# CANYON GOLF/STONE OAK PARKWAY RETAIL

**Water Pollution Abatement Plan** 

**November 2023** 





November 14, 2023

Ms. Lillian Butler Texas Commission on Environmental Quality (TCEQ) Region 13 14250 Judson Road San Antonio, Texas 78233-4480

Re: Golf Canyon/Stone Oak Parkway Retail

Water Pollution Abatement Plan

Dear Ms. Butler:

Please find included herein the Golf Canyon/Stone Oak Parkway Retail Water Pollution Abatement Plan Application. This Water Pollution Abatement Plan has been prepared in accordance with the Texas Administrative Code (30 TAC 213) and current policies for development over the Edwards Aquifer Recharge Zone.

This Water Pollution Abatement Plan applies to an approximate 11.118-acre site as identified by the project limits. Please review the plan information for the items it is intended to address. If acceptable, please provide a written approval of the plan in order that construction may begin at the earliest opportunity.

Appropriate review fees (\$6,500) and fee application are included. If you have questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,
Pape-Dawson Engineers

Taylor G. Dawson, P.E. Senior Vice President

**Attachments** 

P:\73\28\21\Word\Reports\WPAP\231002a1.docx

# CANYON GOLF/STONE OAK PARKWAY RETAIL

**Water Pollution Abatement Plan** 



**November 2023** 



# 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**

- 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: <a href="http://www.tceq.texas.gov/field/eapp">http://www.tceq.texas.gov/field/eapp</a>.
- 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**

- 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:					2. Regulated Entity No.:				
3. Customer Name:						4. Cı	4. Customer No.:		
5. Project Type: (Please circle/check one)	New		Modif	icatior	1	Exter	ısion	Exception	
6. Plan Type: (Please circle/check one)	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Resider	ntial	Non-r	residen	itial		8. Sit	te (acres):	
9. Application Fee:			10. P	ermai	nent l	BMP(	s):		•
11. SCS (Linear Ft.):			12. AST/UST (No			o. Tar	ıks):		
13. County:			14. W	aters	hed:				

#### **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.)					
Region (1 req.)		_	_		
County(ies)					
Groundwater Conservation District(s)	Edwards Aquifer AuthorityBarton Springs/ Edwards AquiferHays Trinity Plum Creek	Barton Springs/ Edwards Aquifer	NA		
City(ies) Jurisdiction	AustinBudaDripping SpringsKyleMountain CitySan MarcosWimberleyWoodcreek	AustinBee CavePflugervilleRollingwoodRound RockSunset ValleyWest Lake Hills	AustinCedar ParkFlorenceGeorgetownJerrellLeanderLiberty HillPflugervilleRound 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 HillsFair Oaks RanchHelotesHill Country VillageHollywood ParkSan 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.				
_				

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

# GENERAL INFORMATION FORM (TCEQ-0587)

#### **General Information Form**

Print Name of Customer/Agent: Taylor G. Dawson, P.E.

**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

Date: 11/14/23

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:

Sig	gnature of Customer/Agent:	
_		
Pi	roject Information	
1.	Regulated Entity Name: Canyon Golf/Stone Oak Parkway Retaiil	
2.	County: Bexar	
3.	Stream Basin: Mud Creek	
4.	Groundwater Conservation District (If applicable): Edwards Aquifer; Trinity Glen Rose	
5.	Edwards Aquifer Zone:	
	Recharge Zone Transition Zone	
6.	Plan Type:	

7.	Customer (Applicant):	
	Contact Person: Miguel Serra Entity: Stone Oak 11 Acres, LLC Mailing Address: 15555 Tradesman Dr, Ste 400 City, State: San Antonio, TX Telephone: (210) 265-1773 Email Address: crosstimber@me.com	Zip: <u>78249</u> FAX:
8.	Agent/Representative (If any):	
	Contact Person: <u>Taylor G. Dawson, P.E.</u> Entity: <u>Pape-Dawson Engineers, Inc.</u> Mailing Address: <u>2000 NW Loop 410</u> City, State: <u>San Antonio, Texas</u> Telephone: <u>(210) 375-9000</u> Email Address: <u>taylordawson@pape-dawson.com</u>	Zip: <u>78213</u> FAX: <u>(210)</u> 375-9010
9.	Project Location:	
	<ul> <li>☐ The project site is located inside the city limits</li> <li>☐ The project site is located outside the city limit jurisdiction) of</li> <li>☐ The project site is not located within any city's</li> </ul>	s but inside the ETJ (extra-territorial
10.	The location of the project site is described bel detail and clarity so that the TCEQ's Regional s boundaries for a field investigation.	
	From TCEQ's regional office, turn right onto Ju- miles toward N Loop 1604. Travel east on N to exit toward US Hwy 281 N. Travel north Evans Rd. Continue for approximately 1.8 r located at the NE corner of Golf Canyon Rd	N Loop 1604 E for approximately 5 miles for approximately 2.0 miles to exit at niles to Stone Oak Pkwy. The site is
11.	Attachment A – Road Map. A road map show project site is attached. The project location are the map.	
12.	Attachment B - USGS / Edwards Recharge Zon USGS Quadrangle Map (Scale: 1" = 2000') of th The map(s) clearly show:	
	<ul> <li>☑ Project site boundaries.</li> <li>☑ USGS Quadrangle Name(s).</li> <li>☑ Boundaries of the Recharge Zone (and Trange)</li> <li>☑ Drainage path from the project site to the I</li> </ul>	
13.	The TCEQ must be able to inspect the project Sufficient survey staking is provided on the pro	

	tures noted in the Geologic Assessment.
⊠ Sur	vey staking will be completed by this date: When advised by TCEQ
nar	achment C – Project Description. Attached at the end of this form is a detailed rative description of the proposed project. The project description is consistent oughout 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	g 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:
Prohib	ited Activities
	n aware that the following activities are prohibited on the Recharge Zone and are not sposed 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.
<del></del>	n aware that the following activities are prohibited on the Transition Zone and are 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.

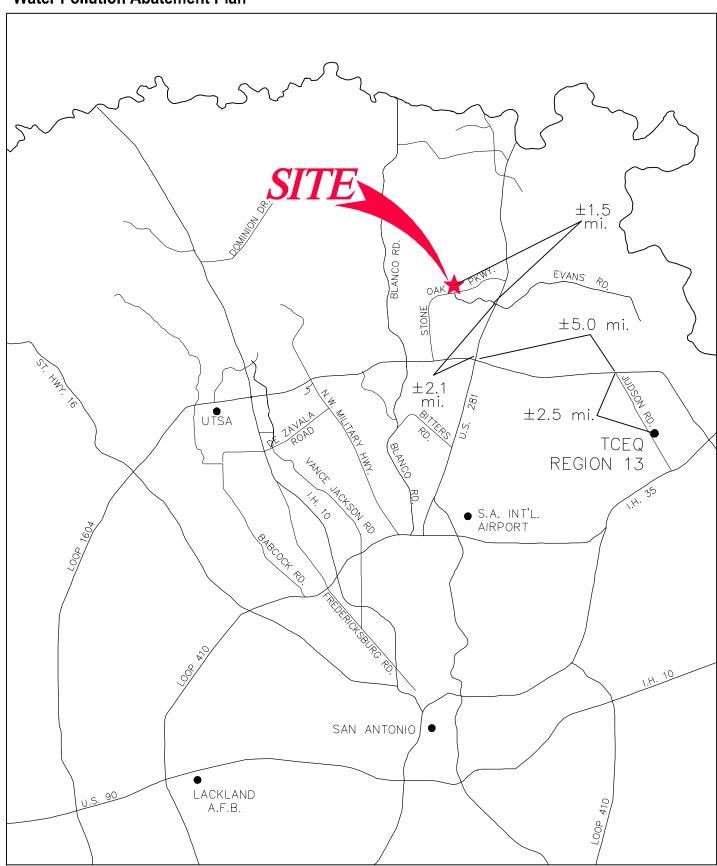
#### **Administrative Information**

18. The	e 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:
	<ul> <li>☐ TCEQ cashier</li> <li>☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)</li> <li>☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)</li> </ul>
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 regiona office.
21. 🔀	No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

### **ATTACHMENT A**

#### **GOLF CANYON/STONE OAK PARKWAY RETAIL Water Pollution Abatement Plan**





Pape-Dawson Engineers, Inc.

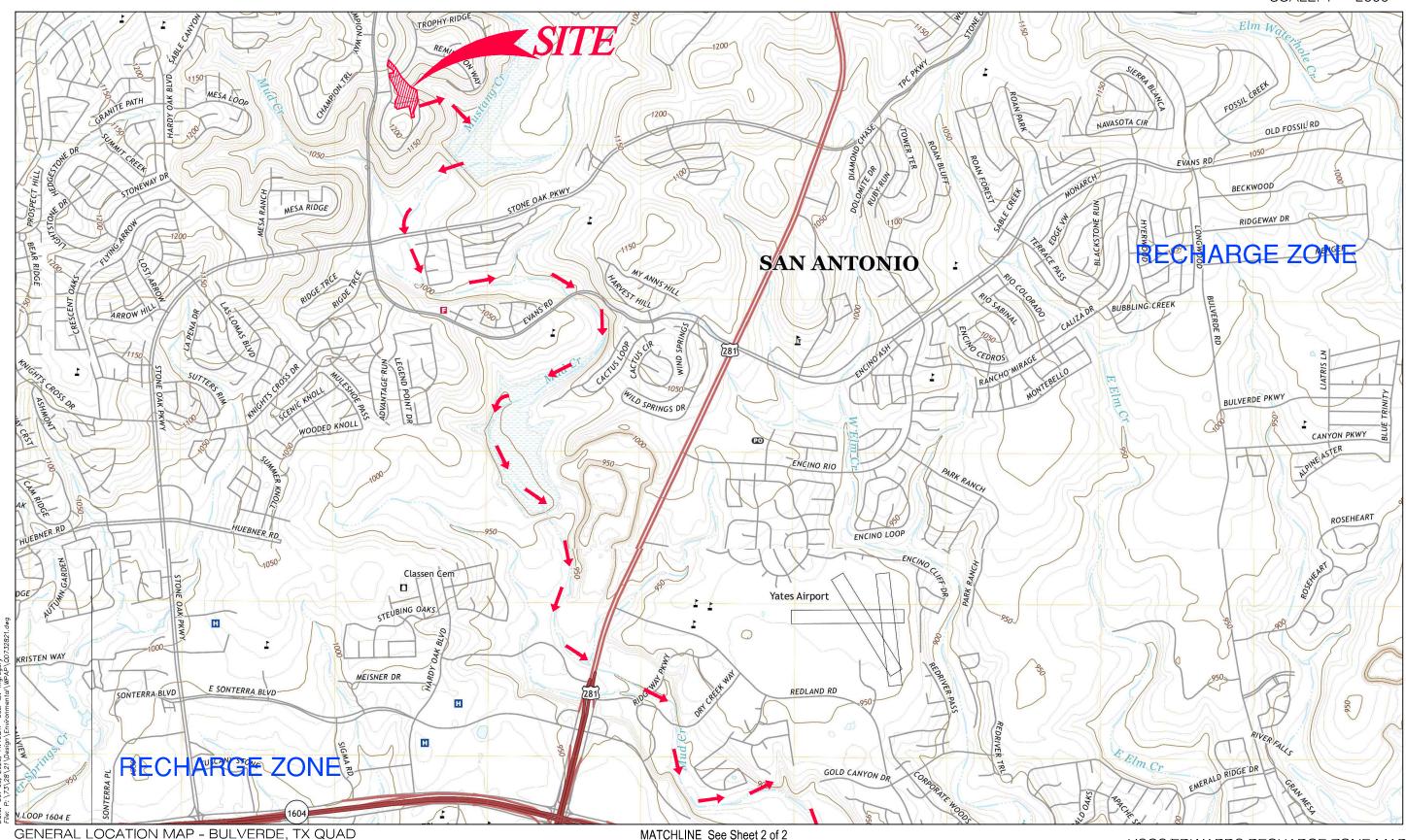
Date: Oct 03, 2023, 11:00am User ID: mgregory
File: P: \73\28\21\Design\Environmental\WPAP\RM 732821.dwg

ATTACHMENT A Road Map

### **ATTACHMENT B**

#### **GOLF CANYON/STONE OAK PARKWAY RETAIL Water Pollution Abatement Plan**





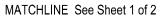
Pape-Dawson Engineers, Inc.

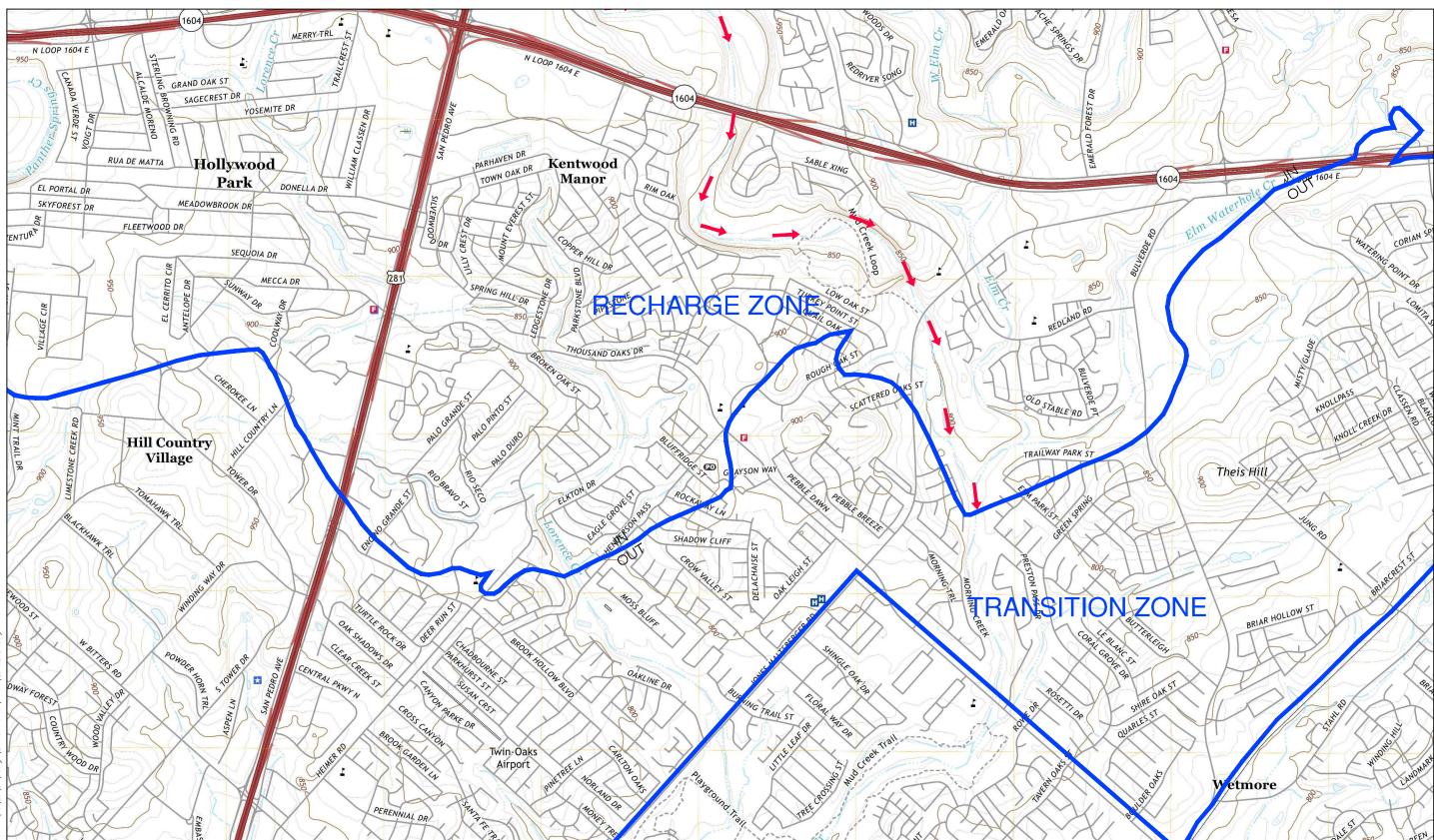
MATCHLINE See Sheet 2 of 2

USGS/EDWARDS RECHARGE ZONE MAP ATTACHMENT B

### GOLF CANYON/STONE OAK PARKWAY RETAIL Water Pollution Abatement Plan







GENERAL LOCATION MAP - BULVERDE, TX QUAD DRAINAGE FLOW --> Pape-Dawson Engineers, Inc.

USGS/EDWARDS RECHARGE ZONE MAP ATTACHMENT B

### **ATTACHMENT C**

### GOLF CANYON/STONE OAK PARKWAY RETAIL Water Pollution Abatement Plan

#### Attachment C - Project Description

Canyon Golf/Stone Oak Parkway Retail proposes the future construction of a commercial development on approximately 11.118 acres northeast of the Golf Canyon and Stone Oak Parkway intersection in San Antonio, Texas. This Golf Canyon/Stone Oak Parkway Retail Water Pollution Abatement Plan (WPAP) is being submitted for the first phase of construction to include mass grading and stockpiling, utility relocations, and erection of a retaining wall. No impervious cover is proposed for this phase of construction.

The 11.118-acre project site is located at the northeast corner of Golf Canyon and Stone Oak Parkway intersection, is undeveloped, lies within the Salado Creek watershed, and does contain the 100-year floodplain. The project site is located in the Edwards Aquifer Recharge Zone. There is one (1) manmade sensitive feature and no naturally occurring sensitive geological features identified in the Geologic Assessment.

This WPAP proposes clearing, mass grading, erection of a retaining wall and relocation of existing utilities. No impervious cover is proposed for the site therefore no PBMPs or equivalent protection are required. Please refer to the included exhibits for additional details.

The proposed development will not generate wastewater or require any potable water.



# GEOLOGIC ASSESSMENT FORM (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: Henry E. Stultz III, P.G. Telephone: 210-375-9000

	•	
Date: February 9, 2023	Fax:	210-375-9090
Representing: Pape-Dawson Engineers, Inc., TBPG r	egistration nun	nber 50351
Signature of Geologist:		STATE OF TEXASSISSION
<del>}</del>		HENRY STULTZ III  GEOLOGY 12121  CENSE
Regulated Entity Name: <u>STONE OAK / CANYON GO</u>	LF NEC	- Contraction of the Contraction
Project Information		
1. Date(s) Geologic Assessment was performed: Fel	bruary 2, 2023	
2. Type of Project:		
<ul><li>WPAP</li><li>SCS</li><li>Location of Project:</li></ul>	☐ AST ☐ UST	
<ul><li>Recharge Zone</li><li>Transition Zone</li><li>Contributing Zone within the Transition Zone</li></ul>		

- 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)
Krum clay, 1 to 5 percent slopes	С	3-4
Eckrant-Rock outcrop association, 8 to 30 percent slopes	D	0-1

- \* 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:  $1'' = \underline{40'}$ Site Geologic Map Scale:  $1'' = \underline{40'}$ 

Site Soils Map Scale (if more than 1 soil type): 1'' = 200'

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.	<ol> <li>Geologic or manmade features were discovered on the project site dur investigation. They are shown and labeled on the Site Geologic Map and are the attached Geologic Assessment Table.</li> </ol>	
	Geologic or manmade features were not discovered on the project site durinvestigation.	ing the field
13.	3. 🔀 The Recharge Zone boundary is shown and labeled, if appropriate.	
14.	<ol> <li>All known wells (test holes, water, oil, unplugged, capped and/or abandor applicable, the information must agree with Item No. 20 of the WPAP Application</li> </ol>	
	There is one (1) well present on the project site and the location is shown (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 sit	6

#### **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 Geologic Assessment Table

Sheet 1 of 1

GEOLO	GEOLOGIC ASSESSMENT TABLE	SMENT T	ABLE	1				Ь	ROJEC.	T NAN	IE: ST	ONE OA	K/CAN	PROJECT NAME: STONE OAK / CANYON GOLF NEC	NEC					
	LOCATION						FEA	TURE	FEATURE CHARACTERISTICS	TERIS	STICS				EV,	EVALUATION	NO	PHYS	SICAL S	PHYSICAL SETTING
1A	1B *	10*	ZA	2B	က		4	A	2	2A	9	7	8A	8B	တ	10		11	William .	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE		POINTS FORMATION	DIMEN	DIMENSIONS (FEET)		TREND (DEGREES)	МОО	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)	AREA S)	TOPOGRAPHY
	THE PERSON NAMED IN		Service of the last		The Parties	×	<b>\</b>	2		10						<40	>40	41.6	>1.6	
S-1	29.64496	-98.47943	MB	30	Kek								F,C	20	90		20		×	Hillside
S-2	29.64554	-98.48001	8	2	Kek	10	09	1.5	N50°W				Z	2	10	10			×	Drainage
8-3	29.64564	-98.47961	8	2	Kek	80	80	7					Н	5	10	10		×		Hillside
S-4	29.64448	-98.47920	ш	20	Kek	>2000			N45°E	9			Ц	5	35	32		×		Hillside
S-5	29.64534	-98.48050	MB	30	Kek			310					×	5	35	35		×		Hillside
** DATUM: NAD 83	NAD 83																			

	83
	NAD
I	ï
	2
	à

2A TYPE	TYPE	2B POINTS	
O	Cave	30	Z
SC	Solution cavity	20	O
SF	Solution-enlarged fracture(s)	20	0
Щ	Fault	20	ഥ
0	Other natural bedrock features	52	>
MB	Manmade feature in bedrock	30	R
SW	Swallow hole	30	×
SH	Sinkhole	20	]
8	Non-karst closed depression	3	
Z	Zone, clustered or aligned features	30	E C

|--|

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

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.

HENRY STULTZIII TEONORY STULTZ

Date February

# ATTACHMENT B Stratigraphic Column

# STONE OAK / CANYON GOLF NEC Geologic Assessment (TCEQ-0585)

#### Attachment B - Stratigraphic Column

Period	Epoch	Group	Formation	Member	Thickness	Lithology	Hydro- logic Unit	Hydro- stratigraphic Unit	Hydrologic Function	Parosity	Cavern Development		
						Grainstone	40–50	Hard, dense limestone that consists mostly of a tightly cemented miliolid skeletal fragment grainstone; contains interspersed chalky mudstone and wackestone; chert as beds and nodules; crossbedding and ripple marks are common primarily at the contact with the overlying regional dense bed		٧	Aquifer	IP, IG, BU, FR, BP, CV	Few
		sp.		Kirsch-berg Evaporite	40–50	Highly altered crystalline limestone and chalky mudstone with occasional grainstone associated with tidal channels; chert as beds and nodules, boxwork molds are common, matrix recrystallized to a coarse grain spar; intervals of collapse breccia and travertine deposits	.quifer	VI	Aquifer	IG, MO, VUG, FR, BR, CV	Probably extensive cave development		
		Edwards	Kainer	Dolomitic	90–120	Hard, dense to granular, dolomitic limestone; chert as beds and nodules (absent in lower 20 ft); <i>Toucasia</i> sp. abundant; lower three-fourths composed of sucrosic dolomites and grainstones with hard, dense limestones interspersed; upper one-fourth composed mostly of hard, dense mudstone, wackestone, packstone, grainstone, and recrystallized dolomites with bioturbated beds	Edwards Aquifer	VII	Aquifer	IP, IC, IG, MO, BU, VUG, FR, BP, CV	Cave development as shafts with minor horizontal extent		
Cretaceous	Early Cretaceous			Basal nodular	40–50	Moderately hard, shaly, nodular, burrowed mudstone to millolid grainstone that also contains dolomite; contains dark, spherical textural features known as black rotund bodies; Ceratostreon texana, Caprina sp., millolids, and gastropods		VIII	Aquifer, confining unit in areas without caves	IP, MO, BU, BP, FR, CV	Large lateral caves at surface		
					0–120 (absent in northern Comal Co.)			Cavernous	Aquifer	MO, BR, BP, FR, CV			
					120–230 (thicker in northern Comal Co.)	Alternating resistant and nonresistant beds of blue shale,	Upper Trinity Lower confining unit to the Edwards aquifer	Camp Bullis	Confining	BU, BP, FR, occasional CV			
		Trinity	Glen Rose Limestone	0-10	0–10	nodular marl, and impure, fossiliferous limestone; gray to yellowish gray; stair-step topography; contains two distinct evaporite zones; distinct <i>Corbula</i> sp. bed marks the contact with the underlying lower member of the Glen	Upper Trinity 3 unit to the Ec	Upper evaporite	Aquifer	IP, MO, BU, BR	Some surface cave development		
					0–40	Rose Limestone; Orbitulina texana	U confining	Fossil- Upper	Aquifer	MO, BU, FR, CV			
					80–150		Lower	Lower	Confining	MO, BU, FR			
					8–10	ed from Stein and Ozuna (1995). Porosity types - Fabric selective: IP. Interpartic		Lower evaporite	Aquifer	IP, MO, BU, BR			

Source: Clark, Golab, and Morris (2016); Cavern development modified from Stein and Ozuna (1995). Porosity types - Fabric selective: IP, Interparticle porosity; IG, Intergranular porosity; IC, Intercrystalline porosity; SH, shelter porosity; MO, moldic porosity; BU, burrowed porosity; FE, fenestral; BP, bedding plane porosity. Not fabric selective: FR, fracture porosity; CH, channel porosity; BR, breccia; VUG, vug porosity; CV, cave porosity; CV,

# ATTACHMENT C Site Geology

STONE OAK / CANYON GOLF NEC Geologic Assessment

Attachment C – Site Geology

**SUMMARY** 

The ±11.089-acre Stone Oak / Canyon Golf NEC site is located within Bexar County within the City of San

Antonio. It is located near the northeast corner of Stone Oak Pkwy. and Canyon Golf Rd.

Based on the results of the field survey conducted in accordance with Instructions for Geologists for

Geologic Assessments in the Edwards Aquifer Recharge/Transition Zones (TCEQ-0585 Instructions), no

naturally occurring sensitive features were identified on site. The overall potential for fluid migration to

the Edwards Aquifer for the site is low.

**SITE GEOLOGY** 

As observed through field evidence, the geologic formation which outcrops at the surface within the

subject site is the dolomitic (Kekd) is characterized as massively bedded, mudstone to grainstone,

crystalline limestone. Karst development in the Kekd is characterized by few small sinkholes and caves

developed as vertical shafts.

The predominant trend of faults in the vicinity of the site is approximately N45°E, based on faults identified

during the previous mapping of the area.

**FEATURE DESCRIPTIONS:** 

A description of the features observed onsite is provided below:

Feature S-1

Feature S-1 is a series of existing sewer lines. The sewer lines have been trenched through bedrock and

backfilled with a mix of fine and course fill material that may be more permeable than surrounding

undisturbed areas. Therefore, the probability of rapid infiltration is intermediate.

Feature S-2

Feature S-2 is a non-karst closed depression created by stream scour within intact limestone. Due to the

non-karst origin, the probability for rapid infiltration is low.

PAPE-DAWSON ENGINEERS

### STONE OAK / CANYON GOLF NEC Geologic Assessment

#### Feature S-3

Feature S-3 is a man-made non-karst closed depression within a raised berm. The depression appears to be a dry stock tank. Due to the non-karst origin, the probability of rapid infiltration is low.

#### Feature S-4

Feature S-4 is an intraformational fault within the Kek. It was identified by review of aerial photography and published maps. Due to the lack of evidence of enhanced permeability and the presence of fine-grained soil cover, the probability of rapid infiltration is low.

#### Feature S-5

Feature S-5 is a well that was identified on the Texas Water Development Board's Groundwater Database Viewer as State of Texas Well 6821702. The well casing was observed extending 1.5 feet above the ground surface, however the well appeared to be plugged as concrete was observed on the casing and up to the ground level within the casing. Water was observed pooled within the casing on top of the concrete. No plugging report was identified. Since water was observed pooled on top of the concrete within the well, the probability of rapid infiltration is low.

#### **REFERENCES**

Clark, A.K., Golab, J.A., and Morris, R.R., 2016, Geologic Framework and Hydrostratigraphy of the Edwards and Trinity Aquifers Within Northern Bexar and Comal Counties, Texas: U.S. Geological Survey Scientific Investigations Map 3366, scale 1:24,000, 20 p. pamphlet.

Nationwide Environmental Title Research, LLC. Historical Aerials, HistoricAerials.com. https://www.historicaerials.com/viewer, September 29, 2023.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. http://websoilsurvey.sc.egov.usda.gov/, September 29, 2023.

Stein, W.G., and Ozuna, G.B., 1995, Geologic framework and hydrogeologic characteristics of the Edwards Aquifer recharge zone, Bexar County, Texas: U.S. Geological Survey Water-Resources Investigations Report 95–4030, 8 p.

Texas Water Development Board, Wells in TWDB Groundwater Database Viewer, https://www3.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer, September 29, 2023.



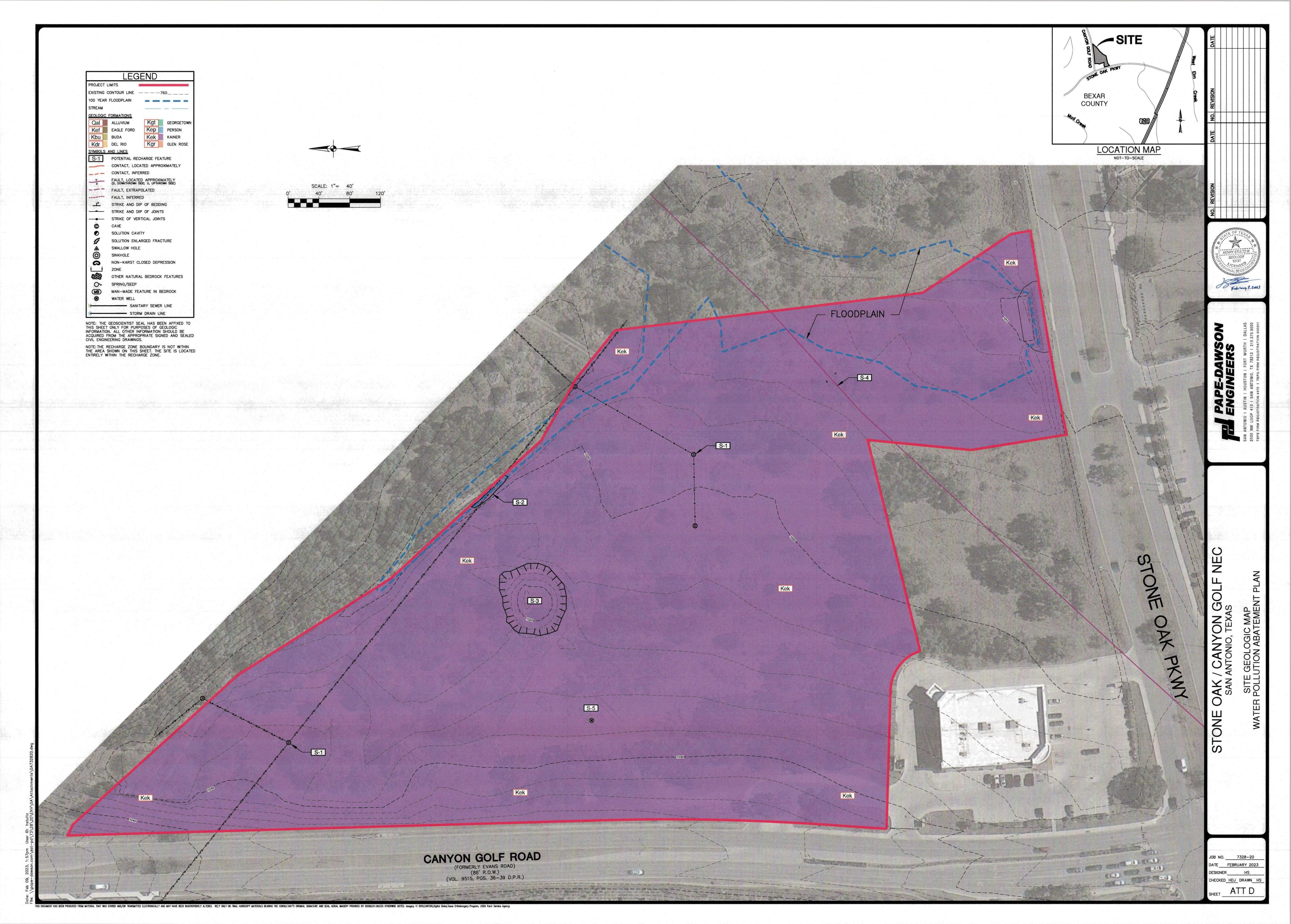
## STONE OAK / CANYON GOLF NEC Geologic Assessment

U.S. Geological Survey, National Water Information System: Mapper, https://maps.waterdata.usgs.gov/mapper/index.html, September 29, 2023.



# ATTACHMENT D Site Geologic Map(s)

S DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED ANDOR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANTS ORIGINAL SIGNATURE AND SEAL



# WATER POLLUTION ABATEMENT PLAN APPLICATION FORM (TCEQ0584)

# 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:

Populated Entity Information			
Regulated Entity Name: Golf Canyon/Stone Oak Parkway Retail			
Signature of Customer/Agent:			
Date:11/14/23			
Print Name of Customer/Agent: <u>Taylor G. Dawson, P.E.</u>			

#### Regulated Entity Information

L.	The type of project is:
	Residential: Number of Lots:
	Residential: Number of Living Unit Equivalents:
	☐ Industrial
	Other:

- 2. Total site acreage (size of property):11.118
- 3. Estimated projected population: N/A
- 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		÷ 43,560 =	
Parking		÷ 43,560 =	
Other paved surfaces		÷ 43,560 =	
Total Impervious Cover	N/A	÷ 43,560 =	N/A

Total Impervious Cover  $\underline{0}$  ÷ Total Acreage  $\underline{11.118}$  X 100 =  $\underline{0}$ % Impervious Cover

5.	Attachment A - Factors Affecting Surface Water Quality. A detailed description of all
	factors that could affect surface water and groundwater quality that addresses ultimate
	land use is attached.

6. Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

#### For Road Projects Only

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

7.	Type of project:
	TXDOT road project. County road or roads built to county specifications. City thoroughfare or roads to be dedicated to a municipality. Street or road providing access to private driveways.
8.	Type of pavement or road surface to be used:
	Concrete Asphaltic concrete pavement Other:
9.	Length of Right of Way (R.O.W.): feet.
	Width of R.O.W.: feet. $L \times W = Ft^2 \div 43,560 Ft^2/Acre = acres.$
10.	Length of pavement area: feet.
	Width of pavement area: feet. L x W = $Ft^2 \div 43,560 \ Ft^2/Acre = acres.$ Pavement area acres $\div$ 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.

TCEQ Executive Director. Modifica	ng roadways that do not require approval from the ations to existing roadways such as widening more than one-half (1/2) the width of one (1) existing the TCEQ.
Stormwater to be general	ted by the Proposed Project
volume (quantity) and character ( occur from the proposed project in quality and quantity are based on	racter of Stormwater. A detailed description of the quality) of the stormwater runoff which is expected to is attached. The estimates of stormwater runoff the area and type of impervious cover. Include the oth pre-construction and post-construction conditions
Wastewater to be genera	ted by the Proposed Project
14. The character and volume of wastew	ater is shown below:
% Domestic % Industrial % Commingled TOTAL gallons/day <u>N/A</u>	Gallons/day Gallons/day Gallons/day
15. Wastewater will be disposed of by:	
On-Site Sewage Facility (OSSF/Sep	otic Tank):
will be used to treat and disponing authority's (authorize the land is suitable for the use the requirements for on-site serial relating to On-site Sewage Face Each lot in this project/develosize. The system will be desig	ter from Authorized Agent. An on-site sewage facility ose of the wastewater from this site. The appropriate ed agent) written approval is attached. It states that e of private sewage facilities and will meet or exceed sewage facilities as specified under 30 TAC Chapter 285 cilities.  Ipment is at least one (1) acre (43,560 square feet) in ned by a licensed professional engineer or registered censed installer in compliance with 30 TAC Chapter
Sewage Collection System (Sewer	Lines):
to an existing SCS.	ne wastewater generating facilities will be connected ne wastewater generating facilities will be connected
<ul><li>The SCS was previously submi</li><li>The SCS was submitted with the SCS will be submitted at a be installed prior to Executive</li></ul>	his application. I later date. The owner is aware that the SCS may not

	The sewage collection system will convey the wastewater to the (name) Treatment Plant. The treatment facility is:
	<ul><li>Existing.</li><li>Proposed.</li></ul>
16.	. All private service laterals will be inspected as required in 30 TAC §213.5.
Si	te Plan Requirements
Ite	ms 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" = <u>40</u> '.
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): <a href="DFIRM">DFIRM</a> (Digital Flood Insurance Rate Map for Bexar County, Texas and Incorporated Areas) Panel No. 48029C0140G, Dated 09/29/2010
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)
	<ul> <li>The wells are not in use and have been properly abandoned.</li> <li>The wells are not in use and will be properly abandoned.</li> <li>The wells are in use and comply with 16 TAC §76.</li> </ul>
	igspace 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:
	<ul> <li>All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.</li> <li>No sensitive geologic or manmade features were identified in the Geologic</li> </ul>
	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).
$\boxtimes$	N/A
27. 🗌	Locations where stormwater discharges to surface water or sensitive features are to occur.
$\boxtimes$	There will be no discharges to surface water or sensitive features.
28. 🖂	Legal boundaries of the site are shown.
Adm	inistrative Information
29. 🔀	Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
30. 🖂	Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

# **ATTACHMENT A**

#### **Attachment A - Factors Affecting Water Quality**

Potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the site during construction include:

- Soil erosion due to the clearing of the site;
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings;
- Hydrocarbons from asphalt paving operations;
- Miscellaneous trash and litter from construction workers and material wrappings;
- Concrete truck washout.
- Potential overflow/spills from portable toilets

Potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the site after development include:

- Oil, grease, fuel and hydraulic fluid contamination from vehicle drippings;
- Dirt and dust which may fall off vehicles; and
- Miscellaneous trash and litter.



# **ATTACHMENT B**

#### <u>Attachment B – Volume and Character of Storm</u>water

Stormwater runoff will increase as a result of this development. For a 25-year storm event, the overall project will generate approximately 22.07 cfs. The runoff coefficient for the site changes from approximately 0.47 before development to 0.47 after development. Values are based on the Rational Method using runoff coefficients per the City of San Antonio Unified Development Code.



# 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: Taylor G. Dawson, P.E.

Date: 11/14/23

Signature of Customer/Agent:

Regulated Entity Name: Golf Canyon/Stone Oak Parkway 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: <u>construction</u> <u>staging area</u>

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.

	<ul> <li>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.</li> <li>Aboveground storage tanks with a cumulative storage capacity of 500 gallons or</li> </ul>
	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.
S	equence 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.
	<ul> <li>For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.</li> <li>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.</li> </ul>
ŝ.	Name the receiving water(s) at or near the site which will be disturbed or which will

#### Temporary Best Management Practices (TBMPs)

receive discharges from disturbed areas of the project: Salado Creek

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.	<b>Attachment F - Structural Practices</b> . 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.	<b>Attachment G - Drainage Area Map</b> . 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.
$\boxtimes$	N/A
12. 🔀	<b>Attachment I - Inspection and Maintenance for BMPs.</b> 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
mulchi	les: establishment of temporary vegetation, establishment of permanent vegetation, ng, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or

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

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

#### **Administrative Information**

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

# **ATTACHMENT A**

#### Attachment A – Spill Response Actions

In the event of an accidental leak or spill:

- Spill must be contained and cleaned up immediately.
- Spills will not be merely buried or washed with water.
- Contractor shall take action to contain spill. Contractor may use sand or other absorbent material stockpiled on site to absorb spill. Absorbent material should be spread over the spill area to absorb the spilled product.
- In the event of an uncontained discharge the contractor shall utilize onsite equipment to construct berms downgradient of the spill with sand or other absorbent material to contain and absorb the spilled product.
- Spill containment/absorbent materials along with impacted media must be collected and stored in such a way so as not to continue to affect additional media (soil/water). Once the spill has been contained, collected material should be placed on poly or plastic sheeting until removed from the site. The impacted media and cleanup materials should be covered with plastic sheeting and the edges weighed down with paving bricks or other similarly dense objects as the material is being accumulated. This will prevent the impacted media and cleanup materials from becoming airborne in windy conditions or impacting runoff during a rain event. The stockpiled materials should not be located within an area of concentrated runoff such as along a curb line or within a swale.
- Contaminated soils and cleanup materials will be sampled for waste characterization. When the
  analysis results are known the contaminated soils and cleanup materials will be removed from the
  site and disposed in a permitted landfill in accordance with applicable regulations.
- The contractor will be required to notify the owner, who will in turn contact TCEQ to notify them in the event of a significant hazardous/reportable quantity spill. Additional notifications as required by the type and amount of spill will be conducted by owner or owner's representative.

In the event of an accidental significant or hazardous spill:

The contractor will be required to report significant or hazardous spills in reportable quantities to:

- 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. <a href="https://www.tceq.texas.gov/response/spills/spill\_rq.html">https://www.tceq.texas.gov/response/spills/spill\_rq.html</a>
- For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.



- Notification should first be made by telephone and followed up with a written report.
- The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction
  personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at
  the job site.
- Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.
- Contaminated soils will be sampled for waste characterization. When the analysis results are known the contaminated soils will be removed from the site and disposed in a permitted landfill in accordance with applicable regulations.

Additional guidance can be obtained from TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) Section 1.4.16. Contractor shall review this section.



# **ATTACHMENT B**

#### Attachment B - Potential Sources of Contamination

Other potential sources of contamination during construction include:

Potential Source Preventative Measure

- Asphalt products used on this project.
- After placement of asphalt, emulsion or coatings, the contractor will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt product curing time, the contractor will maintain standby personnel and equipment to contain any asphalt wash-off should an unexpected rain occur. The contractor will be instructed not to place asphalt products on the ground within 48 hours of a forecasted rain.
- Potential Source •
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle dripping.

Preventative Measure

- Vehicle maintenance when possible will be performed within the construction staging area.
- Construction vehicles and equipment shall be checked regularly for leaks and repaired immediately.
- Potential Source •
- Accidental leaks or spills of oil, petroleum products and substances listed under 40 CFR parts 110, 117, and 302 used or stored temporarily on site.

Preventative Measure

- Contractor to incorporate into regular safety meetings, a discussion of spill prevention and appropriate disposal procedures.
- Contractor's superintendent or representative overseer shall enforce proper spill prevention and control measures.
- Hazardous materials and wastes shall be stored in covered containers and protected from vandalism.
- A stockpile of spill cleanup materials shall be stored on site where it will be readily accessible.
- Potential Source •
- Miscellaneous trash and litter from construction workers and material wrappings.

Preventive Measure

- Trash containers will be placed throughout the site to encourage proper trash disposal.
- Potential Source Preventive Measure
- Construction debris.
  - 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 • Preventative Measure

Spills/Overflow of waste from portable toilets

- Portable toilets will be placed away from high traffic vehicular areas and storm drain inlets.
- Portable toilets will be placed on a level ground surface.
- Portable toilets will be inspected regularly for leaks and will be serviced and sanitized at time intervals that will maintain sanitary conditions.



# **ATTACHMENT C**

#### <u>Attachment C – Sequence of Major Activities</u>

The sequence of major activities which disturb soil during construction on this site will be divided into two stages. The first is site preparation that will include installation of TBMPs, clearing and grubbing of vegetation where applicable, and mass grading. This will disturb approximately 11.118 acres. The second is erection of the retaining wall, relocation of existing utilities, and site cleanup. This will disturb approximately 11.118 acres.



# **ATTACHMENT D**

#### Attachment D – Temporary Best Management Practices and Measures

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.

Upgradient water will cross the site from undeveloped property adjacent to the site and be routed around the site via grading and the proposed retaining wall. All TBMPs are adequate for the drainage areas they serve.

b. 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.

Site preparation, which is the initiation of all activity on the project, will disturb the largest amount of soil. Therefore, before any of this work can begin, the clearing and grading contractor will be responsible for the installation of all on-site control measures. The methodology for pollution prevention of on-site stormwater will include: (1) erection of silt fences along the downgradient boundary of construction activities for temporary erosion and sedimentation controls, (2) installation of rock berms with silt fencing downgradient from areas of concentrated stormwater flow for temporary erosion control, (3) installation of stabilized construction entrance/exit(s) to reduce the dispersion of sediment from the site, and (4) installation of construction staging area(s).

Prior to the initiation of construction, all previously installed control measures will be repaired or reestablished for their designed or intended purpose. This work, which is the remainder of all activity on the project, may also disturb additional soil. The construction contractor will be responsible for the installation of all remaining on-site control measures that includes installation of the concrete truck washout pit(s), as construction phasing warrants.

Temporary measures are intended to provide a method of slowing the flow of runoff from the construction site in order to allow sediment and suspended solids to settle out of the runoff. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features.

c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

There are no naturally occurring sensitive features observed within the project limits. Any surface waters within the project limits will be protected by the proposed TBMPs within this plan. Temporary BMPs utilized are adequate for the drainage areas served.

Temporary measures are intended to provide a method of slowing the flow of runoff from the construction site in order to allow sediment and suspended solids to settle out of the runoff. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features.



d. 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.

There are no naturally occurring sensitive features observed within the project limits. Any surface waters within the project limits will be protected by the proposed TBMPs within this plan. Temporary BMPs utilized are adequate for the drainage areas served.

BMP measures utilized in this plan are intended to allow stormwater to continue downstream after passing through the BMPs. This will allow stormwater runoff to continue downgradient to streams or features that may exist downstream of the site.



# **ATTACHMENT F**

#### <u>Attachment F – Structural Practices</u>

The following structural measures will be installed prior to the initiation of site preparation activities:

- Erection of silt fences along the downgradient boundary of construction activities and rock berms with silt fence for secondary protection, as located on Exhibit 1 and illustrated in Exhibit 2.
- Installation of stabilized construction entrance/exit(s) and construction staging area(s), as located on Exhibit 1, and illustrated on Exhibit 2.

The following structural measures will be installed at the initiation of construction activities or as appropriate based on the construction sequencing:

• Installation of concrete truck washout pit(s), as required and located on Exhibit 1 and illustrated on Exhibit 2.



# **ATTACHMENT G**

#### Attachment G - Drainage Area Map

No more than ten (10) acres will be disturbed within a common drainage area at one time as the site is comprised of multiple sub-drainage areas. All TBMPs utilized are adequate for the drainage areas served.



# **ATTACHMENT I**

#### **INSPECTIONS**

Designated and qualified person(s) shall inspect Pollution Control Measures weekly and within 24 hours after a storm event. An inspection report that summarizes the scope of the inspection, names and qualifications of personnel conducting the inspection, date of the inspection, major observations, and actions taken as a result of the inspection shall be recorded and maintained as part of Storm Water TPDES data for a period of three years after the Notice of Termination (NOT) has been filed. A copy of the Inspection Report Form is provided in this Storm Water Pollution Prevention Plan.

As a minimum, the inspector shall observe: (1) significant disturbed areas for evidence of erosion, (2) storage areas for evidence of leakage from the exposed stored materials, (3) structural controls (rock berm outlets, silt fences, drainage swales, etc.) for evidence of failure or excess siltation (over 6 inches deep), (4) vehicle exit point for evidence of off-site sediment tracking, (5) vehicle storage areas for signs of leaking equipment or spills, (6) concrete truck rinse-out pit for signs of potential failure, (7) embankment, spillways, and outlet of sediment basin (where applicable) for erosion damage, and (8) sediment basins (where applicable) for evidence that basin has accumulated 50% of its volume in silt. Deficiencies noted during the inspection will be corrected and documented within seven calendar days following the inspection or before the next anticipated storm event if practicable.

Contractor shall review Sections 1.3 and 1.4 of TCEQ's Technical Guidance Manual for additional BMP inspection and maintenance requirements.

Pollution	ë ë	Corrective Action Required	
Prevention	Inspected Compliance		D-4-
Measure	speci mpli	Description	Date Completed
	S II	(use additional sheet if necessary)	Completed
<b>Best Management Practices</b>			
Natural vegetation buffer strips			
Temporary vegetation			
Permanent vegetation			
Sediment control basin			
Silt fences			
Rock berms			
Gravel filter bags			
Drain inlet protection			
Other structural controls			
Vehicle exits (off-site tracking)			
Material storage areas (leakage)			
Equipment areas (leaks, spills)			
Concrete washout pit (leaks, failure)			
General site cleanliness			
Trash receptacles			
Evidence of Erosion			
Site preparation			
Roadway or parking lot construction			
Utility construction			
Drainage construction			
Building construction			
Major Observations			
Sediment discharges from site			
BMPs requiring maintenance			
BMPs requiring modification			
Additional BMPs required			
A brief statement describing the qualifications of the inspector is included in this SWP3.  "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 gather and evaluate 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."  "I further certify I am an authorized signatory in accordance with the provisions of 30 TAC §305.128."			
Inspector's Name In	spector	's Signature Date	

#### **PROJECT MILESTONE DATES**

Date when major site grading activities begin: **Construction Activity** Date Installation of BMPs Dates when construction activities temporarily or permanently cease on all or a portion of the project: **Construction Activity** <u>Date</u> Dates when stabilization measures are initiated: **Stabilization Activity** Date

Removal of BMPs

# **ATTACHMENT J**

#### Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

Interim on-site stabilization measures, which are continuous, will include minimizing soil disturbances by exposing the smallest practical area of land required for the shortest period of time and maximizing use of natural vegetation. As soon as practical, all disturbed soil will be stabilized as per project specifications in accordance with pages 1-35 to 1-60 of TCEQ's Technical Guidance Manual (TGM) RG-348 (2005). Mulching, netting, erosion blankets and seeding are acceptable.

Stabilization measures will be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and except as provided below, will be initiated no more than fourteen (14) days after the construction activity in that portion of the site has temporarily or permanently ceased. 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 site. In areas experiencing droughts where the initiation of stabilization measures by the 14<sup>th</sup> day after construction activity has temporarily or permanently ceased is precluded by seasonably arid conditions, stabilization measures must be initiated as soon as practicable.

# PERMANENT STORMWATER SECTION (TCEQ-0600)

## **Permanent Stormwater Section**

**Texas Commission on Environmental Quality** 

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

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

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

### Signature

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

Pri	nt Name of Customer/Agent: <u>Taylor G. Dawson, P.E.</u>
Da	te: <u>11/14/23</u>
Sig	gnature of Customer/Agent
Re	gulated Entity Name: Golf Canyon/Stone Oak Parkway Retail
P	ermanent Best Management Practices (BMPs)
	rmanent best management practices and measures that will be used during and after nstruction 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.
	<ul> <li>□ The site will be used for low density single-family residential development and has 20% or less impervious cover.</li> <li>□ The site will be used for low density single-family residential development but has more than 20% impervious cover.</li> <li>□ The site will not be used for low density single-family residential development.</li> </ul>
5.	The executive director may waive the requirement for other permanent BMPs for multifamily 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.
	<ul> <li>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.</li> <li>□ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.</li> <li>□ The site will not be used for multi-family residential developments, schools, or small business sites.</li> </ul>
6	

	<ul> <li>☑ 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.</li> <li>☑ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.</li> <li>☑ 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.</li> </ul>
7.	Attachment C - BMPs for On-site Stormwater.
	<ul> <li>□ 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.</li> <li>☑ 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.</li> </ul>
8.	<b>Attachment D - BMPs for Surface Streams</b> . 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.
	<ul> <li>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.</li> <li>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.</li> </ul>
10.	<b>Attachment F - Construction Plans</b> . 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:
	<ul> <li>Design calculations (TSS removal calculations)</li> <li>TCEQ construction notes</li> <li>All geologic features</li> <li>All proposed structural BMP(s) plans and specifications</li> </ul>
	N/A

insp	chment G - Inspection, Maintenance, Repair and Retrofit Plan. A plan for the ection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and sures is attached. The plan includes all of the following:
	Prepared and certified by the engineer designing the permanent BMPs and measures
☐ F	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	
reco	chment H - Pilot-Scale Field Testing Plan. Pilot studies for BMPs that are not gnized by the Executive Director require prior approval from the TCEQ. A plan for t-scale field testing is attached.
⊠ N/A	
of th and and crea by tl	chment I -Measures for Minimizing Surface Stream Contamination. A description ne measures that will be used to avoid or minimize surface stream contamination changes in the way in which water enters a stream as a result of the construction development is attached. The measures address increased stream flashing, the tion of stronger flows and in-stream velocities, and other in-stream effects caused the regulated activity, which increase erosion that results in water quality radation.
☐ N/A	
Respon	sibility for Maintenance of Permanent BMP(s)
' <del>-</del>	ity for maintenance of best management practices and measures after n is complete.
until entii own own resp	applicant is responsible for maintaining the permanent BMPs after construction I such time as the maintenance obligation is either assumed in writing by another ty having ownership or control of the property (such as without limitation, an er's association, a new property owner or lessee, a district, or municipality) or the ership of the property is transferred to the entity. Such entity shall then be onsible for maintenance until another entity assumes such obligations in writing or ership is transferred.
⊠ N/A	
appr mult or a	opy of the transfer of responsibility must be filed with the executive director at the ropriate regional office within 30 days of the transfer if the site is for use as a tiple single-family residential development, a multi-family residential development, non-residential development such as commercial, industrial, institutional, schools, other sites where regulated activities occur.
⊠ N/A	

# **ATTACHMENT B**

# GOLF CANYON/STONE OAK PARKWAY RETAIL Water Pollution Abatement Plan

#### Attachment B – BMPs for Upgradient Stormwater

Upgradient stormwater will cross the site from the adjacent undeveloped site at the northeast. This stormwater will be rerouted around the site via proposed grading and retaining wall. No impervious cover is proposed for the site, therefore no PBMPs are required.



# **ATTACHMENT C**

# **GOLF CANYON/STONE OAK PARKWAY RETAIL Water Pollution Abatement Plan**

#### <u>Attachment C – BMPs for On-Site Stormwater</u>

No impervious cover is proposed for the site therefore no PBMPs are required.



# **ATTACHMENT D**

# GOLF CANYON/STONE OAK PARKWAY RETAIL Water Pollution Abatement Plan

#### <u>Attachment D – BMPs for Surface Streams</u>

No impervious cover is proposed for the site therefore no PBMPs are required.



# **ATTACHMENT F**

# **GOLF CANYON/STONE OAK PARKWAY RETAIL Water Pollution Abatement Plan**

#### <u>Attachment F – Construction Plans</u>

Please refer to the Exhibits Section of this application for the Water Pollution Abatement Site Plans.



# **ATTACHMENT I**

# GOLF CANYON/STONE OAK PARKWAY RETAIL Water Pollution Abatement Plan

#### <u>Attachment I – Measures for Minimizing Surface Stream Contamination</u>

Any points where discharge from the site is concentrated and erosive velocities exist will include appropriately sized energy dissipators to reduce velocities to non-erosive levels.



# 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

ľ	Miguel Serra	
*	Print Name	
0.000	Owner	
	Title - Owner/President/Other	
of	Stone Oak 11 Acres, LLC Corporation/Partnership/Entity Name	* #***
have authorized	Pape-Dawson Engineers, Inc. Print Name of Agent/Engineer	
of	Pape-Dawson Engineers, Inc. Print Name of Firm	

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

#### I also understand that:

- 1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
- 2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
- 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:

Notary ID 130072954

MY COMMISSION EXPIRES: 8/29/2024

# APPLICATION FEE FORM (TCEQ-0574)

# **Application Fee Form**

#### **Texas Commission on Environmental Quality** Name of Proposed Regulated Entity: Canyon Golf/Stone Oak Parkway Retail Regulated Entity Location: NE Corner of Canyon Golf and Stone Oak Pkwy intersection Name of Customer: Stone Oak 11 Acres, LLC Contact Person: Miguel Serra Phone: (210) 265-1773 Customer Reference Number (if issued):CN Regulated Entity Reference Number (if issued):RN **Austin Regional Office (3373)** Havs 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 Overnight Delivery to: TCEQ - Cashier Mailed to: TCEQ - Cashier **Revenues Section** 12100 Park 35 Circle Mail Code 214 Building A, 3rd Floor P.O. Box 13088 Austin, TX 78753 (512)239-0357 Austin, TX 78711-3088 Site Location (Check All That Apply): Recharge Zone Contributing Zone Transition Zone

Type of Plan	Size	Fee Due
Water Pollution Abatement Plan, Contributing Zone		
Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone		
Plan: Multiple Single Family Residential and Parks	11.118 Acres	\$ 6,500
Water Pollution Abatement Plan, Contributing Zone		
Plan: Non-residential	Acres	\$
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature:	

Date:	

# **Application Fee Schedule**

**Texas Commission on Environmental Quality** 

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

#### Water Pollution Abatement Plans and Modifications

**Contributing Zone Plans and Modifications** 

	Project Area in	
Project	Acres	Fee
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,	< 1	\$3,000
institutional, multi-family residential, schools, and	1 < 5	\$4,000
other sites where regulated activities will occur)	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$10,000

Organized Sewage Collection Systems and Modifications

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

# Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

**Exception Requests** 

Project	Fee
Exception Request	\$500

**Extension of Time Requests** 

Project	Fee
Extension of Time Request	\$150

# CORE DATA FORM (TCEQ-10400)



# **TCEQ Core Data Form**

TCEQ Use Only

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

### **SECTION I: General Information**

		sion (If other is cl	•		•	•	,	ith the n	rogram a	ennlicatio	n l		
<ul> <li>New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)</li> <li>□ Renewal (Core Data Form should be submitted with the renewal form)</li> <li>□ Other</li> </ul>													
2. Developed Forth, Defended Number (History)						fissuad)							
CN  Follow this link to search for CN or RN numbers in Central Registry**  CN  Central Registry**  CN  CN  CN  RN  RN							i issueuj						
SECTION	II: Cu	stomer Info	ormation_										
4. General C	4. General Customer Information 5. Effective Date for Customer Information Updates (mm/dd/yyyy)												
		•										active with the	
		f State (SOS) (	•	-			-						
6. Customer	Legal Nai	me (If an individual,	, print last name f	first: eg:	: Doe, John)		<u>If</u>	new Cu	stomer, ei	nter previ	ious Custome	er below:	
Stone Oak	11 Acr	es, LLC											
7. TX SOS/CI	PA Filing	Number	8. TX State Ta	ax ID (1	11 digits)		9.	Federa	al Tax ID	(9 digits)	10. DUNS	S Number (if applicable)	
08045389	60		320842844	499			9	920288436					
11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited													
Government:	☐ City ☐	County 🔲 Federal 🗀	] State ☐ Other		☐ Sole	Proprie	torship		Other:				
<b>12. Number  ⊙</b> 0-20	of Employ 21-100	/ees	<u></u>	<u></u>	01 and hig	her	1; [	3. Indep	endently	y Owned	l and Opera	ted?	
14. Custome	r Role (Pr	oposed or Actual) –	- as it relates to th				n this fo	m. Pleas	se check c	one of the	following		
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following         □ Owner       □ Operator       □ Owner & Operator         □ Occupational Licensee       □ Responsible Party       □ Voluntary Cleanup Applicant       □ Other:													
	15555	Tradesman I	Or, Ste 400										
15. Mailing Address:													
City San Antonio State TX					ZIP	78249			ZIP + 4				
16. Country I	16. Country Mailing Information (if outside USA)  17. E-Mail Address (if applicable)												
crosstimber@me.com													
18. Telephone Number 19. Ex				19. Ext	ension or	or Code 20.			20. Fax	20. Fax Number (if applicable)			
( 210 ) 265-1773													
SECTION III: Regulated Entity Information													
21. General Regulated Entity Information (If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)													
New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information													
The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal													
of organizational endings such as Inc, LP, or LLC).  22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)													
Golf Canyon/Stone Oak Parkway Retail													

TCEQ-10400 (02/21) Page 1 of 2

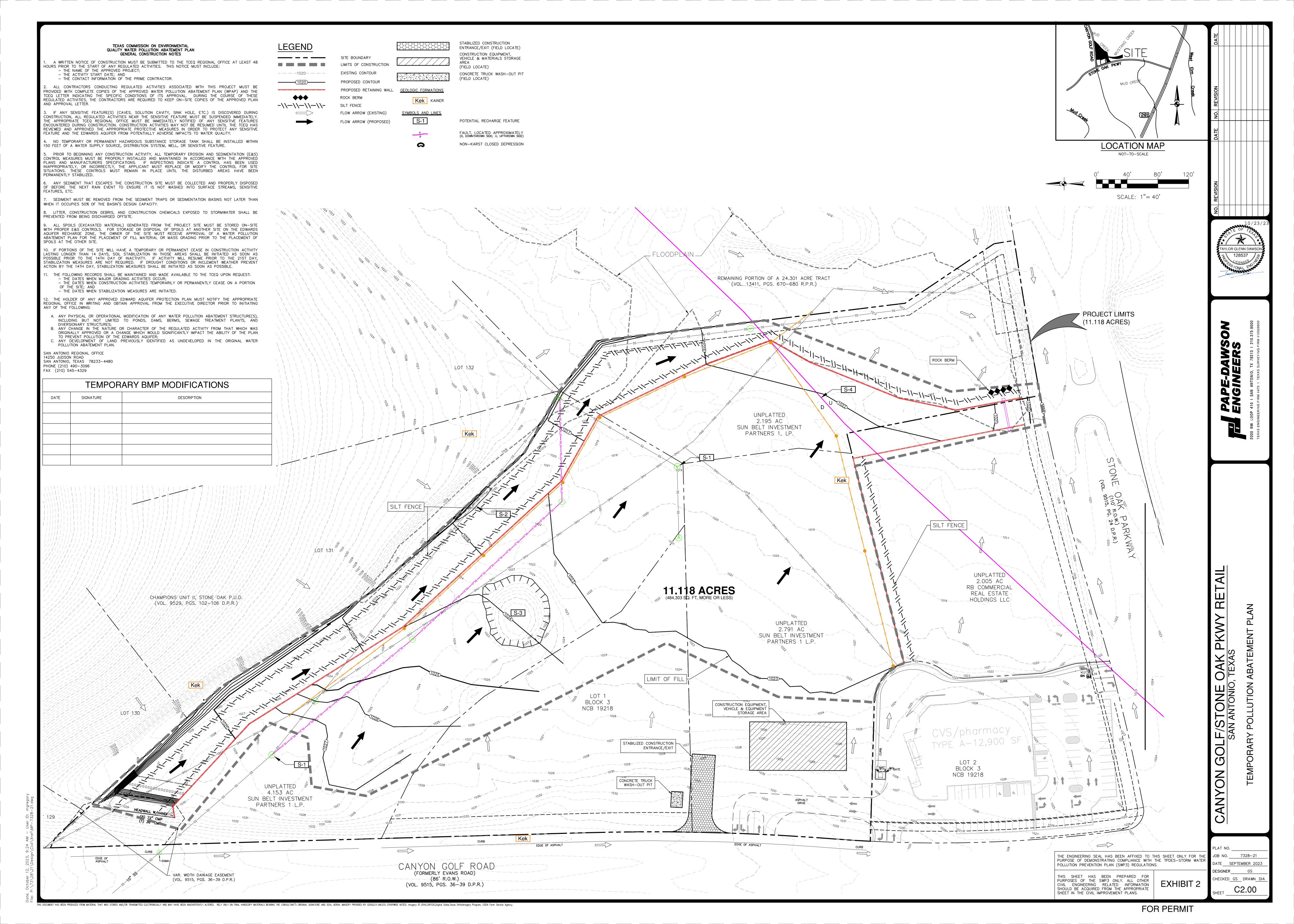
23. Street Address of										
the Regulated Entity:										
(No PO Boxes)	City		State		ZIP		ZIP +	4		
24. County	Bexar									
	Е	nter Physical L	ocation Description	on if no stre	eet address	is provided.				
25. Description to Physical Location:	Northeast corner of Canyon Golf and Stone Oak Parkway intersection									
26. Nearest City						State		Nearest ZIP	Code	
San Antonio					ŗ	ГХ		78258		
27. Latitude (N) In Decin	nal:	29.645919	N	28. Lo	ongitude (W	) In Decimal:	-98.47	9716 W		
Degrees	Minutes		Seconds	Degree		Minutes		Seconds		
29		38	45.3		-98		28	4	7.0	
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)										
1794	16	23		238910	,	237				
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)										
Mass grading for fu	ture com	mercial dev	elopment							
	15555 Tradesman Dr, Ste 400									
34. Mailing										
Address:	City	San Antoni	o State	TX	ZIP	78249	ZIP -	+ 4		
35. E-Mail Address:		1	-	cross	timber@me	e.org		•		
36. Telephone Number 37. Extension or Code 38. Fax Number (if applicable)										
( 210 ) 2	65-1773					(	) -			
9. TCEQ Programs and ID orm. See the Core Data Form i				mits/registrat	ion numbers t	hat will be affected	by the upo	lates submitted	d on this	
☐ Dam Safety ☐ Districts		S		fer	er Emissions In		ventory Air		us Waste	
☐ Municipal Solid Waste     ☐ New Source Review Air     ☐ OSSF     ☐ Petroleum Storage Tank     ☐ PWS										
		NA/ 1			Tires					
☐ Sludge ☐ Storm Water ☐ Title V Air							☐ Used Oil			
☐ Voluntary Cleanup ☐ Waste Water			☐ Wastewater A	griculture	☐ Water R	ights	Other:			
SECTION IV: Pre	parer Ir	<u>nformation</u>	<u>l</u>							
40. Name: Jean Autrey, P.E., CESSWI 41. T					. Title: Project Manager					
Name: Jean Autrey,	P.E., CE	55 111	<u> </u>		42. Telephone Number 43. Ext./Code 44. Fax Number 45. E-Mail Address					
Name:			x Number	45. E-Ma	ail Address					
42. Telephone Number		le 44. Fa	x Number 0) 375-9010			lawson.com				
Name:	13. Ext./Cod	de 44. Fa				lawson.com				

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:	Pape-Dawson Engineers	ice President			
Name (In Print):	Taylor G. Dawson, P.E.	Phone:	( 210 ) 375- <b>9000</b>		
Signature:				Date:	11/14/23

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# **EXHIBITS**



# SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT

#### MATERIALS THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.

8-INCHES. 3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD2, A MULLEN BURST RATING OF 140 LB/IN2, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE

2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF

4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4-INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OF

# INSTALLATION

SEDIMENT TRAP OR BASIN.

1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.

THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.

3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG. 4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%. CONSTRUCT A RIDGE 6-INCHES TO 8-INCHES HIGH WITH 3:1 (H: V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT

RUNOFF AWAY FROM THE PUBLIC ROAD. 5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.

6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE. 7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A

8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD

# GEOTEXTILE FABRIC TO STABILIZE FOUNDATION SECTION "A-A" OF A

# CONSTRUCTION ENTRANCE/EXIT

# COMMON TROUBLE POINTS

1. INADEQUATE RUNOFF CONTROL-SEDIMENT WASHES ONTO PUBLIC ROAD. . STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY

CONDITION AS STONE IS PRESSED INTO SOIL. 5. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC-EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.

4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING

TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD. 5. UNSTABLE FOUNDATION - USE GEOTEXTILE FABRIC UNDER PAD AND/OR IMPROVE FOUNDATION DRAINAGE.

# INSPECTION AND MAINTENANCE GUIDELINES THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION. WHICH WILL

PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

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

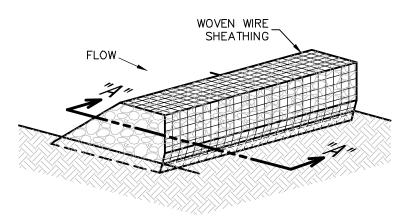
PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. 4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN

5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

INCORRECT

SOD INSTALLATION

USE PEGS OR STAPLES TO FASTEN SOD



ISOMETRIC PLAN VIEW

#### **MATERIALS ROCK BERMS**

THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT—LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE. AS SUCH, ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS (DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING BED LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

## INSPECTION AND MAINTENANCE GUIDELINES . 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

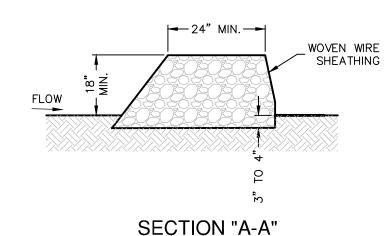
AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT

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.



THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT

2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE

## INSTALLATION

A HEIGHT NOT LESS THAN 18".

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH

2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER. 3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO

4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES. AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON. 5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.

6. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE

AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4

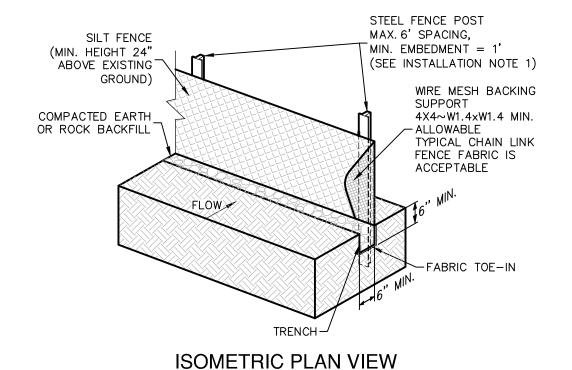
## INCHES DEEP TO PREVENT FAILURE OF THE CONTROL. COMMON TROUBLE POINTS

. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).

2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).

# **ROCK BERM DETAIL**

NOT-TO-SCALE



# STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL NOT-TO-SCALE

SHOOTS OR GRASS BLADES.

GRASS SHOULD BE GREEN AND

HEALTHY; MOWED AT A 2"-3"

— THATCH- GRASS CLIPPINGS AND

DEAD LEAVES, UP TO 1/2" THICK.

# LAY SOD IN A STAGGERED PATTERN. BUTT

THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.

 ANGLED FNDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED

LAY SOD ACROSS THE DIRECTION OF FLOW

-<u>ROOT ZONE</u>— SOIL AND ROOTS. SHOULD BE 1/2"-3/4" THICK, WITH DENSE ROOT MAT FOR STRENGTH.

APPEARANCE OF GOOD SOD

1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE

2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.

3. MOW WHEN THE SOD IS ESTABLISHED - IN 2-3 WEEKS. SET THE MOWER HIGH (2"-3").

#### FIRMLY - AT THE ENDS OF STRIPS AND IN THE CENTER, OR EVERY 3-4 FEET IF THE STRIPS ARE LONG. WHEN READY TO MOW. DRIVE PEGS OR STAPLES FLUSH IN CRITICAL AREAS, SECURE SOD WITH THE GROUND. WITH NETTING, USE STAPLES.

**MATERIALS** 1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH (± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE SHOOT GROWTH AND THATCH.

2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%. IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE. STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO

SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION. 4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

# SITE PREPARATION

PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.

THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL

INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS. . FERTILIZE ACCORDING TO SOIL TESTS. FERTILIZER NEEDS CAN BE DETERMINED BY A SOIL TESTING LABORATORY OR REGIONAL RECOMMENDATIONS CAN BE MADE BY COUNTY AGRICULTURAL EXTENSION AGENTS. FERTILIZE

# SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 3 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE

# INSTALLATION IN CHANNELS

SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS TIGHTLY (SEE FIGURE ABOVE).

2. AFTER ROLLING OR TAMPING, SOD SHOULD BE PEGGED OR STAPLED TO RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL

# GENERAL INSTALLATION (VA. DEPT. OF CONSERVATION, 1992

SOD SHOULD NOT BE CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER. SOD ALSO SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN. 2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHOULD BE LIGHTLY

REDUCE ROOT BURNING AND DIEBACK. FIRST ROW OF SOD SHOULD BE LAID IN A STRAIGHT LINE WITH

SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH OTHER. LATERAL JOINTS SHOULD BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHOULD BE EXERCISED TO ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS (SEE FIGURE ABOVE).

4. ON SLOPES 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM SOD SHOULD BE LAID WITH STAGGERED JOINTS AND SECURED BY STAPLING OF OTHER APPROVED METHODS. SOD SHOULD BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON CONTOUR). 5. AS SODDING OF CLEARLY DEFINED AREAS IS COMPLETED, SOD SHOULD BE

ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD ROLLED OR TAMPED TO PROVIDE FIRM CONTACT BETWEEN ROOTS AND SOIL. 6. AFTER ROLLING, SOD SHOULD BE IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE SOD PAD AND THE SOIL 4 INCHES BELOW THE SOD IS

UNTIL SUCH TIME A GOOD ROOT SYSTEM BECOMES DEVELOPED, IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHOULD BE PERFORMED AS 

> 8. THE FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FIRMLY ROOTED, USUALLY 2-3 WEEKS. NOT MORE THAN ONE THIRD OF THE GRASS LEAF SHOULD BE REMOVED AT ANY ONE CUTTING.

### INSPECTION AND MAINTENANCE GUIDELINES . SOD SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.

IS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGL® UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agenc

DAMAGE FROM STORMS OR NORMAL CONSTRUCTION ACTIVITIES SUCH AS TIRE RUTS OR DISTURBANCE OF SWALE STABILIZATION SHOULD BE REPAIRED AS SOON AS PRACTICAL.

# SOD INSTALLATION DETAIL

# SILT FENCE

STAPLE

A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE. WHEN PROPERLY USED, SILT FENCES CAN BE HIGHLY EFFECTIVE AT CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO POND, ALLOWING HEAVIER SOLIDS TO SETTLE OUT. IF NOT PROPERLY INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER-BORN 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.

I. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.

. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS

3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.

2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.

3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE

4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE

6. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

#### COMMON TROUBLE POINTS FENCE NOT INSTALLED ALONG THE CONTOUR CAUSING WATER TO CONCENTRATE AND FLOW OVER THE FENCE.

2. FABRIC NOT SEATED SECURELY TO GROUND (RUNOFF PASSING UNDER

FENCE). 3. FENCE NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING

4. FENCE TREATING TOO LARGE AN AREA, OR EXCESSIVE CHANNEL FLOW (RUNOFF OVERTOPS OR COLLAPSES FENCE).

#### INSPECTION AND MAINTENANCE GUIDELINES 1. INSPECT ALL FENCING WEEKLY, AND AFTER RAINFALL.

# 2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.

ENDS OF FABRIC MEET

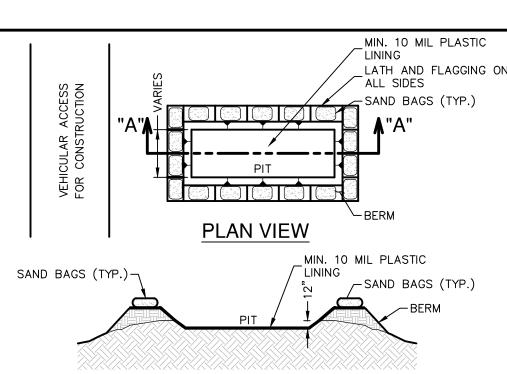
3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

4. REPLACE OR REPAIR 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.

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.

# SILT FENCE DETAIL

NOT-TO-SCALE



#### **GENERAL NOTES** . DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.

. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC. . WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.

LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES,

SECTION "A-A

STORM DRAINS, OPEN DITCHES OR WATER BODIES. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

### PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL

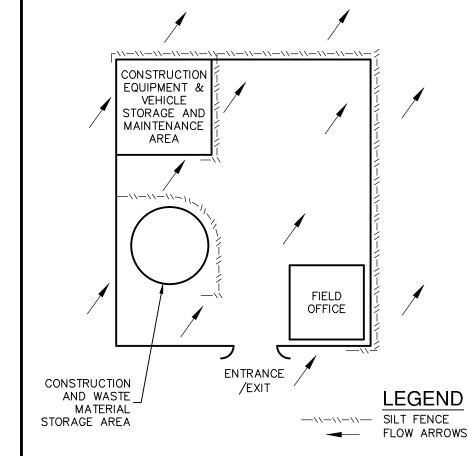
MAINTENANCE WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.

# MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED

. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

# CONCRETE TRUCK WASHOUT

PIT DETAIL



# CONSTRUCTION STAGING AREA

NOT-TO-SCALE

IE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE POLLUTION ABATEMEN SIZING AND TREATMENT REQUIREMENTS OF THE TEXAS COMMISSION ON IVIRONMENTAL QUALITY'S EDWARDS AQUIFER TECHNICAL GUIDANCE MANUA

IIS SHEET HAS BEEN PREPARED FOR PURPOSE F POLLUTION ABATEMENT ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN TH CIVIL IMPROVEMENT PLANS.

ESIGNER

IECKED GS DRAWN DIA C2.01

ATE SEPTEMBER 2023

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AYLOR GLENN DAWS

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