESCRIPTION	SIGNATURE	DATE	SHEET
				23
				OF
				29



Permanent Stormwater Section (TCEQ-0600)

Attachment G: Inspection, Maintenance, Repair and Retrofit Plan

Recommended Maintenance Guidelines for Batch Detention Pond BMP

General

Batch detention ponds capture and temporarily detain the water quality volume. They capture the first flush of stormwater, allowing the solids fraction to settle, and they limit downstream erosion by controlling peak flow rates during erosive events. A batch detention pond can be used in combination with grassy swales to achieve water quality and drainage goals. Batch detention ponds may have moderate to somewhat higher maintenance requirements since they are active stormwater controls. There are many factors that may affect a batch detention pond's operation and that will be periodically checked. These factors can include mowing, removal of accumulated bottom sediments, removal of debris from all inflow and outflow structures, unclogging of orifice perforations, and the upkeep of all physical structures that are within the batch detention pond area.

Routine Maintenance

Inspections

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

Mowing

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

Litter and Debris Removal

Litter and debris removal should take place at least twice a year, as part of the periodic mowing operations and inspections. Debris and litter should be removed from the surface of the pond basin. Particular



WOODLAKE RETAIL WATER POLLUTION ABATEMENT PLAN

attention should be paid to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed.

Erosion Control

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

Nuisance Control

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

Non-routine maintenance

Structural Repairs and Replacement

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

Sediment Removal

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

Logic Controller

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

Record Keeping



***WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN***

Maintenance and inspection records should be kept on file by the Owner of the permanent BMPs for a period of at least three (3) years. Repair and retrofit records should be kept on file by the Owner of the permanent BMPs for a period of at least five (5) years.



**WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN**

General Owner Responsibility

The OWNER or SUBSEQUENT OWNER shall bear all expenses for the operation and maintenance of this Permanent Water Quality Control (PWQC) system including but not limited to all general maintenance activities needed to keep this system in proper operation condition. If this system is abused or not maintained, then it may contribute to malfunction of the storm water system. All designated PWQC areas shall remain free of construction, development, and encroachments.

You as the OWNER of this property have a responsibility to provide any SUBSEQUENT OWNER or your real estate agent with a copy of this Best Management Practices (BMP) Maintenance Plan if this facility is sold so that the BMPs can be properly maintained and operated. The same rights, duties, and responsibilities borne by the current OWNER shall be borne by each subsequent OWNER.

OWNER ACKNOWLEDGEMENT AND ACCEPTANCE:

WOODLAKE RETAIL

Brad Andrews

Print Name

Manager

Title

DocuSigned by:

Brad Andrews

58871818DCF2487...
Signature

2/15/2024

Date

PREPARED AND CERTIFIED BY ENGINEER:

Nick Sandlin, P.E.

2/14/2024

Date



**Permanent Stormwater Section
(TCEQ-0600)**

**Attachment H:
Pilot-Scale Field Testing Plan (if proposed)
(NOT APPLICABLE)**

A pilot-scale field testing plan is not applicable. All BMP design and calculations are based on and comply with Edwards Aquifer Technical Guidance for Edwards Aquifer Rules (RG-348, revised July 2005).



Permanent Stormwater Section (TCEQ-0600)

Attachment I: Measures for Minimizing Surface Stream Contamination

No surface streams flow across the property. The Batch Detention Pond BMP will address onsite water quality and stormwater drainage to mitigate and minimize offsite surface stream contamination.



***WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN***

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 BRADLEY ANDREWS,
Print Name

MANAGER,
Title - Owner/President/Other

of TAILWIND 303 PROPERTIES, LLC,
Corporation/Partnership/Entity Name

have authorized NICK SANDLIN, P.E.
Print Name of Agent/Engineer

of SANDLIN SERVICES, LLC
Print Name of Firm

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

I also understand that:

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

SIGNATURE PAGE:

Applicant's Signature

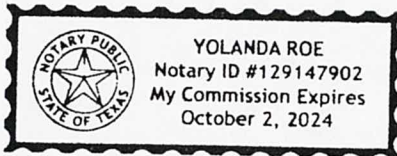
Bradley Andrew
1-23-24
Date

THE STATE OF Texas §

County of Tubbock §

BEFORE ME, the undersigned authority, on this day personally appeared BRADLEY Andrew 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 23rd day of January, 2024.



Yolanda Roe
NOTARY PUBLIC

Yolanda Roe
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 10-2-2024



***WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN***

**Application Fee Form
(TCEQ-0574)**

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: WOODLAKE RETAIL

Regulated Entity Location: 100 WOODLAKE DR., GEORGETOWN, TX 78633

Name of Customer: TAILWIND 303 PROPERTIES LLC

Contact Person: BRAD ANDREWS

Phone: 806-368-6554

Customer Reference Number (if issued):CN _____

Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays

☐ Travis

☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar

☐ Medina

☐ Uvalde

☐ Comal

☐ Kinney

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

☒ Austin Regional Office

☐ San Antonio Regional Office

☐ Mailed to: TCEQ - Cashier

☐ Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone

☐ Contributing Zone

☐ Transition Zone

Type of Plan	Size	Fee Due
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	1.054 Acres	\$ 4,000
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	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: Nick Zales

Date: 2/13/2024

Application Fee Schedule

Texas Commission on Environmental Quality

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

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

Extension of Time Requests

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



***WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN***

**Check Payable to the “Texas Commission on Environmental
Quality”**



***WOODLAKE RETAIL
WATER POLLUTION ABATEMENT PLAN***

**Core Data Form
(TCEQ-10400)**



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.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)		<input type="checkbox"/> Other
2. 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)			
<input checked="" type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
<i>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).</i>					
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>	
TAILWIND 303 PROPERTIES LLC					
7. TX SOS/CPA Filing Number		8. TX State Tax ID (11 digits)		9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
804183662		32080509550			
11. Type of Customer:		<input checked="" type="checkbox"/> Corporation		<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship		<input type="checkbox"/> Other:	
12. Number of Employees				13. Independently Owned and Operated?	
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following					
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Other: <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant					
15. Mailing Address:		8001 QUAKER AVE STE K			
City		LUBBOCK		State	TX
ZIP		79424		ZIP + 4	3368
16. Country Mailing Information (if outside USA)				17. E-Mail Address (if applicable)	
				brad@bradandrewsrealty.com	
18. Telephone Number		19. Extension or Code		20. Fax Number (if applicable)	

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected, a new permit application is also required.)								
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information								
<i>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).</i>								
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)								
WOODLAKE RETAIL								
23. Street Address of the Regulated Entity: (No PO Boxes)	100 WOODLAKE DRIVE							
	City	GEORGETOWN	State	TX	ZIP	78633	ZIP + 4	
24. County	WILLIAMSON							

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

25. Description to Physical Location:									
26. Nearest City					State				Nearest ZIP Code
<i>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).</i>									
27. Latitude (N) In Decimal:		30.689683			28. Longitude (W) In Decimal:		-97.725869		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds				
30	41	22.86	-97	43	33.13				
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)			
5999		5499		453998		445299			
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)									
RETAIL									
34. Mailing Address:	100 WOODLAKE DRIVE								
	City	GEORGETOWN	State	TX	ZIP	78633	ZIP + 4		
35. E-Mail Address:									
36. Telephone Number			37. Extension or Code			38. Fax Number (if applicable)			
() -						() -			

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.


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

SECTION IV: Preparer Information

40. Name:	NICK SANDLIN, P.E.		41. Title:	PROFESSIONAL ENGINEER
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
(806) 679-7303		() -	nick@sandlinservices.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:	SANDLIN SERVICES, LLC		Job Title:	PRINCIPAL & PROFESSIONAL ENGINEER	
Name (In Print):	NICK SANDLIN, P.E.			Phone:	(806) 679- 7303
Signature:				Date:	2/13/2024