BENCLARE ESTATES PRESSURE REDUCING VALVE FACILITY

Recharge Zone Plan Exception Request

October 2023





October 11, 2023

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

Re: Benclare Estates Pressure Reducing Valve Facility

Recharge Zone Exception Request

Dear Ms. Butler:

Please find included herein the Benclare Estates Pressure Reducing Valve Facility Recharge Zone Exception Request. This Recharge Zone Exception Request 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 Recharge Zone Exception Request applies to an approximate 0.13-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 (\$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

Jason T. Diamond, P.E.

Vice President

Attachments

P:\126\70\01\Word\Exception Request\230501a1.docx

BENCLARE ESTATES PRESSURE REDUCING VALVE FACILITY

Recharge Zone Plan Exception Request



October 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: http://www.tceq.texas.gov/field/eapp.
- 2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
- 3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
- 4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.
 - An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.
- 5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
- 6. If the geologic assessment was completed before October 1, 2004 and the site contains "possibly sensitive" features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

- 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 N	ame:					2. Re	egulat	ed Entity No.:	
3. Customer Name:						4. Cı	ıstom	er 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)	Reside	ntial	Non-r	residen	itial		8. Sit	te (acres):	
9. Application Fee:			10. P	ermai	nent I	BMP(s):		
11. SCS (Linear Ft.):			12. A	ST/US	ST (N	o. Tai	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 1	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

	Sa	an 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 a application is hereby submitted to TCEQ for admir	application is complete and accurate. This nistrative review and technical review.
,	
Print Name of Customer/Authorized Agent	
Jason T. Diamond	10/11/2023
Signature of Customer/Authorized Agent	Date
VB	

FOR TCEQ INTERNAL USE ONLY		
Date(s)Reviewed:	Date Administratively Complete:	
Received From:	Correct Number of Copies:	
Received By:	Distribution Date:	
EAPP File Number:	Complex:	
Admin. Review(s) (No.):	No. AR Rounds:	-
Delinquent Fees (Y/N):	Review Time Spent:	
Lat./Long. Verified:	SOS Customer Verification:	
Agent Authorization Complete/Notarized (Y/N):	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

Texas Commission on Environmental Quality

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

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

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

Signature

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

Pri	nt Name of Customer/Agent: <u>Jason T. Diamond, P.E.</u>
Dat	re: <u>10/1</u> 1/2023
Sig	nature of Customer/Agent:
Pr	ason T. Diamond roject Information
1.	Regulated Entity Name: Benclare Estates Pressure Reducing Valve Facility
2.	County: Bexar
3.	Stream Basin: <u>Cibolo Creek</u>
4.	Groundwater Conservation District (If applicable): Edwards Aquifer; Trinity Glen Rose
5.	Edwards Aquifer Zone:
	Recharge Zone Transition Zone
6.	Plan Type:
	WPAP □ AST SCS □ UST Modification □ Exception Request

7.	Customer (Applicant):	
	Contact Person: <u>David C. Garcia</u> Entity: <u>San Antonio Water System</u> Mailing Address: <u>2800 US Hwy 281 N</u> City, State: <u>San Antonio, TX</u> Telephone: <u>(210) 233-3492</u> Email Address: <u>david.garcia2@saws.org</u>	Zip: <u>78212</u> FAX:
8.	Agent/Representative (If any):	
	Contact Person: <u>Jason T. Diamond, P.E.</u> Entity: <u>Pape-Dawson Consulting Engineers, LLC</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>jdiamond@pape-dawson.com</u>	Zip: <u>78213</u> FAX: <u>(210)</u> 375-9010
9.	Project Location:	
	 ☐ The project site is located inside the city limits ☐ The project site is located outside the city limit jurisdiction) of <u>San Antonio</u>. ☐ The project site is not located within any city's 	s but inside the ETJ (extra-territorial
10.	The location of the project site is described be detail and clarity so that the TCEQ's Regional s boundaries for a field investigation.	
	From TCEQ's regional office, turn right on Juds Nacogdoches Rd. Turn right onto Nacogdo miles before turning onto Green Mountain for 2 miles, before turning left onto Evans turning right onto Hanging Oak. The site is LF east of Hanging Oak and Southern Knoll	ches Rd and travel approximately 2.5 Rd. Travel north on Green Mountain Rd Rd. Travel north approximately 2.1 miles, located on the right, approximately 500
11.	Attachment A – Road Map. A road map show project site is attached. The project location at the map.	_
12.	Attachment B - USGS / Edwards Recharge Zor USGS Quadrangle Map (Scale: 1" = 2000') of the map(s) clearly show:	
	 Project site boundaries. USGS Quadrangle Name(s). Boundaries of the Recharge Zone (and Trank) Drainage path from the project site to the 	

13. 🔀	The TCEQ must be able to inspect the project site or the application will be returned. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.
\boxtimes	Survey staking will be completed by this date: when advised by TCEQ of site visit
14. 🔀	Attachment C – Project Description. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:
	 Area of the site ○ Offsite areas ○ Impervious cover ○ Permanent BMP(s) ○ Proposed site use ○ Site history ○ Previous development ○ Area(s) to be demolished
15. Ex	isting 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: Existing electric/water easements

Prohibited Activities

- 16. I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:
 - (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
 - (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
 - (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
 - (4) The use of sewage holding tanks as parts of organized collection systems; and
 - (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
 - (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project: (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control); (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title. Administrative Information 18. The fee for the plan(s) is based on: For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur. For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines. For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems. A request for an exception to any substantive portion of the regulations related to the protection of water quality. A request for an extension to a previously approved plan. 19. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's: TCEQ cashier Austin Regional Office (for projects in Hays, Travis, and Williamson Counties) San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and **Uvalde Counties**) 20. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional

copies to these jurisdictions. The copies must be submitted to the appropriate regional

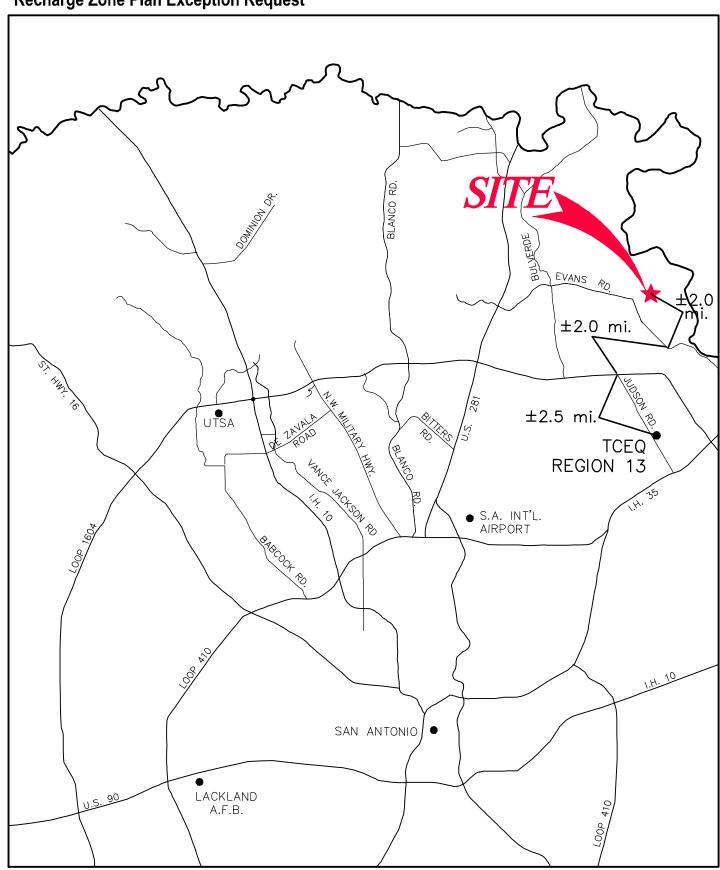
21. No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

office.

ATTACHMENT A

BENCLARE ESTATES PRESSURE REDUCING VALVE FACILITY **Recharge Zone Plan Exception Request**



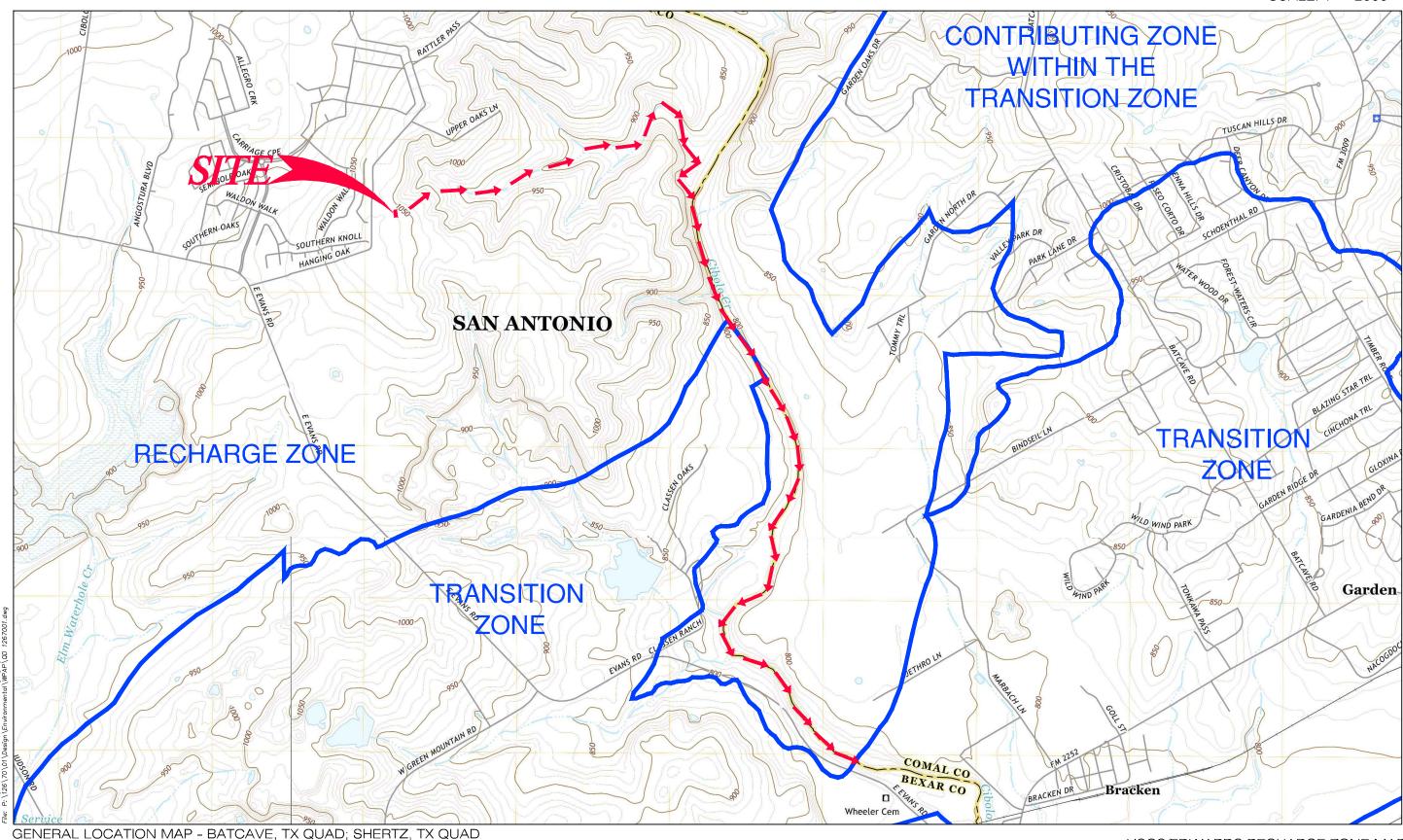


ATTACHMENT A Road Map

ATTACHMENT B

BENCLARE ESTATES PRESSURE REDUCING VALVE FACILITY Recharge Zone Plan Exception Request





ATTACHMENT C

BENCLARE ESTATES PRESSURE REDUCING VALVE FACILITY Recharge Zone Plan Exception Request

Attachment C - Project Description

The Benclare Estates Pressure Reducing Valve (PRV) Facility is a 0.13-acre project site located within the extra-territorial jurisdiction (ETJ) of the City of San Antonio in Bexar County, Texas. This site lies approximately 500 LF east of Hanging Oak and Southern Knoll cul-de sac within the Cibolo Creek watershed. This site is cleared, does not contain the 100-year floodplain, and lies within the Edwards Aquifer Recharge Zone. There were no naturally occurring sensitive geological features identified in the Geologic Assessment.

The Benclare Estates Pressure Reducing Valve (PRV) Facility proposes the construction of an aboveground pressure reducing valve facility and water main tie-ins. This PRV is required to in order to bring working pressures in the water mains to the east of the project site down to a reasonable operating zone for homes and businesses. While PRV assemblies are typically located underground in concrete vaults, San Antonio Water System (SAWS) is requesting an above ground PRV assembly for maintenance accessibility. Proposed regulated activities include additional clearing, grading, and excavation for the installation of water lines and the pressure reducing valve facility site with associated SCADA tower, power pole, and light pole. Approximately 0.006 ac of impervious cover, or 4.6% of the 0.13- acre project limits, are proposed for this site. Please refer to the included exhibits for details of the proposed construction.

Minimal disturbance is proposed for this project site, and the surrounding areas will remain undisturbed. The re-vegetative areas will provide equivalent protection. The proposed development will not generate wastewater and potable water will be provided by SAWS.



GEOLOGIC ASSESSMENT FORM (TCEQ-0585)

Geologic Assessment

Texas Commission on Environmental Quality

Drint Name of Goologist: Honry E Stultz III D.G.

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.

Telephone: 210-375-9000

Thirt Name of Geologist. Henry L. Stattz III, F.G.	relephone	2. 210-373-3000
Date: December 16, 2022	Fax:	210-375-9090
Representing: Pape-Dawson Engineers, Inc., TBPG reg	istration nun	nber 50351
Signature of Geologist:		TE OF TELES
Regulated Entity Name: Benclare Estates SAWS PRV	Facility	HENRY STULTZ III GEOLOGY 12121 CENSE
Project Information		
1. Date(s) Geologic Assessment was performed: <u>Dece</u>	ember 13, 202	22
2. Type of Project:		
WPAP□ SCSLocation of Project:	AST UST	
Recharge Zone Transition Zone Contributing Zone within the Transition Zone		

- 4. Attachment A Geologic Assessment Table. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.
- 5. Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Crawford, stony and Bexar soils, 0-5% slopes (Cb)	D	1-3

- * 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'' = 20'Site Geologic Map Scale: 1'' = 20'

Site Soils Map Scale (if more than 1 soil type): N/A

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. X Surface geologic units are shown and labeled on the Site Geologic Map.

12.		Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.
	\boxtimes	Geologic or manmade features were not discovered on the project site during the field investigation.
13.		The Recharge Zone boundary is shown and labeled, if appropriate.
14.		known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If olicable, the information must agree with Item No. 20 of the WPAP Application Section.
		There are(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.) The wells are not in use and have been properly abandoned. The wells are not in use and will be properly abandoned. The wells are in use and comply with 16 TAC Chapter 76. There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

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

ATTACHMENT A Geologic Assessment Table

GEOLO	GEOLOGIC ASSESSMENT TABLE	SMENT 1	ABLE			Ь	ROJECT	NAMI	E: Bend	lare Est	ates SA	PROJECT NAME: Benclare Estates SAWS PRV Facility	acility	,		
	LOCATION					FEATUR	FEATURE CHARACTERISTICS	CTERIS	STICS				EV⊅	EVALUATION	PHYSIC/	PHYSICAL SETTING
1A	18 *	1C*	2A	2B	3	4	2	5A	9	7	8A	88	6	10	11	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE	POINTS	POINTS FORMATION	DIMENSIONS (FEET)	TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY	CATCHMENT AREA (ACRES)	A TOPOGRAPHY
は 日本の		Description (Sept.)	STATE STATE STATE	STORES OF STREET		Z X X	STATE STATE STATE OF THE PARTY	10		With the second states				<40 >40	<1.6 >1.6	NA ESCRIPTORNAMINATION OF
				G	Geologic or mann	nanmade features were not discovered on the project site during the field investigation.	e not discov	rered on	the projeα	st site during	the field i	nvestigation.				
,														*		
							**									
** DATUM: NAD 83	NAD 83															

S S S S S S S S S S S S S S S S S S S	I have read, I und The information p My signature certi
THE STATE OF THE S	GEOLOGY 12121 12121 GEOLOGY 12121 12

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

Loose or soft mud or soil, organics, leaves, sticks, dark colors Fines, compacted clay-rich sediment, soil profile, gray or red colors Vegetation. Give details in narrative description Coarse - cobbles, breakdown, sand, gravel 12 TOPOGRAPHY Flowstone, cements, cave deposits Other materials $Z \cup O \square > \stackrel{\circ}{\square} \times$

8A INFILLING

None, exposed bedrock

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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

16.2022

Date_ Dece

ATTACHMENT B Stratigraphic Column

BENCLARE ESTATES SAWS PRV FACILITY Geologic Assessment (TCEQ-0585)

Attachment B - Stratigraphic Column

Period	Epoch	Group	Formation	Member	Thickness	Lithology	Hydro- logic Unit	Hydro- stratigraphic Unit	Hydrologic Function	Porosity	Cavern Development
				Cyclic and marine, undivided	80–90	Pelletal limestone; ranges from chalk to mudstone and millolid grainstone; thin to massive beds; some crossbedding evident; a packstone containing large caprinids is present near contact with the overlying Georgetown Formations; chert is common as beds and large nodules		II	Aquifer	MO, BU, VUG, BP, FR, CV	Many subsurface; might be associated with earlier karst development
			Person	Leached and collapsed, undivided	70 -9 0	Hard, dense, recrystallized limestone; mudstone, wackestone, packstone, and grainstone; contains chert as beds and large nodules; heavily bioturbated with ironstained beds; often stromatolitic; <i>Toucasia</i> sp. Often found above contact with the underlying regional dense member; <i>Montastrea roemeriana</i> and oysters rare		III	Aquifer	BU, VUG, FR, BP, BR, CV	Extensive lateral development; large rooms
				Regional dense	20–24	Dense, shaly limestone; oyster shell mudstone and iron wackestone; wispy iron staining; chert nodules rarer than in the rest of the chert-bearing Edwards Group		IV	Confining	FR, CV	Very few; only vertical fracture enlargement
	Early Cretaceous	Edwards		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	Edwards Aquifer	v	Aquifer	IP, IG, BU, FR, BP, CV	Few
				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	EG	VI	Aquifer	IG, MO, VUG, FR, BR, CV	Probably extensive cave development
			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		VII	Aquifer	IP, IC, IG, MO, BU, VUG, FR, BP, CV	Cave development as shafts with minor horizontal extent
				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; <i>Ceratostreon texana</i> , <i>Caprina</i> sp., millolids, and gastropods		VIII	Aquifer, confining unit in areas without caves	IP, MO, BU, BP, FR, CV	Large lateral caves at surface

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; EF, fenestral; BP, bedding plane porosity. Not fabric selective: FR, fracture porosity; CH, channel porosity; BR, brecda; VUG, vug porosity; CV, cave porosity.



ATTACHMENT C Site Geology

BENCLARE ESTATES SAWS PRV FACILITY Geologic Assessment

Attachment C - Site Geology

SUMMARY

The Benclare Estates – San Antonio Water System (SAWS) Pressure Reducing Valve (PRV) facility is located northeast of Evans Road and adjacent to Hanging Oak in the southeast corner of the Wortham Oaks development in San Antonio, Bexar County, Texas.

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 regional dense (Keprd) member of the Person formation. The Keprd is a dense, thinly-bedded, argillaceous mudstone. Karst development within the Keprd member is uncommon. Vertical fracture enlargement is possible. The Keprd may act as a vertical barrier to most cave development within the thin overlying portion of the leached and collapsed members.

The predominant trend of faults in the vicinity of the site is approximately N60°E, based on faults identified during the previous mapping of the area.

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, December 16, 2022.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. http://websoilsurvey.sc.egov.usda.gov/, December 16, 2022.



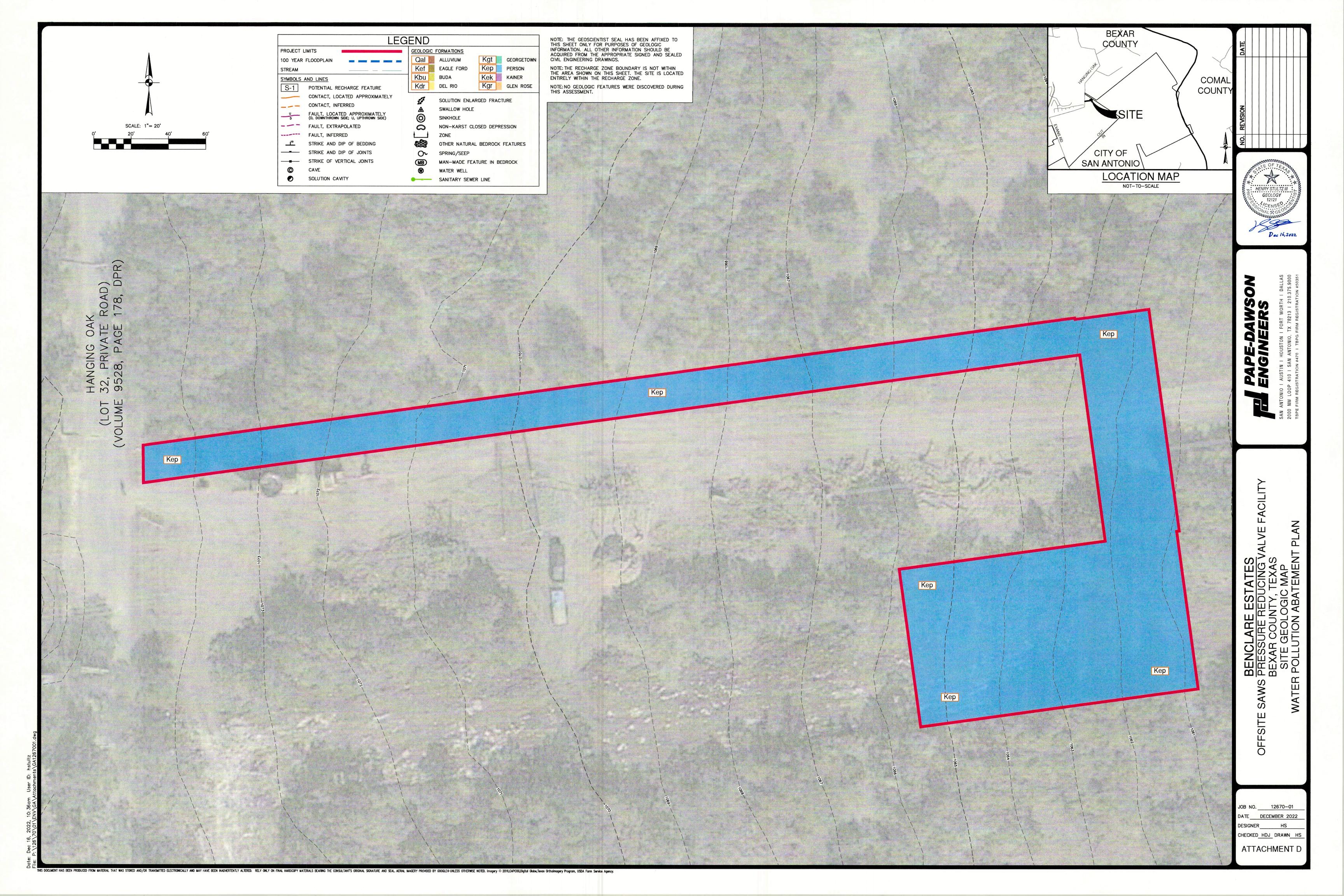
BENCLARE ESTATES SAWS PRV FACILITY Geologic Assessment

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, December 16, 2022.

U.S. Geological Survey, National Water Information System: Mapper, https://maps.waterdata.usgs.gov/mapper/index.html, December 16, 2022.

ATTACHMENT D Site Geologic Map(s)



RECHARGE AND TRANSITION ZONE EXCEPTION REQUEST FORM (TCEQ0628)

Recharge and Transition Zone Exception Request Form

Texas Commission on Environmental Quality

30 TAC §213.9 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 **Recharge and Transition Zone Exception Request Form** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Jason T. Diamond, P.E.

Date: <u>10/</u>11/2023

Signature of Customer/Agent:

Regulated Entity Name: Benclare Estates Pressure Reducing Valve Facility

Exception Request

- 1. Attachment A Nature of Exception. A narrative description of the nature of each exception requested is attached. All provisions of 30 TAC §213 Subchapter A for which an exception is being requested have been identified in the description.
- 2. Attachment B Documentation of Equivalent Water Quality Protection.

 Documentation demonstrating equivalent water quality protection for the Edwards Aquifer is attached.

Administrative Information

- 3. 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.
- 4. The applicant understands that no exception will be granted for a prohibited activity in Chapter 213.
- 5. The applicant understands that prior approval under this section must be obtained from the executive director for the exception to be authorized.

ATTACHMENT A

BENCLARE ESTATES PRESSURE REDUCING VALVE FACILITY Recharge Zone Plan Exception Request

Attachment A - Nature of Exception

The Benclare Estates Pressure Reducing Valve (PRV) Facility is a 0.13-acre project site located within the extra-territorial jurisdiction (ETJ) of the City of San Antonio in Bexar County, Texas. This site lies approximately 500 LF east of Hanging Oak and Southern Knoll cul-de sac within the Cibolo Creek watershed. This site is cleared, does not contain the 100-year floodplain, and lies within the Edwards Aquifer Recharge Zone. There were no naturally occurring sensitive geological features identified in the Geologic Assessment.

The Benclare Estates Pressure Reducing Valve (PRV) Facility proposes the construction of an aboveground pressure reducing valve facility and water main tie-ins. This PRV is required to in order to bring working pressures in the water mains to the east of the project site down to a reasonable operating zone for homes and businesses. While PRV assemblies are typically located underground in concrete vaults, San Antonio Water System (SAWS) is requesting an above ground PRV assembly for maintenance accessibility. Proposed regulated activities include additional clearing, grading, and excavation for the installation of water lines and the pressure reducing valve facility site with associated SCADA tower, power pole, and light pole. Approximately 0.006 ac of impervious cover, or 4.6% of the 0.13- acre project limits, are proposed for this site. Please refer to the included exhibits for details of the proposed construction.

The proposed development will not generate wastewater and potable water will be provided by SAWS.



ATTACHMENT B

<u>Attachment B – Documentation of Equivalent Water Quality Protection</u>

The Benclare Estates Pressure Reducing Valve (PRV) Facility proposes the construction of an aboveground pressure reducing valve facility and water main tie-ins. This PRV is required to in order to bring working pressures in existing water lines to the east of the project site down to a reasonable operating zone for homes and businesses. While PRV assemblies are typically located underground in concrete vaults, San Antonio Water System (SAWS) is requesting an above ground PRV assembly for maintenance accessibility. Proposed regulated activities include additional clearing, grading, and excavation for the installation of water lines and the pressure reducing valve facility site with associated SCADA tower, power pole, and light pole. Approximately 0.006 ac of impervious cover, or 4.6% of the 0.13- acre project limits, are proposed for this site. Please refer to the included exhibits for details of the proposed construction.

Minimal disturbance is proposed for this project site, and the surrounding areas will remain undisturbed. The re-vegetative areas will provide equivalent protection.



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: <u>Jason T. Diamond, P.E.</u>
Date: <u>10/</u> 11/2023
Signature of Customer/Agent:
Regulated Entity Name: Benclare Estates Pressure reducing Valve Facility Project Information
Project Information

Potential Sources of Contamination

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

1.	Fuels for construction equipment and hazardous substances which will be used during construction:
	The following fuels and/or hazardous substances will be stored on the site:
	These fuels and/or hazardous substances will be stored in:
	Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

	 Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year. Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
	Evels 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.
	 For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given. For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
6.	Name the receiving water(s) at or near the site which will be disturbed or which will

Temporary Best Management Practices (TBMPs)

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

receive discharges from disturbed areas of the project: Upper Cibolo Creek

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

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

	There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
se te Te m	ttachment H - Temporary Sediment Pond(s) Plans and Calculations. Temporary ediment pond or basin construction plans and design calculations for a proposed emporary BMP or measure have been prepared by or under the direct supervision of a exas Licensed Professional Engineer. All construction plans and design information nust be signed, sealed, and dated by the Texas Licensed Professional Engineer. onstruction plans for the proposed temporary BMPs and measures are attached.
\boxtimes N,	/A
te ne re	ttachment I - Inspection and Maintenance for BMPs. A plan for the inspection of each emporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if eccessary, retrofit is attached. A description of the documentation procedures, ecordkeeping practices, and inspection frequency are included in the plan and are pecific to the site and/or BMP.
w in cc	Il control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic aspections 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.
re fu	sediment escapes the construction site, off-site accumulations of sediment must be emoved at a frequency sufficient to minimize offsite impacts to water quality (e.g., agitive sediment in street being washed into surface streams or sensitive features by the next rain).
w	ediment must be removed from sediment traps or sedimentation ponds not later than then design capacity has been reduced by 50%. A permanent stake will be provided nat can indicate when the sediment occupies 50% of the basin volume.
pr	tter, construction debris, and construction chemicals exposed to stormwater shall be revented from becoming a pollutant source for stormwater discharges (e.g., screening utfalls, picked up daily).
Soil S	tabilization Practices
=	s: establishment of temporary vegetation, establishment of permanent vegetation, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or

preservation of mature vegetation.

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

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

Administrative Information

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

ATTACHMENT A

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. https://www.tceq.texas.gov/response/spills/spill_rq.html
- 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. This will disturb approximately 0.13 acres. The second is construction that will include installation of water mains and construction of the pressure reducing valve facility, landscaping and site cleanup. This will disturb approximately 0.13 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.

No upgradient water will cross the site. 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 stabilized construction entrance/exit(s) to reduce the dispersion of sediment from the site, and (3) 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 sensitive features observed within the project limits. 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 sensitive features observed within the project limits. 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, 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 as part of the proposed project. 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	.⊑ ₀	Corrective Actio	n Required
Prevention	ted	5	Data
Measure	Inspected Compliance	Description	Date Completed
	≗ 8	(use additional sheet if necessary	() Completed
Best Management Practices			_
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 qu "I certify under penalty of law that this document a		·	
system designed to assure that qualified personnel p or persons who manage the system, or those persons of my knowledge and belief, true, accurate, and com the possibility of fine and imprisonment for knowing	roperly gath directly resp plete. I am	er and evaluate the information submitted ponsible for gathering the information, the i	. Based on my inquiry of the person information submitted is, to the best
"I further certify I am an authorized signatory in acco	rdance with	the provisions of 30 TAC §305.128."	
Inspector's Name	Inspector	s Signature Da	te

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 14th day after construction activity has temporarily or permanently ceased is precluded by seasonably arid conditions, stabilization measures must be initiated as soon as practicable.



AGENT AUTHORIZATION FORM (TCEQ-0599)

Agent Authorization Form

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

I	David C. Garcia, P.E.	
	Print Name	
	Manager - Engineering	
	Title - Owner/President/Other	,
of	San Antonio Water System	
	Corporation/Partnership/Entity Name	
have authorized	Pape-Dawson Consulting Engineers, LLC Print Name of Agent/Engineer	
of	Pape-Dawson Consulting Engineers, LLC	
	Print Name of Firm	

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

I also understand that:

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

SIGNATURE PAGE:

Applicant's Signature

9/6/2023 Date

THE STATE OF TEXAS §

County of BEXAR §

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

GIVEN under my hand and seal of office on this day of September 2023.

Relie A. A

RUBY A. GONZALEZ Notary Public, State of Texas Comm. Expires 09-23-2025 Notary ID 129568966

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: September 23, 2025

APPLICATION FEE FORM (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: <u>Benclare Estates Pressure Reducing Valve Facility</u>
Regulated Entity Location: <u>500 LF east of Hanging Oak and Southern Knoll cul-de-sac, San</u>
Antonio, TX 78261

<u> Antonio, TX 78261</u>					
Name of Customer: <u>San Antonio Water System</u>					
Contact Person: <u>David C. Garcia</u> Phone: <u>(210) 233-3492</u>					
Customer Reference Number (if	issued):CN <u>600529069</u>				
Regulated Entity Reference Nun	nber (if issued):RN				
Austin Regional Office (3373)					
☐ Hays	Travis	Wil	liamson		
San Antonio Regional Office (33	362)				
Bexar ■ Bexar		Uva	alde		
Comal	Kinney				
Application fees must be paid by	y check, certified check, o	r money order, payabl	e to the Texas		
Commission on Environmental	Quality. Your canceled c	heck will serve as your	receipt. This		
form must be submitted with y	our fee payment. This pa	nyment is being submit	ted to:		
Austin Regional Office	Sa	an Antonio Regional Of	fice		
Mailed to: TCEQ - Cashier	⊠o	vernight Delivery to: To	CEQ - Cashier		
Revenues Section	1:	2100 Park 35 Circle			
Mail Code 214	В	uilding A, 3rd Floor			
P.O. Box 13088	A	ustin, TX 78753			
Austin, TX 78711-3088	(5	512)239-0357			
Site Location (Check All That Apply):					
☑ Recharge Zone ☐ Contributing Zone ☐ Transition Zone					
Type of F	Plan	Size	Fee Due		
Water Pollution Abatement Pla	an, Contributing Zone				
Plan: One Single Family Reside	ntial Dwelling	Acres	\$		
Water Pollution Abatement Pla	an, Contributing Zone				
Plan: Multiple Single Family Re	sidential and Parks	Acres	\$		
		1			

Water Pollution Abatement Plan, Contributing Zone		
Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone		
Plan: Multiple Single Family Residential and Parks	Acres	\$
Water Pollution Abatement Plan, Contributing Zone		
Plan: Non-residential	Acres	\$
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	1 Each	\$ 500
Extension of Time	Each	\$

Signature: Jason T. Wiamond Date

Date: <u>10/11/2023</u>

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

1. Reason fo	r Submis	sion (If other is c	hecked please de	escribe in s	space pro	ovided.)						
New Per New Per	rmit, Regis	tration or Authori	zation (Core Data	a Form sho	ould be s	ubmitte	d with	the pi	rogram applicatio	1.)		
☐ Renewal (Core Data Form should be submitted with the renewal form) ☐ Other												
2. Customer Reference Number (if issued) Follow this link to search 3. Regulated Entity Reference Number (if issued)						f issued)						
CN 6005	29069		fo	or CN or RN Central R		<u>in</u>	RN					
SECTION	II: Cu	stomer Info	<u>rmation</u>									
4. General C	ustomer l	nformation	5. Effective Da	ate for Cus	stomer Ir	nforma	tion U	pdate	s (mm/dd/yyyy)			
☐ New Cust				date to Cus						Regulated E	Entity Ownership	
		ne (Verifiable wit									<i></i>	
			-	•			-			rent and	active with the	
		f State (SOS)		-		IIIC AC		•		O.:1-	an halann	
6. Customer	Legai Nai	ne (If an individual	, print last name til	rst: eg: Doe,	, Jonn)		<u>If ne</u>	w Cus	stomer, enter previ	ous Custome	<u>er below:</u>	
San Antor	nio Wate	er System										
7. TX SOS/C	PA Filing	Number	8. TX State Ta	x ID (11 digi	ts)		9. F	edera	I Tax ID (9 digits)	10. DUN	S Number (if applicable)	
								T				
11. Type of C	Customer:	☐ Corporati	on		Individua	al		Partnership: General Limited				
Government:	☐ City ☐	County 🔲 Federal 🗆	State Other		Sole Pro	prietors	ship		Other:			
12. Number 0 0-20	of Employ	ees 101-250	251-500	☐ 501 aı	nd higher			ndep Yes	endently Owned	and Opera	ted?	
	14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following											
Owner		Operat	or	O	wner & C	perato	r					
Occupatio	nal Licens		nsible Party		oluntary (•		cant	Other:			
15. Mailing												
Address:	City			State		Z	IP			ZIP + 4		
16. Country		formation (if outsi	de USA)			17. F-M	ail Ad	dress	(if applicable)			
To commity		i o i i o ator							(ii applicazio)			
18. Telephor	e Numbe	7	19	9. Extensi	on or Co	de			20. Fax Numbe	r (if applical	ole)	
()	-								()	=		
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.)												
Benclare Estates Pressure Reducing Valve Facility												

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

23. Street Address of											
the Regulated Entity: (No PO Boxes)				_							
	City			State		ZIP			ZIP + 4	1	
24. County	Bexar										
	I	Enter Phy	sical Lo	cation Description	on if no st	reet address	s is prov	rided.			
25. Description to Physical Location:	500 LF east of Hanging Oak and Southern knowll cul-de-sac										
26. Nearest City							State		N	earest	ZIP Code
San Antonio							TX		7	8261	
27. Latitude (N) In Decin	nal:	29.64	3189 N	V	28. 1	ongitude (\	tude (W) In Decimal: -9			98.368753 W	
Degrees	Minutes		S	econds	Degre	ees	I	Vinutes		Sec	conds
29		38		35.5		-98		2	22	07.5	
29. Primary SIC Code (4	digits) 30	. Seconda	ary SIC (Code (4 digits)	31. Prima (5 or 6 digit	ry NAICS C	ode	32. Se (5 or 6	econdary I	NAICS	Code
1623					237110	1					
33. What is the Primary	Business o	of this en	tity? ([Do not repeat the SIC	or NAICS des	scription.)		•			
Water main and pre	essure re	ducing	valve f	facility site							
					1846 N Lo	op 1604, St	e 200				
34. Mailing	·										
Address:	City	San	Antonio	State	TX	ZIP	7	'8248	ZIP +	4	
35. E-Mail Address:	:				david	garcia2@sa	ws.org		I		
36. Telepho	36. Telephone Number 37. Extension or Code 38. Fax Number (if applicable)										
(210) 9	57-3395				() -		
9. TCEQ Programs and ID					mits/registra	ation numbers	that will b	e affected	by the upda	tes sub	mitted on this
☐ Dam Safety	☐ Distric	cts		⊠ Edwards Aqui	fer	☐ Emissions Inventory Air			☐ Industrial Hazardous Waste		
☐ Municipal Solid Waste	☐ New S	Source Rev	riew Air	OSSF		☐ Petroleum Sto		orage Tank		NS	
Sludge	Storm	n Water		☐ Title V Air		☐ Tires		Used		Oil	
						—					
☐ Voluntary Cleanup ☐ Waste Water			☐ Wastewater A	griculture	ulture Water Rights			Other:			
SECTION IV: Pre	 parer I	nform	ation								
40. Name: Jean Autrey, P.E., CESSWI 41. Title: Project Manager											
	Felephone Number 43. Ext./Code 44. Fax Number				45. E-Mail Address						
(210)375-9000) (210) 375-9010 jautrey@pape-dawson.com										
SECTION V: Aut	horized	Signa	<u> </u>		1 2	- 11					
6. By my signature below,	I certify, to	the best	of my kn								
gnature authority to submit	this form of	an behalf (of the ent	tity specified in S	ection II F	ield 6 and/or	· as reani	red for the	undates to	the II) numbers

signature authority to identified in field 39.

Company:	Pape-Dawson Engineers	Job Title:	Vice President			
Name (In Print):	Jason T. Diamond, P.E.			Phone:	(210) 375- 9000	
Signature:	Jason T. Wiamond			Date:	10/11/2023	

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

EXHIBITS

TEMPORARY BMP MODIFICATIONS					
DATE	SIGNATURE	DESCRIPTION			

ICUMENT 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.

TEXAS COMMISSION ON ENVIRONMENTAL **QUALITY** RECHARGE ZONE GENERAL CONSTRUCTION NOTES

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:

- THE NAME OF THE APPROVED PROJECT;

- THE ACTIVITY START DATE; AND - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.

ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.

3. IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TOEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE. ADVERSE IMPACTS TO WATER QUALITY.

4. NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE UPON REQUEST: INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.

PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

6. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.

7. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.

LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.

9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE FAX (210) 545-4329 STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER

10. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION

> THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR:

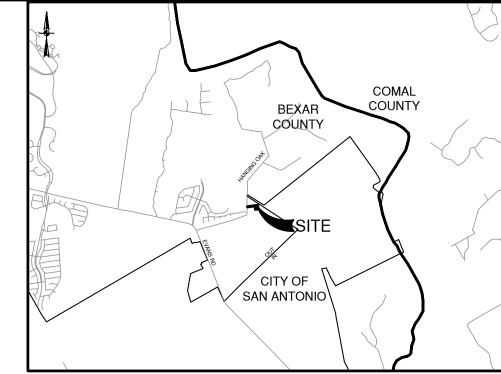
- THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE: AND

- THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

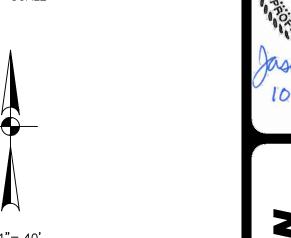
12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:

- A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS. SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES; B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE
- EDWARDS AQUIFER: C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

SAN ANTONIO REGIONAL OFFICE 14250 JUDSON ROAD SAN ANTONIO, TEXAS 78233-4480 PHONE (210) 490-3096







10-11-23

ASON T. DIAMONE

STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE) CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)

GENERAL NOTES

-//-//-//-//-

LEGEND

1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.

PROJECT LIMITS EXISTING CONTOUR

SILT FENCE

ROCK BERM

FLOW ARROW (EXISTING)

GRAVEL FILTER BAGS

3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO I MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.

4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.

6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION

CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES

5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.

PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION 7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD E

MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL 8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT B COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT

AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS. 9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS.

10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE TH WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES

REQUIREMENTS. 11. UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION

TO ROCK BERMS IN DRAINAGE FEATURES. 12. WHERE VEGETATED FILTER STRIPS ARE INDICATED, CONTRACTOR SHAL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE CONTRACTOR

SHALL PLACE SILT FENCING IN LIEU OF VEGETATED FILTER STRIP. 13. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TXDOT

14. CPS ENERGY MAY FUNCTION AS A SECONDARY OPERATOR ON THI PROJECT AND MAY BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.

RIGHT-OF-WAY WITH TXDOT.

IMPROVEMENT PLANS.

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR TH PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE RECHARGE ZONE PLAN EXCEPTION REQUEST.

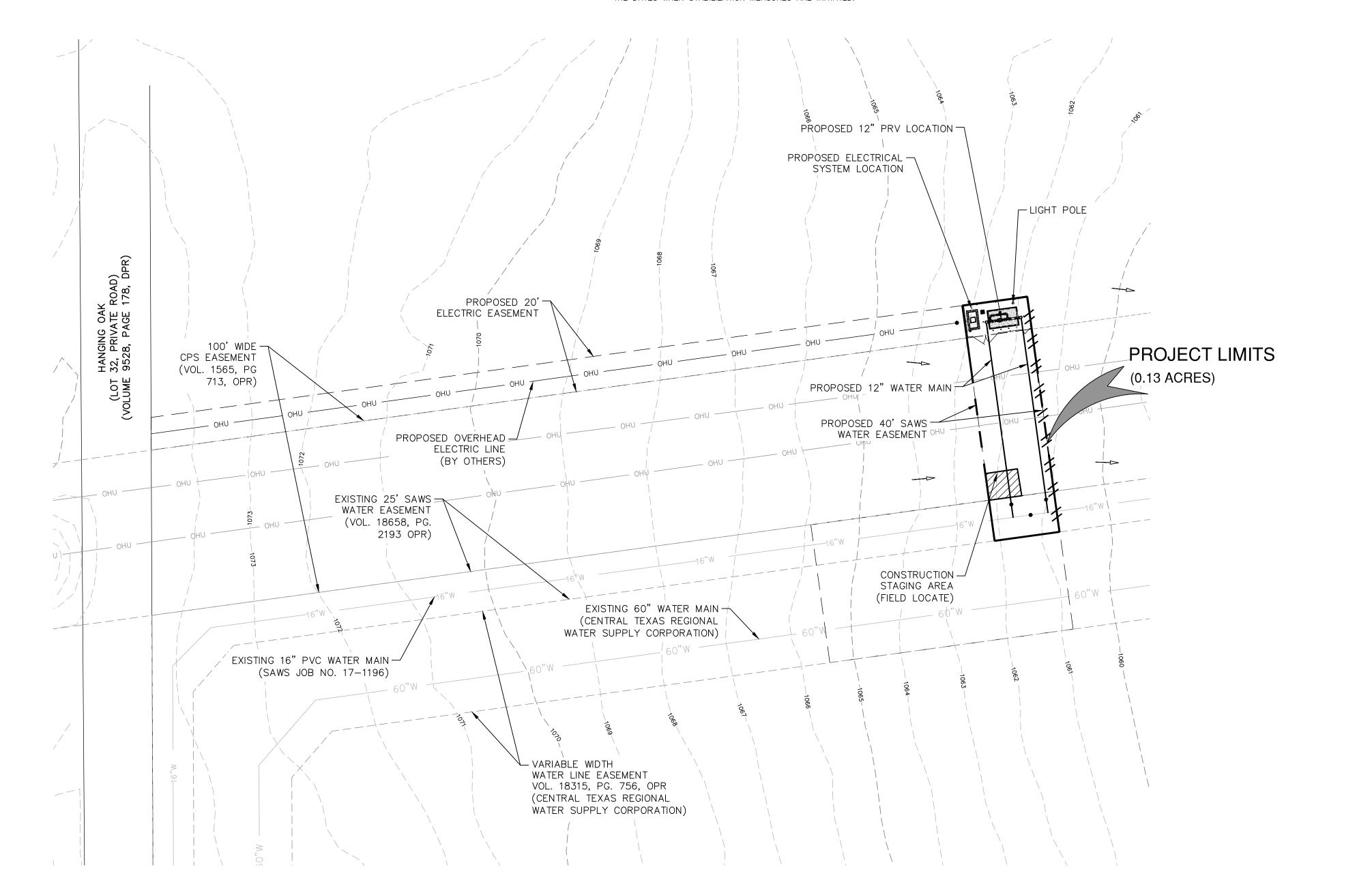
THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE EXCEPTION REQUEST ONLY. **EXHIBIT** ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL

AUGUST 2023 ESIGNER CHECKED MP DRAWN RJ

12670-01

S

S



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

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.

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

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

2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.

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

SEDIMENT TRAP OR BASIN. 8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE

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 ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED

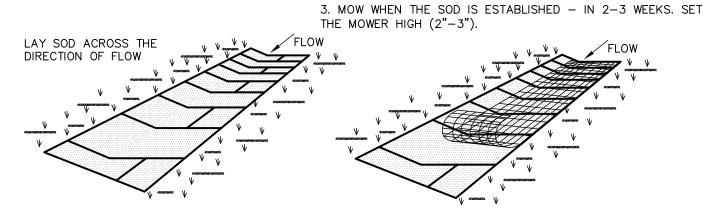
MATERIALS

OF 36 HOURS.

SHOOT GROWTH AND THATCH.

SITE PREPARATION

TIGHTLY (SEE FIGURE ABOVE).



TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE.

SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION.

TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.

INSTALLATION IN CHANNELS

INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.

1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH

STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO

SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN

4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD

PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT

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

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. FERTILIZER

SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 3 INCHES WITH A DISC,

FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE

SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE

. 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

DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS

IN CRITICAL AREAS, SECURE SOD WITH NETTING. USE STAPLES.

CONSERVATION, 1992)

(± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE SOD ALSO SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN. 2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND 2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHOULD BE LIGHTLY LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%.

> 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

> 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 OR 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. 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 OFTEN AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF AT LEAST 4

> ROOTED, USUALLY 2-3 WEEKS. NOT MORE THAN ONE THIRD OF THE GRASS LEAF SHOULD BE REMOVED AT ANY ONE CUTTING.

NSPECTION AND MAINTENANCE GUIDELINES

RUTS OR DISTURBANCE OF SWALE STABILIZATION SHOULD BE REPAIRED AS SOON AS PRACTICAL.

SOD INSTALLATION DETAIL

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. . 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

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

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

WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR

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. -ROOT ZONE - SOIL AND ROOTS. SHOULD BE 1/2"-3/4" THICK, WITH

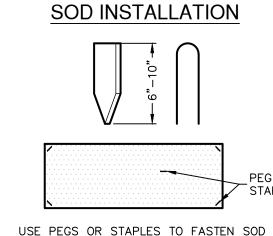
DENSE ROOT MAT FOR STRENGTH.

CUTTING HEIGHT.



 ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

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



CORRECT

INCORRECT

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 WITH THE GROUND.

GENERAL INSTALLATION (VA. DEPT. OF

SOD SHOULD NOT BE CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER. IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND REDUCE ROOT BURNING AND DIEBACK.

THE FIRST ROW OF SOD SHOULD BE LAID IN A STRAIGHT LINE WITH IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS (SEE FIGURE ABOVE).

. AFTER ROLLING, SOD SHOULD BE IRRIGATED TO A DEPTH SUFFICIENT THAT

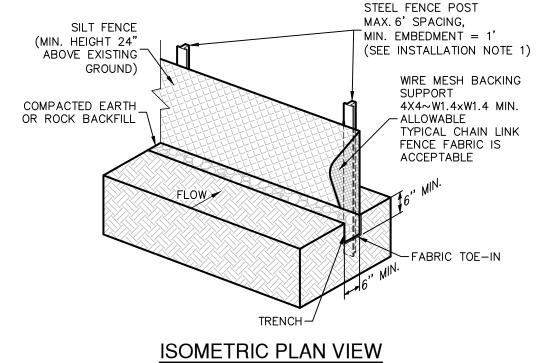
8. THE FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FIRMLY

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

2. DAMAGE FROM STORMS OR NORMAL CONSTRUCTION ACTIVITIES SUCH AS TIRE

SILT FENCE DETAIL

NOT-TO-SCALE



SILT FENCE 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

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.

INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

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.

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.

INSTALLATION

. 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.

. 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.

4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL. 5. 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 ENDS OF FABRIC MEET 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

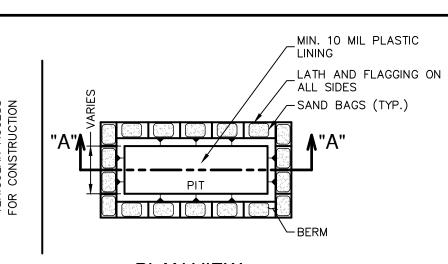
2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.

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

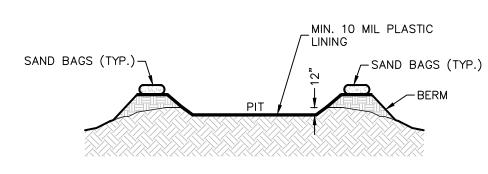
3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL

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.

> PIT DETAIL NOT-TO-SCALE



PLAN VIEW



GENERAL NOTES

DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE. 2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC. 3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION

SECTION "A-A"

FROM STORM WATER RUNOFF. 4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES. 6. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

MATERIALS

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.

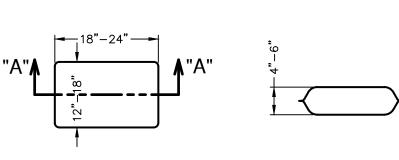
MAINTENANCE

BACKFILLED AND REPAIRED.

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

CONCRETE TRUCK WASHOUT

REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE



PLAN VIEW

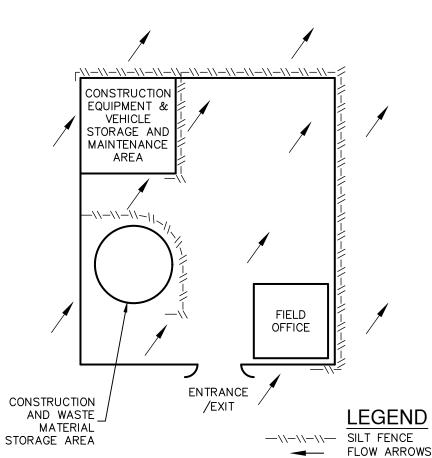
. THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN. UNIT WEIGHT OF 4 OUNCES/SY, HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.

SECTION "A-A"

THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER). SAND SHALL <u>NOT</u> BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



CONSTRUCTION STAGING AREA

NOT-TO-SCALE

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR TI PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE RECHARGE ZONE PLAN EXCEPTION REQUEST.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE EXCEPTION REQUEST ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT

AUGUST 2023 ESIGNER

HECKED MP DRAWN RU

12670-01

ASON T. DIAMONE

10-11-23