



# **NEC BULVERDE/1604**

## **Water Pollution Abatement Plan Modification IV**



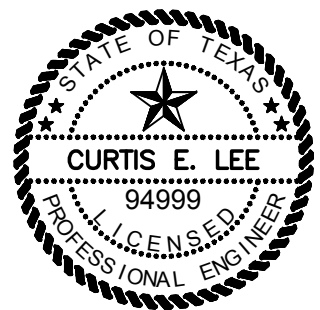
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Transportation | Water Resources | Land Development | Surveying | Environmental



# NEC BULVERDE/1604

## Water Pollution Abatement Plan Modification IV



*Curtis Lee*

February 26, 2025

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

Re: NEC Bulverde/1604  
Water Pollution Abatement Plan Modification IV

Dear Ms. Reyes:

Please find included herein NEC Bulverde/1604 Water Pollution Abatement Plan Modification IV. This Water Pollution Abatement Plan Modification has been prepared in accordance with the regulations of the Texas Administrative Code (30 TAC 213) and current policies for development over the Edwards Aquifer Recharge Zone.

This Water Pollution Abatement Plan Modification applies to an approximate 4.173-acre out of a 60.05-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 written approval of the plan in order that construction may begin at the earliest opportunity.

Appropriate review fees (\$4,000.00) 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 Consulting Engineers, LLC



Curtis Lee, P.E.  
Sr. Vice President

**Attachments**

P:\62\29\43\Word\Reports\WPAP Modification\240709a1.docx

**EDWARDS AQUIFER  
APPLICATION COVER PAGE  
(TCEQ-20705)**



**GENERAL INFORMATION  
FORM (TCEQ-0587)**

# Texas Commission on Environmental Quality

## Edwards Aquifer Application Cover Page

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### Our Review of Your Application

**The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with [30 TAC 213](#).**

### Administrative Review

1. [Edwards Aquifer applications](#) must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: <http://www.tceq.texas.gov/field/eapp>.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

### Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

### Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

<b>1. Regulated Entity Name:</b>					<b>2. Regulated Entity No.:</b>				
<b>3. Customer Name:</b>					<b>4. Customer No.:</b>				
<b>5. Project Type:</b> (Please circle/check one)	New	Modification			Extension	Exception			
<b>6. Plan Type:</b> (Please circle/check one)	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
<b>7. Land Use:</b> (Please circle/check one)	Residential	Non-residential				<b>8. Site (acres):</b>			
<b>9. Application Fee:</b>			<b>10. Permanent BMP(s):</b>						
<b>11. SCS (Linear Ft.):</b>			<b>12. AST/UST (No. Tanks):</b>						
<b>13. County:</b>			<b>14. Watershed:</b>						

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

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

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

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.

Print Name of Customer/Authorized Agent

*Ante Lee*

Signature of Customer/Authorized Agent

Date

**\*\*FOR TCEQ INTERNAL USE ONLY\*\***

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

# General Information Form

## Texas Commission on Environmental Quality

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

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

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

## Signature

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

Print Name of Customer/Agent: Curtis Lee, P.E.

Date: 10/31/24

Signature of Customer/Agent:

  
\_\_\_\_\_

## Project Information

1. Regulated Entity Name: NEC Bulverde/1604
2. County: Bexar
3. Stream Basin: Elm Waterhole Creek
4. Groundwater Conservation District (If applicable): Edwards Aquifer Authority & Trinity Glen Rosa
5. Edwards Aquifer Zone:  
☒ Recharge Zone  
☐ Transition Zone
6. Plan Type:  
☒ WPAP  
☐ SCS  
☒ Modification  
☐ AST

☐ UST

☐ Exception Request

7. Customer (Applicant):

Contact Person: Philip J. Pfeiffer Jr

Entity: NECBUL 1604, LTD

Mailing Address: 200 Concord Plaza Suite 860

City, State: San Antonio, TX

Zip: 78216

Telephone: 210-349-7711

FAX: \_\_\_\_\_

Email Address: ppfeiffer@birnbaumproperty.com

8. Agent/Representative (If any):

Contact Person: Curtis Lee, P.E.

Entity: Pape-Dawson Engineers, Inc.

Mailing Address: 2000 NW Loop 410

City, State: San Antonio, Texas

Zip: 78213

Telephone: (210) 375-9000

FAX: (210) 375-9010

Email Address: clee@pape-dawson.com

9. Project Location:

☒ The project site is located inside the city limits of San Antonio.

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

☐ The project site is not located within any city's limits or ETJ.

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

From TCEQ's Regional Office, head north on Judson Road approximately 2.5 miles to Loop 1604. Travel west on Loop 1604 approximately 1.8 miles to Bulverde Road. The site is located on the northeast corner of Loop 1604 and Bulverde Road

11. ☒ **Attachment A – Road Map.** A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.

12. ☒ **Attachment B - USGS / Edwards Recharge Zone Map.** A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

☒ Project site boundaries.

☒ USGS Quadrangle Name(s).

☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).

☒ Drainage path from the project site to the boundary of the Recharge Zone.

13. ☒ **The TCEQ must be able to inspect the project site or the application will be returned.**  
Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate

the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

☒ Survey staking will be completed by this date: when advised of TCEQ 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. Existing project site conditions are noted below:

- ☐ Existing commercial site
- ☐ Existing industrial site
- ☐ Existing residential site
- ☐ Existing paved and/or unpaved roads
- ☐ Undeveloped (Cleared)
- ☒ Undeveloped (Undisturbed/Uncleared)
- ☐ Other: \_\_\_\_\_

### ***Prohibited Activities***

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

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
- (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
- (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
- (4) The use of sewage holding tanks as parts of organized collection systems; and
- (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
- (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

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



- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and
- (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

### ***Administrative Information***

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

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

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

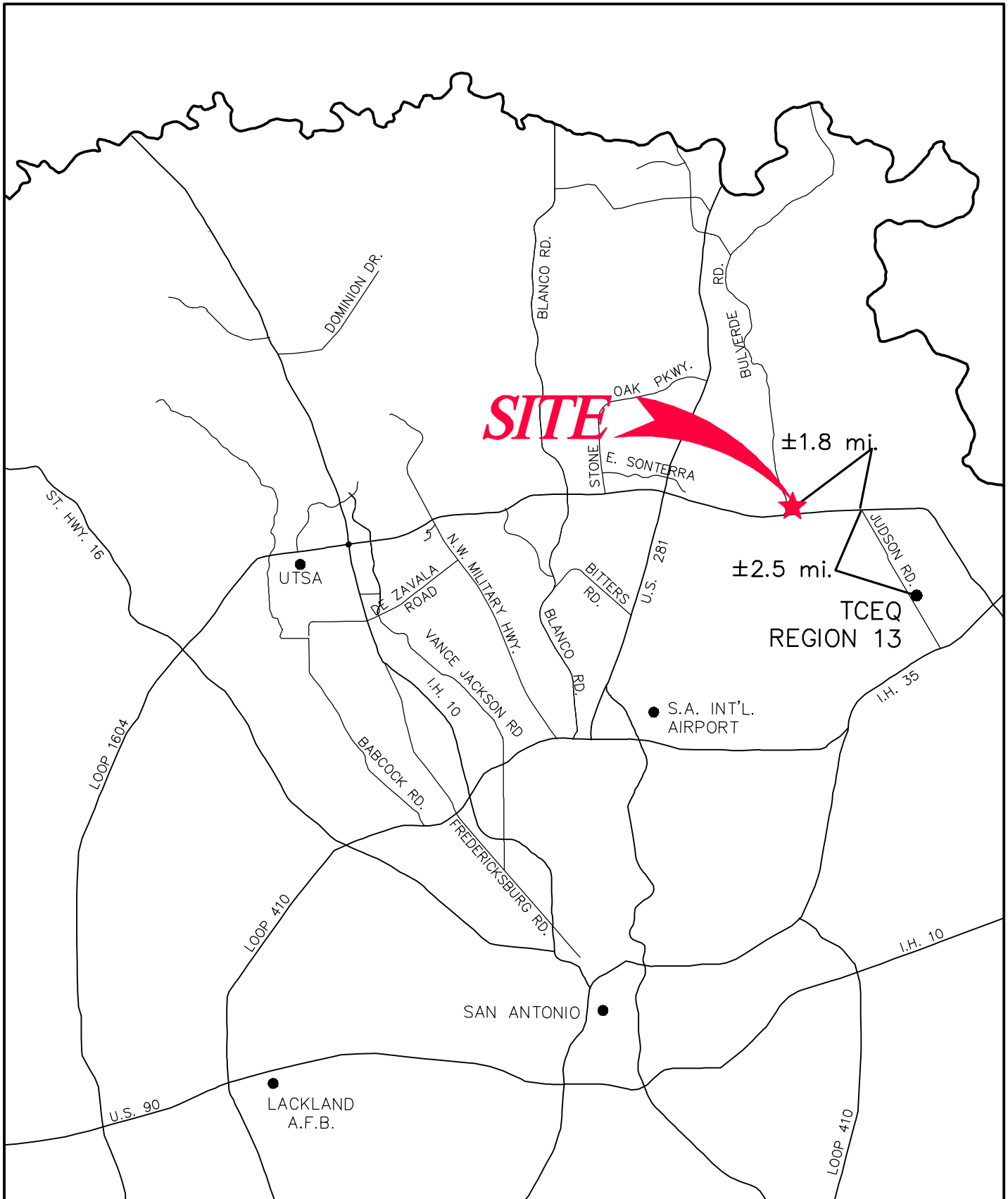
- ☐ TCEQ cashier
- ☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- ☒ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

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

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

**ATTACHMENT A**


NEC BULVERDE/1604  
Water Pollution Abatement Plan

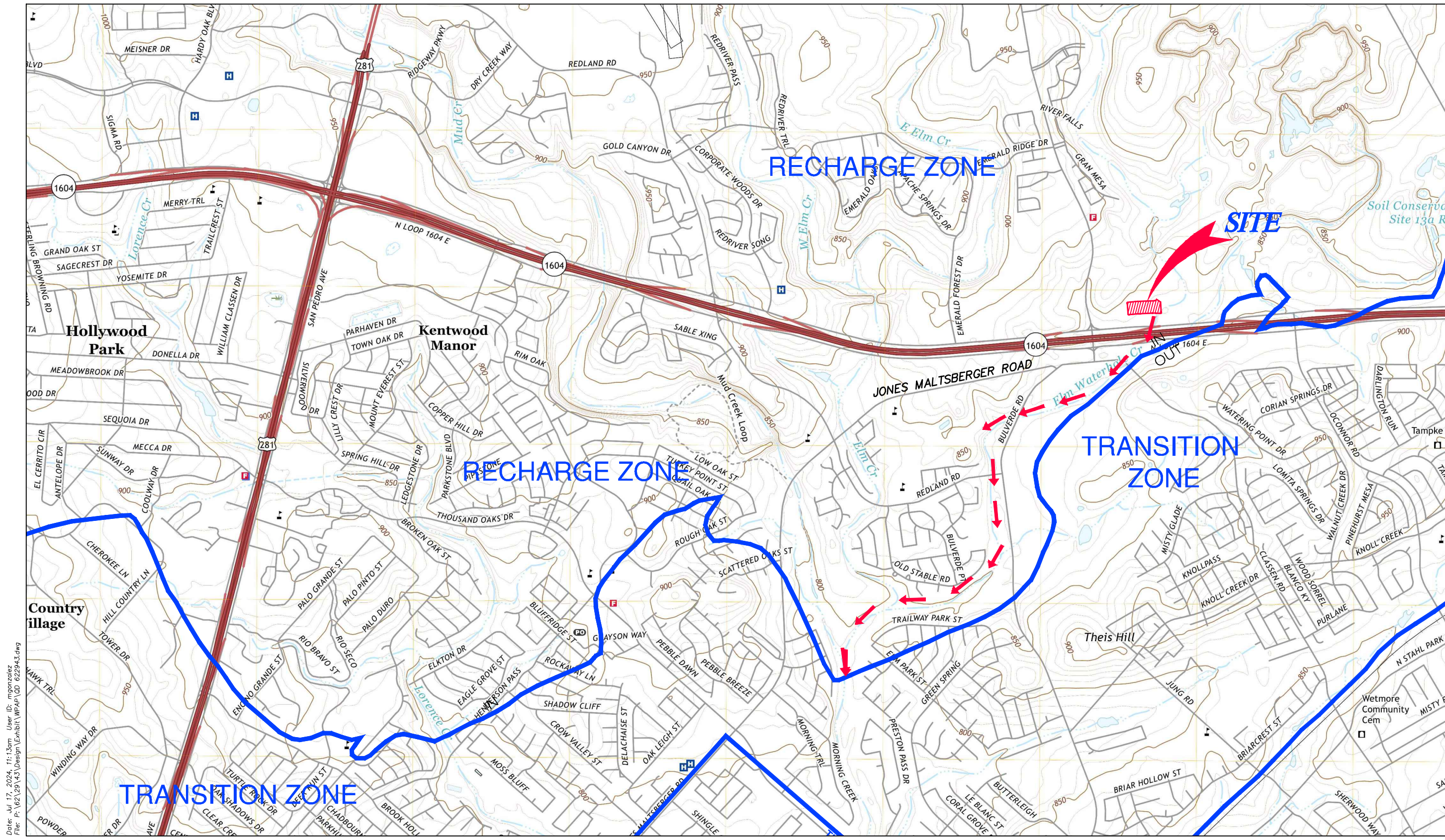


**ATTACHMENT B**




NEC BULVERDE/1604  
Water Pollution Abatement Plan

  
SCALE: 1" = 2000'



Date: Jul 17, 2024, 11:13am User ID: mgonzalez  
File: P:\62129\43\Design\Exhibit\WPAP\QD 622943.dwg

GENERAL LOCATION MAP - LONGHORN, TX QUAD  
DRAINAGE FLOW   
Pape-Dawson Consulting Engineers, LLC

USGS/EDWARDS RECHARGE ZONE MAP  
ATTACHMENT B



**ATTACHMENT C**

## **NEC BULVERDE/1604**

### **Water Pollution Abatement Plan Modification IV**

#### **Attachment C – Project Description**

The NEC Bulverde/1604 Water Pollution (WPAP) Modification (MOD IV) is a modification to the approved NEC Bulverde/1604 WPAP Modification II (RN105171136) and the Bulverde Multifamily WPAP Modification III (RN111567087). The NEC Bulverde/1604 WPAP MOD IV proposes revisions to the site plan due to updated construction phasing to allow for the southeastern portion of the site to be constructed and treated by (1) batch detention basin. The project site is located inside the limits of the City of San Antonio in Bexar County, Texas. The entire site is located over the Edward Aquifer Recharge Zone.

NEC Bulverde/1604 WPAP was approved on May 9, 2007 (EAPP File No. 2692.00) and permitted the construction of 38.42-acres of impervious cover for the 56.67-acre site. The NEC Bulverde/1604 WPAP Modification I (WPAP MOD I) was approved on September 17, 2008 (EAPP File No. 2629.02) and permitted the construction of 41.50-acres of impervious cover for the 60.05-acre site. The NEC Bulverde WPAP Modification II (WPAP MOD II) was approved on February 27, 2015 (RN105171136) and permitted the construction of 39.15-acres of impervious cover for the 60.05-acre site. The Bulverde Multifamily WPAP Modification III was approved on November 21, 2022 (RN111567087) and permitted the construction of 9.72-acres of impervious cover for the 21.09-acre site.

The NEC Bulverde/1604 WPAP MOD IV proposes revisions to the site plan due to updated construction plans and construction phasing to allow for the treatment of the southeastern portion of the 60.05-acre site. The NEC Bulverde/1604 WPAP MOD IV will consist of 4.173 acres for commercial use and 2.55 acres will be under impervious cover (61.11%). This site plan update proposes the construction of (1) batch detention basin and will be designed to provide overtreatment for approximately 0.21 acres of driveway and deceleration lane areas. This site doesn't receive offsite drainage area. This BMP has been designed in accordance with TCEQ Technical Guidance Manual (TGM) to remove 91% of the increased Total Suspended Solids (TSS) for the proposed improvements.

Potable water service is to be provided by the San Antonio Water System (SAWS). Wastewater will be disposed of by conveyance to the existing Steven M. Clouse Water Recycling Center operated by SAWS.

**GEOLOGIC ASSESSMENT FORM**  
**(TCEQ-0585)**



# Geologic Assessment

## Texas Commission on Environmental Quality

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

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

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

## Signature

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

Print Name of Geologist: Henry E. Stultz III, P.G.

Telephone: 210-375-9000

Date: January 30, 2025

Fax: 210-375-9090

Representing: Pape-Dawson Engineers, Inc., TBPGE registration number 50351

Signature of Geologist:



Regulated Entity Name: NEC Bulverde & 1604, PADS

## Project Information

1. Date(s) Geologic Assessment was performed: January 28, 2025

2. Type of Project:

☒ WPAP  
☐ SCS

☐ AST  
☐ UST

3. Location of Project:

☒ Recharge Zone  
☐ Transition Zone  
☐ Contributing Zone within the Transition Zone

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

**Table 1 - Soil Units, Infiltration Characteristics and Thickness**

Soil Name	Group*	Thickness(feet)
Crawford, stony and Bexar soils, 0-5% slopes (Cb)	D	3-4
Lewisville silty clay, 0-1 %slopes (LvA)	C	4-5

*\* Soil Group Definitions (Abbreviated)*

- A. *Soils having a high infiltration rate when thoroughly wetted.*
- B. *Soils having a moderate infiltration rate when thoroughly wetted.*
- C. *Soils having a slow infiltration rate when thoroughly wetted.*
- D. *Soils having a very slow infiltration rate when thoroughly wetted.*

6. ☒ **Attachment B – Stratigraphic Column.** A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.
7. ☒ **Attachment C – Site Geology.** A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
8. ☒ **Attachment D – Site Geologic Map(s).** The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'  
 Applicant's Site Plan Scale: 1" = 40'  
 Site Geologic Map Scale: 1" = 40'  
 Site Soils Map Scale (if more than 1 soil type): 1" = 200'
9. Method of collecting positional data:
  - ☒ Global Positioning System (GPS) technology.
  - ☐ Other method(s). Please describe method of data collection: \_\_\_\_\_
10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.

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

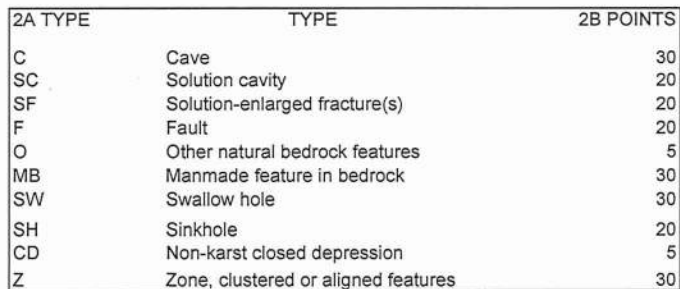
### ***Administrative Information***

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

**ATTACHMENT A**  
**Geologic Assessment Table**

[illegible]

\*\* DATUM: NAD 83



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

183

Date Jan. 30, 2025

# **ATTACHMENT B**

## **Stratigraphic Column**

# NEC BULVERDE 1604, PADS

## 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
Cretaceous	Late Cretaceous	Washita	Del Rio Clay	--	40–50	Fossiliferous blue-green to yellow-brown clay with thin beds of packstone; contains iron nodules; <i>Ilymatogyra arietina</i>	Upper confining unit to Edwards Aquifer	--	Confining	None	None
			Georgetown	--	20–30	Reddish-brown, gray to light tan, shaley mudstone and wackestone; commonly contains black dendrites, iron nodules, and iron staining; often fossiliferous with <i>Plesiroturillites brazoensis</i> , <i>Waconella wacoensis</i> common		I	Confining	MO	None
	Early Cretaceous	Edwards	Person	Cyclic and marine, undivided	80–90	Pelletal limestone; ranges from chalk to mudstone and miliolid 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
				Leached and collapsed, undivided	70–90	Hard, dense, recrystallized limestone;mudstone, wackestone, packstone, and grainstone; contains chert as beds and large nodules; heavily bioturbated with iron-stained 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	
			Kainer	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		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	VI		Aquifer	IG, MO, VUG, FR, BR, CV	Probably extensive cave development	
		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 miliolid grainstone that also contains dolomite; contains dark, spherical textural features known as black rotund bodies; <i>Ceratostreon texana</i> , <i>Caprina</i> sp., miliolids, 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; FE, fenestral; BP, bedding plane porosity. Not fabric selective: FR, fracture porosity; CH, channel porosity; BR, breccia; VUG, vug porosity; CV, cave porosity.

# **ATTACHMENT C**

## **Site Geology**



# NEC BULVERDE & 1604, PADS Geologic Assessment

## Attachment C – Site Geology

### SUMMARY

The NEC Bulverde & 1604, PADS site is located 800 feet northeast from the intersection of N Loop 1604 E Frontage Road and Bulverde Road, 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. No springs were identified on site. A tributary of Elm Waterhole Creek traverses through the site. The overall potential for fluid migration to the Edwards Aquifer for the site is low.

### SITE GEOLOGY

As observed through field evidence, the geologic formation which outcrops at the surface within the subject site is the Del Rio Clay (Kdr). The Kdr is a blue-green to yellow-brown waxy clay. Karst development within the Kdr does not occur.

The predominant trend of faults in the vicinity of the site is approximately N54°E, based on faults identified during the previous mapping of the area.

### FEATURE DESCRIPTIONS:

A description of the feature observed onsite is provided below:

#### Feature S-1

Feature S-1 is an existing sewer line that is not located beneath pavement. The sewer line has been trenched through bedrock and backfilled with a mix of fine and coarse fill material that may be more permeable than surrounding undisturbed areas. Therefore, the probability of rapid infiltration is intermediate.

## NEC BULVERDE & 1604, PADS Geologic Assessment

### REFERENCES

Clark, A.K., Golab, J.A., Morris, R.R., and Pedraza, D.E., 2023, Geologic framework and hydrostratigraphy of the Edwards and Trinity aquifers within northern Bexar and Comal Counties, Texas: U.S. Geological Survey Scientific Investigations Map 3510, 1 sheet, scale 1:24,000, 24-p. pamphlet, <https://doi.org/10.3133/sim3510>

Nationwide Environmental Title Research, LLC. Historical Aerials, [HistoricAerials.com](https://www.historicaerials.com/viewer). <https://www.historicaerials.com/viewer>, May 10, 2021.

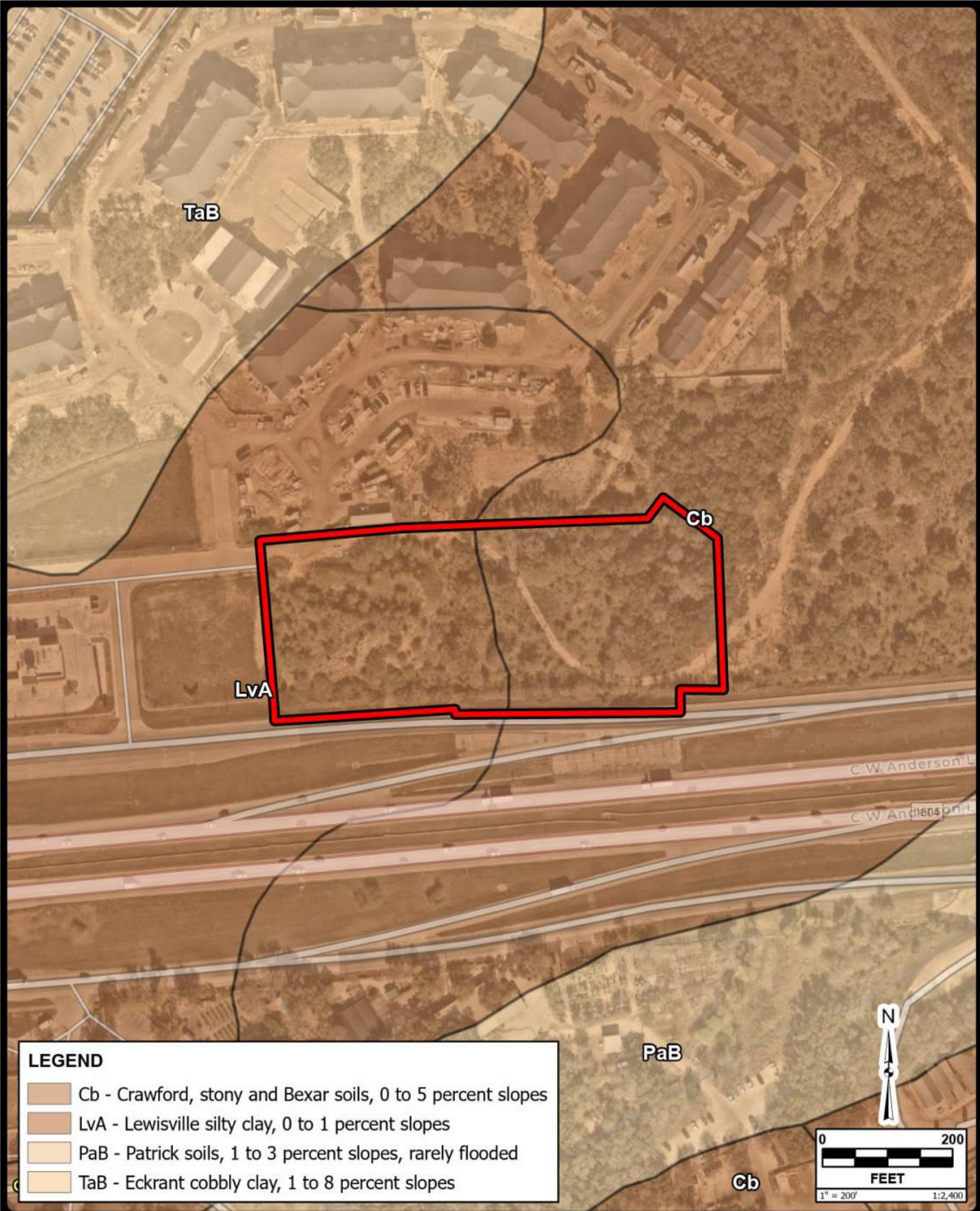
Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov/>, May 10, 2021.

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>, May 10, 2021.

U.S. Geological Survey, National Water Information System: Mapper, <https://maps.waterdata.usgs.gov/mapper/index.html>, May 10, 2021. January 29, 2025.

**ATTACHMENT D**  
**Site Geologic Map(s)**



JOB NO.	6229-43
DATE	Jan 2025
DESIGNER	HS
CHECKED	HDJ
SHEET	ATTACHMENT D

**NEC BULVERDE & 1604, PADS**  
**SAN ANTONIO, TEXAS**  
**SITE SOILS MAP**

**PAPE-DAWSON  
ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

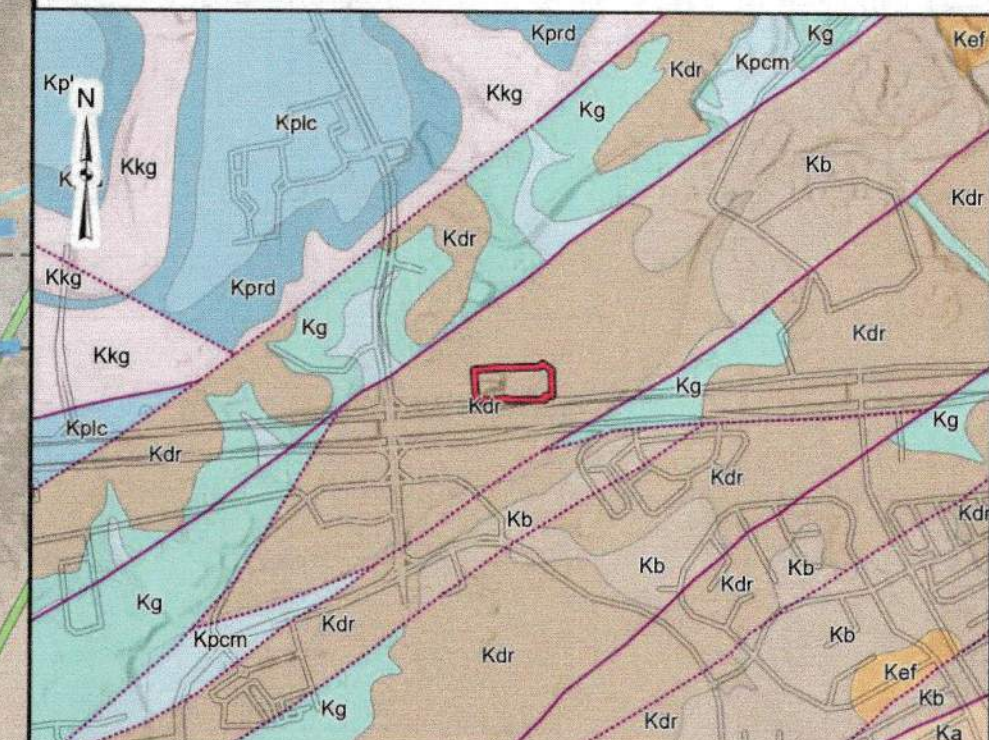


Plot Jan 29, 2025, 8:52 AM User: hndz  
File: P:\6229\6229\GAS\WATER\101

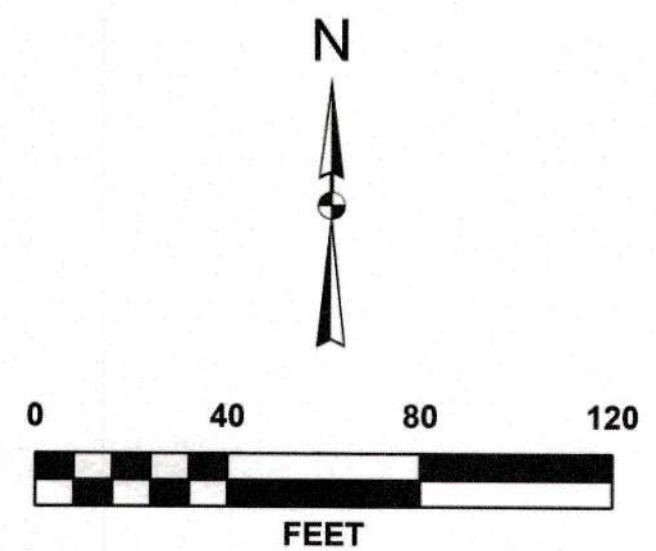
THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE © UNLESS OTHERWISE NOTED. Imagery © 2025, CAPCOG, Digital Globe, Texas Orthomagestry Program, USDA Farm Service Agency.



Location Map  
(not-to-scale)



Regional Geology Map (Clark 2023)  
(not-to-scale)



LEGEND	
PROJECT LIMITS	
EXISTING CONTOUR LINE	--- 760 ---
100 YEAR FLOODPLAIN	---
STREAM	---
GEOLOGIC FORMATIONS	
Qal	ALLUVIUM
Kef	EAGLE FORD
Kbu	BUDA
Kdr	DEL RIO
Kgt	GEORGETOWN
Kep	PERSON
Kek	KAINER
Kgr	GLEN ROSE
SYMBOLS AND LINES	
S-1	POTENTIAL RECHARGE FEATURE
---	CONTACT, LOCATED APPROXIMATELY
---	CONTACT, INFERRED
---	FAULT, LOCATED APPROXIMATELY (D, DOWNTHROW SIDE; U, UPTHROW SIDE)
---	FAULT, EXTRAPOLATED
---	FAULT, INFERRED
---	STRIKE AND DIP OF BEDDING
---	STRIKE AND DIP OF JOINTS
---	STRIKE OF VERTICAL JOINTS
---	CAVE
---	SOLUTION CAVITY
---	SOLUTION ENLARGED FRACTURE
---	SWALLOW HOLE
---	SINKHOLE
---	NON - KARST CLOSED DEPRESSION ZONE
---	OTHER NATURAL BEDROCK FEATURES
---	SPRING /SEEP
---	MAN - MADE FEATURE IN BEDROCK
---	WATER WELL
---	SANITARY SEWER LINE
---	STORM DRAIN LINE

NOTE: THE GEOSCIENTIST SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSES OF GEOLOGIC INFORMATION. ALL OTHER INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SIGNED AND SEALED CIVIL ENGINEERING DRAWINGS.

NOTE: THE RECHARGE ZONE BOUNDARY IS NOT WITHIN THE AREA SHOWN ON THIS SHEET. THE SITE IS LOCATED ENTIRELY WITHIN THE RECHARGE ZONE.

NO.	REVISION	DATE

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPB FIRM REGISTRATION #470 | TBPB FIRM REGISTRATION #10028800

**NEC BULVERDE & 1604, PADS**  
SAN ANTONIO, TEXAS  
**SITE GEOLOGIC MAP**  
**WATER POLLUTION ABATEMENT PLAN**

PLAT NO.	---
JOB NO.	6229-43
DATE	Jan 2025
DESIGNER	HS
CHECKED	HJD
DRAWN	HS
SHEET	ATT D



**MODIFICATION OF A  
PREVIOUSLY APPROVED  
WATER POLLUTION  
ABATEMENT PLAN (TCEQ-  
0590)**

# Modification of a Previously Approved Plan

## Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and  
Relating to 30 TAC 213.4(j), 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 request for a **Modification of a Previously Approved Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Curtis Lee, P.E.

Date: 3/5/25

Signature of Customer/Agent:



## Project Information

1. Current Regulated Entity Name: NECBUL 1604, LTD  
Original Regulated Entity Name: NECBUL 1604, LTD  
Regulated Entity Number(s) (RN): 105171136  
Edwards Aquifer Protection Program ID Number(s): 2629.02  
☒ The applicant has not changed and the Customer Number (CN) is: 603156845  
☐ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.
2. ☒ **Attachment A: Original Approval Letter and Approved Modification Letters.** A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):
- ☒ 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;
  - ☐ 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;
  - ☐ Development of land previously identified as undeveloped in the original water pollution abatement plan;
  - ☐ Physical modification of the approved organized sewage collection system;
  - ☐ Physical modification of the approved underground storage tank system;
  - ☐ Physical modification of the approved aboveground storage tank system.
4. ☒ Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

<b><i>WPAP Modification</i></b>	<b><i>Approved Project</i></b>	<b><i>Proposed Modification</i></b>
<b><i>Summary</i></b>		
Acres	<u>60.05</u>	<u>4.173</u>
Type of Development	<u>Commerical</u>	<u>Commercial</u>
Number of Residential Lots	<u>N/A</u>	<u>N/A</u>
Impervious Cover (acres)	<u>41.50</u>	<u>2.55</u>
Impervious Cover (%)	<u>69.11</u>	<u>61.11</u>
Permanent BMPs	<u>One (1) Sand Filter Basin &amp;</u>	<u>One (1) Batch Detention</u>
Other	<u>Two (2) AquaLogic Basin</u>	<u>      </u>

<b><i>SCS Modification</i></b>	<b><i>Approved Project</i></b>	<b><i>Proposed Modification</i></b>
<b><i>Summary</i></b>		
Linear Feet	<u>      </u>	<u>      </u>
Pipe Diameter	<u>      </u>	<u>      </u>
Other	<u>      </u>	<u>      </u>



**AST Modification  
Summary**

Number of ASTs  
Volume of ASTs  
Other

**Approved Project**

—  
\_\_\_\_\_  
\_\_\_\_\_

**Proposed Modification**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**UST Modification  
Summary**

Number of USTs  
Volume of USTs  
Other

**Approved Project**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Proposed Modification**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. ☒ **Attachment B: Narrative of Proposed Modification.** A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved, including any previous modifications, and how this proposed modification will change the approved plan.
6. ☒ **Attachment C: Current Site Plan of the Approved Project.** A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
- ☐ The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
- ☒ The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
- ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
- ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
- ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.
7. ☐ The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.
- ☒ Acreage has not been added to or removed from the approved plan.
8. ☒ 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**

Kathleen Hartnett White, *Chairman*  
Larry R. Soward, *Commissioner*  
H. S. Buddy Garcia, *Commissioner*  
Glenn Shankle, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

May 9, 2007

Mr. Greg Mann  
NECBUL 1604, Ltd.  
8000 IH-10 West, Suite 200  
San Antonio, Texas 78230

Re: Edwards Aquifer, Bexar County  
NAME OF PROJECT: NEC Bulverde 1604; Located on the northeast corner of Bulverde Rd and Loop 1604, San Antonio, Texas  
TYPE OF PLAN: Request for the Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer; Edwards Aquifer Protection Program ID No. 2629.00; Investigation No. 542233; Regulated Entity No. RN105171136

Dear Mr. Mann:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the above-referenced project submitted to the San Antonio Regional Office by Pape-Dawson Engineers, Inc. on behalf of NECBUL 1604, Ltd. on February 23, 2007. Final review of the WPAP was completed after additional material was received on April 23, 2007 and May 3, 2007. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

### PROJECT DESCRIPTION

The proposed commercial project will have a total site area of approximately 56.67 acres. The impervious cover will be 38.42 acres (68%) and will include 11 commercial lots (90% impervious cover limit), paved parking areas, driveways, utilities, sidewalks and one sedimentation filtration basin. Project wastewater will be disposed of by conveyance to the existing Salado Creek Water Recycling Center owned by the San Antonio Water System.

### PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating onsite and potentially flowing across and off the site after construction, a partial sedimentation filtration basin system and an interim filter strip designed using the TCEQ Technical Guidance Document, "Complying with the Edwards Aquifer Rules: Technical

Guidance on Best Management Practices" (2005) will be constructed. The water quality basin will provide treatment for approximately 31,351 pounds of total suspended solids (TSS) generated from the 38.42 acres (68%) of impervious cover. The basin is designed with a water capture volume of 232,378 cubic feet (231,618 cubic feet required) and a sand filter area of 29,019 square feet (27,794 square feet required). The approved measures have been presented to meet the required 80% removal of the increased load in TSS for the proposed development.

### GEOLOGY

According to the geologic assessment included with the application submitted, eight non-sensitive geologic features in the bedrock were identified at the project site. The geologic assessment included only 46.25 acres of the 56.67 acres. The San Antonio Regional Office conducted a site assessment on April 20, 2007 and found the site to be in general agreement with the geologic assessment.

During the site assessment investigation on April 20, 2007 the results of regulated activities, tree clearing (mulching) with soil disturbance, were observed at the site prior to the TCEQ issuing approval for the water pollution abatement plan. The mulching activities disturbed the soil and changed the topography and hydrology of the site. Correspondence from Pape-Dawson Engineers, Inc. to the TCEQ dated February 8, 2007 stated the project site would be cleared and that "the process will not disturb the surface of the ground".

### SPECIAL CONDITIONS

- I. The holder of the approved Edwards Aquifer WPAP must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the application.
- II. Parcel #6 (1.19 acres) will be treated by an interim filter strip until the water quality basin and stormwater conveyance system is constructed. The water quality basin shall be operational prior to the occupancy of the remaining facilities.
- III. Intentional discharges of sediment laden storm water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
- IV. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.
- V. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.
- VI. The results of regulated activities identified, at the project site, during the site assessment investigation on April 20, 2007, may constitute as construction without the prior approval of the water pollution abatement plan as required by the TCEQ rules (30 TAC §213.4(a)). Therefore, the applicant is hereby advised that the after-the-fact approval of the development, as provided by this letter, may not absolve the applicant of any prior violations of the TCEQ rules related to this project, and may not necessarily preclude the TCEQ from pursuing appropriate enforcement actions and administrative penalties associated with such violations, as provided in 30 TAC §213.10 of TCEQ rules.

- VII. Provide an updated site plan, including the final amount of impervious cover constructed, within 15 days of submitting the Notice of Termination.
- VIII. The geologic assessment included only 46.25 acres of the 56.67 acres project site. The 10.42 acres not included in the geologic assessment shall remain undisturbed with no regulated activities occurring at this location unless a WPAP modification is submitted and approved by the executive director.
- IX. All stormwater runoff from constructed buildings shall be directed and conveyed to the water quality basin.

#### STANDARD CONDITIONS

- 1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

#### Prior to Commencement of Construction:

- 2. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the appropriate Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
- 3. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are complete.
- 4. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
- 5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
- 6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

8. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
10. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
12. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
13. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:


14. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

Mr. Gregg Mann  
May 9, 2007  
Page 5

15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
17. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact Charly Fritz of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4065.

Sincerely,

  
Glenn Shankle  
Executive Director  
Texas Commission on Environmental Quality

GS/CEF/eg

Enclosures: Deed Recordation Affidavit, Form TCEQ-0625  
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Dennis Rion, P.E., Pape-Dawson Engineers, Inc.  
Mr. Scott Halty, San Antonio Water System  
Mr. Robert Potts, Edwards Aquifer Authority  
Ms. Renee Green, Bexar County Public Works  
TCEQ Central Records, Building F, MC 212

Buddy Garcia, *Chairman*  
Larry R. Soward, *Commissioner*  
Bryan W. Shaw, Ph.D., *Commissioner*  
Mark R. Vickery, P.G., *Executive Director*

## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

September 17, 2008

Mr. Greg Mann  
NECBUL 1604 Ltd.  
8000 IH-10 West, Suite 200  
San Antonio, TX 78230

Re: Edwards Aquifer, Bexar County  
NAME OF PROJECT: NEC Bulverde 1604; Located at the northeast corner of Loop 1604 and Bulverde Rd., San Antonio, Texas  
TYPE OF PLAN: Request for Modification of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer  
Edwards Aquifer Protection Program ID No.: 2629.02; Investigation No. 685401; Regulated Entity No. RN105171136

Dear Mr. Mann:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the request for modification of the approved WPAP for the above-referenced project submitted to the San Antonio Regional Office by Pape-Dawson Engineers, Inc. on behalf of NECBUL 1604 Ltd. on July 3, 2008. Final review of the WPAP was completed after additional material was received on August 28, 2008 and September 15, 2008. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

### BACKGROUND

The original WPAP was approved on May 9, 2007 for a 56.67 acre site with 38.42 acres of impervious cover. One sedimentation filtration basin was approved to treat the total suspended solids generated from the site. This modification proposes to increase the total site acreage, total impervious cover and revises the permanent BMPs for the site.

### PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 60.05 acres. It will include approximately 15 commercial buildings, associated driveway, parking lots and utilities and two computer

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P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • Internet address: [www.tceq.state.tx.us](http://www.tceq.state.tx.us)



Mr. Greg Mann  
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controlled cartridge filter systems. The impervious cover will be 41.50 acres (69.11 percent). Project wastewater will be disposed of by conveyance to the existing Salado Creek Water Recycling Center owned by the San Antonio Water System.

### PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two AquaLogic Systems, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 33,864 pounds of TSS generated from the 41.50 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The individual treatment measures will consist of two basins with the design parameters listed below and detailed in the approved plan sheets.

Table 1 BMP Summary								
Watershed	Total Area (ac)	Impervious Cover (ac)	Req. TSS Removal (lb/yr)	Design TSS Removal (lb/yr)	Req. WQV (ft <sup>3</sup> )	Design WQV (ft <sup>3</sup> )	Req. Filter Canisters	Design Filter Canisters
Basin A	14.70	13.28	10,836	10,836	47,233	48,900	109	112
Basin B	29.50	26.66	21,755	23,028	113,787	119,000	262	270
Uncaptured	15.85	1.560	1,273 <sup>A</sup>	0	---	---	---	---
Total	60.05	41.50	33,864	33,864	---	---	---	---

A: Overtreatment of the TSS is provided in Watershed B

### GEOLOGY

According to the geologic assessment included with the application the site is located in cyclic and marine members and the leached and collapsed members of the Pearson Formation. The project geologist scored twelve non-sensitive geologic features and one sensitive manmade feature. The San Antonio Regional Office site assessment conducted on August 27, 2008 revealed the site as described by the assessment.

### SPECIAL CONDITIONS

- I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated May 9, 2007.
- II. Permanent pollution abatement measures shall be operational prior to occupancy of the facility in the BMPs respective drainage area.
- III. All sediment and/or media removed from the water quality basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.
- IV. The application did not include a retrofit plan for the AquaLogic system. In the event that the maintenance contract is not renewed and the AquaLogic systems are removed, the applicant is responsible for submitting a plan to modify the water quality basins 90 days before the contract

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expires. The plan must meet TCEQ requirements current at the time the application for modification is submitted. No interruption of treatment will be allowed.

- V. For full sedimentation/filtration basins, the valve as specified in Section 3.4.7 and Figure 3-24 of the June 2005 Edition of the Technical Guidance Manual on Best Management Practices, should only be used as a spill control device.
- VI. Regulated activities are not approved or authorized in the 11.02 acres designated as open space and drainage easement.
- VII. If building layouts are modified and the impervious cover remains the same or is reduced, an updated site plan is required to be submitted to the TCEQ San Antonio Regional Office before the building pad is constructed. If the total impervious cover increases for the site or the individual watershed drainage area values change (pervious or impervious cover), a modification to this plan may be required.

#### STANDARD CONDITIONS

- 1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
- 2. The holder of the approved Edwards Aquifer Protection Plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, PST) can be required depending on the specifics of the plan.
- 3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

#### Prior to Commencement of Construction:

- 4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
- 5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
- 6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

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7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

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14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden storm water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

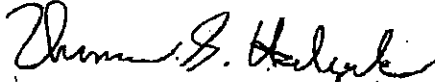
18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.
19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

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22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact Charly Fritz of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4065.

Sincerely,



Mark R. Vickery, P.G.  
Executive Director  
Texas Commission on Environmental Quality

MRV/CEF/eg

Enclosures: Deed Recordation Affidavit, Form TCEQ-0625  
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Dennis Rion, P.E., Pape-Dawson Engineers, Inc.  
Mr. Scott Halty, San Antonio Water System  
Ms. Renee Green, P.E., Bexar County Public Works  
Ms. Velma Danielson, Edwards Aquifer Authority  
TCEQ Central Records, Building F, MC212

Bryan W. Shaw, Ph.D., P.E., *Chairman*  
Toby Baker, *Commissioner*  
Zak Covar, *Commissioner*  
Richard A. Hyde, P.E., *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 27, 2015

Mr. Gregg Mann  
NEC BUL 1604, Ltd  
8000 IH-10 West, Suite 200  
San Antonio, Texas 78230

Re: Edwards Aquifer, Bexar County

NAME OF PROJECT: NEC Bulverde 1604; located at the northeast corner of Loop 1604 and Bulverde Rd., San Antonio, Texas.

TYPE OF PLAN: Request for Modification of an Approved Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Investigation No. 1217067; Regulated Entity No. RN105171136; Additional ID No. 13-14121901

Dear Mr. Mann,

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Modification for the above-referenced project submitted to the San Antonio Regional Office by Pape-Dawson Engineers, Inc. on behalf of NEC BUL 1604, Ltd. on December 19, 2014. Final review of the WPAP was completed after additional material was received on February 13, 2015, and February 23, 2015. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

### BACKGROUND

The original WPAP was approved by letter dated May 9, 2007. The project included the construction of 11 commercial lots, parking areas, driveways, sidewalks, and associated utilities. The total impervious cover for the 56.67 acre project was 38.42 acres (67.79 percent). The plan

was subsequently modified by letter dated September 17, 2008. The modification increased the total site limits to 60.05 acres, increased the number of commercial buildings to 15, increased the total impervious cover to 41.5 acres (69.11 percent) and added two computer controlled cartridge filtration systems.

### PROJECT DESCRIPTION

The proposed commercial development will have an area of approximately 60.05 acres and will be developed in two phases. The changes associated with this modification are for phase 1. Additional modification applications are anticipated for future development of phase 2. The project will include the construction of commercial lots, parking areas, driveways, sidewalks, and associated utilities. The impervious cover will be reduced to 39.15 acres (65.19 percent). Project wastewater will be disposed of by conveyance to the existing Dos Rios Water Recycling Center owned by the San Antonio Water Systems.

### PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, one single chamber sand filter basin, and two existing computer controlled cartridge filtration systems designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed and/or utilized to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 31,947 pounds of TSS generated from the 39.15 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The individual treatment measures are detailed in the tables below.

<b>Computer Controlled Cartridge Filtration System</b>								
Watershed	Total Area (ac)	Impervious Cover (ac)	Req TSS Removal (lb/yr)	Designed TSS Removal (lb/yr)	Req. WQV (ft3)	Designed WQV (ft3)	Req. Filter Cartridges	Designed Filter Cartridges
A	8.92	8.03	6,552.48	7,932	34,273	48,900	79	112
B	9.96	8.96	7,311.36	8,851	45,891	119,000	106	270
Total	18.88	16.99	13,863.84	16,783	80,164	167,900	185	382

<b>Single Chamber Sedimentation/Sand Filtration Basin</b>								
Watershed	Total Area (ac)	Impervious Cover (ac)	Req TSS Removal (lb/yr)	Designed TSS Removal (lb/yr)	Req. WQV (ft3)	Designed WQV (ft3)	Req. Sand Filter Area (ft2)	Designed Sand Filter Area (ft2)
C	23.52	21.17	17,275	19,591	128,004	134,522	12,800	13,031



Uncaptured Areas								
Watershed	Total Area (ac)	Impervious Cover (ac)	Req TSS Removal (lb/yr)	Designed TSS Removal (lb/yr)	Req. WQV (ft3)	Designed WQV (ft3)	Req. Sand Filter Area (ft2) or Cartridges	Designed Treatment Area (ft2) or Cartridges
B2*	0.48	0.48	391.68	0	2,048	0	5	0
C2**	0.51	0.51	416.16	0	2,720	0	227	0
Total	0.99	0.99	807.84					

\* Overtreatment for this area is provided by the cartridge filtration system within watershed B.

\*\* Overtreatment for this area is provided by the sand filtration basin within watershed C.

The combined annual TSS removal is 36,374 pounds (31,947 pounds required).

### GEOLOGY

According to the geologic assessment included with the application, the site is located in the cyclic and marine members and the leached and collapsed members of the Person Formation. The report identified one sensitive man-made feature in bedrock (an existing sewer line trench), and six non-sensitive features (four non-karst closed depressions, and two faults). The San Antonio Regional Office did not conduct a site assessment.

### SPECIAL CONDITIONS

- I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letters dated May 9, 2007, and September 17, 2008.
- II. All permanent pollution abatement measures shall be operational prior to occupancy of any facility within its respective drainage area.
- III. All sediment and/or media removed from the water quality basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.
- IV. Additional modification applications will be required prior to conducting regulated activities within the Phase 2 area.

### STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.



Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (**Deed Recordation Affidavit, TCEQ-0625**) that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved

prior to installation. The application **must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.**

12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and **the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.**
13. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, **as appropriate.**
14. **If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.**
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and **the dates when stabilization measures are initiated.**
17. Stabilization measures shall be initiated **as soon as practicable** in portions of the site where construction activities have temporarily or permanently ceased, and construction activities **will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.**

After Completion of Construction:

18. A Texas Licensed Professional Engineer **must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.**
19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either **assumed** in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. Alex Grant of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210-403-4035

Sincerely,



Lynn Bumguardner, Water Section Manager  
San Antonio Region Office  
Texas Commission on Environmental Quality

LB/AG/eg

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625  
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Ms. Shawna Weaver, P.E., Pape-Dawson Engineers, Inc.  
Mr. George Wissman, Trinity Glen Rose GCD  
Mr. Scott Halty, San Antonio Water System  
Mr. Roland Ruiz, Edwards Aquifer Authority  
Ms. Renee Green, P.E., Bexar County Public Works  
TCEQ Central Records, Building F, MC 212

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Toby Baker, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

November 21, 2022

Mr. Cameron M. Conner  
Bulverde Apartments 2022, LLC  
505 N 20<sup>th</sup> Street, Suite 1000  
Birmingham, Alabama 35203

Re: Edwards Aquifer, Bexar County

NAME OF PROJECT: Bulverde Multifamily; Located at northeast corner of Loop 1604 and Bulverde Road; San Antonio, Texas

TYPE OF PLAN: Request for Modification of an Approved Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Regulated Entity No. RN111567087; Additional ID No. 13001608

Dear Mr. Connor:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Modification for the above-referenced project submitted to the San Antonio Regional Office by LJA Engineering on behalf of Bulverde Apartments 2022, LLC on September 21, 2022. Final review of the WPAP Modification was completed after additional material was received on November 3, 2022, and November 9, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

### BACKGROUND

The NEC Bulverde WPAP was approved by letter dated May 9, 2007, for commercial development of a 56.67-acre site to include several commercial lots with associated parking and driveways. Subsequent WPAP Modifications in 2008 and 2015 increased the number of commercial lots. Permanent BMPs included a sedimentation filtration basin, two (2) computer-controlled cartridge filtration systems and a single chamber sand filter basin.

### PROJECT DESCRIPTION

This modification is on a 21.09-acre site and proposes 9.72 acres (46.08 percent) of impervious cover. The project proposes the construction of multifamily buildings with associated parking. Project wastewater will be disposed of by conveyance to the existing Steven M. Clouse Water Recycling Center owned and operated by the San Antonio Water System.

### PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, one (1) existing single-chamber sand filter basin (13-14121901) and one (1) proposed single-chamber sand filter basin, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be utilized to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 7,932 pounds of TSS generated from the 9.72 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

### GEOLOGY

According to the geologic assessment included with the application, the site lies within the cyclic and marine members of the Person Formation. One (1) non-karst closed depression and three (3) non-sensitive geologic features were noted by the project geologist. The site assessment conducted on October 25, 2022, revealed that the site was generally as described in the application.

### SPECIAL CONDITIONS

- I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated May 9, 2007, and subsequent modifications dated September 17, 2008, and February 27, 2015.
- II. The proposed water quality basin shall be operational prior to first occupancy of the facility.
- III. All sediment and/or media removed from the existing water quality basin and the proposed water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

### STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The

applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

13. No wells exist on the site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.
19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

Mr. Cameron M. Conner

Page 5

November 21, 2022

21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Dianne Pavlicek-Mesa, P.G., of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210-403-4074.

Sincerely,



Lillian Butler, Section Manager  
Edwards Aquifer Protection Program  
Texas Commission on Environmental Quality

LIB/dpm

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625  
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Jose Cantu, P.E., LJA Engineering



**ATTACHMENT B**

## **NEC Bulverde/1604**

### **Water Pollution Abatement Plan Modification IV**

#### **Attachment B – Narrative of Proposed Modification**

The NEC Bulverde/1604 Water Pollution (WPAP) Modification (MOD IV) is a modification to the approve NEC Bulverde/1604 WPAP Modification II (RN105171136) and Bulverde Multifamily WPAP Modification III (RN111567087). The NEC Bulverde/1604 WPAP MOD IV proposes revisions to the site plan due to updated construction phasing to allow for the southeastern portion of the site to be constructed and treated by (1) batch detention basin. The project site is located inside the limits of the City of San Antonio in Bexar County, Texas. The entire site is located over the Edward Aquifer Recharge Zone.

NEC Bulverde/1604 WPAP was approved on May 9, 2007 (EAPP File No. 2692.00) and permitted the construction of 38.42-acres of impervious cover for the 56.67-acre site. The NEC Bulverde/1604 WPAP Modification I (WPAP MOD I) was approved on September 17, 2008 (EAPP File No. 2629.02) and permitted the construction of 41.50-acres of impervious cover for the 60.05-acre site. The NEC Bulverde WPAP Modification II (WPAP MOD II) was approved on February 27, 2015 (RN105171136) and permitted the construction of 39.15-acres of impervious cover for the 60.05-acre site. The Bulverde Multifamily WPAP Modification III was approved on November 21, 2022 (RN111567087) and permitted the construction of 9.72-acres of impervious cover for the 21.09-acre site.

The NEC Bulverde/1604 WPAP MOD IV proposed revisions to the site plan due to updated construction plans and construction phasing to allow for the treatment of the southeastern portion of the 60.05-acre site. The NEC Bulverde/1604 WPAP MOD IV will consist of 4.173 acres for commercial use and 2.55 acres will be under impervious cover (61.11%). This site plan update proposes the construction of (1) batch detention basin and will be designed to provide overtreatment for approximately 0.21 acres of driveway and deceleration lane areas. This site doesn't receive offsite drainage area. This BMP has been designed in accordance with TCEQ Technical Guidance Manual (TGM) to remove 91% of the increased Total Suspended Solids (TSS) for the proposed improvements.

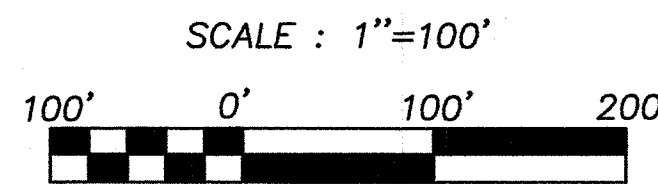
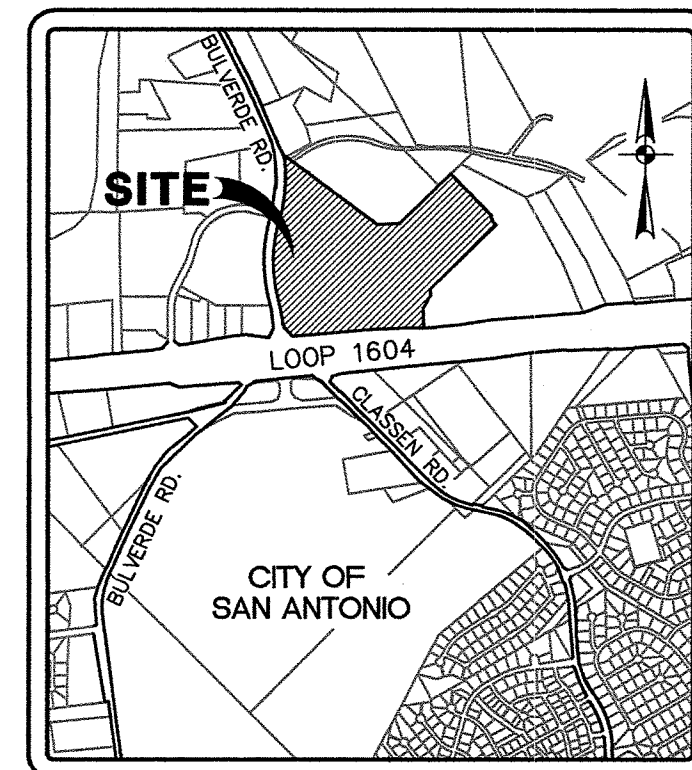
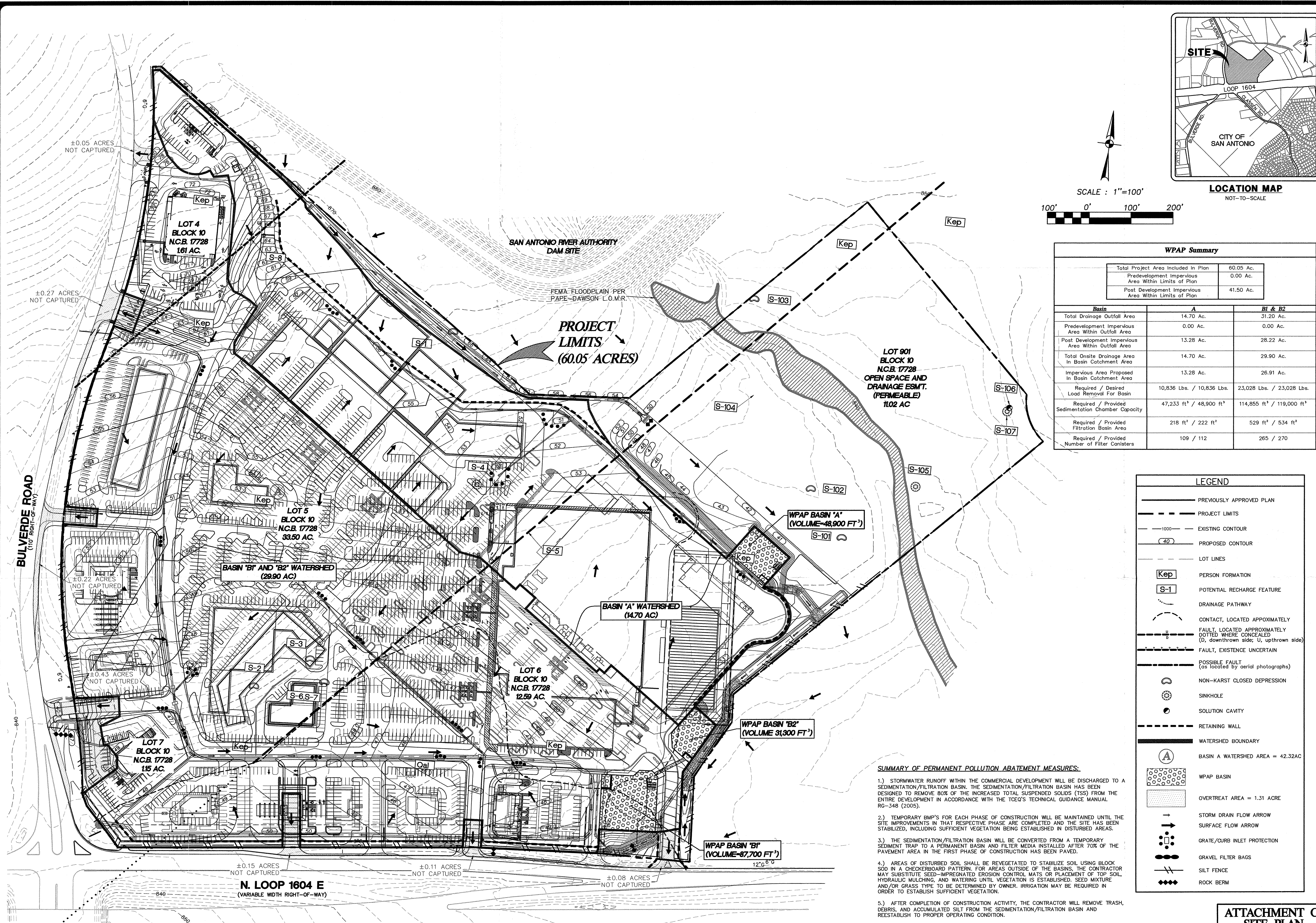
Potable water service is to be provided by the San Antonio Water System (SAWS). Wastewater will be disposed of by conveyance to the existing Steven M. Clouse Water Recycling Center operated by SAWS.

**ATTACHMENT C**



Date: Apr 17, 2008, 1:51pm User ID: LKoracki  
File: P:\62\29\23-WPAP\MOD\DESIGN\ENVIRONMENTAL\ATT C - Site Plan - 622923.dwg

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



WPAP Summary		
Total Project Area Included in Plan	60.05 Ac.	
Predevelopment Impervious Area Within Limits of Plan	0.00 Ac.	
Post Development Impervious Area Within Limits of Plan	41.50 Ac.	
Basin	A	B1 & B2
Total Drainage Outfall Area	14.70 Ac.	31.20 Ac.
Predevelopment Impervious Area Within Outfall Area	0.00 Ac.	0.00 Ac.
Post Development Impervious Area Within Outfall Area	13.28 Ac.	28.22 Ac.
Total Onsite Drainage Area In Basin Catchment Area	14.70 Ac.	29.90 Ac.
Impervious Area Proposed In Basin Catchment Area	13.28 Ac.	26.91 Ac.
Required / Desired Load Removal For Basin	10,836 Lbs. / 10,836 Lbs.	23,028 Lbs. / 23,028 Lbs.
Required / Provided Sedimentation Chamber Capacity	47,233 ft <sup>3</sup> / 48,900 ft <sup>3</sup>	114,855 ft <sup>3</sup> / 119,000 ft <sup>3</sup>
Required / Provided Filtration Basin Area	218 ft <sup>2</sup> / 222 ft <sup>2</sup>	529 ft <sup>2</sup> / 534 ft <sup>2</sup>
Required / Provided Number of Filter Canisters	109 / 112	265 / 270

**SUMMARY OF PERMANENT POLLUTION ABATEMENT MEASURES:**

- 1.) STORMWATER RUNOFF WITHIN THE COMMERCIAL DEVELOPMENT WILL BE DISCHARGED TO A SEDIMENTATION/FILTRATION BASIN. THE SEDIMENTATION/FILTRATION BASIN HAS BEEN DESIGNED TO REMOVE 80% OF THE INCREASED TOTAL SUSPENDED SOLIDS (TSS) FROM THE ENTIRE DEVELOPMENT IN ACCORDANCE WITH THE TCEQ'S TECHNICAL GUIDANCE MANUAL RG-348 (2005).
- 2.) TEMPORARY BMP'S FOR EACH PHASE OF CONSTRUCTION WILL BE MAINTAINED UNTIL THE SITE IMPROVEMENTS IN THAT RESPECTIVE PHASE ARE COMPLETED AND THE SITE HAS BEEN STABILIZED, INCLUDING SUFFICIENT VEGETATION BEING ESTABLISHED IN DISTURBED AREAS.
- 3.) THE SEDIMENTATION/FILTRATION BASIN WILL BE CONVERTED FROM A TEMPORARY SEDIMENT TRAP TO A PERMANENT BASIN AND FILTER MEDIA INSTALLED AFTER 70% OF THE PAVEMENT AREA IN THE FIRST PHASE OF CONSTRUCTION HAS BEEN PAVED.
- 4.) AREAS OF DISTURBED SOIL SHALL BE REVEGETATED TO STABILIZE SOIL USING BLOCK SOD IN A CHECKERBOARD PATTERN. FOR AREAS OUTSIDE OF THE BASINS, THE CONTRACTOR MAY SUBSTITUTE SEED-IMPREGNATED EROSION CONTROL MATS OR PLACEMENT OF TOP SOIL, HYDRAULIC MULCHING, AND WATERING UNTIL VEGETATION IS ESTABLISHED. SEED MIXTURE AND/OR GRASS TYPE TO BE DETERMINED BY OWNER. IRRIGATION MAY BE REQUIRED IN ORDER TO ESTABLISH SUFFICIENT VEGETATION.
- 5.) AFTER COMPLETION OF CONSTRUCTION ACTIVITY, THE CONTRACTOR WILL REMOVE TRASH, DEBRIS, AND ACCUMULATED SILT FROM THE SEDIMENTATION/FILTRATION BASIN AND REESTABLISH TO PROPER OPERATING CONDITION.
- 6.) ALL PERMANENT BMP'S MUST BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER.

**ATTACHMENT C  
SITE PLAN**

**NEC BULVERDE / 1604 2  
SAN ANTONIO, TEXAS  
ATTACHMENT C - SITE PLAN**

JOB NO. 6229-23  
DATE APRIL 2008  
DESIGNER LCK  
CHECKED CEL DRAWN PLM  
SHEET C8.10

**PAPE-DAWSON  
ENGINEERS**

555 EAST RAMSEY | SAN ANTONIO TEXAS 78216 | PHONE: 210.375.9000 FAX: 210.375.9010

REVISIONS:



**WATER POLLUTION  
ABATEMENT PLAN  
APPLICATION FORM (TCEQ-  
0584)**

# Water Pollution Abatement Plan Application

## Texas Commission on Environmental Quality

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

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

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

## Signature

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

Print Name of Customer/Agent: Curtis Lee, P.E.

Date: 10/31/24

Signature of Customer/Agent:



Regulated Entity Name: NEC Bulverde/1604

## Regulated Entity Information

1. The type of project is:

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

2. Total site acreage (size of property): 60.05

3. Estimated projected population: N/A

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

**Table 1 - Impervious Cover Table**

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	309,276	÷ 43,560 =	7.10
Parking	1,250,172	÷ 43,560 =	28.7
Other paved surfaces	248,292	÷ 43,560 =	5.7
Total Impervious Cover	1,807,740	÷ 43,560 =	41.50

**Total Impervious Cover 41.50 ÷ Total Acreage 60.05 X 100 = 69.11% Impervious Cover**

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

### ***For Road Projects Only***

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

7. Type of project:

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

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

- ☐ Concrete  
☐ Asphaltic concrete pavement  
☐ Other: \_\_\_\_\_

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

Width of R.O.W.: \_\_\_\_\_ feet.

L x W = \_\_\_\_\_ Ft<sup>2</sup> ÷ 43,560 Ft<sup>2</sup>/Acre = \_\_\_\_\_ acres.

10. Length of pavement area: \_\_\_\_\_ feet.

Width of pavement area: \_\_\_\_\_ feet.

L x W = \_\_\_\_\_ Ft<sup>2</sup> ÷ 43,560 Ft<sup>2</sup>/Acre = \_\_\_\_\_ acres.

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

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

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

### ***Stormwater to be generated by the Proposed Project***

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

### ***Wastewater to be generated by the Proposed Project***

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

<u>100</u> % Domestic	<u>89,100</u> Gallons/day
<u>      </u> % Industrial	<u>      </u> Gallons/day
<u>      </u> % Commingled	<u>      </u> Gallons/day
TOTAL gallons/day <u>89,100</u>	

15. Wastewater will be disposed of by:

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

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

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

☒ Sewage Collection System (Sewer Lines):

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

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

☐ The SCS was previously submitted on \_\_\_\_\_.

☐ The SCS was submitted with this application.

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



☒ The sewage collection system will convey the wastewater to the Steven M. Clouse (name) Treatment Plant. The treatment facility is:

☒ Existing.

☐ Proposed.

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

## **Site Plan Requirements**

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

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

Site Plan Scale: 1" = 30'.

18. 100-year floodplain boundaries:

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

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

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): DFIRM (Digital Flood Insurance Rate Map for Bexar County, Texas and Incorporated Areas) Panel No. 48029C0260G, Dated 9/29/2010

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

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

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

☒ There are 0 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

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

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

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

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

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

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

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

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

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

### ***Administrative Information***

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

**ATTACHMENT A**

**Attachment A – Factors Affecting Water Quality**

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

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

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

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

**ATTACHMENT B**

## NEC BULVERDE/1604

### Water Pollution Abatement Plan Modification

#### Attachment B – Volume and Character of Stormwater

Stormwater runoff will increase as a result of this development. For a 25-year storm event, the overall project will generate approximately 29.40 cfs. The runoff coefficient for the site changes from approximately 0.75 before development to 0.97 after development. Values are based on the Rational Method using runoff coefficients per the City of San Antonio Unified Development Code.

**TEMPORARY STORMWATER  
SECTION (TCEQ-0602)**

# Temporary Stormwater Section

## Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

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

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

## Signature

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

Print Name of Customer/Agent: Curtis Lee, P.E.

Date: 10/31/24

Signature of Customer/Agent:



---

Regulated Entity Name: NEC Bulverde/1604

## 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: construction staging area

These fuels and/or hazardous substances will be stored in:

- ☒ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.



- ☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
- ☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
- ☐ Fuels and hazardous substances will not be stored on the site.
- 2. ☒ **Attachment A - Spill Response Actions.** A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. ☒ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. ☒ **Attachment B - Potential Sources of Contamination.** A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

### ***Sequence of Construction***

- 5. ☒ **Attachment C - Sequence of Major Activities.** A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.
  - ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.
  - ☒ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
- 6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Elm Waterhole Creek

### ***Temporary Best Management Practices (TBMPs)***

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

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

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

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

## ***Soil Stabilization Practices***

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

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

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

### ***Administrative Information***

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

**ATTACHMENT A**

# NEC BULVERDE/1604

## Water Pollution Abatement Plan Modification

### 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](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.

## **NEC BULVERDE/1604**

### **Water Pollution Abatement Plan Modification**

- 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**



**Water Pollution Abatement Plan Modification****Attachment B – Potential Sources of Contamination**

Other potential sources of contamination during construction include:

<b>Potential Source</b>	<b>Preventative Measure</b>
Asphalt products used on this project.	<ul style="list-style-type: none"><li>▪ 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.</li></ul>
Oil, grease, fuel, and hydraulic fluid contamination from construction equipment and vehicle dripping.	<ul style="list-style-type: none"><li>▪ Vehicle maintenance when possible, will be performed within the construction staging area.</li><li>▪ Construction vehicles and equipment shall be checked regularly for leaks and repaired immediately.</li></ul>
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.	<ul style="list-style-type: none"><li>▪ Contractor to incorporate into regular safety meetings, a discussion of spill prevention and appropriate disposal procedures.</li><li>▪ Contractor's superintendent or representative overseer shall enforce proper spill prevention and control measures.</li><li>▪ Hazardous materials and wastes shall be stored in covered containers and protected from vandalism.</li><li>▪ A stockpile of spill cleanup materials shall be stored on site where it will be readily accessible.</li></ul>
Miscellaneous trash and litter from construction workers and material wrappings.	<ul style="list-style-type: none"><li>▪ Trash containers will be placed throughout the site to encourage proper trash disposal.</li></ul>
Construction debris.	<ul style="list-style-type: none"><li>▪ 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.</li></ul>
Spills/Overflow of waste from portable toilets	<ul style="list-style-type: none"><li>▪ Portable toilets will be placed away from high-traffic vehicular areas and storm drain inlets.</li><li>▪ Portable toilets will be placed on a level ground surface.</li><li>▪ Portable toilets will be inspected regularly for leaks and will be serviced and sanitized at time intervals that will maintain sanitary conditions.</li></ul>

**ATTACHMENT C**

## **NEC BULVERDE/1604**

### **Water Pollution Abatement Plan Modification**

#### **Attachment C – Sequence of Major Activities**

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 clearing and grubbing of vegetation where applicable. This will disturb approximately 4.59 acres. The second is construction that will include construction of the batch detention basin, construction of new pavement area, landscaping and site cleanup. This will disturb approximately 4.59 acres.

**ATTACHMENT D**

Attachment D – Temporary Best Management Practices and Measures

- a. 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.

***Some upgradient water will cross the site but will not be in the portion that is being developed. All TBMPs are adequate for the drainage areas they serve.***

- b. A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.

***Site preparation, which is the initiation of all activity on the project, will disturb the largest amount of soil. Therefore, before any of this work can begin, the clearing and grading contractor will be responsible for the installation of all on-site control measures. The methodology for pollution prevention of on-site stormwater will include: (1) erection of silt fences along the downgradient boundary of construction activities for temporary erosion and sedimentation controls, (2) installation of rock berms with silt fencing downgradient from areas of concentrated stormwater flow for temporary erosion control, (3) Installation of gravel bags and drain inlet protection at inlets and downgradient areas of construction activities for sediment control (4) installation of stabilized construction entrance/exit(s) to reduce the dispersion of sediment from the site, and (5) 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.

***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.***

**Water Pollution Abatement Plan Modification**

- 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.

***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**

**Attachment F – Structural Practices**

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

- Erection of silt fences along the downgradient boundary of construction activities and rock berms with silt fence for secondary protection, as located on Exhibit 1 and illustrated in Exhibit 2.
- Installation of gravel bags and drain inlet protection at inlets and downgradient areas 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**

## **NEC BULVERDE/1604**

### **Water Pollution Abatement Plan Modification**

#### **Attachment G – Drainage Area Map**

No more than ten (10) acres will be disturbed within a common drainage area at one time as construction of civil infrastructure (utilities, roads, drainage, etc.) will precede home building construction. All TBMPs utilized are adequate for the drainage areas served.

**ATTACHMENT I**

**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.



**NEC BULVERDE/1604****Water Pollution Abatement Plan Modification**

Pollution Prevention Measure	Inspected in Compliance	Corrective Action Required	
		Description (use additional sheet if necessary)	Date Completed
<b>Best Management Practices</b>			
Natural vegetation buffer strips			
Temporary vegetation			
Permanent vegetation			
Sediment control basin			
Silt fences			
Rock berms			
Gravel filter bags			
Drain inlet protection			
Other structural controls			
Vehicle exits (off-site tracking)			
Material storage areas (leakage)			
Equipment areas (leaks, spills)			
Concrete washout pit (leaks, failure)			
General site cleanliness			
Trash receptacles			
<b>Evidence of Erosion</b>			
Site preparation			
Roadway or parking lot construction			
Utility construction			
Drainage construction			
Building construction			
<b>Major Observations</b>			
Sediment discharges from site			
BMPs requiring maintenance			
BMPs requiring modification			
Additional BMPs required			

\_\_\_\_\_ A brief statement describing the qualifications of the inspector is included in this SWP3.

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

"I further certify I am an authorized signatory in accordance with the provisions of 30 TAC §305.128."

\_\_\_\_\_  
Inspector's Name

\_\_\_\_\_  
Inspector's Signature

\_\_\_\_\_  
Date

**NEC BULVERDE/1604**  
**Water Pollution Abatement Plan Modification**

**PROJECT MILESTONE DATES**

Date when major site grading activities begin:

<u>Construction Activity</u>	<u>Date</u>
Installation of BMPs	

Dates when construction activities temporarily or permanently cease on all or a portion of the project:

<u>Construction Activity</u>	<u>Date</u>

Dates when stabilization measures are initiated:

<u>Stabilization Activity</u>	<u>Date</u>
Removal of BMPs	

**ATTACHMENT J**

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

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

Stabilization measures will be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and except as provided below, will be initiated no more than fourteen (14) days after the construction activity in that portion of the site has temporarily or permanently ceased. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14<sup>th</sup> day after construction activity has temporarily or permanently ceased is precluded by seasonably arid conditions, stabilization measures must be initiated as soon as practicable.



**PERMANENT STORMWATER  
SECTION (TCEQ-0600)**

# Permanent Stormwater Section

## Texas Commission on Environmental Quality

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

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

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

## Signature

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

Print Name of Customer/Agent: Curtis Lee, P.E.

Date: 10/31/24

Signature of Customer/Agent



Regulated Entity Name: \_\_\_\_\_

## Permanent Best Management Practices (BMPs)

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

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

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

☐ N/A

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

☐ N/A

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

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

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

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

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

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

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

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

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

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



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

### ***Responsibility for Maintenance of Permanent BMP(s)***

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

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

**ATTACHMENT B**

## **NEC BULVERDE/1604**

### **Water Pollution Abatement Plan Modification**

#### **Attachment B – BMPs for Upgradient Stormwater**

Upgradient flow will be routed around the site and will not flow across the impervious cover within this development.

The proposed Permanent Best Management Practices (PBMPs) for stormwater treatment is one (1) batch detention basin which was designed in accordance with the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) to remove 91% of the increase in Total Suspended Solids (TSS) from the site.

**ATTACHMENT C**



## **NEC BULVERDE/1604**

### **Water Pollution Abatement Plan Modification**

#### **Attachment C – BMPs for On-Site Stormwater**

The proposed Permanent Best Management Practices (PBMPs) for stormwater treatment is one (1) batch detention basin and one which is designed in accordance with the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) to remove 91% of the increase in Total Suspended Solids (TSS) from the site.

**ATTACHMENT D**

# **NEC BULVERDE/1604**

## **Water Pollution Abatement Plan Modification**

### **Attachment D – BMPs for Surface Streams**

The proposed Permanent Best Management Practices (PBMPs) for stormwater treatment is one (1) batch detention which is designed in accordance with the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) to remove 91% of the increase in Total Suspended Solids (TSS) from the site.

**ATTACHMENT F**

**NEC BULVERDE/1604**  
**Water Pollution Abatement Plan Modification**

**Attachment F – Construction Plans**

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



**ATTACHMENT G**

**NEC BULVERDE/1604**  
**Water Pollution Abatement Plan Modification**

**PERMANENT POLLUTION ABATEMENT MEASURES**  
**MAINTENANCE SCHEDULE AND MAINTENANCE PROCEDURES**

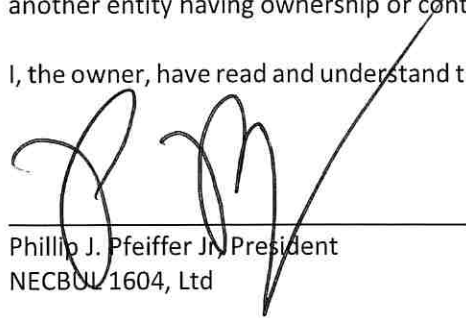
This document has been prepared to provide a description and schedule for the performance of maintenance on permanent pollution abatement measures. Maintenance measures to be performed will be dependent on what permanent pollution abatement measures are incorporated into the project. The project specific water pollution abatement plan should be reviewed to determine what permanent pollution abatement measures are incorporated in to a project.

It should also be noted that the timing and procedures presented herein are general guidelines, adjustment to the timing and procedures may have to be made depending on project specific characteristics as well as weather related conditions but may not be altered without TCEQ approval.

Where a project is occupied by the owner, the owner may provide for maintenance with his own skilled forces or contract for recommended maintenance of Permanent Best Management Practices. Where a project is occupied or leased by a tenant, the owner shall require tenants to contract for such maintenance services either through a lease agreement, property owners association covenants, or other binding document.

I understand that I am responsible for maintenance of the Permanent Pollution Abatement Measures included in this project until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property or ownership is transferred.

I, the owner, have read and understand the requirements of the attached Maintenance Plan and Schedule.

  
\_\_\_\_\_  
Phillip J. Pfeiffer Jr, President  
NECBUL 1604, Ltd

  
\_\_\_\_\_  
Date

# NEC BULVERDE/1604

## Water Pollution Abatement Plan Modification

### INSPECTION AND MAINTENANCE SCHEDULE FOR PERMANENT POLLUTION ABATEMENT MEASURES

Recommended Frequency	Task to be Performed													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
After Rainfall	√							√	√					
Biannually*	√	√	√	√	√	√	√	√	√					√

*\*At least one biannual inspection must occur during or immediately after a rainfall event.*

*√Indicates maintenance procedure that applies to this specific site.*

See description of maintenance task to be performed on the following pages. Frequency of maintenance tasks may vary depending on amount of rainfall and other weather related conditions but may not be altered without TCEQ approval.

*A written record should be kept of inspection results and maintenance performed.*

<b>Task No. &amp; Description</b>	<b>Included in this project</b>	
1. Check Depth of Vegetation	Yes	<del>No</del>
2. Check Depth of Silt Deposit in Basin	Yes	<del>No</del>
3. Removal of Debris and Trash	Yes	<del>No</del>
4. Cut-off Valve	Yes	<del>No</del>
5. Inlet Splash Pad	Yes	<del>No</del>
6. Underdrain System	Yes	<del>No</del>
7. Structural Integrity	Yes	<del>No</del>
8. Discharge Pipe	Yes	<del>No</del>
9. Drawdown Time	Yes	<del>No</del>
10. Vegetated Filter Strips	<del>Yes</del>	No
11. For Pump Stations	<del>Yes</del>	No
12. For Pump Stations	<del>Yes</del>	No
13. For Pump Stations	<del>Yes</del>	No
14. Visually Inspect Security Fencing for Damage or Breach	Yes	<del>No</del>

#### MAINTENANCE PROCEDURES FOR PERMANENT POLLUTION ABATEMENT MEASURES

**Note: Additional guidance can be obtained from TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) Section 3.5.**

1. Check Depth of Vegetation. Vegetation in the basin shall not exceed 18-inches in depth. When vegetation needs to be cut, it shall be cut to an approximately 4-inch height. *A written record should be kept of inspection results and maintenance performed.*
2. Check Depth of Silt Deposit in Basin. Top of cleanouts shall be set 4-inches above sand layer. When silt has accumulated to top of cleanouts, the silt shall be removed. The top two (2) inches of the sand media shall also be removed and replaced with clean, silica-based washed sand meeting ASTM C33 specifications [0.0165 inch (#40 sieve) to 0.0469 inch (#16 sieve)]. Silt/sediment shall be cleared from the inlet structure at least every year and from the basin at least every five (5) years. Any sand discolored as a result of apparent impact by petroleum hydrocarbon or hazardous materials should also be removed and replaced. *Written record should be kept of inspection results and maintenance performed.*
3. Removal of Debris and Trash. The basin and inlet structure shall be checked for the accumulation of debris and trash such as brush, limbs, leaves, paper cups, aluminum cans, plastic bottles etc. Accumulated trash and debris shall be raked or collected from the basin and inlet structure and disposed of properly. *Written record should be kept of inspection results and maintenance performed.*
4. Cut-off Valve. The cut-off valve shall be turned to confirm full opening and full closure. Prior to operating the valve, the valve setting shall be checked to determine the position to which the valve is to be returned (which should limit drawdown time of the basin between 24-hours and 48-hours). Count should be kept of number of turns to open and close the valve so that the valve can be reset to the starting position. Defects in the operation of the cut-off valve shall be corrected within 7 working days. *A written record should be kept of inspection results and maintenance performed.*
5. Inlet Splash Pad. The filter area around the inlet splash pad shall be checked for erosion and for the condition of the rock rubble. Erosion or disturbance of the rock rubble should be corrected by removing the rock rubble, restoring missing sand media to appropriate depth and replacement of the rock rubble. If the condition persists in subsequent inspections, the size of the rock rubble should be increased. Rubble should be placed to a density that minimizes the amount of exposed sand between the rock rubble. Deficiencies should be corrected within seven working days. *A written record should be kept of inspection results and maintenance performed.*
6. Underdrain System. The underdrain system shall be visually inspected for the accumulation of silt in the pipe system. The pipe clean-outs shall have the caps removed and visually inspected for accumulation of silt deposits. If silt deposits appear to have accumulated so as to significantly reduce the drain capacity of the pipes, then maintenance shall be performed. When silt deposits have accumulated to the stage described above, the clean-outs and drainpipes can be flushed with a high-pressure water flushing process. Clean-out caps must be replaced onto the clean-outs after maintenance so as to avoid the possibility of short circuiting the filtering process. Sediment accumulation at outlet pipe or in wet well due to flushing shall be removed and disposed of properly. *A written record should be kept of inspection results and the maintenance performed.*

**Water Pollution Abatement Plan Modification**

7. Structural Integrity. In addition to Items 1 through 6 the following are measures which should be reviewed during a check of structural integrity:
  - Observe the height of the confining berm for visible signs of erosion or potential breach. Signs of erosion should be identified and repaired immediately. Corrective measures include but are not limited to addition of topsoil or appropriate soil material so as to restore the original berm height of the sand filter basin. Restored areas shall be protected through placement of solid block sod.
  - Bypass of filter process. This condition can manifest itself in several ways. One way is by visually inspecting the clean-outs for accumulation of silt as described in Item 6. Significant accumulations of silt could be a sign of a torn filter fabric. Observations should be made over several inspection cycles to determine whether the condition persists. A second non-intrusive way of making observations for structural condition would be to visually look for collapsed or depressed areas along the edge of the filter media interface with basin side slope. If condition exists, corrective action should be performed within 15 working days. Removal of sand and replacement of filter fabric and/or pipe and gravel may be necessary. *A written record should be kept of inspection results and corrective measures taken.*
8. Discharge Pipe. The basin discharge pipe shall be checked for accumulation of silt, debris or other obstructions which could block flow. Soil accumulations, vegetative overgrowth and other blockages should be cleared from the pipe discharge point. Erosion at the point of discharge shall be monitored. If erosion occurs, the addition of rock rubble to disperse the flow should be accomplished. *A written record should be kept of inspection results and corrective measures taken*
9. Drawdown Time. This characteristic can be a sign of the need for maintenance. The minimum drawdown time is 24 hours. If drawdown time is less than 24 hours, the gate valve shall be checked and partially closed to limit the drawdown time. Extensive drawdown time greater than 48 hours may indicate blockage of the sand media, the underdrain system and/or the discharge pipe. Corrective actions should be performed and completed within 15 working days. *A written record of the inspection findings and corrective actions performed should be made.*
10. Vegetated Filter Strips. Vegetation height for native grasses shall be limited to no more than 18-inches. When vegetation exceeds that height, the filter strip shall be cut to a height of approximately 4 inches. Turf grass shall be limited to a height of 4-inches with regular maintenance that utilizes a mulching mower. Trash and debris shall be removed from filter strip prior to cutting. Check filter strip for signs of concentrated flow and erosion. Areas of filter strip showing signs of erosion shall be repaired by scarifying the eroded area, reshaping, regrading and placement of solid block sod over the affected area. *A written record of the inspection findings and corrective actions performed should be made*
11. For Pump Stations. Check wet well discharge pipe to confirm flow through the pump system. If flow is not present, allow sufficient time for pump to cycle on and off. If flow does not occur, the wet well should be checked for the level of water. The wet well should be opened and the on/off float switches should be moved up and down to activate the pump. If the pump does not start, a repair technician shall be called in to repair the malfunction within 5 working days. *A written record of the inspection findings and corrective actions performed should be made*



**Water Pollution Abatement Plan Modification**

12. For Pump Stations. Check the wet well for accumulation for trash, debris and silt. Trash and debris shall be removed and disposed of properly. Silt depth can be checked by probing the bottom of the wet well with a stick or PVC pipe. Silt accumulations should be removed when silt collects to a depth of three (3) inches over the entire wet well bottom. Silt can be removed by vacuum pump method. If silt buildup continues, underdrain system shall be inspected. *A written record should be kept of inspection results and maintenance performed.*
13. For Pump Stations. Visually check aboveground pump wiring and connections for damage. Damaged or loose connections should be repaired within 5 working days. *A written record should be kept of inspection results and the maintenance performed.*
14. Visually Inspect Security Fencing for Damage or Breach. Check maintenance access gates for proper operation. Damage to fencing or gates shall be repaired within 5 working days. *A written record should be kept of inspection results and maintenance performed.*

**ATTACHMENT I**

**Attachment I – Measures for Minimizing Surface Stream Contamination**

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

**AGENT AUTHORIZATION FORM**  
**(TCEQ-0599)**

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

I \_\_\_\_\_ **Philip J Pfeiffer Jr** \_\_\_\_\_,  
Print Name  
\_\_\_\_\_  
President \_\_\_\_\_,  
Title - Owner/President/Other  
of \_\_\_\_\_ **BUL-1604 Ltd** \_\_\_\_\_,  
Corporation/Partnership/Entity Name  
have authorized \_\_\_\_\_ **Pape-Dawson Engineers, Inc.** \_\_\_\_\_  
Print Name of Agent/Engineer  
of \_\_\_\_\_ **Pape-Dawson Engineers, Inc.** \_\_\_\_\_  
Print Name of Firm

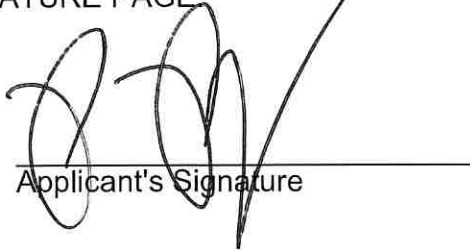
to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

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



SIGNATURE PAGE:

  
Applicant's Signature

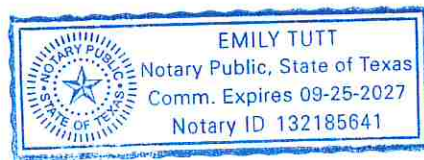
11-25-24  
Date

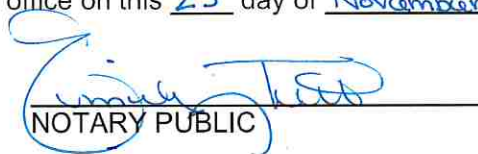
THE STATE OF Texas §

County of Bexar §

BEFORE ME, the undersigned authority, on this day personally appeared Philip Plotter, Jr 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 25<sup>th</sup> day of November, 2024



  
NOTARY PUBLIC

Emily Tutt  
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 9-25-2027

# Owner Authorization Form

Texas Commission on Environmental Quality

for Required Signature

Edwards Aquifer Protection Program

Relating to 30 TAC Chapter 213

Effective June 1, 1999

## ***Land Owner Authorization***

I, Philip J. Pfeiffer Jr of BUL-1604 LTD  
Land Owner Signatory Name Land Owner Name (Legal Entity or Individual)

am the owner of the property located at  
Remaining of Lot 5, Block 10, NCB 17728 (Further described in the attached field notes)

Legal description of the property referenced in the application

and am duly authorized in accordance with §213.4(c)(2) and §213.4(d)(1) or §213.23(c)(2) and §213.23(d) relating to the right to submit an application, signatory authority, and proof of authorized signatory.

I do hereby authorize NECBUL 1604 LTD  
Applicant Name (Legal Entity or Individual)

to conduct WPAP Modification Application to support retail project  
Description of the proposed regulated activities

at 29.60181 N , -98.41624 W  
Precise location of the authorized regulated activities

## ***Land Owner Acknowledgement***

I understand that BUL-1604 LTD  
Land Owner Name (Legal Entity or Individual)

Is ultimately responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation even if the responsibility for compliance and the right to possess and control the property referenced in the application has been contractually assumed by another legal entity. I further understand that any failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

**Land Owner Signature**

\_\_\_\_\_  
Land Owner Signature

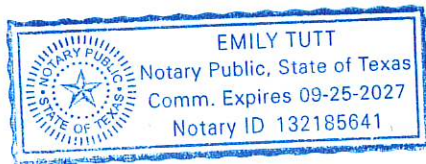
THE STATE OF § Texas

County of § Bexar

2.20.25  
Date

BEFORE ME, the undersigned authority, on this day personally appeared Philip J. Pfeiffer Jr. 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 20<sup>th</sup> day of February



Emily Tutt  
NOTARY PUBLIC

Emily Tutt  
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 9.25.27

Attached: (Mark all that apply)

- ☐ Lease Agreement
- ☐ Signed Contract
- ☐ Deed Recorded Easement
- ☐ Other legally binding document

## ***Applicant Acknowledgement***

I, Philip J. Pfeiffer Jr of NECBUL 1604 LTD  
Applicant Signatory Name Applicant Name (Legal Entity or Individual)

acknowledge that BUL-1604 LTD  
Land Owner Name (Legal Entity or Individual)

has provided NECBUL 1604 LTD  
Applicant Name (Legal Entity or Individual)

with the right to possess and control the property referenced in the Edwards Aquifer protection plan.

I understand that NECBUL 1604 LTD  
Applicant Name (Legal Entity or Individual)

is contractually responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation. I further understand that failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

## ***Applicant Signature***

  
Applicant Signature

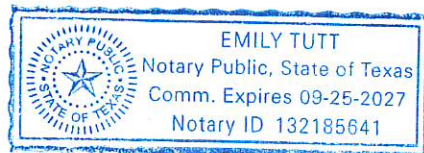
2-20-25  
Date

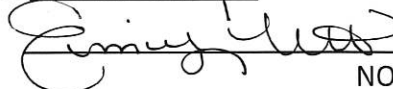
THE STATE OF § Texas

County of § Bexar

BEFORE ME, the undersigned authority, on this day personally appeared Philip J. Pfeiffer Jr. 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 20<sup>th</sup> day of February



  
NOTARY PUBLIC

Emily Tutt  
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 9-25-27

**APPLICATION FEE FORM**  
**(TCEQ-0574)**



# Application Fee Form

## Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: NEC Bulverde/1604

Regulated Entity Location: Northeast corner of Loop 1604 and Bulverde Road

Name of Customer: NECBUL 1604, Ltd

Contact Person: Philip J. Pfeiffer Jr

Phone: 210-349-7711

Customer Reference Number (if issued): CN 603156845

Regulated Entity Reference Number (if issued): RN 105171136

### Austin Regional Office (3373)

☐ Hays

☐ Travis

☐ Williamson

### San Antonio Regional Office (3362)

☒ Bexar

☐ Medina

☐ Uvalde

☐ Comal

☐ Kinney

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

☐ Austin Regional Office

☒ San Antonio Regional Office

☐ Mailed to: TCEQ - Cashier

☐ Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

### Site Location (Check All That Apply):

☒ Recharge Zone

☐ Contributing Zone

☐ Transition Zone

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
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	4.173 Acres	\$ 4,000
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: 

Date: 3/5/25

# 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***

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

### ***Organized Sewage Collection Systems and Modifications***

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

### ***Underground and Aboveground Storage Tank System Facility Plans and Modifications***

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

### ***Exception Requests***

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

### ***Extension of Time Requests***

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

**CORE DATA FORM**  
**(TCEQ-10400)**



TCEQ Use Only

# TCEQ Core Data Form

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

## SECTION I: General Information

<b>1. Reason for Submission</b> (If other is checked please describe in space provided.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other	
<b>2. Customer Reference Number (if issued)</b>	<a href="#">Follow this link to search for CN or RN numbers in Central Registry**</a>	<b>3. Regulated Entity Reference Number (if issued)</b>
CN 603156845		RN 105171136

## SECTION II: Customer Information

<b>4. General Customer Information</b>		<b>5. Effective Date for Customer Information Updates</b> (mm/dd/yyyy)	
<input type="checkbox"/> New Customer		<input type="checkbox"/> Update to Customer Information	
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)		<input type="checkbox"/> Change in Regulated Entity Ownership	
<b>The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).</b>			
<b>6. Customer Legal Name</b> (If an individual, print last name first: eg: Doe, John)		<i>If new Customer, enter previous Customer below:</i>	
NECBUL 1604 LTD		N	
<b>7. TX SOS/CPA Filing Number</b>	<b>8. TX State Tax ID</b> (11 digits)	<b>9. Federal Tax ID</b> (9 digits)	<b>10. DUNS Number</b> (if applicable)
800451778			
<b>11. Type of Customer:</b>	<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Other:	
<b>12. Number of Employees</b>		<b>13. Independently Owned and Operated?</b>	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>14. Customer Role</b> (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following			
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator			
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other:			
<b>15. Mailing Address:</b>			
City	State	ZIP	ZIP + 4
<b>16. Country Mailing Information</b> (if outside USA)		<b>17. E-Mail Address</b> (if applicable)	
<b>18. Telephone Number</b>	<b>19. Extension or Code</b>	<b>20. Fax Number</b> (if applicable)	
( ) -		( ) -	

## SECTION III: Regulated Entity Information

<b>21. General Regulated Entity Information</b> (If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)	
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information	
<b>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).</b>	
<b>22. Regulated Entity Name</b> (Enter name of the site where the regulated action is taking place.)	
NECBUL 1604 LTD	

23. Street Address of the Regulated Entity: (No PO Boxes)							
	City		State		ZIP		ZIP + 4
24. County							

**Enter Physical Location Description if no street address is provided.**

25. Description to Physical Location:	Northeast corner of Loop 1604 and Bulverde Rd						
26. Nearest City	State				Nearest ZIP Code		
San Antonio	TX				78259		
27. Latitude (N) In Decimal:	29.60181 N		28. Longitude (W) In Decimal:	-98.41624 W			
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		
29	36	6.52	98	24	58.46		
29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)		31. Primary NAICS Code (5 or 6 digits)		32. Secondary NAICS Code (5 or 6 digits)		
1542	1623		236220		237110		
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)							
Commercial							
34. Mailing Address:	200 Concord Plaza Suite 860						
	City	San Antonio	State	TX	ZIP	78216	ZIP + 4
35. E-Mail Address:	ppfeiffer@birnbaumproperty.com						
36. Telephone Number	37. Extension or Code		38. Fax Number (if applicable)				
( 210 ) 349-7711			( ) -				

**39. TCEQ Programs and ID Numbers** Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.


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

#### **SECTION IV: Preparer Information**

40. Name:	Curtis Lee, P.E.	41. Title:	Vice President
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
( 210 ) 375-9000		( 210 ) 375-9010	clee@pape-dawson.com

#### **SECTION V: Authorized Signature**

**46.** By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Pape-Dawson Consulting Engineers, LLC	Job Title:	Vice President
Name (In Print):	Curtis Lee, P.E.	Phone:	( 210 ) 375- 9000
Signature:		Date:	10/31/24



# **POLLUTANT LOAD AND REMOVAL CALCULATIONS**

# Texas Commission on Environmental Quality

## TSS Removal Calculations 04-20-2009

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

### 1. The Required Load Reduction for the total project:

Calculations from RG-348

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

where:

$L_{M \text{ TOTAL PROJECT}}$  = Required TSS removal result

$A_N$  = Net increase in impervious area

P = Average annual precipitation

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

County =	Bexar	
Total project area included in plan *	4.59	acres
Predevelopment impervious area within the limits of the plan *	0.00	acres
Total post-development impervious area within the limits of the plan *	2.76	acres
Total post-development impervious cover fraction *	0.60	
P =	30	inches

$L_{M \text{ TOTAL PROJECT}}$  = 2252 lbs.

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

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

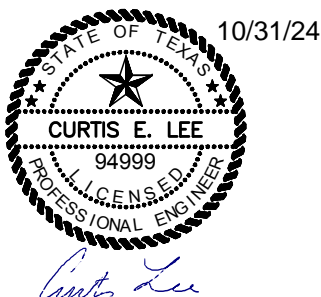
### 2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	2.87	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	2.55	acres
Post-development impervious fraction within drainage basin/outfall area =	0.89	
$L_{M \text{ THIS BASIN}}$ =	2081	lbs.

### 3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Extended Detention  
Removal efficiency = 91 percent



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

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

where:

$A_C$  = Total On-Site drainage area

$A_I$  = Impervious area proposed in

$A_P$  = Pervious area remaining in th

$L_R$  = TSS Load removed from this

$A_C$  = **2.87** acres

$A_I$  = **2.55** acres

$A_P$  = **0.32** acres

$L_R$  = **2413** lbs

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

Desired  $L_{M \text{ THIS BASIN}}$  = **2252** lbs.

$F$  = **0.93**

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

Rainfall Depth = **2.20** inches

Post Development Runoff Coefficient = **0.73**

On-site Water Quality Volume = **16628** cubic feet

10/31/24

Calculations from RG-348

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

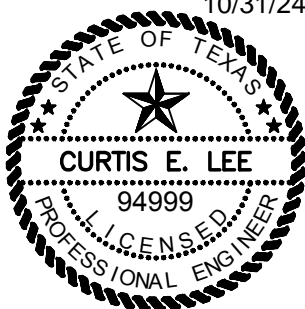
Off-site Impervious cover draining to BMP = **0.00** acres

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

Off-site Runoff Coefficient = **0.00**

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

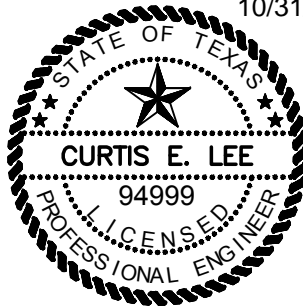
Storage for Sediment = **3326**



*Curtis Lee*

Total Capture Volume (required water quality volume(s) x 1.20) = 19954 cubic feet

10/31/24



*Curtis E. Lee*

**EXHIBITS**



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

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

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

3. IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.

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

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

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

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

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

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

10. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.

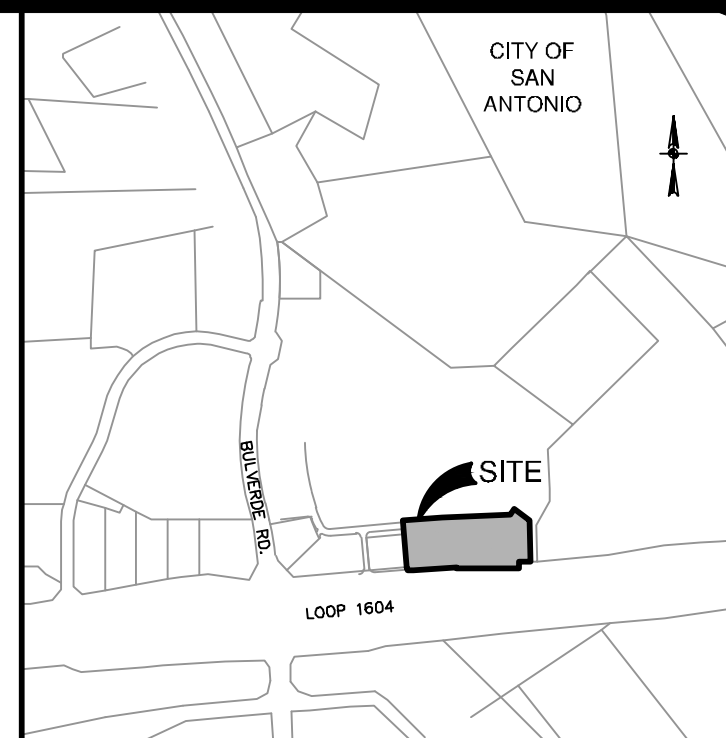
11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:

- THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
- THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
- THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

12. THE HOLDER OF ANY APPROVED EDWARDS 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.

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.
3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL 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.
5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.
7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE 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 TO COINCIDE WITH THE DISTURBANCE OF UPGRADEMENT AREAS.
10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE 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 SHALL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE CONTRACTOR SHALL PLACE SILT FENCING IN LIEU OF VEGETATED FILTER STRIP.
13. SHADED AREA \_\_\_\_\_ DENOTES LIMITS OF DISTURBED AREAS. OTHER AREAS WITHIN THE PROJECT LIMITS, WITH THE EXCEPTION OF A CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD, ARE NOT A PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES. HOUSE CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN.
14. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TxDOT RIGHT-OF-WAY WITH TxDOT.
15. CPS ENERGY MAY FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND MAY BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.

[illegible]

NOT-TO-SCALE

SCALE: 1" = 30'

0' 30' 60' 90'

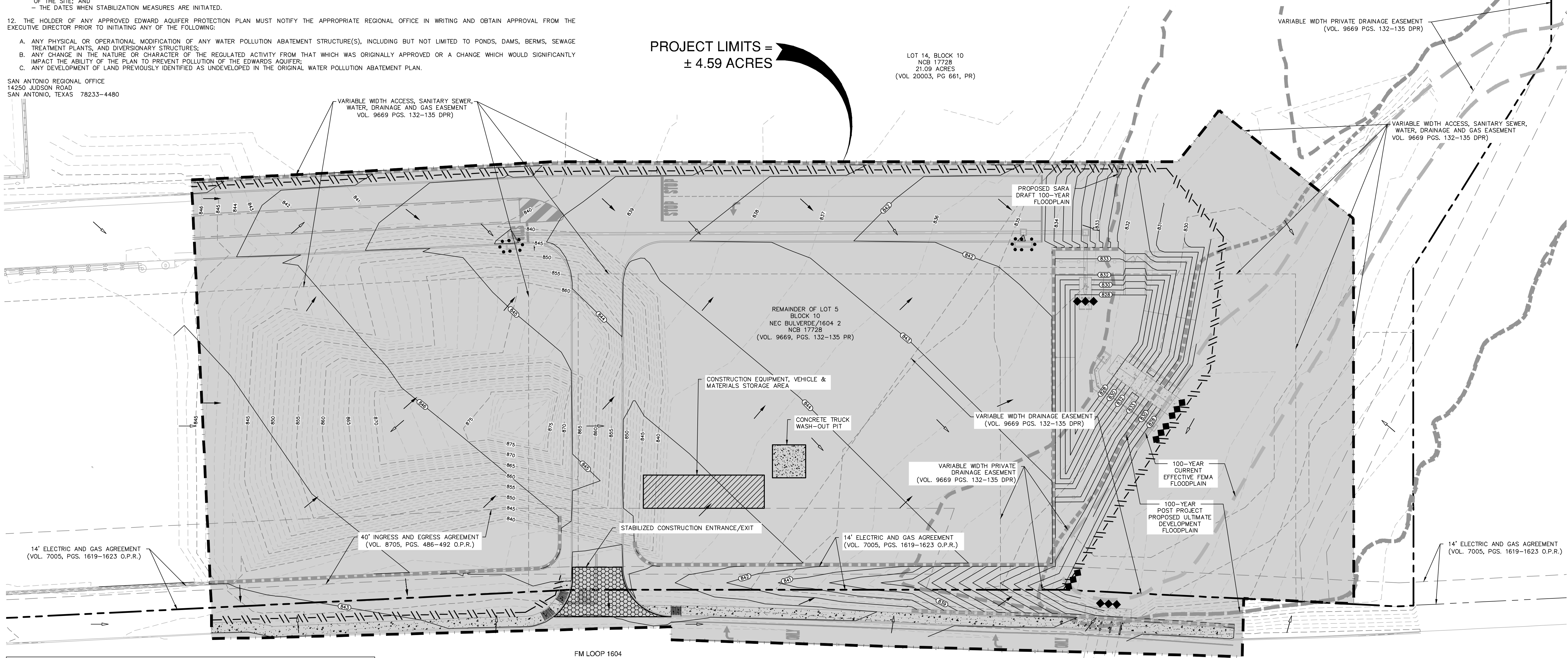
[illegible]

EXHIBIT 1

PLAT NO. 080120  
JOB NO. 6229-43  
DATE OCTOBER 2024  
DESIGNER MG  
CHECKED \_\_\_\_\_ DRAWN \_\_\_\_\_  
SHEET EX 1

**PAPE-DAWSON  
ENGINEERS**

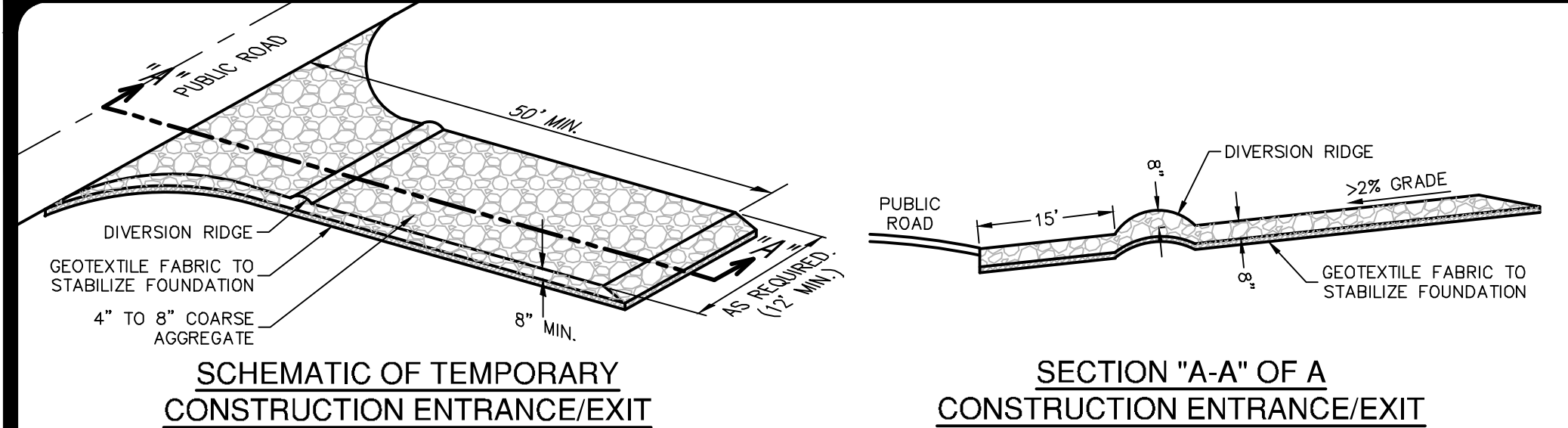
**NEC BULVERDE & 1604**  
**DRIVEWAY AND MASS GRADING**  
SAN ANTONIO, TEXAS  
TEMPORARY WATER POLLUTION ABATEMENT PLAN MODIFICATION

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



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#### MATERIALS

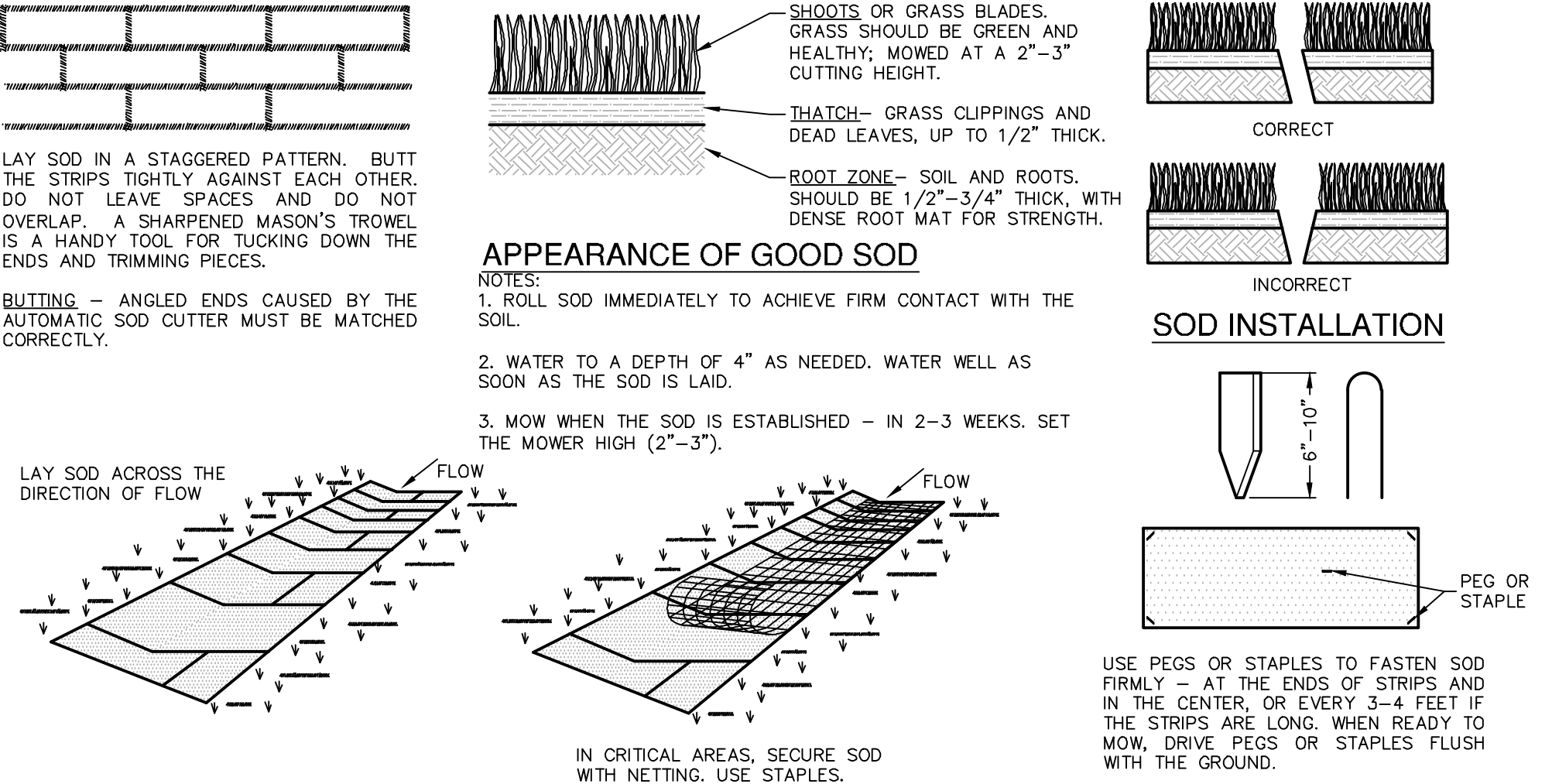
1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD<sup>2</sup>, A MULLEN BURST RATING OF 140 LB/IN<sup>2</sup>, 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 OR BASIN.

#### INSTALLATION

1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6-INCHES TO 8-INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

#### STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE



#### MATERIALS

1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH (± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE SHOOT GROWTH AND THATCH.
2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5% TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE.
3. STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT, THEIR SIZE AND SHAPE WHEN SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION.
4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

#### SITE PREPARATION

1. PRIOR TO SOD PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.
2. THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
3. 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, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT ON SLOPING LAND, THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

#### INSTALLATION IN CHANNELS

1. SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS TIGHTLY (SEE FIGURE ABOVE).
2. AFTER ROLLING OR TAMPING, SOD SHOULD BE PEGGED OR STAPLED TO RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL AREAS.

#### SOD INSTALLATION DETAIL

NOT-TO-SCALE

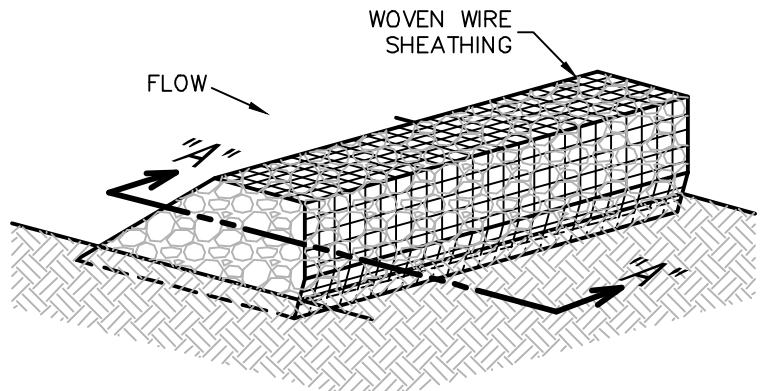
#### COMMON TROUBLE POINTS

1. INADEQUATE RUNOFF CONTROL--SEDIMENT WASHES ONTO PUBLIC ROAD.
2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.
3. 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

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

#### ISOMETRIC PLAN VIEW



#### ROCK BERMS

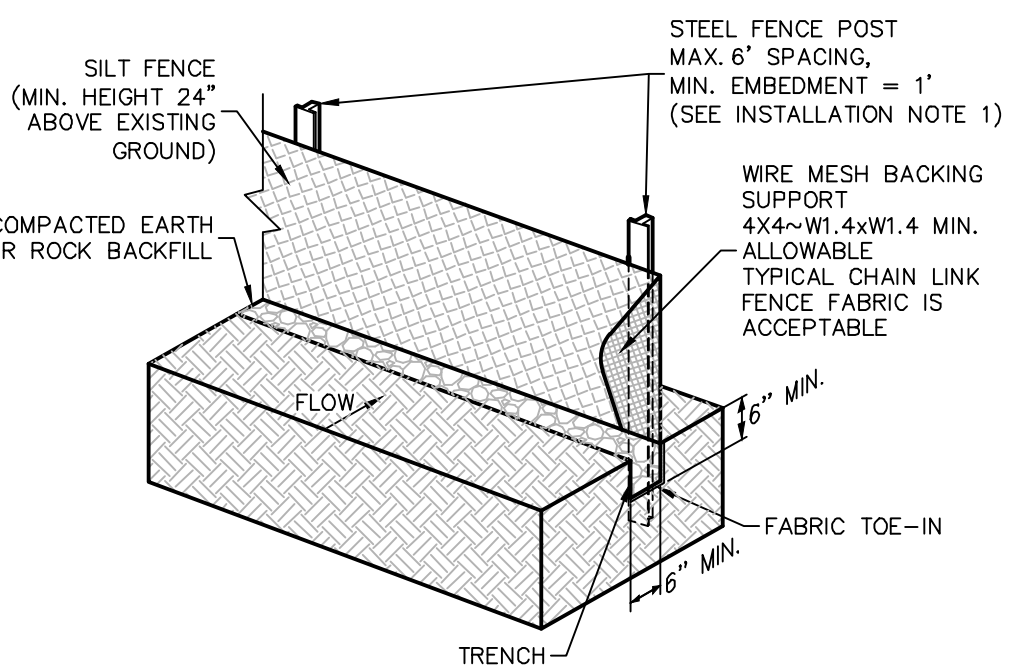
THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE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

#### INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.
3. REPAIR ANY LOOSE WIRE SHEATHING.
4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
5. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

#### ROCK BERM DETAIL

NOT-TO-SCALE



#### ISOMETRIC PLAN VIEW

#### 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 INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER-BORN SEDIMENT FROM UNPROTECTED AREAS OF A LIMITED EXTENT. SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY. IF CONCENTRATED FLOW OCCURS AFTER INSTALLATION, CORRECTIVE ACTION MUST BE TAKEN SUCH AS PLACING A ROCK BERM IN THE AREAS OF CONCENTRATED FLOW.

SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY ANCHORED TO THE GROUND AT THE END OF THE DAY. SILT FENCES ON THE PERIMETER OF THE SITE OR AROUND DRAINAGE WAYS SHOULD NOT BE MOVED AT ANY TIME.

#### MATERIALS

1. 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/IN<sup>2</sup>, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.

2. 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 EXCEEDING 140.

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

#### INSTALLATION

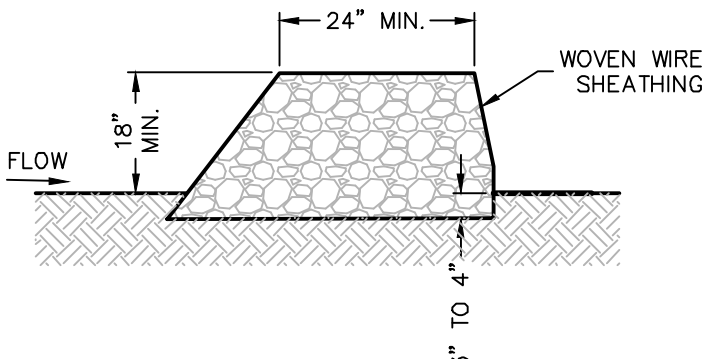
1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.

2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/100 FEET OF FENCE.

#### SILT FENCE DETAIL

NOT-TO-SCALE

#### SECTION "A-A"



#### MATERIALS

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

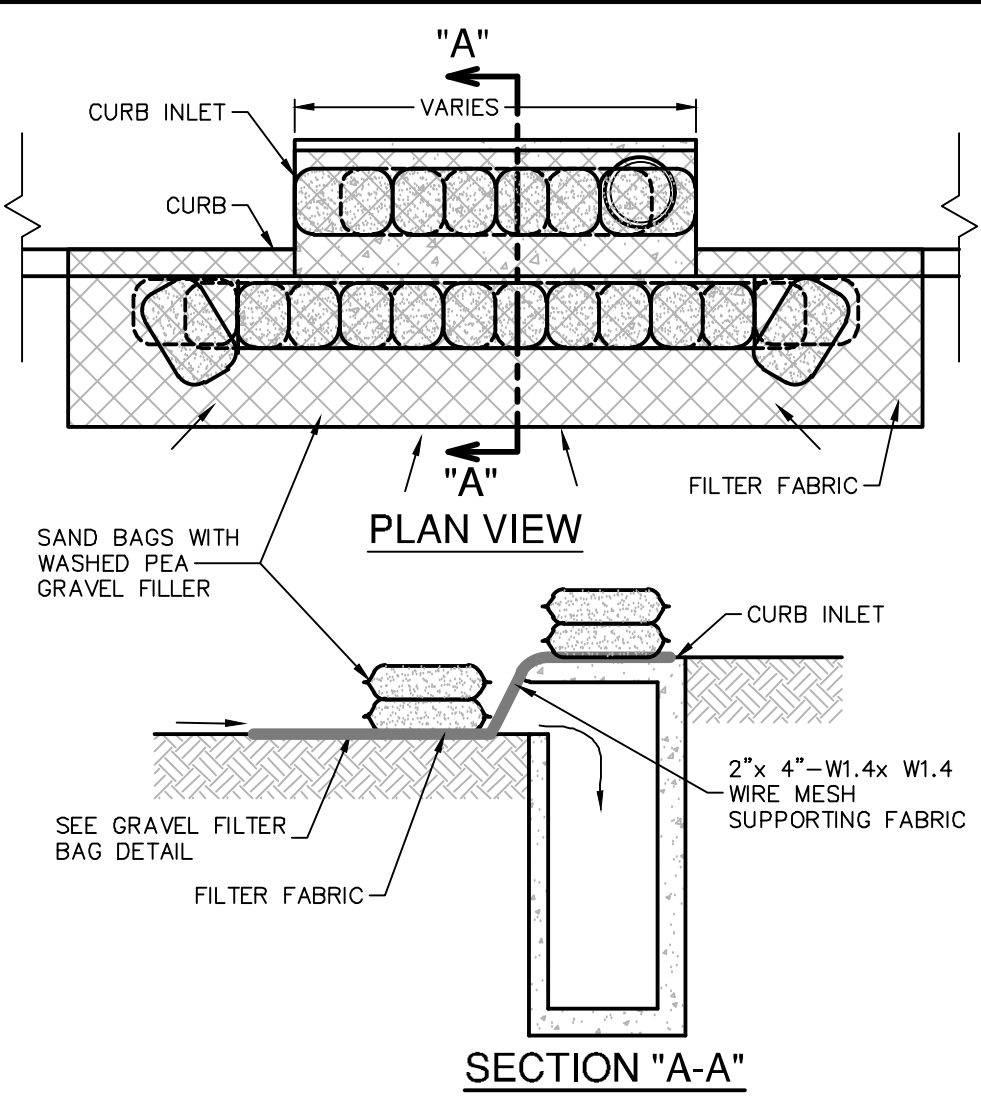
2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE USED.

#### INSTALLATION

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A HEIGHT NOT LESS THAN 18".
4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
6. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

#### COMMON TROUBLE POINTS

1. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).
2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).



#### GENERAL NOTES

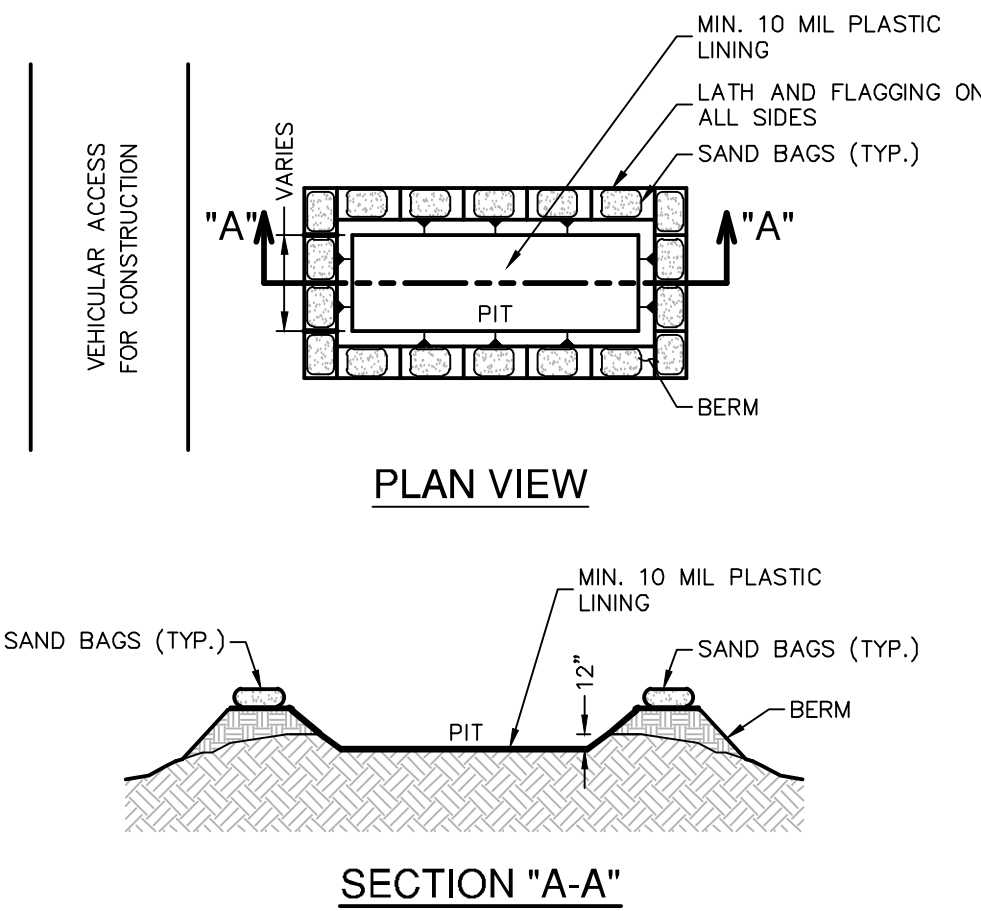
1. CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE CUTTER AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.
2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

#### INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

#### BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT-TO-SCALE



#### GENERAL NOTES

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

#### MATERIALS

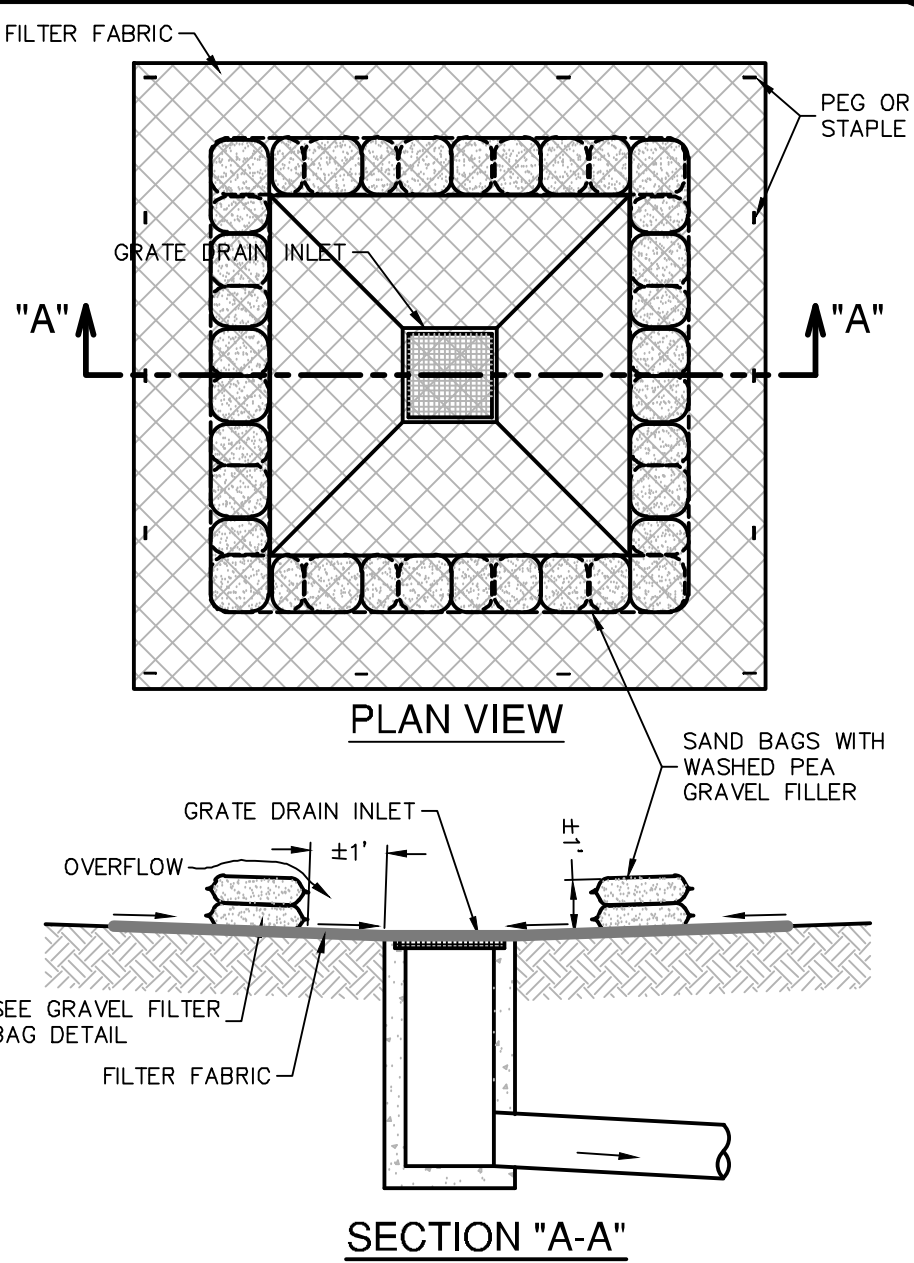
PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

#### MAINTENANCE

1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.
2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.
3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

#### CONCRETE TRUCK WASHOUT PIT DETAIL

NOT-TO-SCALE



#### GENERAL NOTES

1. THE SANDBAGS SHOULD BE FILLED WITH WASHED PEA GRAVEL AND STACKED TO FORM A CONTINUOUS BARRIER ABOUT 1 FOOT HIGH AROUND INLETS.

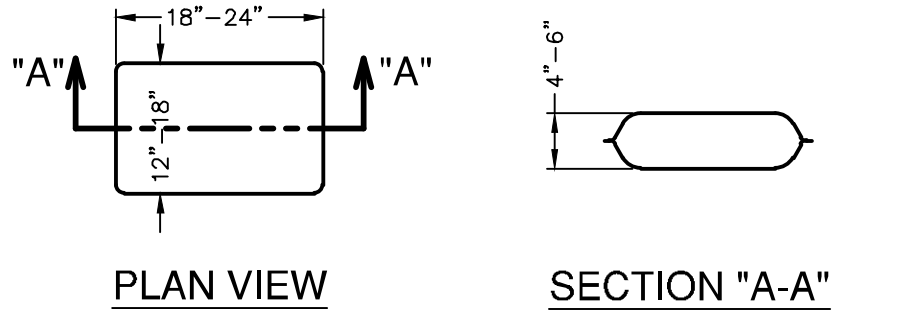
2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

#### INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

#### BAGGED GRAVEL GRATE INLET PROTECTION DETAIL

NOT-TO-SCALE

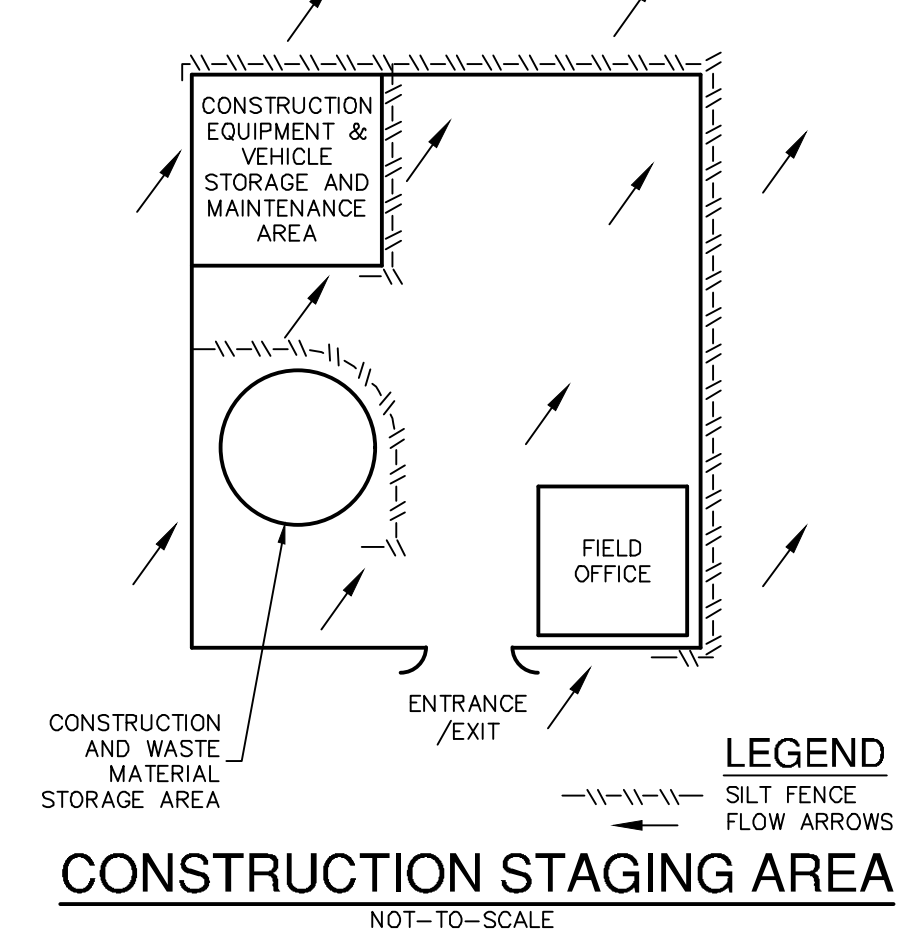


#### NOTES:

1. 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%.
2. THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).
3. SAND SHALL NOT BE USED TO FILL THE FILTER BAGS.

#### GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



#### CONSTRUCTION STAGING AREA

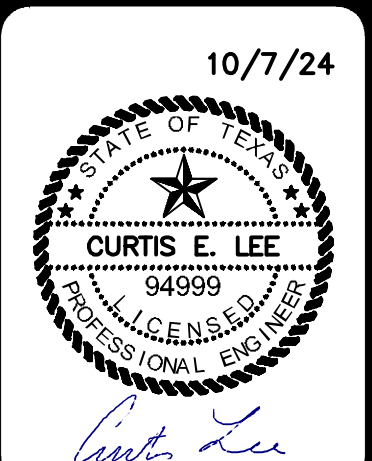
NOT-TO-SCALE

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE POLLUTION ABATEMENT ACTING REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL.

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

#### EXHIBIT 2

DATE	
NO.	
REVISION	



**PAPE-DAWSON ENGINEERS**  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

**NEC BULVERDE & 1604 DRIVEWAY AND MASS GRADING**  
SAN ANTONIO, TEXAS  
TEMPORARY WATER POLLUTION ABATEMENT DETAILS

PLAT NO.	080120
JOB NO.	6229-43
DATE	OCTOBER 2024
DRAWN	MG
CHECKED	MG
SHEET	EX 2



TREATMENT SUMMARY

NEC BULVERDE & 1604				
Treatment Summary by Watershed				
Watershed/Sub-Basin	Total Watershed Area (Acres)	Post-Development Impervious Cover Area (Acres)	Permanent BMP Type	Total TSS Generated Annually (Lbs)
A	2.87	2.55	Batch Detention Basin	2,081
B	0.21	0.21		171
TOTAL	3.08	2.76	-	2,252

TREATMENT FACILITY SUMMARY

Treatment Facility Summary					
Treatment Facility	Facility Type	Rated TSS Removal	Required TSS Removal (lbs/yr)	Required Volume (ft3)	Design Volume (ft3)
Basin "A"	Batch Detention Basin	91%	2,252	19,954	21,310

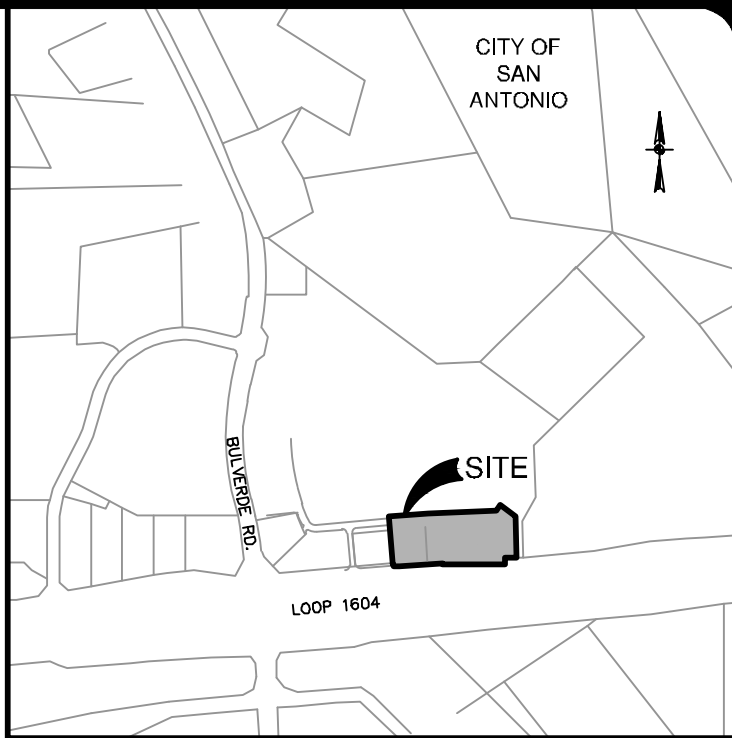
LEGEND		
GEOLOGIC FORMATIONS		
<div>Qal</div>	ALLUVIUM	<div>Kgt</div> GEORGETOWN
<div>Kef</div>	EAGLE FORD	<div>Kep</div> PERSON
<div>Kbu</div>	BUDA	<div>Kek</div> KAINER
<div>Kdr</div>	DEL RIO	<div>Kgr</div> GLEN ROSE
SYMBOLS AND LINES		
<div>S-1</div>	POTENTIAL RECHARGE FEATURE	
<div>---</div>	CONTACT, LOCATED APPROXIMATELY	
<div>---</div>	CONTACT, INFERRED	
<div>U</div>	FAULT, LOCATED APPROXIMATELY (U, DOWNHOWN SIDE; U, UPHOWN SIDE)	
<div>---</div>	FAULT, EXTRAPOLATED	
<div>.....</div>	FAULT, INFERRED	
<div>F</div>	STRIKE AND DIP OF BEDDING	
<div>---</div>	STRIKE AND DIP OF JOINTS	
<div>---</div>	STRIKE OF VERTICAL JOINTS	
<div>○</div>	CAVE	
<div>○</div>	SOLUTION CAVITY	
<div>○</div>	SWALLOW HOLE	
<div>○</div>	SINKHOLE	
<div>○</div>	NON-KARST CLOSED DEPRESSION	
<div>○</div>	ZONE	
<div>○</div>	OTHER NATURAL BEDROCK FEATURES	
<div>○</div>	MAN-MADE FEATURE IN BEDROCK	
<div>○</div>	WATER WELL	
<div>○</div>	SANITARY SEWER LINE	

TCEQ WATER POLLUTION ABATEMENT PLAN GENERAL CONSTRUCTION NOTES

- A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
  - THE NAME OF THE APPROVED PROJECT;
  - THE ACTIVITY START DATE; AND
  - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
- ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.
- IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
- NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
- PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
- ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
- SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
- LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
- ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.
- IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
- THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
  - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
  - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
  - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
- THE HOLDER OF ANY APPROVED EDWARDS 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 BASINS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
  - B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FORM 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.

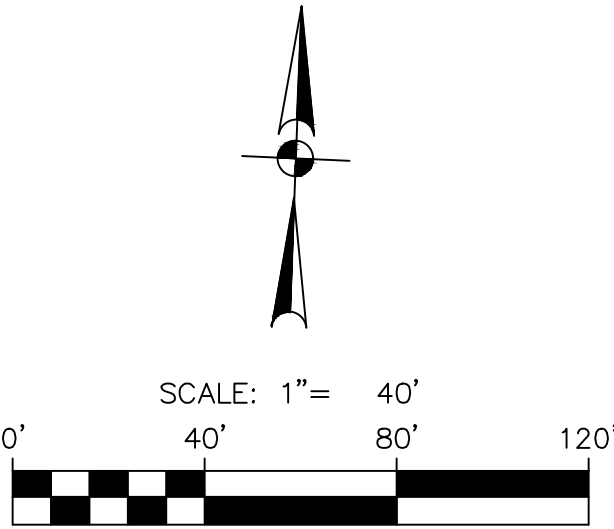
SUMMARY OF PERMANENT POLLUTION ABATEMENT MEASURES

- SILT FENCING AND ROCK BERMS, WHERE APPROPRIATE, WILL BE MAINTAINED UNTIL ALL UTILITY AND DRAINAGE IMPROVEMENTS ARE COMPLETED.
- ENERGY DISSIPATORS (TO HELP REDUCE EROSION) WILL BE PROVIDED AT POINTS OF CONCENTRATED DISCHARGE WHERE EXCESSIVE VELOCITIES MAY BE ENCOUNTERED.
- THIS PROJECT DOES NOT INCLUDE THE INSTALLATION OF ABOVE GROUND STORAGE TANKS (AST) WITH VOLUME(S) GREATER THAN OR EQUAL TO 500 GALLONS.
- DRAINAGE PATTERNS ARE ILLUSTRATED BY FLOW ARROWS. SLOPES VARY THROUGHOUT THE SITE; TYPICAL SLOPES IN THIS PROJECT WILL RANGE FROM 0.5% TO 2H:1V.
- PERMANENT BMP'S FOR THIS SITE INCLUDE (2) TWO SEDIMENTATION/FILTRATION BASIN AND (3) THREE ENGINEERED VEGETATIVE FILTER STRIP. THESE PERMANENT BMP'S HAVE BEEN DESIGNED TO REMOVE AT LEAST 80% OF THE INCREASED TOTAL SUSPENDED SOLIDS (TSS) FOR THE 77.13 ACRES IN ACCORDANCE WITH THE TCEQ'S TECHNICAL GUIDANCE MANUAL (TGM) RG-348 (2005). SOD SHOULD BE USED IN CHANNELS ON SLOPES > 15%. THE CONTRACTOR MAY SUBSTITUTE THE USE OF SOD WITH THE PLACEMENT OF TOPSOIL AND A FRIABLE SEED BED WITH A PROTECTIVE MATTING OR HYDRAULIC MULCH ALONG WITH WATERING UNTIL VEGETATION IS ESTABLISHED. APPLICATIONS AND PRODUCTS SHALL BE THOSE APPROVED BY TMOOT AS OF FEBRUARY 2001 AND IN COMPLIANCE WITH THE TGM RG-348 (2005). SEED MIXTURE AND/OR GRASS TYPE TO BE DETERMINED BY OWNER AND SHOULD BE IN COMPLIANCE WITH TGM RG-348 (2005) GUIDELINES. IRRIGATION MAY BE REQUIRED IN ORDER TO ESTABLISH SUFFICIENT VEGETATION.
- TEMPORARY BMP'S WILL BE MAINTAINED UNTIL THE SITE IMPROVEMENTS ARE COMPLETED AND THE SITE HAS BEEN STABILIZED, INCLUDING SUFFICIENT VEGETATION BEING ESTABLISHED IN ACCORDANCE WITH APPLICABLE PROJECT SPECIFICATIONS.
- DURING CONSTRUCTION, TO THE EXTENT PRACTICABLE, CONTRACTOR SHALL MINIMIZE THE AREA OF SOIL DISTURBANCE. AREAS OF DISTURBED SOIL SHALL BE RE-VEGETATED TO STABILIZE SOIL USING SOLID SOD IN A STAGGERED PATTERN. SEE DETAIL ON TEMPORARY POLLUTION ABATEMENT DETAIL SHEET AND REFER TO SECTION 1.3.11 IN TCEQ'S TECHNICAL GUIDANCE MANUAL (TGM) RG-348 (2005). SOD SHOULD BE USED IN CHANNELS ON SLOPES > 15%. THE CONTRACTOR MAY SUBSTITUTE THE USE OF SOD WITH THE PLACEMENT OF TOPSOIL AND A FRIABLE SEED BED WITH A PROTECTIVE MATTING OR HYDRAULIC MULCH ALONG WITH WATERING UNTIL VEGETATION IS ESTABLISHED. APPLICATIONS AND PRODUCTS SHALL BE THOSE APPROVED BY TMOOT AS OF FEBRUARY 2001 AND IN COMPLIANCE WITH THE TGM RG-348 (2005). SEED MIXTURE AND/OR GRASS TYPE TO BE DETERMINED BY OWNER AND SHOULD BE IN COMPLIANCE WITH TGM RG-348 (2005) GUIDELINES. IRRIGATION MAY BE REQUIRED IN ORDER TO ESTABLISH SUFFICIENT VEGETATION.
- ALL PERMANENT BMP'S MUST BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER.



LOCATION MAP

NOT-TO-SCALE



LEGEND

- PROJECT LIMITS
- EXISTING GRADE
- PROPOSED GRADE
- WATERSHED BOUNDARY
- 100-YEAR POST ULTIMATE DEVELOPMENT FLOODPLAIN
- WATERSHED DESIGNATION
- FLOW ARROW (PROPOSED)
- FLOW ARROW (EXISTING)
- PROPOSED 90% IMPERVIOUS COVER (1.98 AC)
- PROPOSED 100% IMPERVIOUS COVER (0.57 AC)
- PROPOSED UNCAPTURED 100% IMPERVIOUS COVER (0.21 AC)

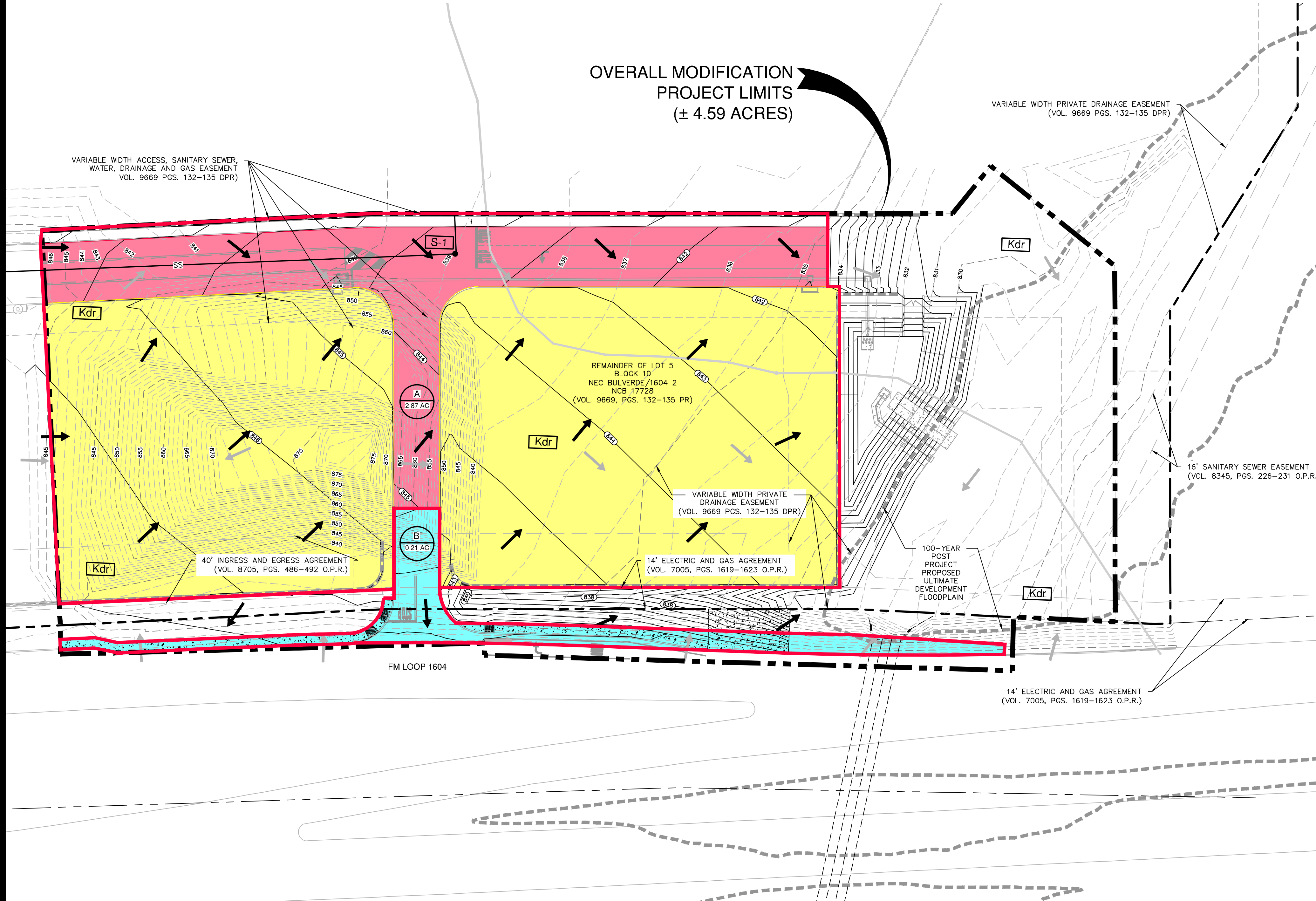
GENERAL NOTES

- DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
- LOCATIONS OF CONSTRUCTION ENTRANCE/EXITS, CONCRETE WASHOUT PITS, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARDS TO BE DETERMINED IN THE FIELD.
- STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
- RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
- ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
- CONTRACTOR, TO THE EXTENT PRACTICAL, SHALL MINIMIZE THE AMOUNT OF AREA DISTURBED, AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
- BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADE AREAS.
- BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED.
- ALL TEMPORARY BMP'S WILL BE REMOVED ONCE WATERSHED IS STABILIZED.
- MUD OR DIRT INADVERTENTLY TRACKED OFF-SITE AND ONTO EXISTING STREETS SHALL BE REMOVED IMMEDIATELY BY HAND OR MECHANICAL BROOM SWEEPING.
- TEMPORARY BMP'S SHOWN ON THIS SHEET ARE FOR GRAPHICAL PURPOSES AND MAY NOT BE TO SCALE. BMP'S SHALL BE LOCATED WITHIN THE PROJECT LIMITS.
- UPON COMPLETION OF THE PROJECT AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND REMOVAL OF TEMPORARY POLLUTION ABATEMENT MEASURES THAT CONFLICT WITH SITE IMPROVEMENTS SUCH AS LANDSCAPING AND FENCES SO AS TO PREVENT SEDIMENT FROM ESCAPING THE PROJECT SITE.
- GPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE POLLUTION ABATEMENT SIZING AND TREATMENT REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL. THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF POLLUTION ABATEMENT ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

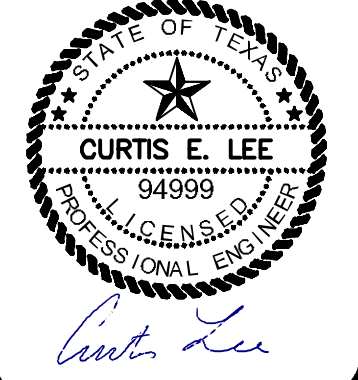
EXHIBIT 3

OVERALL MODIFICATION PROJECT LIMITS (± 4.59 ACRES)



DATE	
NO.	
REVISION	

3/3/25



**PAPE-DAWSON ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1002890

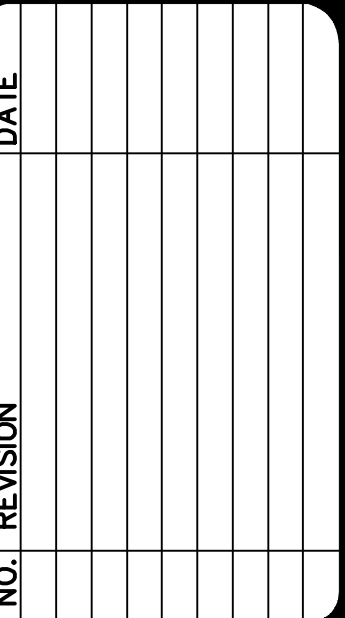
NEC BULVERDE & 1604  
DRIVEWAY AND MASS GRADING  
SAN ANTONIO, TEXAS  
WATER POLLUTION ABATEMENT PLAN MODIFICATION  
PERMANENT WATER POLLUTION ABATEMENT PLAN

PLAT NO.	080120
JOB NO.	6229-43
DATE	MARCH 2025
DRAWN	MG
CHECKED	MG
SHEET	EX 3







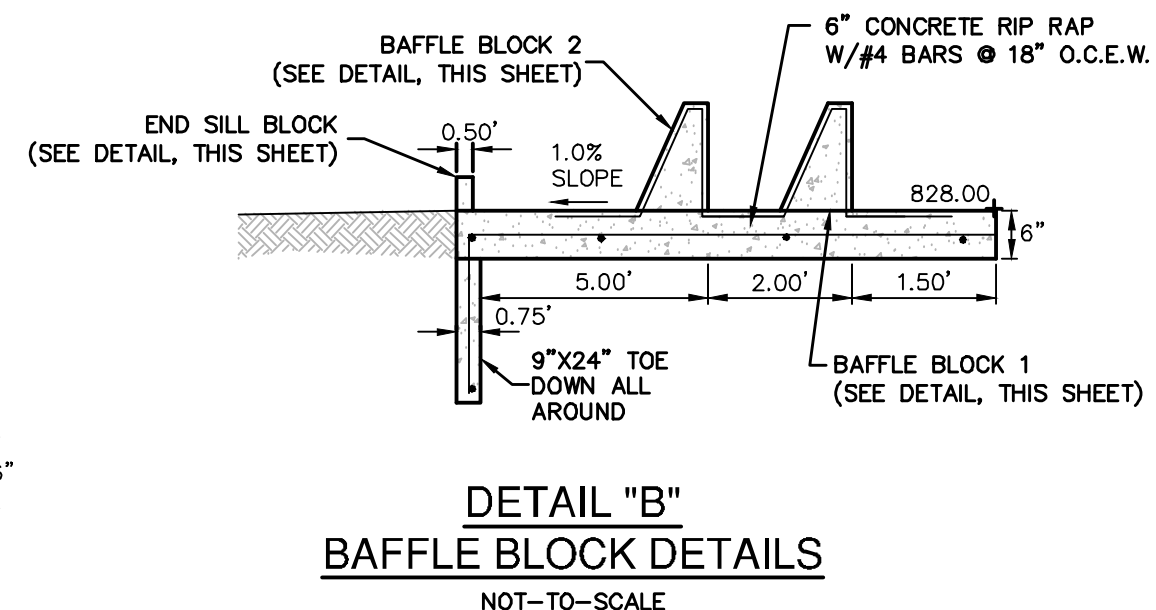
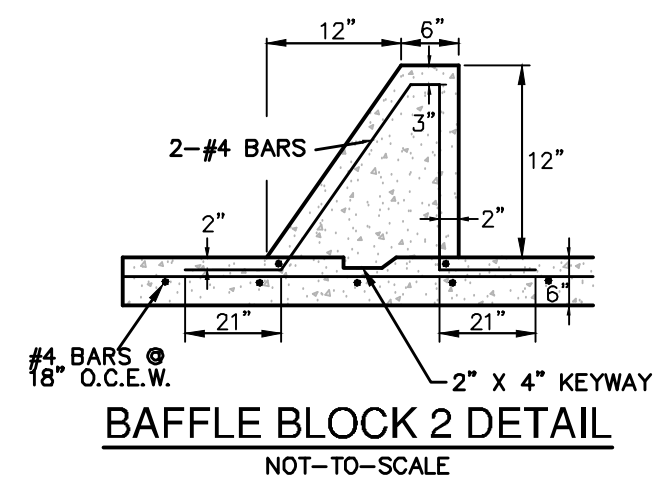
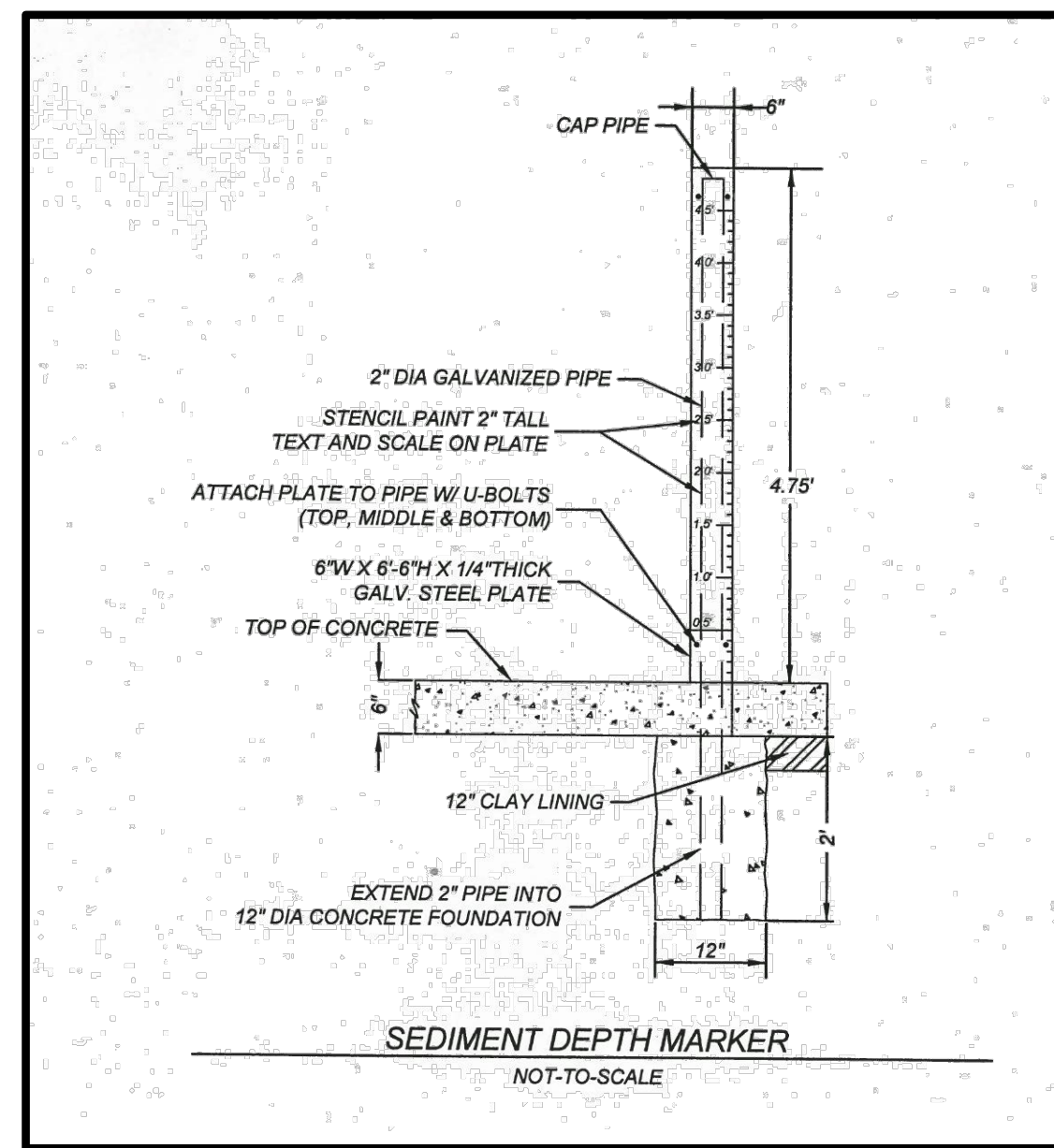


A circular professional engineer seal for the State of Texas. The outer ring contains the text "STATE OF TEXAS" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by stars. The inner circle features a five-pointed star at the top, the name "CURTIS E. LEE" in the center, and the license number "94999" below it. The word "LICENSED" is written in a smaller font at the bottom of the inner circle.

**PAPE-DAWSON  
ENGINEERS**  
22000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #4470 | TEXAS SURVEYING FIRM #10028600

**NEC BULVERDE & 1604  
DRIVEWAY AND MASS GRADING  
SAN ANTONIO, TEXAS  
BASIN DETAILS**

PLAT NO. 080120  
JOB NO. 6229-43  
DATE OCTOBER 2024  
DESIGNER MG  
CHECKED          DRAWN JV  
  
SHEET C7.10



**SECTION B-B**  
**NOT TO SCALE**

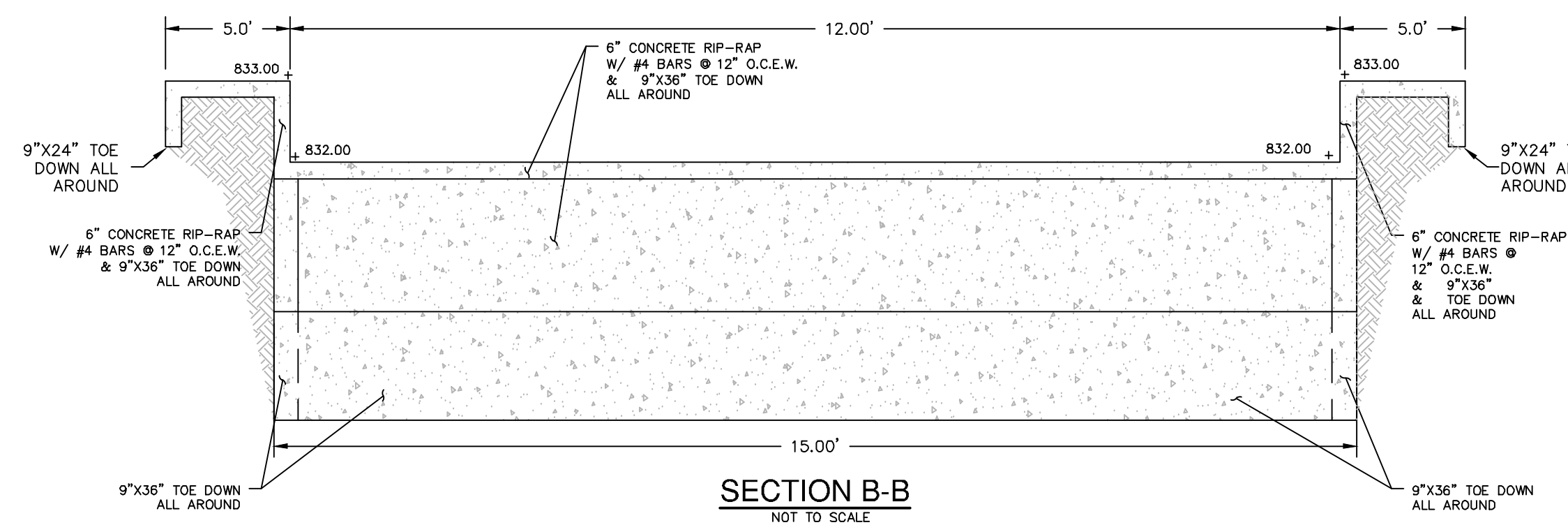
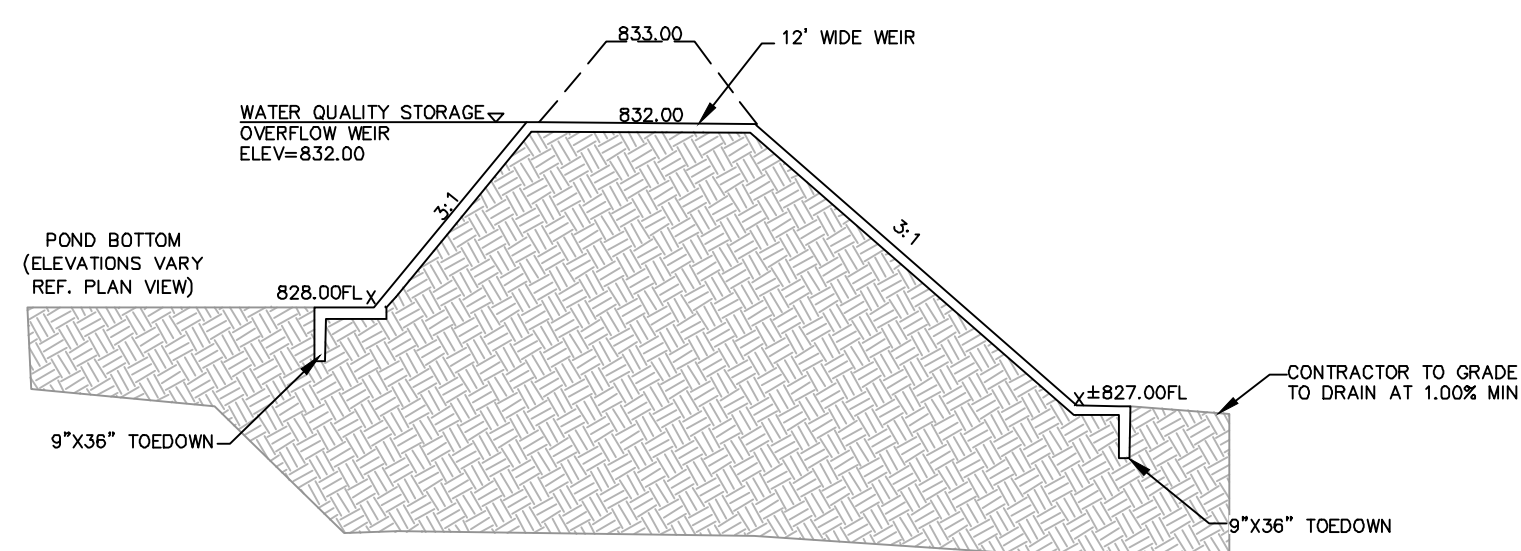


Diagram illustrating the components of a sediment trap assembly:

- SEDIMENT LEVEL STAKE
- 12" THICK CONCRETE BASE
- 5"
- RISER WITH HOOD AND TRASH RACK
- 18" PVC WITH 2" PERFORATIONS. WRAP AND SECURE FILTER FABRIC ALL AROUND 18" PIPE
- 4" SOLID PVC OUTLET PIPE

**SECTION D-D**  
**NOT-TO-SCALE**



THE CLAY LINER SHALL HAVE A MINIMUM THICKNESS OF TWELVE (12) INCHES.

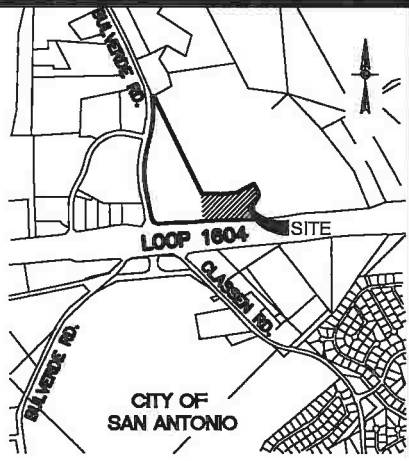
IF A GEOMEMBRANE LINER IS USED IT SHALL HAVE A MINIMUM THICKNESS OF FORTY (40) MILS. AND BE ULTRAVIOLET RESISTANT. A GEOTEXTILE FABRIC SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

EXHIBIT 5

Date: February 6, 2024, 11:09 AM – User ID: mgonzalez  
File: P:\62\29\43\Design\Civil\BADT622943.dwg

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





LOCATION MAP NOT-TO-SCALE

TEXAS COMMISSION ENVIRONMENTAL  
QUALITY WATER POLLUTION  
ABATEMENT PLAN EXHIBIT  
**4.173 ACRES**  
(181,774 SQ. FT. MORE OR LESS)

**LEGEND:**

OPR OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS  
PR PLAT RECORDS OF BEXAR COUNTY, TEXAS  
FD FOUND 1/2" IRON ROD  
POC POINT OF COMMENCING  
POB POINT OF BEGINNING  
FOUND MONUMENT (AS NOTED)

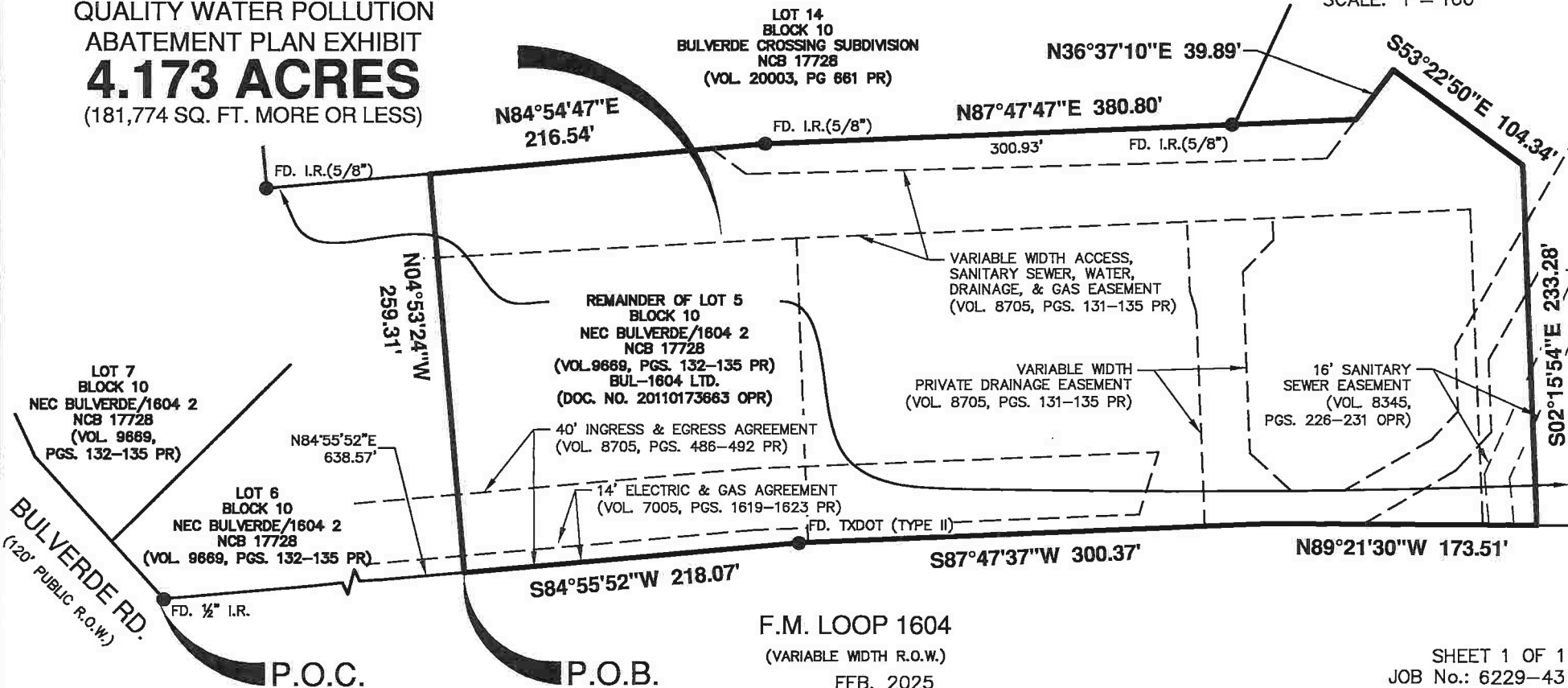
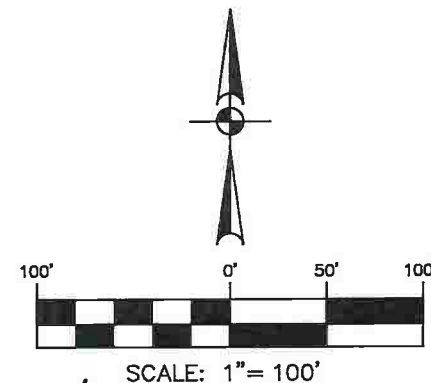
**NOTES:**

1. THIS EXHIBIT IS ISSUED IN CONJUNCTION WITH A METES AND BOUNDS DESCRIPTION PREPARED UNDER JOB NO. 6229-43 BY PAPE-DAWSON ENGINEERS.
2. THE BEARINGS ARE BASED ON THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE FROM THE NORTH AMERICAN DATUM OF 1983 NAD 83 (NA2011) EPOCH 2010.00.
3. ALL DISTANCES SHOWN ARE IN U.S. SURVEY FEET.



**PAPE-DAWSON ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10026800





METES AND BOUNDS DESCRIPTION  
FOR A 4.173 ACRE TRACT FOR A  
TEXAS COMMISSION ENVIRONMENTAL QUALITY WATER POLLUTION ABATEMENT PLAN EXHIBIT

A 4.173 acre, or 181,774 square feet more or less, tract of land out of that remaining portion of Lot 5, Block 10, of the NEC Bulverde/1604 2, recorded in Volume 9669, Pages 132-135, of said Plat Records, conveyed to BUL-1604 Ltd., by deed recorded in Document No. 20110173663, of the Official Public Records of Bexar County, Texas, in New City Block 17728 of the City of San Antonio, Bexar County, Texas. Said 4.173 acre tract being more fully described as follows, with bearings based on the Texas Coordinate System established for the South Central Zone from the North American Datum of 1983 NAD 83 (NA2011) epoch 2010.00:

COMMENCING: At a found ½" iron rod on the north right-of-way line of F.M. Loop 1606, a variable width public right-of-way, at the southeast cutback of Bulverde Road, a 120-foot public right-of-way, at the south corner of Lot 6, Block 10, of said plat of NEC Bulverde/1604 2;

THENCE: N 84°55'52" E, along and with the north line of said F.M. Loop 1604, same being the south line of said NEC Bulverde/1604 2, a common line, a distance of 638.57 feet to the POINT OF BEGINNING of the herein described easement tract

THENCE: N 04°53'24" W, departing said common line, over and across said remainder of Lot 5, a distance of 259.31 feet to a point on the north line of said remainder of Lot 5, same being the south line of Lot 14, Block 10, Bulverde Crossing Subdivision, recorded in Volume 20003, Page 661, of said Plat Records;

THENCE: N 84°54'47" E, along and with the south line of said Lot 14, same being the north line of said remainder of Lot 5, a distance of 216.54 feet to a found 5/8" iron rod;

THENCE: N 87°47'47" E, continuing along said common line, a distance of 300.93 feet, passing a found 5/8" iron rod, for the southeast corner of said Lot 14, continuing across said remainder of Lot 5, for a total distance of 380.80 feet to a point;

THENCE: Continuing across said remainder of Lot 5, the following bearings and distances:

N 36°37'10" E, a distance of 39.89 feet to a point;

S 53°22'50" E, a distance of 104.34 feet to a point;

S 02°15'54" E, a distance of 233.28 feet to a point on the north right-of-way line of said F.M. Loop 1604, same being the south line of said remainder of Lot 5, a common line;

THENCE: Along and with said common line, the following bearings and distances:

N 89°21'30" W, a distance of 173.51 feet to a point;

S 87°47'37" W, a distance of 300.37 feet to a found TxDOT Monument (Type II);

THENCE: S 84°55'52" W, a distance of 218.07 feet to the POINT OF BEGINNING and containing 4.173 acres in the City of San Antonio, Bexar County, Texas. Said tract being described in conjunction with an exhibit prepared under job number 6229-43 by Pape-Dawson Engineers.

PREPARED BY: Pape-Dawson Engineers  
Texas Registered Survey Firm # 10028800  
DATE: February 2025  
JOB NO. 6229-43  
DOC. ID. N:\CIVIL\6229-43\Word\6229-43 FNWPAP 4.173AC.docx

