WATER POLLUTION ABATEMENT PLAN AND ABOVEGROUND STORAGE TANK PLAN APPLICATION

FOR

CALIBRE QUARRY

33952 Ronald Reagan Blvd
Georgetown, TX 78633

Prepared For:

FP HACIENDA PROPERTIES, LLC
PO BOX 706
JARRELL, TX 76537

Prepared By:

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

June 26, 2025

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
6/26/2025

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Check Payable to the "Texas Commission on Environmental Quality"

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Edwards Aquifer Application Cover Page (TCEQ-20705)

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.

3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.

4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

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

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.

6. If the geologic assessment was completed before October 1, 2004 and the site contains "possibly sensitive" features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

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

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

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Calibre Quarry						**2. Regulated Entity No.:**			
3. Customer Name: FP HACIENDA PROPERTIES LLC						**4. Customer No.: CN605334903**			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**			185.35
9. Application Fee:	$11,300		**10. Permanent BMP(s):**					Batch Detention Basin, Natural VFS	
11. SCS (Linear Ft.):	n/a		**12. AST/UST (No. Tanks):**					AST – 2x 6k Gal Fuel Tanks	
13. County:	Williamson		**14. Watershed:**					Berry Creek	

Application Distribution

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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	_1_
Region (1 req.)	___	___	_1_
County(ies)	___	___	_1_
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jarrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	___	___	___	___
Region (1 req.)	___	___	___	___	___
County(ies)	___	___	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village ___Hollywood Park ___San Antonio (SAWS) ___Shavano Park	___Bulverde ___Fair Oaks Ranch ___Garden Ridge ___New Braunfels ___Schertz	NA	___San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. NICHOLAS SANDLIN, P.E. Print Name of Customer/Authorized Agent
 6/26/2025 Signature of Customer/Authorized Agent Date

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

General Information Form
(TCEQ-0587)

General Information Form

Texas Commission on Environmental Quality

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

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

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

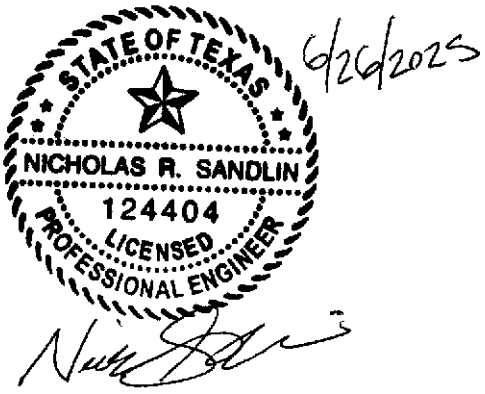
Signature

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

Print Name of Customer/Agent: Nicholas Sandlin, P.E.

Date: 6/26/2025

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Calibre Quarry
2. County: Williamson
3. Stream Basin: Brazos River
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☒ WPAP
   ☐ SCS
   ☐ Modification
   ☒ AST
   ☐ UST
   ☐ Exception Request

7. Customer (Applicant):

   Contact Person: PEDRO AGUADO
   Entity: FP HACIENDA PROPERTIES LLC
   Mailing Address: PO BOX 706
   City, State: JARRELL, TX Zip: 76537
   Telephone: 512-914-3963 FAX: _____
   Email Address: PEDRO@COBRASTONE.COM

8. Agent/Representative (If any):

   Contact Person: Nicholas Sandlin, P.E.
   Entity: Sandlin Services, LLC
   Mailing Address: 9111 Jollyville Rd, STE 212
   City, State: Austin, Texas Zip: 78759
   Telephone: (806) 679-7303 FAX: _____
   Email Address: operations@sandlinservices.com

9. Project Location:

   ☐ The project site is located inside the city limits of _____.
   ☐ 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.

    33952 Ronald Reagan Blvd, Georgetown, Texas 78633

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

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

    ☒ Project site boundaries.
    ☒ USGS Quadrangle Name(s).
    ☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
    ☒ Drainage path from the project site to the boundary of the Recharge Zone.

13. ☒ **The TCEQ must be able to inspect the project site or the application will be returned**. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

    ☒ Survey staking will be completed by this date: 11/1/2025

14. ☒ **Attachment C – Project Description**. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

- ☒ Area of the site
- ☒ Offsite areas
- ☒ Impervious cover
- ☒ Permanent BMP(s)
- ☒ Proposed site use
- ☒ Site history
- ☒ Previous development
- ☒ Area(s) to be demolished

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

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

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

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

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

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

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

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

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

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

Administrative Information

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

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

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

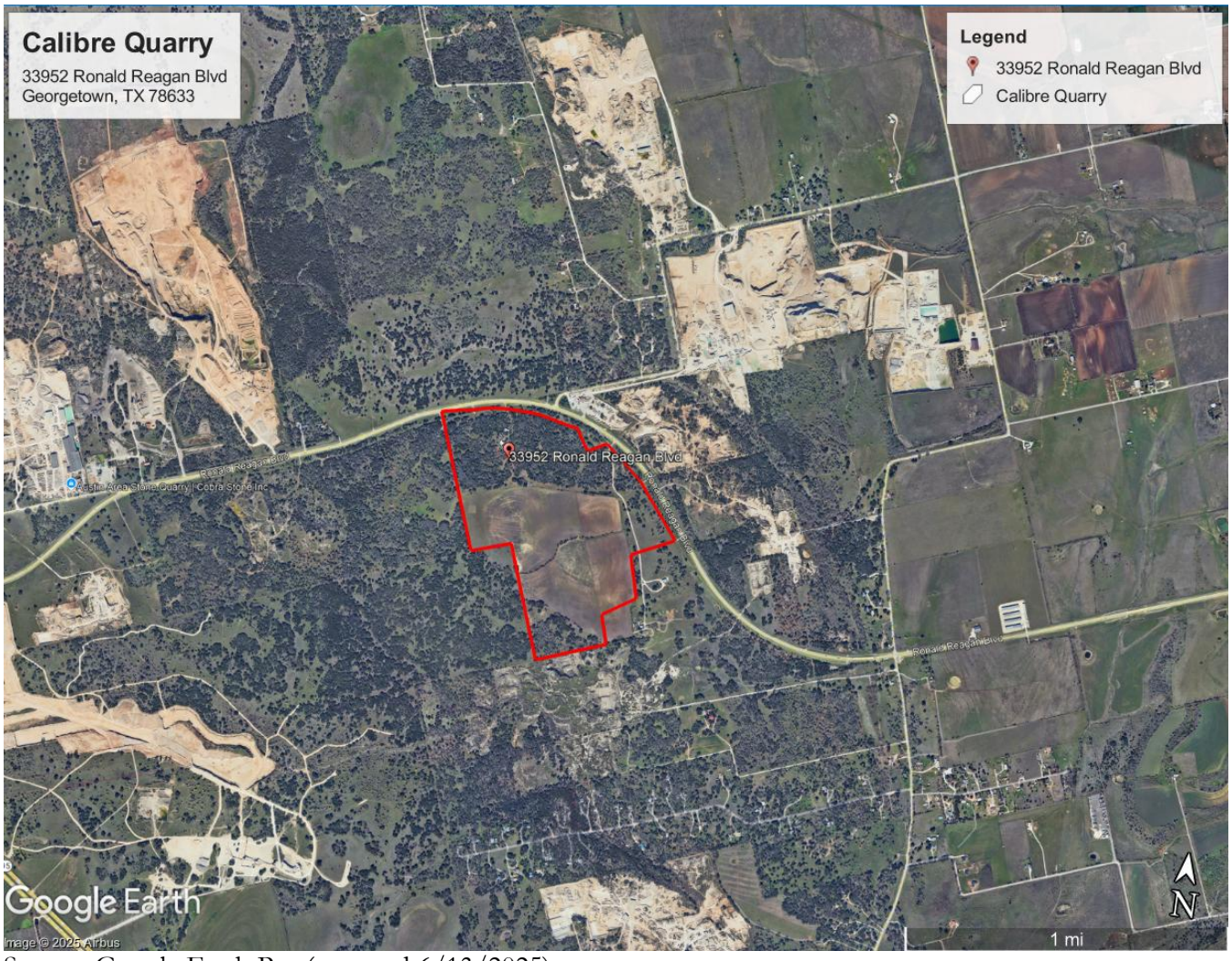
- ☐ TCEQ cashier
- ☒ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- ☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

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

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

General Information Form
(TCEQ-0587)

Attachment A:
Road Map

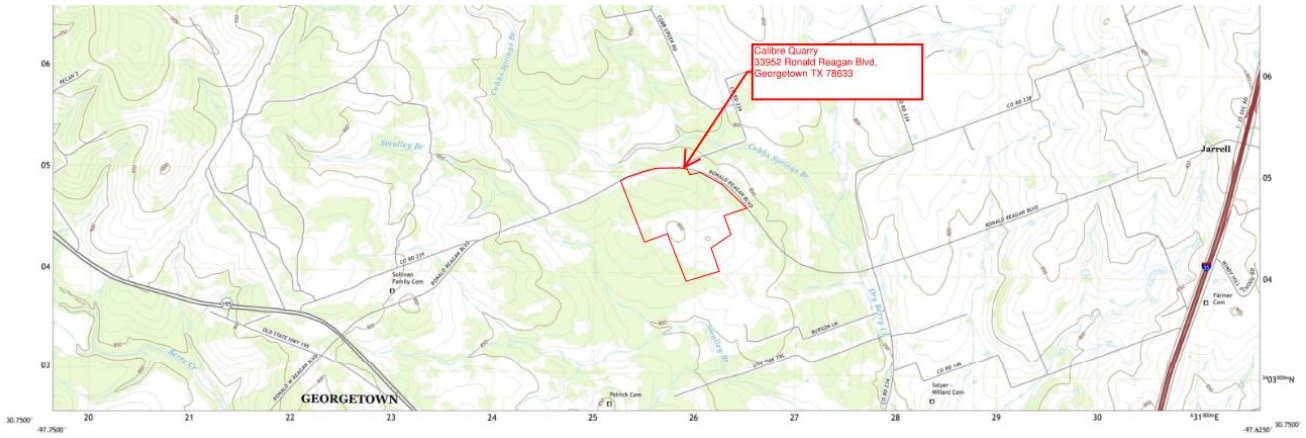


Source: Google Earth Pro (accessed 6/13/2025)

General Information Form
(TCEQ-0587)

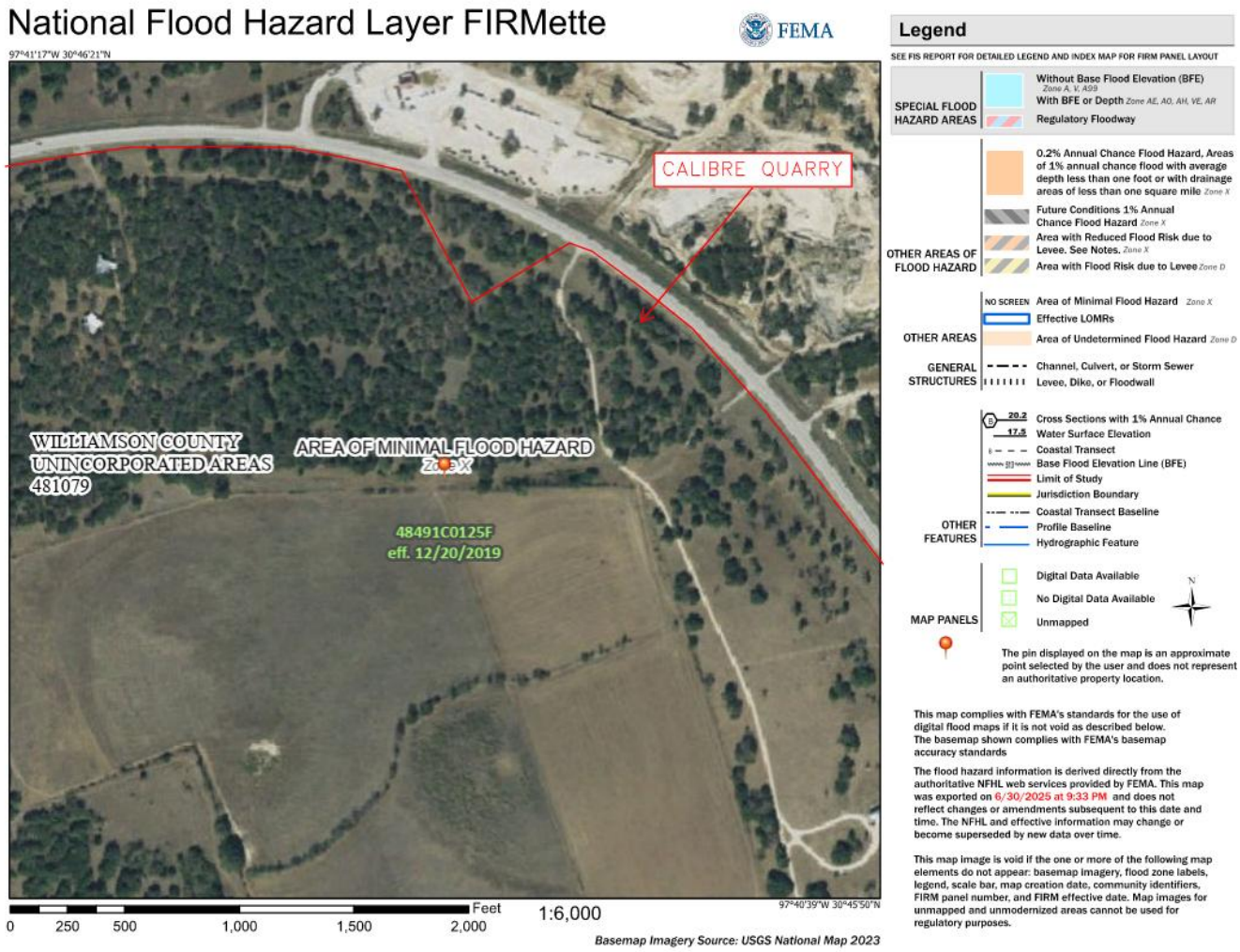
Attachment B:
USGS Quadrangle Map
Edwards Aquifer Recharge Zone Map
FEMA FIRM Map

USGS QUADRANGLE MAP

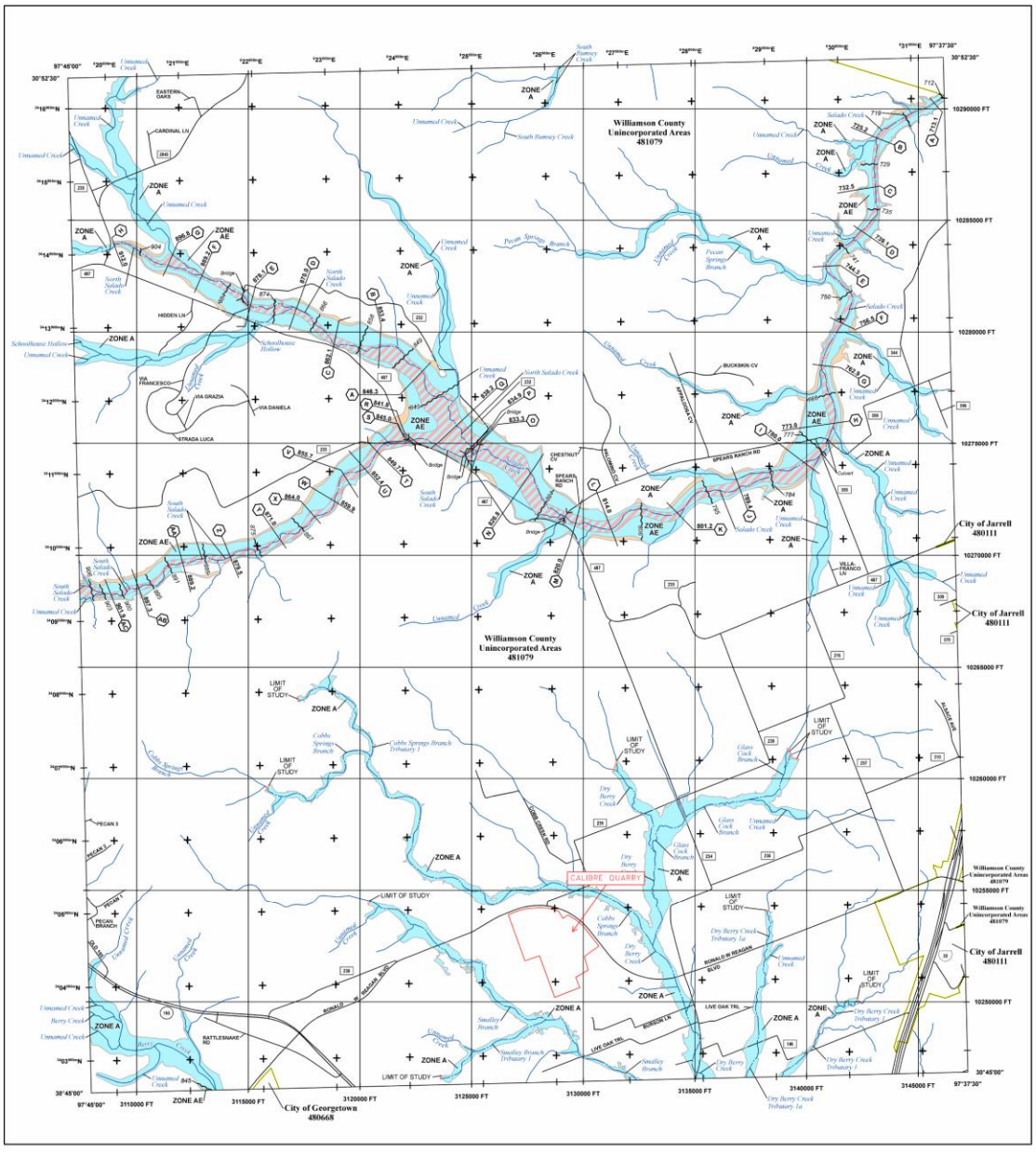


Source: Portion of USGS Quadrangle Map (TX_Cobbs_Cavern_20220808_TM)

FEMA FIRM MAP PANEL



Source: FEMA FIRMette Map Panel 48491C0125F (effective 12/20/2019)



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
HTTPS://MSC.FEMA.GOV

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

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

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

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall
- 18.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- Base Flood Elevation Line (BFE)

OTHER FEATURES
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Service Center (MSC) toll free at 1-800-358-9620 or the FEMA MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

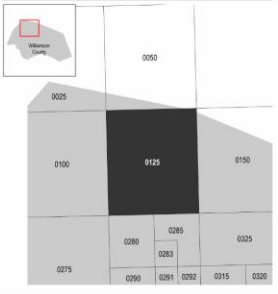
Base map information shown on this FIRM was derived from digital data obtained from Texas Natural Resource Information Systems (TNRIS), dated 2000 United States Census Bureau, dated 2010, United States Geological Survey, dated 2005, and the Williamson County Geographic Information Systems (GIS) Department, dated 2014 and 2017.

SCALE

Map Projection:
Texas State Plane Central (FIPS ZONE 4203); North American Datum 1983;
Western Hemisphere; Vertical Datum: NAVD 88.

N
1 inch = 2,000 feet 1:24,000
0 2,000 4,000 8,000 feet
0 500 1,000 2,000 meters

PANEL LOCATOR



FEMA
National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
WILLIAMSON COUNTY, TEXAS
and Incorporated Areas
PANEL 125 OF 750

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
GEORGETOWN, CITY OF	480668	0125	F
JARRELL, CITY OF	480111	0125	F
WILLIAMSON COUNTY	481079	0125	F

VERSION NUMBER
2.3.3.3
MAP NUMBER
48491C0125F
MAP REVISED
DECEMBER 20, 2019

EDWARDS AQUIFER RECHARGE ZONE MAP



General Information Form
(TCEQ-0587)

Attachment C:
Project Description

Proposed Development

The 185.35 AC project site is located at approximately 33952 Ronald Reagan Blvd in Georgetown, Texas, Williamson County (WCAD # R012262, R665598, & R665599). The project lies within the unincorporated areas of Williamson County, outside of any city ETJ. The project site is currently rural residential with existing driveways, and a single-family home with the associated infrastructure on-site. The existing structures on-site will be repurposed for quarry office and warehouse use. This project proposes the development of the site to support a 120 AC quarry area, along with the associated material storage, access, overburden placement, AST, and supporting infrastructure. Additionally, a storage yard is proposed which will be treated with a Batch Detention Basin BMP. The additional impervious cover from the proposed access to the quarry site will be treated with a Natural Vegetated Filter Strip BMP. Per RG-500, a 25' wide vegetated buffer and berm surrounds the quarry pit adjacent to neighboring properties. Stormwater and runoff originating upstream and from the quarry will be contained within the pit.

This project proposes the construction of aboveground refueling facilities, including (1) 500-gallon 14-gauge steel waste oil tank, (1) 700-gallon HDPE DEF tank, (4) 275-gallon 12-gauge steel oil tanks, and (2) 6,000-gallon double wall (as secondary containment) HR Carbon Steel fuel tanks with rod ladders and E-vents. The diesel fuel tanks shall be built and labeled per UL spec #142. Refer to the UST section of this application for details and specifications. The fueling infrastructure and associated canopy will be located within the quarry pit.

Site Description and History

The total 185.35 AC project site includes three properties located in Williamson County, Texas. The properties are currently owned by FP Hacienda, LLC and include WCAD parcel numbers R012262, R665598, and R665599.

The site contains slopes ranging from 0% to 30% and generally drains to the north toward Berry Creek. The site ranges in elevation from approximately 810 feet above mean sea level to approximately 849 feet.

Soils on the property consist of 5.4% Brackett association, 1 to 8 percent slopes; 3.3% Denton silty clay, 0 to 1 percent slopes, 8.6% Denton silty clay, 1 to 3 percent slopes, 39.7% Doss silty clay, moist, 1 to 5 percent slopes, 15.2% Eckrant cobbly clay, 1 to 8 percent slopes, 3.0% and Georgetown clay loam, 0 to 2 percent slopes, 24.8% Georgetown stony clay loam, 1 to 3 percent slopes. 96.7 percent of the soils on site are hydrologic soil group D, and 3.3% are type C.

Access

Access to this quarry exists along Ronald Reagan Blvd.

Impervious Cover (IC)

The total existing area of impervious cover is approximately 43,531 sf (1.00 acre), or 31.9% of the developed project site.

The total proposed permanent Project Site IC is 498,007 SF (11.43 AC), or 6.17% of the project site. 3,951 SF is associated with structures and buildings, and 494,056 SF of IC is proposed for driveways, roads, and the storage yard. Existing and proposed areas of impervious cover will be treated as shown in the permanent stormwater section.

Watershed and FEMA Floodplain Information

The project site is within the Berry Creek Watershed, which drains to the San Gabriel River Basin. No surface streams run across the property.

The project site is not located within the boundaries of the 100-year floodplain of any waterway that is within the limits of the study of the Federal Emergency Insurance Administration (FEMA) FIRM Panel #48491C0125F (Effective date: 12/20/2019).

Temporary Best Management Practices (BMPs)

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

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

Permanent Best Management Practices (BMPs)

Batch Detention Basin and Natural Vegetated Filter Strip BMPs are proposed for permanent water quality control at the developed project site. The required capture volume of the Batch Detention Basin BMP is 52,902 cubic feet for the 33.77 AC drainage area. The natural vegetated filter strip BMP is sized to treat a 1.61 AC drainage area (WQ DA-2). Refer to the Water Quality Plan sheets for additional information.

After construction activities are complete, the permanent BMPs will be maintained as described in Attachment G of the Permanent Stormwater Section. Permanent seeding, sodding or mulching will be utilized as described in Attachment J of the Temporary Stormwater Section. Permanent BMPs for trash,

herbicide/pesticide use, and general maintenance of the BMPs are also described in Attachment G of the Permanent Stormwater Section.

Offsite Areas

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

Geologic Assessment
TCEQ-0585

Geologic Assessment

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Geologist: James R. Woodburn, P.G.

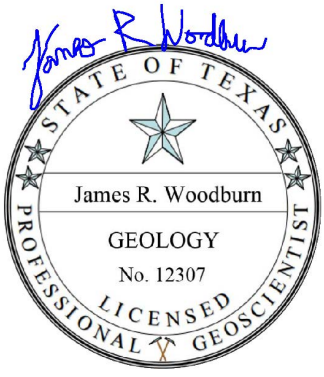
Telephone: 512-335-1785

Fax: 512-335-0527

Date: 09/30/2019

Representing: Ranger Environmental Services, Inc. (Reg No. 50140) (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



9/30/2019

Regulated Entity Name: Cobra Stone - Plant #2

Project Information

1. Date(s) Geologic Assessment was performed: 09/24/2019
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)
Doss silty clay, moist, 1 to 5 percent slopes (DoC)	D	0.91-1.67
Georgetown clay loam, 1 to 3 percent slopes (GsB)	D	1.67-3.33
Eckrant extremely stony clay, 1 to 8 percent slopes (EaD)	D	0.33-1.67
Denton silty clay, 1 to 3 percent slopes (DnB)	D	1.83-5
Brackett association, 1 to 8 percent slopes (BkC)	D	0.42-1.67

** 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" = 200'
   Site Geologic Map Scale: 1" = 200'
   Site Soils Map Scale (if more than 1 soil type): 1" = ~490.8'

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 2 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    ☐ The wells are not in use and have been properly abandoned.
    ☐ The wells are not in use and will be properly abandoned.
    ☒ The wells are in use and comply with 16 TAC Chapter 76.
    ☐ There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

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

ATTACHMENT A

Geological Assessment Table
TCEQ-0585 Table

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Cobra Stone - Plant #2

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DIM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-1	N30° 46' 0.08"	W097° 41' 16.26"	CD	5	Kgt	30	15	1					C,V	5	10	X		X		Hillside
S-2	N30° 45' 45.02"	W097° 41' 0.98"	CD	5	Kgt	22	14	2.5					C,V	5	10	X		X		Hillside
S-3	N30° 45' 43.56"	W097° 41' 2.85"	CD	5	Kgt	31	16	1.5					C,V	5	10	X		X		Hillside
S-4	N30° 45' 44.49"	W097° 41' 3.56"	CD	5	Kgt	25	18	3					C,V	5	10	X		X		Hillside
S-5	N30° 46' 10.32"	W097° 41' 11.57"	MB	30	Kgt								N	5	35	X		X		Hillside
S-6	N30° 46' 10.43"	W097° 41' 13.62"	MB	30	Kgt								N	5	35	X		X		Hillside
S-7	N30° 46' 12.53"	W097° 41' 13.71"	MB	30	Kgt								N	5	35	X		X		Hillside
S-8	N30° 46' 13.10"	W097° 41' 13.03"	MB	30	Kgt								N	5	35	X		X		Hillside

* DATUM WGS84

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

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

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

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

James R Woodburn

Date 9/30/2019

Sheet 1 of 1

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

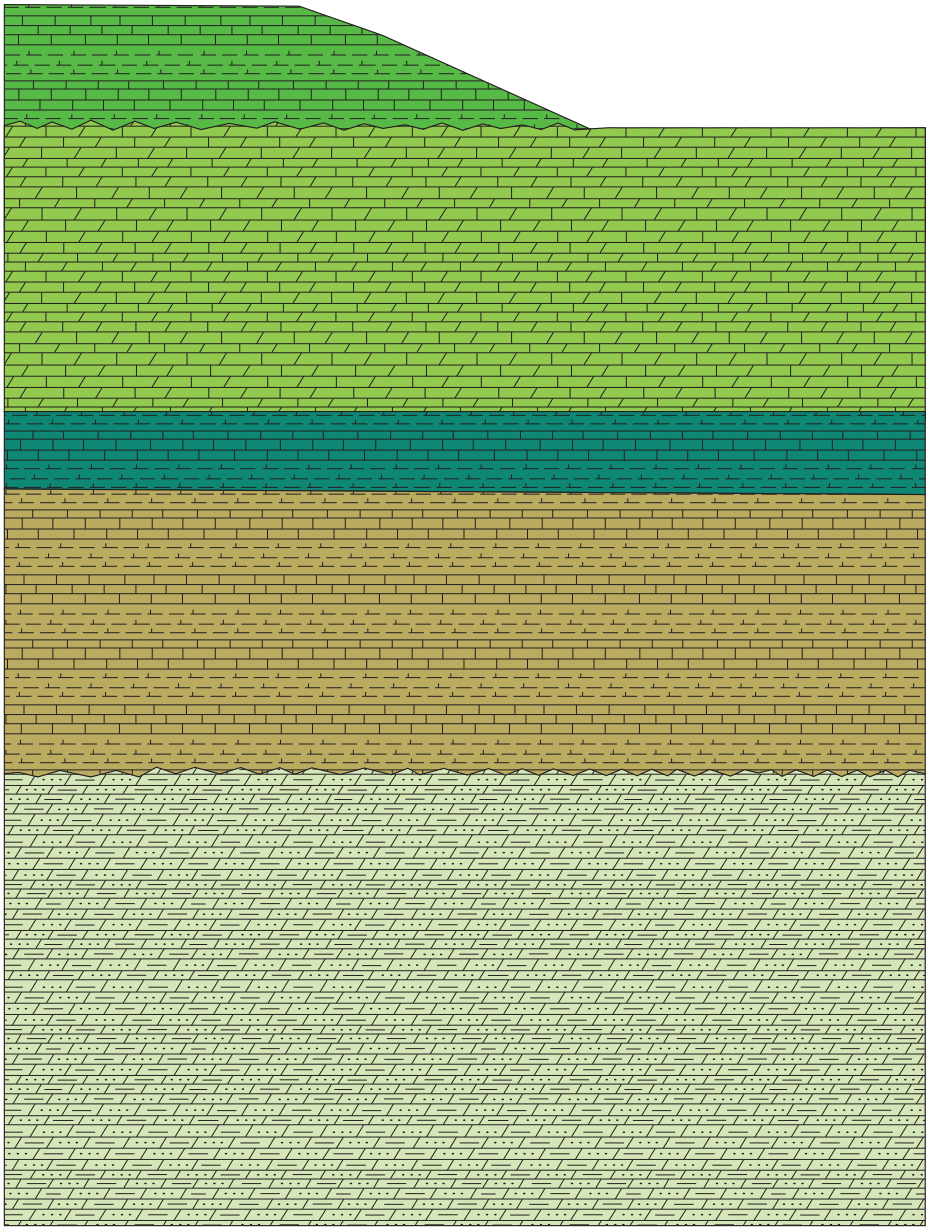
James R Woodburn

STATE OF TEXAS
James R. Woodburn
GEOLOGY
No. 12307
LICENSED
PROFESSIONAL GEOSCIENTIST

9/30/2019

ATTACHMENT B

Stratigraphic Column



Georgetown Formation (Kgt)
Limestone and marl

Edwards Limestone (Ked)
Limestone and dolostone

Comanche Peak Formation (Kc)
Limestone and marl

Walnut Formation (Kwa)
Limestone and marl

Glen Rose Formation (Kgr)
Limestone, dolostone,
and marl

Edwards Aquifer

STATE OF TEXAS
James R. Woodburn
GEOLOGY
No. 12307
LICENSED
PROFESSIONAL GEOSCIENTIST

9/30/2019

Adapted from the Bureau of Economic Geology, 1990, Hydrogeology of the Northern Segment of the Edwards Aquifer, Austin Region, Report of Investigations No. 192, Figure 4

RANGER ENVIRONMENTAL SERVICES

GENERALIZED STRATIGRAPHIC COLUMN
COBRA STONE - PLANT #2
CR 239 & RONALD REAGAN BLVD.
WILLIAMSON COUNTY, TEXAS

DATE: 8/2/2018 | RANGER REFERENCE #5520
COMMENTS: NOT FOR CONSTRUCTION

ATTACHMENT C

Site Geology

GEOLOGIC ASSESSMENT

COBRA STONE – PLANT #2
CR 239 AND RONALD REAGAN BOULEVARD
GEORGETOWN (WILLIAMSON COUNTY), TEXAS 78633
SEPTEMBER 2019

INTRODUCTION

Ranger Environmental Services, Inc. (Ranger) was contracted to conduct a Geologic Assessment of the referenced property. This location lies within the designated Edwards Aquifer Recharge Zone. Therefore, site development should adhere to the Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program Rules in accordance with Title 30 of the Texas Administrative Code, Section 213 (30 TAC§ 213).

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

A field geologic assessment was conducted by Mr. James R. Woodburn, P.G. on September 24, 2019. According to historical aerial maps, the site has been an undeveloped residential property and agricultural farmland. At the time of the inspection, a large portion of the property was utilized for agricultural purposes. The northern portion of the property contains a house and barn surrounded by undeveloped land with heavy native vegetation. Approximately 70 acres of the property have been used as agricultural land to grow crops. In addition, two active water wells and one septic system and associated septic tank were observed during the assessment of the entire property. Ranger field personnel identified four non-karst closed depressions that were surficially scraped.

The geologic survey was conducted by both off-road vehicles and walking surveys on 50-foot center transects, where accessible. No intrusive testing was conducted. If present, features identified in the field were photographed, flagged, and recorded with a hand held global positioning system (GPS). The geologic table, stratigraphic column, geologic map with topographic contours, and soil unit map are included herein.

LOCATION

The subject site consists of one 161.439-acre lot located at Lemuel S. Walters Survey, Abstract No. 653, Block No. 6, Section No. 6 in Williamson County, Texas. The site coordinates are at approximately N 30° 46' 13.10" and W 097° 41' 13.02".

RESEARCH INFORMATION

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

- The University of Texas Bureau of Economic Geology. Reprinted 1981. Geologic Atlas of Texas Austin Sheet.
- The University of Texas Bureau of Economic. 1990. Hydrogeology of the Northern Segment of the Edwards Aquifer, Austin Region. Report of Inv. 192.
- Texas Commission on Environmental Quality. 2004. Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones. TCEQ-0585.
- The University of Texas Bureau of Economic Geology. 1958. The Geology of Texas, Bulletin No. 3232. Volume 1.
- United States Department of Agriculture (USDA) National Resources Conversation Services (NRCS) (www.nrcs.usda.gov) – Websoil Survey.
- Texas Commission on Environmental Quality (www.tceq.state.tx.us).
- Federal Emergency Management Agency (FEMA) Flood Plain Maps.
- Center for Geospatial Technology, Texas Tech University, obtained from the Texas Geologic Atlas of Texas.
- Texas Water Development Board (TWDB) – Groundwater Data Viewer.
- United State Geological Survey (USGS) Topographic Maps – Terrain Navigator Pro 2015.

DESCRIPTION OF SITE

According to historical aerial maps, the site has been an undeveloped residential property and has been used for agricultural purposes. At the time of the inspection, the central portion of the site had been utilized for agricultural purposes. The northern portion of the property contains a house and barn surrounded by undeveloped land with heavy native vegetation. Approximately 70 acres of the central portion of the property have been used as agricultural land to grow crops.

In addition, two active water wells and one septic system and associated septic tank were observed during the assessment of the entire property. Ranger field personnel identified four non-karst closed depressions that were surficially scraped. Ranger also noted

drainage ways on the northeastern and southern portions of the property with minor relief. The drainage ways contained no evidence of outcrops or infiltration, and they were lined with soil.

SOIL DESCRIPTION

Please see the attached USDA NRCS Custom Soil Resource Report.

SITE GEOLOGY

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

The Balcones Fault Zone trend closely follows the structural trend of the late Paleozoic Ouachita fold and thrust belt. Faulting may have been initiated in the Late Cretaceous with the majority of movement taking place during the late Oligocene and early Miocene. Minor isostatic adjustments resulting from sediment loading in the Gulf of Mexico continue to the present.

Referencing the Geologic Atlas of Texas, Austin Sheet, and The University of Texas Bulletin No. 3232, The Geology of Texas, Volume 1 the local stratigraphic units that outcrop at the site are the Georgetown Formation (Kgt) and Edwards Limestone (Ked).

The Cretaceous age Georgetown Formation unconformably overlies the Edwards Limestone in Williamson County. The Georgetown Formation consists primarily of nodular limestones interbedded with marls and is typically light gray to white, massive, indurated, and fossiliferous. Small vugs may be present within the formation but are not common. The formation thickens to the north from approximately 65 feet to 110 feet. The Georgetown Formation represents the uppermost Edwards aquifer strata. The Geologic Atlas of Texas, Austin Sheet indicates that the Georgetown Formation outcrops across the entire site except for a small portion of along the northern edge of the property, which is the Edwards Limestone. This area was investigated, and no stratigraphic contact was observed.

The Lower Cretaceous Edwards Limestone (Ked) is a member of the Fredericksburg Group and is massive to thinly bedded limestones and dolostones. The Edwards Limestone is generally light gray, crystalline to coarse-grained, cavernous and includes calcareous shell detritus and milliolids. Chert and rudists are present within the Edwards Limestone and can serve as markers to differentiate the Edwards Limestone from the underlying Comanche Peak Formation and the unconformable and overlying Georgetown Formation.

Ranger observed unconsolidated, weathered limestone fragments across the entire site; however, no outcrops were observed at the site. Ranger also noted soil-lined drainage ways on the northeastern and southern portions of the property which contained no evidence of outcrops or infiltration. No vugs, faults, caves, solution cavities, or other features that would historically provide avenues for rapid infiltration were noted in the undeveloped or agriculturally developed portions of the property.

SITE SPECIFIC GEOLOGIC FEATURES

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

S-1 (CD) – Non-Karst Closed Depression. A small closed depression was noted near the northwestern portion of the agricultural area of the property. The feature is located outside of the 100-year flood plain according to the published FEMA Flood Plain Maps. The feature does not appear to be karst related. The depression appears to be man-made from a tractor. The closed depression measured approximately 30 feet by 15 feet by 1 foot deep. Loose soil and grassy vegetation were observed in the closed depression. The probability of rapid infiltration is very low. The catchment area is less than 1.6 acres.

S-2 (CD) – Non-Karst Closed Depression. A small closed depression was noted on the southern portion of the property. The feature is located outside of the 100-year flood plain according to the published FEMA Flood Plain Maps. The feature does not appear to be karst related. The depression appears to be man-made. The closed depression measured approximately 22 feet by 14 feet by 2.5 feet deep. Loose limestone gravel and grassy vegetation were observed in the closed depression. The probability of rapid infiltration is low. The catchment area is less than 1.6 acres.

S-3 (CD) – Non-Karst Closed Depression. A small closed depression was noted on the southern portion of the property. The feature is located outside of the 100-year flood plain according to the published FEMA Flood Plain Maps. The feature does not appear to be karst related. The depression appears to be man-made. The closed depression measured approximately 31 feet by 16 feet by 1.5 feet deep. Loose soil and grassy vegetation were observed in the closed depression. The probability of rapid infiltration is very low. The catchment area is less than 1.6 acres.

S-4 (CD) – Non-Karst Closed Depression. A small closed depression was noted on the southern portion of the property. The feature is located outside of the 100-year flood plain according to the published FEMA Flood Plain Maps. The feature does not appear to be karst related. The depression appears to be man-made. The closed depression measured approximately 25 feet by 18 feet by 3 feet deep. Loose soil and grassy vegetation were observed in the closed depression. The probability of rapid infiltration is very low. The catchment area is less than 1.6 acres.

S-5 (MB) – Man-made Feature in Bedrock, Active Water Well. The surface completion of the water well is noted to be approximately eight inches in diameter. The water well has a concrete surface completion and is constructed approximately one foot above ground. The information from the TWDB Groundwater Database indicates that the total depth of the well is approximately 920 feet below ground surface (bgs), and the well was screened between 860 feet and 920 feet bgs. There was no evidence of possible rapid infiltration into the well. The catchment area is less than 1.6 acres.

S-6 (MB) – Man-made Feature in Bedrock, Active Water Well. The surface completion of the observed water well is noted to be approximately eight inches in diameter. The water well has a concrete surface completion and is constructed approximately two feet above ground. Ranger was unable to find any available information about the well through the TWDB Groundwater Database. There was no evidence of possible rapid infiltration into the well. The catchment area is less than 1.6 acres.

S-7 (MB) – Man-made Feature in Bedrock, Sanitary Septic System. The observed septic system is located approximately 20 feet southwest of the residential dwelling. The probability of rapid infiltration is low. The catchment area is less than 1.6 acres.

S-8 (MB) – Man-made Feature in Bedrock, Sanitary Septic System. The observed septic system tank is located adjacent to the residential dwelling to the west. The probability of rapid infiltration is low. The catchment area is less than 1.6 acres.

CONCLUSIONS AND RECOMMENDATIONS

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

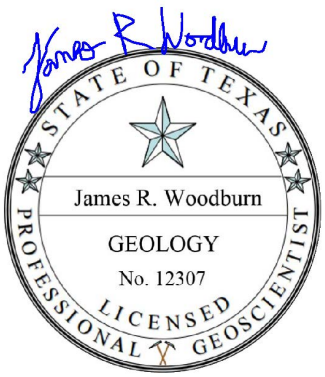
This assessment does not address the possible presence of subsurface conditions that may be exposed during future construction and/or development. Should solution features or conditions be exposed during site construction activities that indicate a potential for hydraulic interconnectedness between the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

LIMITATIONS

It should be noted that only areas readily accessible were inspected. There may be geologic features present that were not identified as part of this study. This non-intrusive visual field assessment cannot wholly eliminate the possibility of sensitive features at the site. The historic use of the property for agricultural purposes may have potentially changed the site topography and also may have obscured specific site conditions.

Prepared by:

James R. Woodburn, P.G.
Ranger Environmental Services, Inc.

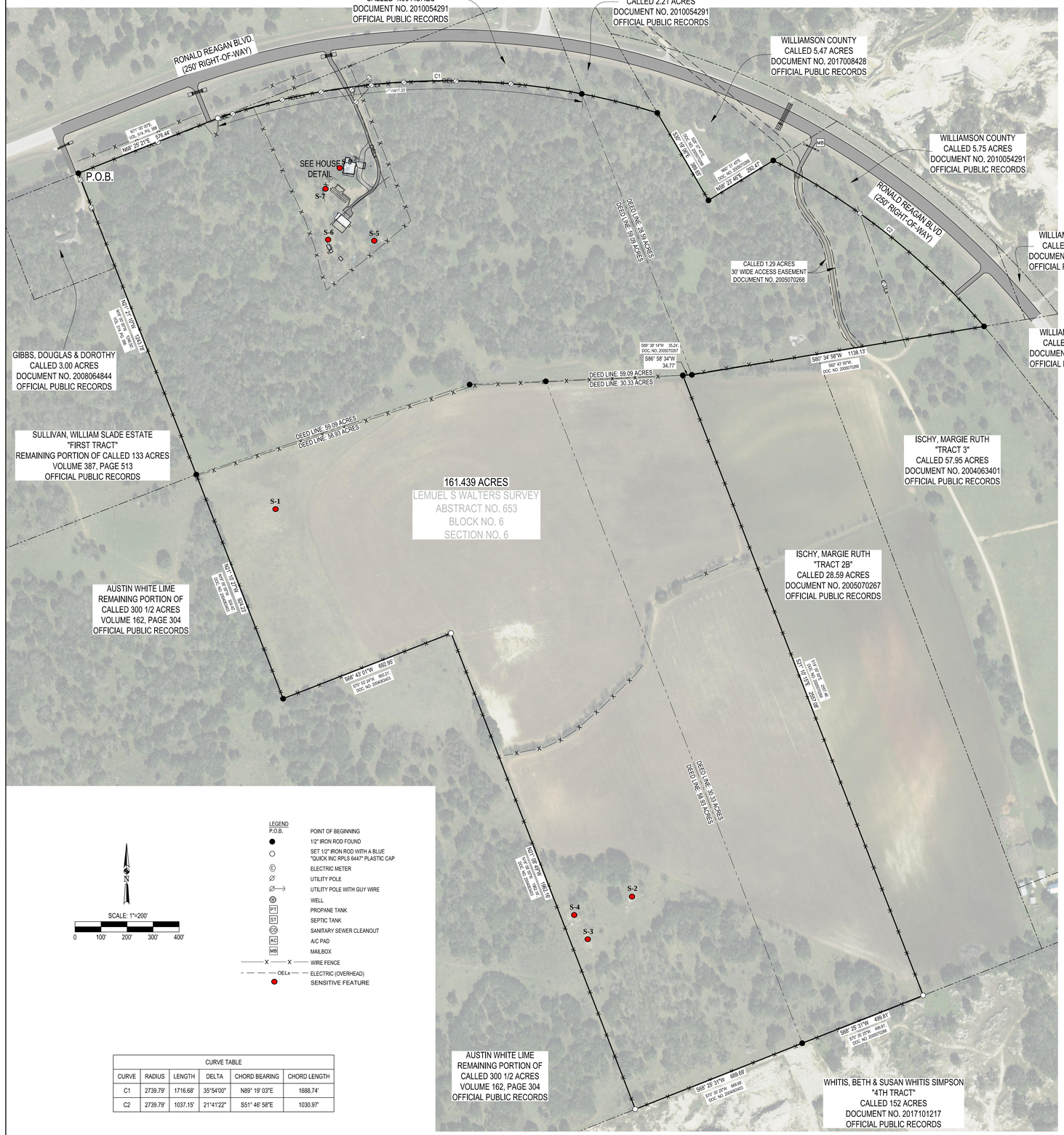


9/30/2019

ATTACHMENT D

Site Geologic Map(s)

SURVEY SHOWING A 161.439 ACRE TRACT OF LAND, LOCATED IN THE LEMUEL S WALTERS SURVEY, ABSTRACT NO. 653, BLOCK NO. 6, SECTION NO. 6, WILLIAMSON COUNTY, TEXAS, SAID 161.439 ACRE TRACT, BEING THE REMAINING PORTION OF THAT CALLED 59.09 ACRE TRACT OF LAND RECORDED IN VOLUME 514, PAGE 388 OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS, BEING THE REMAINING PORTION OF THAT CALLED 28.59 ACRE TRACT OF LAND RECORDED IN DOCUMENT NO. 2005070266, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS, BEING ALL OF THAT CALLED 30.33 ACRE TRACT OF LAND RECORDED IN DOCUMENT NO. 2005070266, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS, AND BEING ALL OF THAT CALLED 58.93 ACRE TRACT OF LAND RECORDED IN DOCUMENT NO. 2004063403, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.



CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	2739.79'	1716.68'	35°54'00"	N89° 19' 03"E	1688.74'
C2	2739.79'	1037.15'	21°41'22"	S51° 46' 58"E	1030.97'

HOUSE DETAIL
1" = 20'



NOTES:
1) FIELD WORK PERFORMED ON: APRIL 2, 2019
2) BORROWER: NORMAN ASHBY
3) ADDRESS: 33952 W. RONALD REAGAN BLVD, GEORGETOWN, TEXAS
4) BASIS OF BEARING: TEXAS STATE PLANE, CENTRAL ZONE, NAD83
5) THIS SURVEY IS BASED ON A TITLE COMMITMENT ISSUED BY TITLE RESOURCES GUARANTY COMPANY, G.F. NUMBER 1909469-GTN, ISSUED DATE OF MARCH 27, 2019 EFFECTIVE DATE OF MARCH 18, 2019 AND IS SUBJECT TO ALL TERMS, CONDITIONS, LEASES AND ENCUMBRANCES STIPULATED THEREIN. THERE MAY BE OTHER EASEMENTS, RESTRICTIONS, OR ENCUMBRANCES NOT SHOWN.THE SURVEYOR DID NOT COMPLETE AN ABSTRACT OF TITLE.
6) A METES AND BOUNDS DESCRIPTION WAS PREPARED BY A SEPARATE DOCUMENT.
7) ACCORDING TO THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR WILLIAMSON COUNTY, TEXAS, MAP NUMBER 48491C0125E, EFFECTIVE DATE SEPTEMBER 26, 2008, THIS PROPERTY LIES IN ZONE X, WHICH IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE OF THE 100 YEAR FLOOD PLAIN. THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP IS FOR USE IN ADMINISTERING THE NATIONAL FLOOD INSURANCE PROGRAM; IT DOES NOT NECESSARILY IDENTIFY ALL AREAS SUBJECT TO FLOODING, PARTICULARLY FROM LOCAL DRAINAGE SOURCES OF SMALL SIZE, OR ALL PLANIMETRIC FEATURES OUTSIDE SPECIAL FLOOD HAZARD AREAS. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES LOCATED THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. THE FLOOD HAZARD AREA IS SUBJECT TO CHANGE AS DETAILED STUDIES OCCUR AND/OR WATERSHED OR CHANNEL CONDITIONS CHANGE. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.
8) ONLY APPARENT UTILITIES WERE LOCATED. NO ATTEMPT HAS BEEN MADE AS PART OF THIS SURVEY TO SHOW THE EXISTENCE, SIZE, DEPTH, CONDITION, OR LOCATION OF ANY UNDERGROUND UTILITY. FOR INFORMATION REGARDING UNDERGROUND UTILITIES PLEASE CONTACT THE APPROPRIATE AGENCY.
9) THE IMPROVEMENTS SHOWN HEREON ARE FOR GENERAL LOCATIVE PURPOSES ONLY AND HAVE NOT BEEN DETAILED IN THEIR ENTIRETY.

SCHEDULE B EXCEPTIONS:
10g, 30' WIDE, 1.29 ACRE ACCESS EASEMENT - RECORDED IN DOCUMENT NO. 2005070268, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS. (SHOWN ON SURVEY)

STATE OF TEXAS
James R. Woodburn
GEOLOGY
No. 12307
LICENSED
PROFESSIONAL GEOSCIENTIST
9/30/2019

Map modified by Ranger Environmental Services, Inc. on September 25, 2019

STATE OF TEXAS
REGISTERED
TRAVIS L. QUICKSALL
6447
PROFESSIONAL LAND SURVEYOR

I DO HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON AND IS CORRECT, AND THAT THERE ARE NO DISCREPANCIES, CONFLICTS, SHORTAGES IN AREA, BOUNDARY LINE CONFLICTS, VISIBLE ENCROACHMENTS, OVERLAPPING OF IMPROVEMENTS, UTILITY LINES OR ROADS, EXCEPT AS SHOWN, AND THAT SAID PROPERTY HAS ACCESS TO AND FROM A DEDICATED ROADWAY.

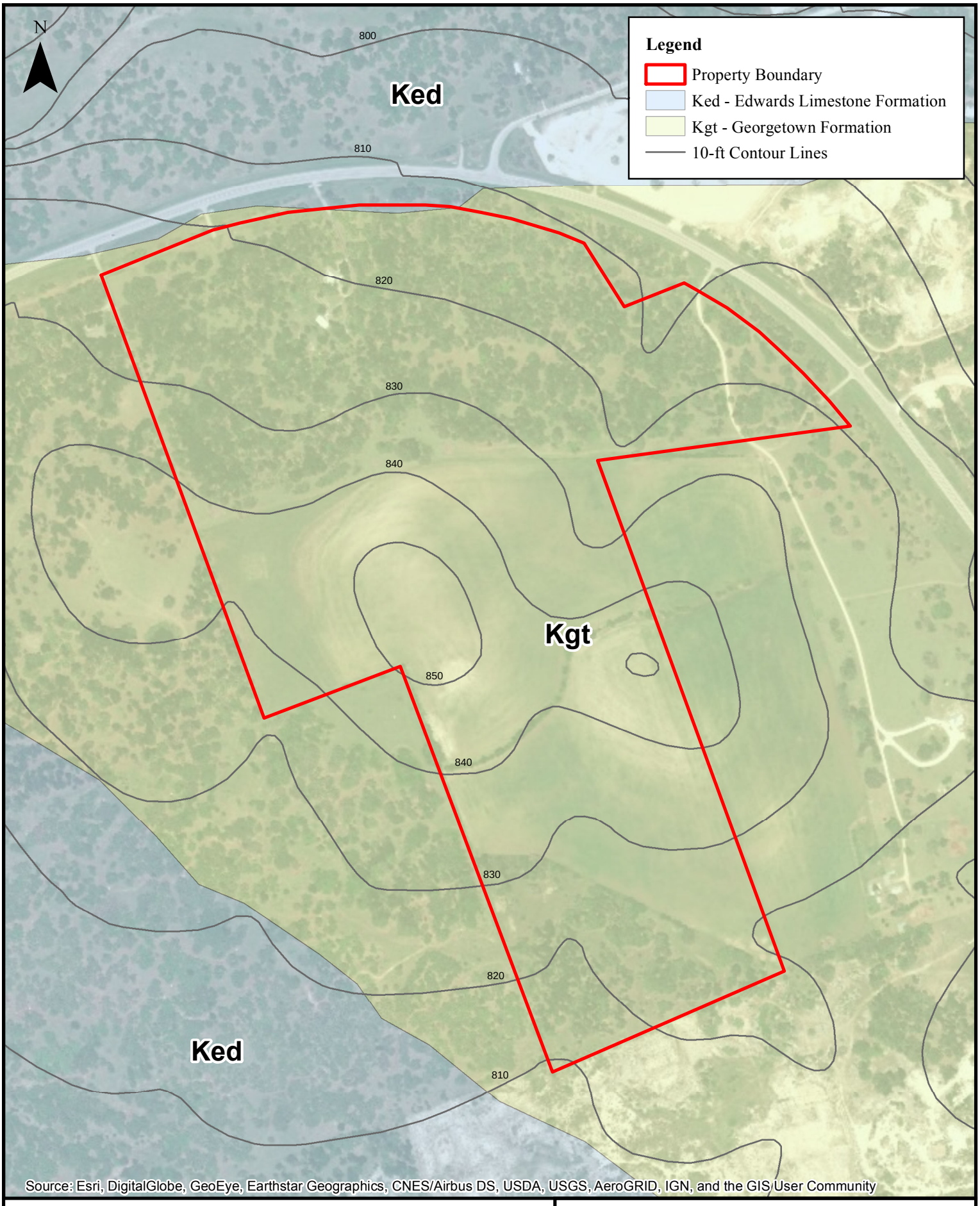
TRAVIS L. QUICKSALL DATE: APRIL 12, 2019
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6447
JOB NO. 19-2064



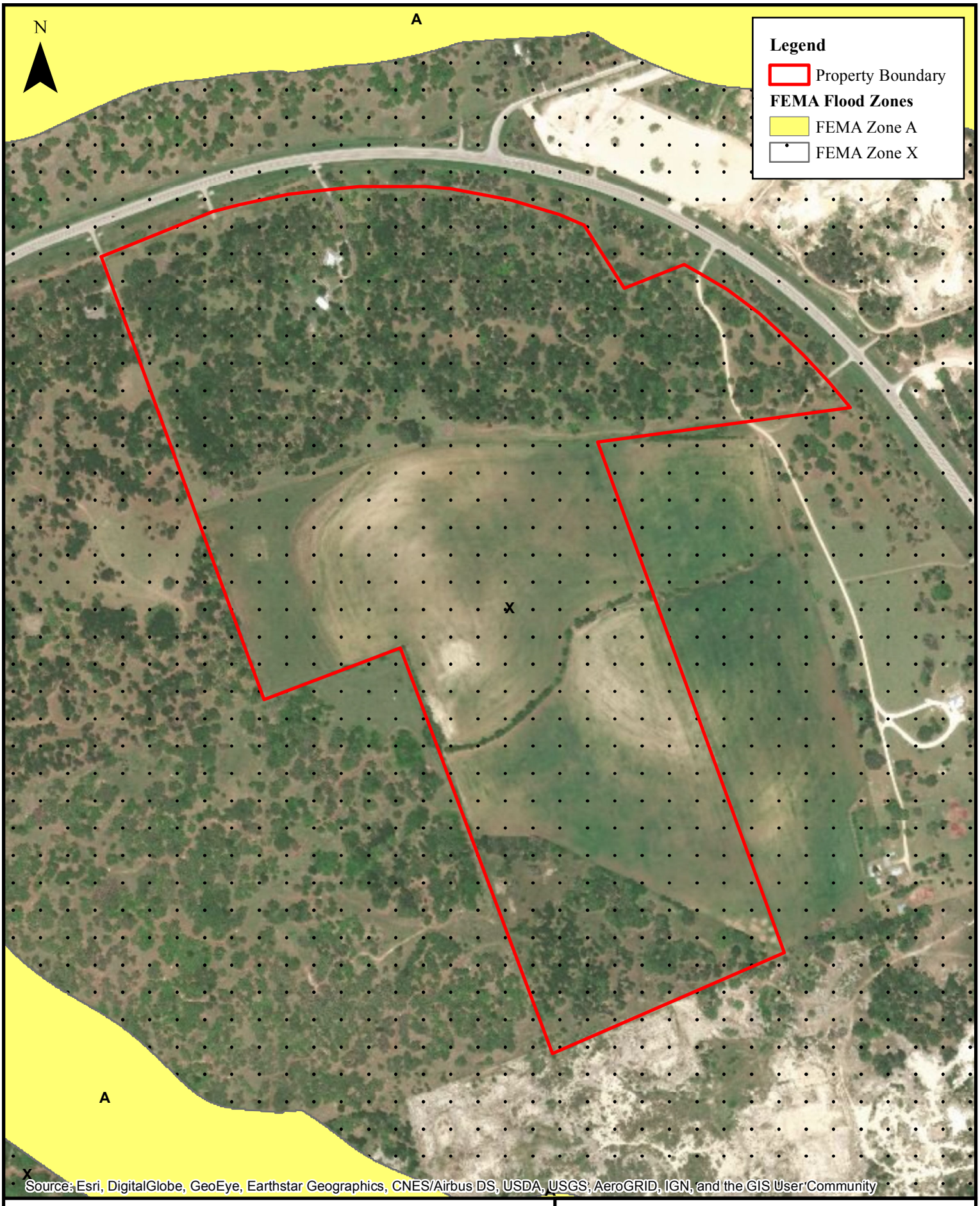
RANGER ENVIRONMENTAL SERVICES, INC.

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EDWARDS AQUIFER ZONE MAP
Cobra Stone - Plant #2
CR 239 & Ronald Reagan Blvd.
Williamson County, Texas



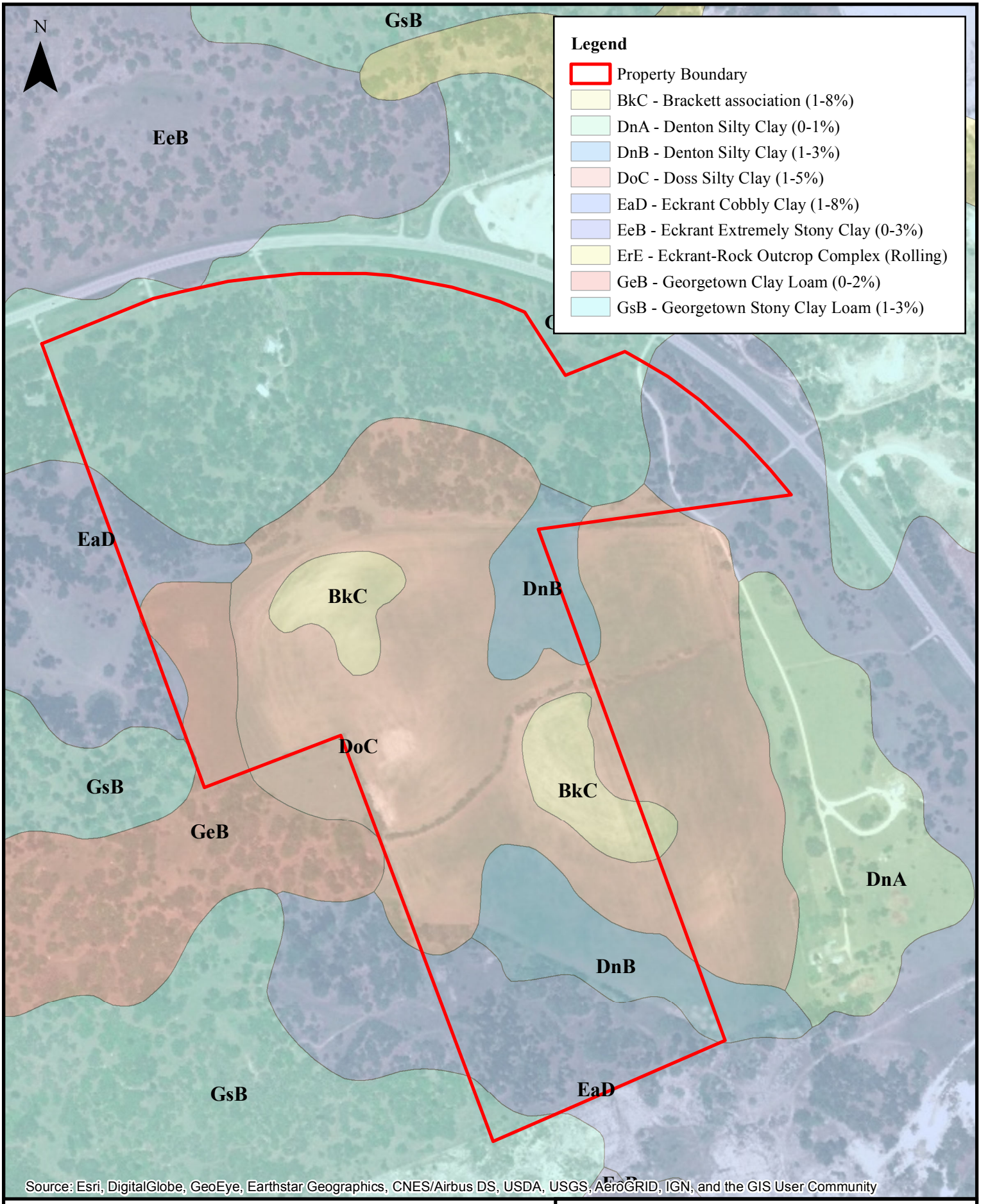
GEOLOGIC SITE MAP
Cobra Stone - Plant #2
CR 239 & Ronald Reagan Blvd.
Williamson County, Texas



RANGER ENVIRONMENTAL SERVICES, INC.

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FEMA FLOODPLAIN MAP
Cobra Stone - Plant #2
CR 239 & Ronald Reagan Blvd.
Williamson County, Texas



RANGER ENVIRONMENTAL SERVICES, INC.

0 175 350 700 1,050 1,400 Feet

SOIL UNIT MAP
Cobra Stone - Plant #2
CR 239 & Ronald Reagan Blvd.
Williamson County, Texas

United States Department of Agriculture

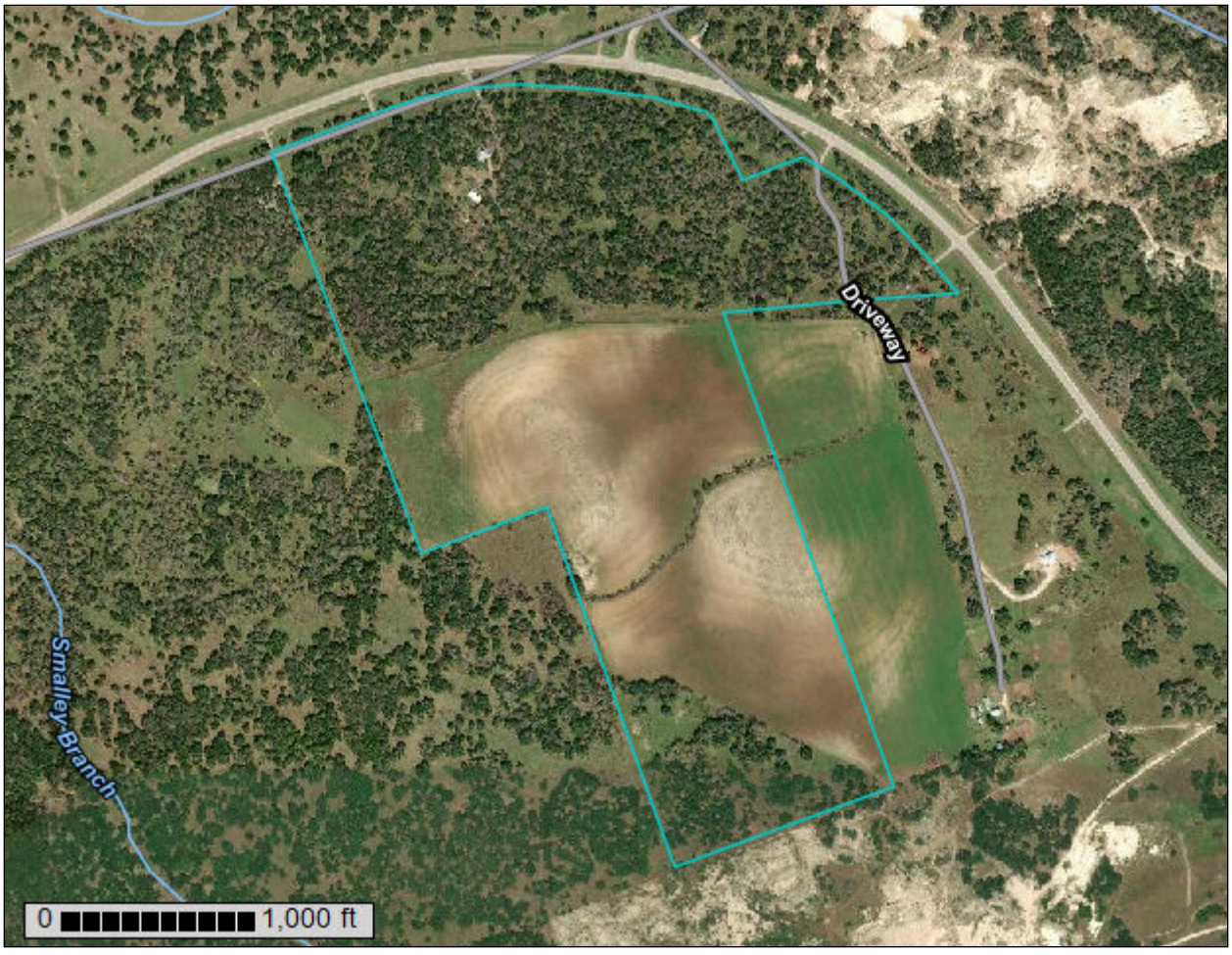
NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Williamson County, Texas

Cobra Stone - Plant #2



September 25, 2019

Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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



Map Scale: 1:5,890 if printed on B portrait (11" x 17") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Williamson County, Texas
Survey Area Data: Version 19, Sep 15, 2018

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

Date(s) aerial images were photographed: Jan 11, 2016—Nov 20, 2018

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BkC	Brackett association, 1 to 8 percent slopes	10.7	6.5%
DnB	Denton silty clay, 1 to 3 percent slopes	16.0	9.8%
DoC	Doss silty clay, moist, 1 to 5 percent slopes	53.9	33.0%
EaD	Eckrant cobbly clay, 1 to 8 percent slopes	23.7	14.5%
EeB	Eckrant extremely stony clay, 0 to 3 percent slopes	0.0	0.0%
GeB	Georgetown clay loam, 0 to 2 percent slopes	6.1	3.7%
GsB	Georgetown stony clay loam, 1 to 3 percent slopes	52.9	32.4%
Totals for Area of Interest		**163.3**	**100.0%**

Map Unit Descriptions

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

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

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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

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

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

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

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

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

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

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

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

Williamson County, Texas

BkC—Brackett association, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t26h
Elevation: 550 to 1,920 feet
Mean annual precipitation: 30 to 35 inches
Mean annual air temperature: 64 to 68 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Brackett and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brackett

Setting

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

Typical profile

A - 0 to 5 inches: clay loam
Bk - 5 to 14 inches: clay loam
Cr - 14 to 60 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Depth to restrictive feature: 5 to 20 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 80 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: Adobe 29-35" PZ (R081CY355TX)
Hydric soil rating: No

Minor Components

Eckrant

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit, backslope, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Low Stony Hill 29-35" PZ (R081CY360TX)
Hydric soil rating: No

Doss

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: Shallow 29-35" PZ (R081CY574TX)
Hydric soil rating: No

Bolar

Percent of map unit: 3 percent
Landform: Ridges on plateaus
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Clay Loam 29-35" PZ (R081CY357TX)
Hydric soil rating: No

Krum

Percent of map unit: 2 percent
Landform: Stream terraces on plateaus
Landform position (three-dimensional): Tread, riser
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: Clay Loam 29-35" PZ (R081CY357TX)
Hydric soil rating: No

DnB—Denton silty clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t26l
Elevation: 570 to 1,870 feet
Mean annual precipitation: 31 to 36 inches
Mean annual air temperature: 65 to 68 degrees F
Frost-free period: 220 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Denton and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Denton

Setting

Landform: Hillslopes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty and clayey slope alluvium over residuum weathered from limestone

Typical profile

A - 0 to 14 inches: silty clay
Bw - 14 to 25 inches: silty clay
Bk - 25 to 33 inches: silty clay
Ck - 33 to 36 inches: gravelly silty clay
R - 36 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 22 to 60 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 80 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: D
Ecological site: Clay Loam 29-35" PZ (R081CY357TX)
Hydric soil rating: No

Minor Components

Krum

Percent of map unit: 6 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: Clay Loam 29-35" PZ (R081CY357TX)
Hydric soil rating: No

Doss

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: Shallow 23-31" PZ (R081BY343TX)
Hydric soil rating: No

Anhalt

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Deep Redland 29-35" PZ (R081CY358TX)
Hydric soil rating: No

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

Map Unit Setting

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

Map Unit Composition

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

Description of Doss

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Brackett

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

Bolar

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

Purves

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

Eckrant

Percent of map unit: 1 percent

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

Denton

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

EaD—Eckrant cobbly clay, 1 to 8 percent slopes

Map Unit Setting

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

Map Unit Composition

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

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

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

Properties and qualities

Slope: 1 to 8 percent
Percent of area covered with surface fragments: 2.3 percent

Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: Low Stony Hill 29-35" PZ (R081CY360TX)
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Adobe 29-35" PZ (R081CY355TX)
Hydric soil rating: No

Bexar

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Redland 29-35" PZ (R081CY361TX)
Hydric soil rating: No

Krum

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Clay Loam 29-35" PZ (R081CY357TX)
Hydric soil rating: No

EeB—Eckrant extremely stony clay, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: djpv
Elevation: 1,000 to 2,400 feet
Mean annual precipitation: 22 to 32 inches
Mean annual air temperature: 66 to 70 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant

Setting

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

Typical profile

H1 - 0 to 4 inches: extremely stony clay
H2 - 4 to 11 inches: extremely stony clay
H3 - 11 to 16 inches: bedrock

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 8 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Very low (about 0.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: Low Stony Hill 29-35" PZ (R081CY360TX)
Hydric soil rating: No

GeB—Georgetown clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t273
Elevation: 620 to 1,250 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 65 to 68 degrees F
Frost-free period: 230 to 260 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Georgetown and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Georgetown

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone

Typical profile

A - 0 to 7 inches: clay loam
Bt - 7 to 35 inches: cobbly clay
R - 35 to 60 inches: bedrock

Properties and qualities

Slope: 0 to 2 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: D
Ecological site: Redland 29-35" PZ (R081CY361TX)

Hydric soil rating: No

Minor Components

Tarpley

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Redland 29-35" PZ (R081CY361TX)
Hydric soil rating: No

Eckrant

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Linear, convex
Across-slope shape: Convex
Ecological site: Low Stony Hill 29-35" PZ (R081CY360TX)
Hydric soil rating: No

GsB—Georgetown stony clay loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t277
Elevation: 620 to 1,250 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 65 to 68 degrees F
Frost-free period: 230 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Georgetown and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Georgetown

Setting

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

Typical profile

A - 0 to 7 inches: stony clay loam

Bt - 7 to 35 inches: cobbly clay
R - 35 to 60 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Percent of area covered with surface fragments: 0.1 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: Redland 29-35" PZ (R081CY361TX)
Hydric soil rating: No

Minor Components

Tarpley

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Redland 29-35" PZ (R081CY361TX)
Hydric soil rating: No

Eckrant

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder, summit, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Low Stony Hill 29-35" PZ (R081CY360TX)
Hydric soil rating: No

Fairlie

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: Southern Blackland (R086AY011TX)
Hydric soil rating: No

Georgetown

Percent of map unit: 0 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Redland 29-35" PZ (R081CY361TX)
Hydric soil rating: No

References

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STATE OF TEXAS WELL REPORT for Tracking #261401

Owner:	**Bill & Teresa Thompson**	Owner Well #:	**1**
Address:	**2700 CR 239 Georgetown, TX 78633**	Grid #:	**58-11-8**
Well Location:	**2700 CR 239 Georgetown, TX 78633**	Latitude:	**30° 46' 10" N**
		Longitude:	**097° 41' 11" W**
Well County:	**Williamson**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **7/23/2010** Drilling End Date: **7/27/2010**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
12	**0**	**20**
8	**20**	**100**
6.25	**100**	**920**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**5**	**3 1/2 Cement**
5	**105**	**7 1/2 Benseal**

Seal Method: **Trimmie Pipe**

Sealed By: **Driller**

Distance to Property Line (ft.): **50+**

Distance to Septic Field or other concentrated contamination (ft.): **100+**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **Measured**

Surface Completion: **Surface Sleeve Installed**

Water Level: **368 ft.** below land surface on **2010-07-27** Measurement Method: **Unknown**

Packers: **Shale 840'**
Shale 820'
Shale 800'
Cement 105'

Type of Pump: **Submersible** Pump Depth (ft.): **600**

Well Tests: **Jetted** **Yield: 100+ GPM**

Water Quality:

Strata Depth (ft.)	Water Type
850-920	**Trinity**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Tom Lovelace Water Well Serv.**

4997 Elm Grove Rd.
Belton, TX 76513

Driller Name: **Jimmy Okun** License Number: **55015**

Comments: **^EAD**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**17**	**over burden**
17	**95**	**tan & brown lime**
95	**780**	**gray lime & shale**
780	**850**	**gay & tan lime**
850	**880**	**tan lime green shale**
880	**920**	**water sand**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
4 1/2" New Plastic Solid +2'-860'
4 1/2" New Plastic Mfg. Screen 860'-920' .032

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

Geologic Assessment
TCEQ-0585

Geologic Assessment

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Geologist: James R. Woodburn, P.G.

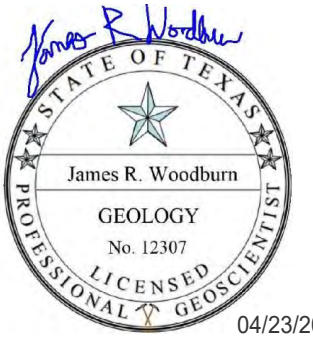
Telephone: 512-335-1785

Fax: 512-335-0527

Date: 04/23/2025

Representing: Ranger Environmental Services, Inc. (Reg No. 50140) (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



04/23/2025

Regulated Entity Name: Calibre Stone, LLC

Project Information

1. Date(s) Geologic Assessment was performed: 04/16/2025
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)
Doss silty clay, moist, 1 to 5 percent slopes (DoC)	D	0.91-1.67
Georgetown clay loam, 1 to 3 percent slopes (GsB)	D	1.67-3.33
Denton silty clay, 0 to 1 percent slopes (DnA)	C	1.83-5.00
Denton silty clay, 1 to 3 percent slopes (DnB)	D	1.83-5
Brackett association, 1 to 8 percent slopes (BktD)	D	0.42-1.67
Eckrant cobbly clay, 1 to 8 percent slopes (EaD)	D	0.33-1.67

** 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" = 150' and 100'
   Site Geologic Map Scale: 1" = 150' and 100'
   Site Soils Map Scale (if more than 1 soil type): 1" = ~337.5'

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 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 Chapter 76.
    ☒ There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

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

ATTACHMENT A

Geological Assessment Table
TCEQ-0585 Table

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Calibre Quarry

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

No geologic features were identified during Ranger's April 16, 2025 geologic assessment.

* DATUM WGS84

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

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

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

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

Date

Sheet ___1___ of ___1___

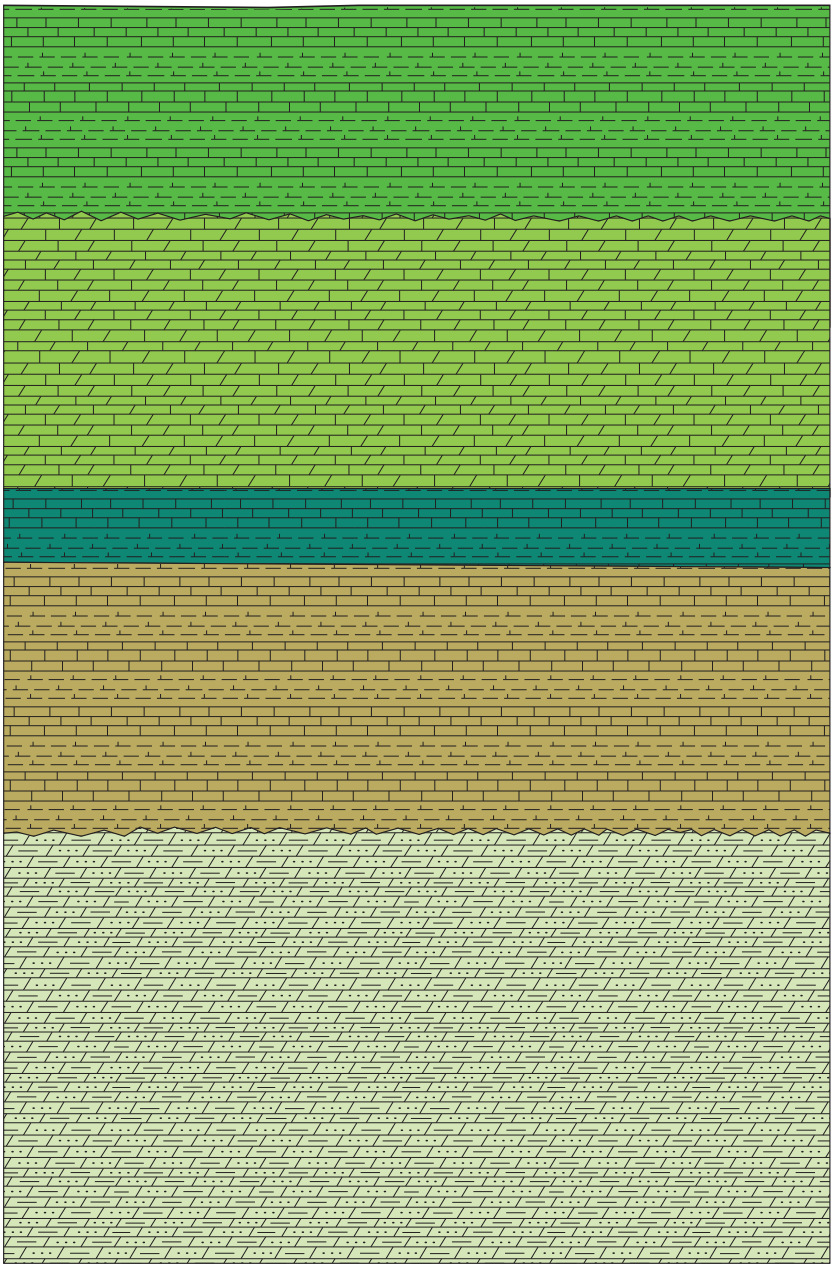
TCEQ-0585-Table (Rev. 10-01-04)

STATE OF TEXAS
James R. Woodburn
GEOLOGY
No. 12307
LICENSED PROFESSIONAL GEOSCIENTIST

04/23/2025

ATTACHMENT B

Stratigraphic Column



Georgetown Limestone, (Kgt)
Limestone and marl

Edwards Limestone (Ked)
Limestone and dolostone

Comanche Peak Formation (Kc)
Limestone and marl

Edwards Aquifer

Walnut Formation (Kwa)
Limestone and marl

Glen Rose Formation (Kgr)
Limestone, dolostone, and marl

STATE OF TEXAS
James R. Woodburn
GEOLOGY
No. 12307
LICENSED PROFESSIONAL GEOSCIENTIST

04/23/2025

Adapted from the Bureau of Economic Geology, 1990, Hydrogeology of the Northern Segment of the Edwards Aquifer, Austin Region, Report of Investigations No. 192, Figure 4

RANGER ENVIRONMENTAL SERVICES, LLC

Stratigraphic Column
Calibre Quarry
CR 239 and Ronald Reagan Blvd
Georgetown, TX 78633

Ranger Project No. 7120

COMMENTS: NOT FOR CONSTRUCTION

ATTACHMENT C

Site Geology

GEOLOGIC ASSESSMENT

CALIBRE QUARRY
CR 239 AND RONALD REAGAN BOULEVARD
GEORGETOWN (WILLIAMSON COUNTY), TEXAS 78633
APRIL 22, 2025

INTRODUCTION

Ranger Environmental Services, LLC (Ranger) was contracted to conduct a Geologic Assessment of the referenced property. This location lies within the designated Edwards Aquifer Recharge Zone. The site has been an undeveloped residential property with native vegetation and has been used for agricultural purposes in portions of the property. Since the subject site is located over the Edwards Aquifer Recharge Zone, site development should adhere to the Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program Rules in accordance with Title 30 of the Texas Administrative Code, Section 213 (30 TAC§ 213).

PROJECT DESCRIPTION

The subject site consists of three lots, approximately 32.866 acres and 11.138 acres, more or less, located at the southwest intersection of County Road 239 and Ronald Reagan Boulevard in Georgetown, Williamson County, Texas at approximately 30.766235, -97.681232.

According to aerial photos, approximately 26.250 acres of the 32.866 acre lot is used for agricultural purposes. The remaining portion as well as the 11.138 acre lot is undeveloped residential property with native vegetation.

METHODOLOGY

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

A field geologic assessment was conducted by Chad M. Copeland, P.G. on April 16, 2025. The site contains both undeveloped residential property and agricultural property. The site was noted to support native vegetation and crops planted within the agricultural area.

The walking geologic survey was conducted on 50-foot center transects, where possible. No intrusive testing was conducted. If present, features identified in the field were photographed and recorded with a hand held global positioning system (GPS). Features include, but were not limited

to, caves, solution cavities, solution-enlarged fractures, faults, manmade features in bedrock, swallow holes, sinkholes, non-karst closed depressions, and zone clustered or aligned features. The geologic assessment table, stratigraphic column, geologic, soils and topographic maps are included herein.

RESEARCH INFORMATION

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

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

SITE GEOLOGY

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

The Balcones Fault Zone trend closely follows the structural trend of the late Paleozoic Ouachita fold and thrust belt. Faulting may have been initiated in the Late Cretaceous with the majority of movement taking place during the late Oligocene and early Miocene. Minor isostatic adjustments resulting from sediment loading in the Gulf of Mexico continue to the present.

Referencing the Geologic Atlas of Texas, Austin Sheet, and The University of Texas Bulletin No. 3232, The Geology of Texas, Volume 1 the local stratigraphic section which outcrops at the site is

the Cretaceous age Georgetown Formation (Kgt) which unconformably overlies the Edwards Limestone (Ked). The Georgetown Formation consists primarily of nodular, moderately indurated limestones interbedded with marls. Georgetown limestones are typically fine grained, massive, and fossiliferous. Small vugs may be present within the formation but are not common. The formation is approximately 30 feet to 80 feet in thickness and thins southward. The Georgetown limestones represent the uppermost Edwards aquifer strata.

Ranger observed unconsolidated, weathered limestone fragments across the entire site; however, no outcrops were observed at the site. No vugs, faults, caves, solution cavities, or other features that would historically provide avenues for rapid infiltration were noted in the undeveloped or agriculturally developed portions of the property.

SITE SPECIFIC GEOLOGIC FEATURES

No geologic features, as defined in TCEQ "*Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones*" (TCEQ Guidance 0585), were observed at the site.

SOIL DESCRIPTION

According to the USDA Natural Resources Conservation Services *Web Soil Survey*, the soil types at the site are comprised of the following: Brackett association, 1 to 8 percent slopes (BktD); Denton silty clay, 0 to 1 percent slopes (DnA); Denton silty clay, 1 to 3 percent slopes (DnB); Doss silty clay, moist, 1 to 5 percent slopes (DoC); Eckrant cobbly clay, 1 to 8 percent slopes (EaD); and Georgetown clay loam, 1 to 3 percent slopes (GsB).

Please see attached USDA NRCS Custom Soil Resource Report for more information pertaining to each soil type.

TOPOGRAPHY AND DRAINAGE

The subject site was noted to be relatively flat with minor topographic relief. The surface topography was noted to drain predominantly to the east toward Cobbs Spring Branch.

CONCLUSIONS AND RECOMMENDATIONS

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

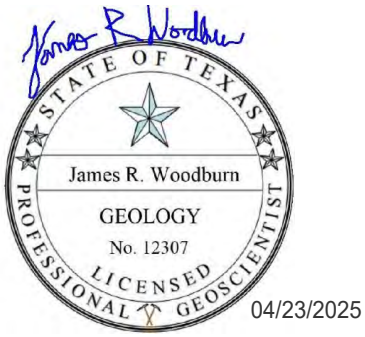
This assessment does not address the possible presence of subsurface conditions that may be exposed during future construction and/or development. Should solution features or conditions be exposed during site construction activities that indicate a potential for hydraulic interconnectedness between the surface and the Edwards Aquifer, operations in the vicinity of the

feature should be halted and the Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program should be contacted immediately in accordance with 30 TAC §213.5(f)(2).

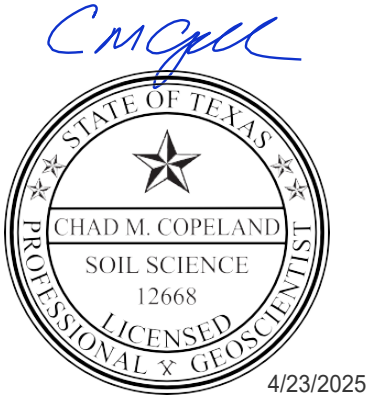
LIMITATIONS

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

Prepared by:



James R. Woodburn, P.G.
Ranger Environmental Services, LLC



Chad Copeland, P.G.
Ranger Environmental Services, LLC

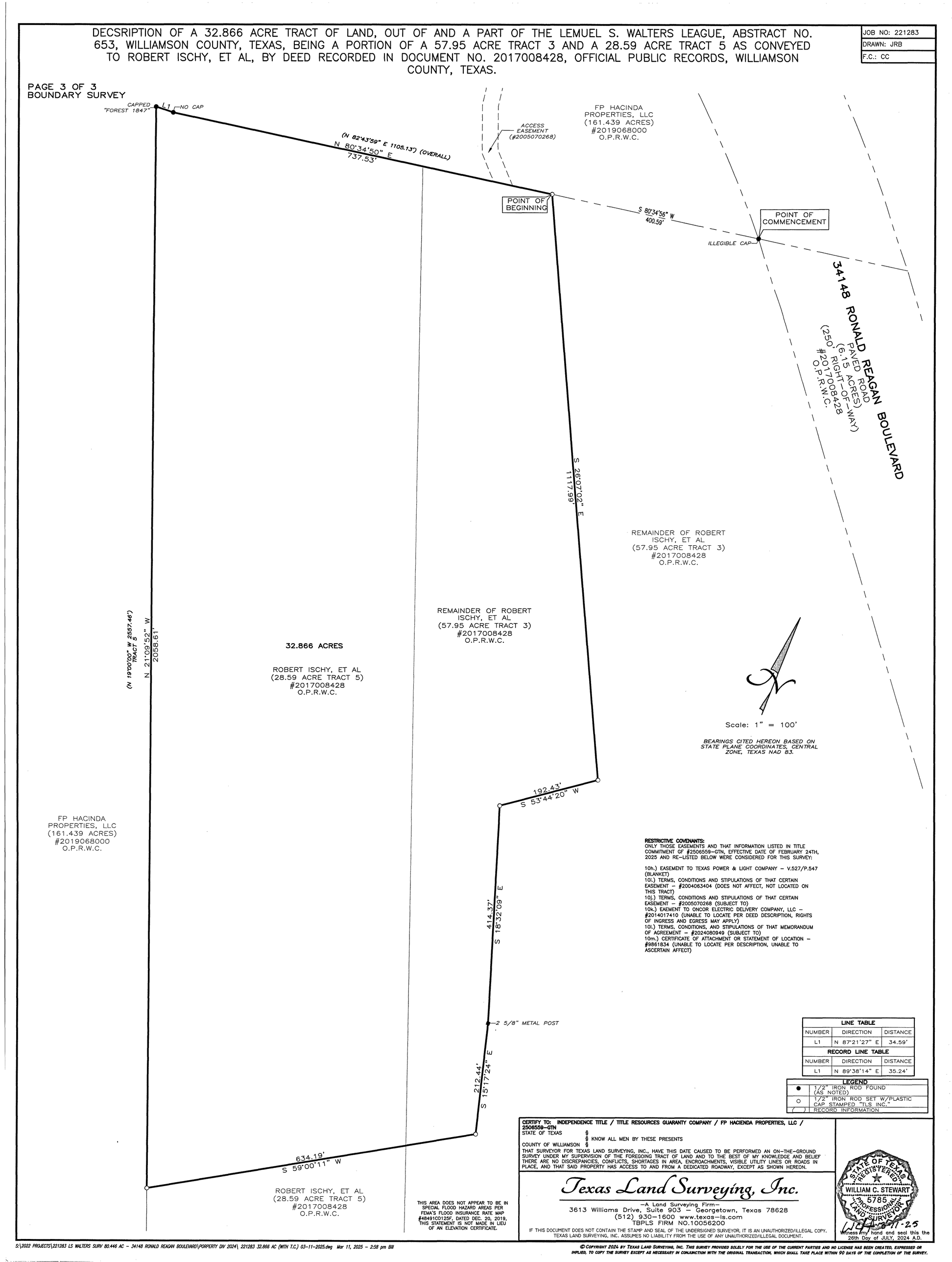
ATTACHMENT D

Site Geologic Map(s)

DECSRIPTION OF A 32.866 ACRE TRACT OF LAND, OUT OF AND A PART OF THE LEMUEL S. WALTERS LEAGUE, ABSTRACT NO. 653, WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A 57.95 ACRE TRACT 3 AND A 28.59 ACRE TRACT 5 AS CONVEYED TO ROBERT ISCHY, ET AL, BY DEED RECORDED IN DOCUMENT NO. 2017008428, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.

JOB NO: 221283
DRAWN: JRB
F.C.: CC

PAGE 3 OF 3
BOUNDARY SURVEY



BEARINGS CITED HEREON BASED ON STATE PLANE COORDINATES, CENTRAL ZONE, TEXAS NAD 83.

RESTRICTIVE COVENANTS:
ONLY THOSE EASEMENTS AND THAT INFORMATION LISTED IN TITLE COMMITMENT OF #2506559-GTN, EFFECTIVE DATE OF FEBRUARY 24TH, 2025 AND RE-LISTED BELOW WERE CONSIDERED FOR THIS SURVEY:

10h.) EASEMENT TO TEXAS POWER & LIGHT COMPANY – V.527/P.547 (BLANKET)
10i.) TERMS, CONDITIONS AND STIPULATIONS OF THAT CERTAIN EASEMENT – #2004063404 (DOES NOT AFFECT, NOT LOCATED ON THIS TRACT)
10j.) TERMS, CONDITIONS AND STIPULATIONS OF THAT CERTAIN EASEMENT – #2005070268 (SUBJECT TO)
10k.) EAEMENT TO ONCOR ELECTRIC DELIVERY COMPANY, LLC – #2014017410 (UNABLE TO LOCATE PER DEED DESCRIPTION, RIGHTS OF INGRESS AND EGRESS MAY APPLY)
10l.) TERMS, CONDITIONS, AND STIPULATIONS OF THAT MEMORANDUM OF AGREEMENT – #2024080949 (SUBJECT TO)
10m.) CERTIFICATE OF ATTACHMENT OR STATEMENT OF LOCATION – #9861834 (UNABLE TO LOCATE PER DESCRIPTION, UNABLE TO ASCERTAIN AFFECT)

LINE TABLE		
NUMBER	DIRECTION	DISTANCE
L1	N 87°21'27" E	34.59'
RECORD LINE TABLE		
NUMBER	DIRECTION	DISTANCE
L1	N 89°38'14" E	35.24'

LEGEND	
●	1/2" IRON ROD FOUND (AS NOTED)
O	1/2" IRON ROD SET W/PLASTIC CAP STAMPED "TLS INC."
( )	RECORD INFORMATION

THIS AREA DOES NOT APPEAR TO BE IN SPECIAL FLOOD HAZARD AREAS PER FEMA'S FLOOD INSURANCE RATE MAP #48491C0125F, DATED DEC. 20, 2019, THIS STATEMENT IS NOT MADE IN LIEU OF AN ELEVATION CERTIFICATE.

CERTIFY TO: INDEPENDENCE TITLE / TITLE RESOURCES GUARANTY COMPANY / FP HACIENDA PROPERTIES, LLC / 2506559-GTN

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS
COUNTY OF WILLIAMSON §

THAT SURVEYOR FOR TEXAS LAND SURVEYING, INC., HAVE THIS DATE CAUSED TO BE PERFORMED AN ON-THE-GROUND SURVEY UNDER MY SUPERVISION OF THE FOREGOING TRACT OF LAND AND TO THE BEST OF MY KNOWLEDGE AND BELIEF THERE ARE NO DISCREPANCIES, CONFLICTS, SHORTAGES IN AREA, ENCROACHMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE, AND THAT SAID PROPERTY HAS ACCESS TO AND FROM A DEDICATED ROADWAY, EXCEPT AS SHOWN HEREON.

Texas Land Surveying, Inc.
-A Land Surveying Firm-
3613 Williams Drive, Suite 903 – Georgetown, Texas 78628
(512) 930-1600 www.texas-ls.com
TBPLS FIRM NO.10056200

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STATE OF TEXAS
REGISTERED
WILLIAM C. STEWART
5785
PROFESSIONAL LAND SURVEYOR

Witness my hand and seal this the 26th Day of JULY, 2024 A.D.

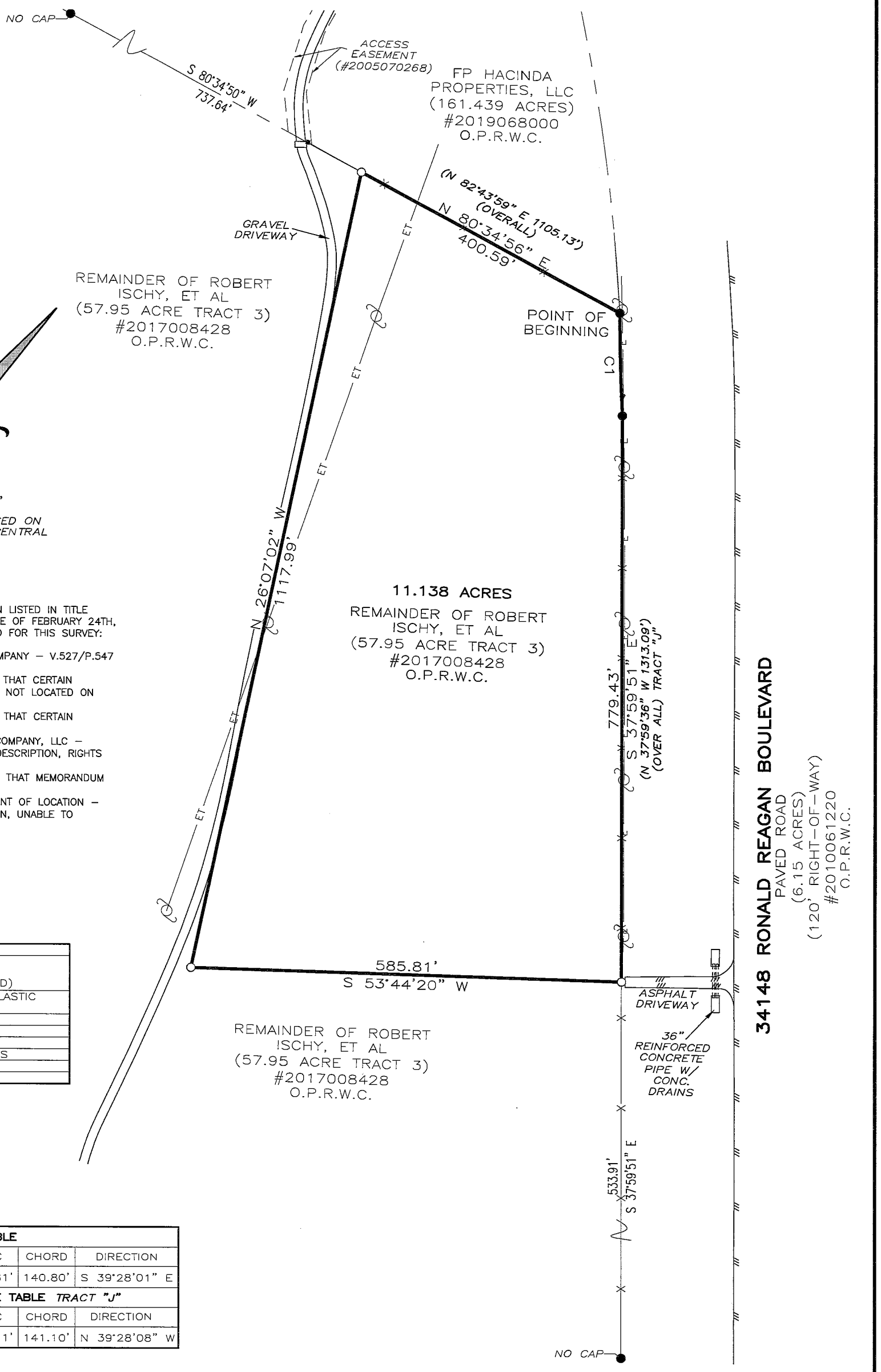
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DESCRIPTION OF A 11.138 ACRE TRACT OF LAND, OUT OF AND A PART OF THE LEMUEL S. WALTERS LEAGUE, ABSTRACT NO. 653, WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF THAT 57.95 ACRE TRACT 3 AS CONVEYED TO ROBERT ISCHY, ET AL, BY DEED RECORDED IN DOCUMENT NO. 2017008428, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.

JOB NO: 221283
DRAWN: JRB
F.C.: CC

PAGE 2 OF 2
BOUNDARY/IMPROVEMENT SURVEY

CORRECTED RIGHT-OF-WAY DOCUMENT No. MARCH 6, 2025



Scale: 1" = 150'

BEARINGS CITED HEREON BASED ON STATE PLANE COORDINATES, CENTRAL ZONE, TEXAS NAD 83.

RESTRICTIVE COVENANTS:
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10i.) TERMS, CONDITIONS AND STIPULATIONS OF THAT CERTAIN EASEMENT – #2004063404 (DOES NOT AFFECT, NOT LOCATED ON THIS TRACT)
10j.) TERMS, CONDITIONS AND STIPULATIONS OF THAT CERTAIN EASEMENT – #2005070268 (SUBJECT TO)
10k.) EAEMENT TO ONCOR ELECTRIC DELIVERY COMPANY, LLC – #2014017410 (UNABLE TO LOCATE PER DEED DESCRIPTION, RIGHTS OF INGRESS AND EGRESS MAY APPLY)
10l.) TERMS, CONDITIONS, AND STIPULATIONS OF THAT MEMORANDUM OF AGREEMENT – #2024080949 (SUBJECT TO)
10m.) CERTIFICATE OF ATTACHMENT OR STATEMENT OF LOCATION – #9861834 (UNABLE TO LOCATE PER DESCRIPTION, UNABLE TO ASCERTAIN AFFECT)

LEGEND	
●	1/2" IRON ROD FOUND WITH ILLEGIBLE CAP (UNLESS OTHERWISE NOTED)
O	1/2" IRON ROD SET W/PLASTIC CAP STAMPED "TLS INC."
■	FENCE POST
— X —	WIRE FENCE
	UTILITY POLE
—ET—	ELECTRIC/TELEPHONE LINES
— E —	ELECTRIC LINES
( )	RECORD INFORMATION

CURVE TABLE					
NUMBER	DELTA	RADIUS	ARC	CHORD	DIRECTION
C1	2°56'41"	2739.79'	140.81'	140.80'	S 39°28'01" E
RECORD CURVE TABLE *TRACT "J"*					
NUMBER	DELTA	RADIUS	ARC	CHORD	DIRECTION
C1	2°57'04"	2739.79'	141.11'	141.10'	N 39°28'08" W

THIS AREA DOES NOT APPEAR TO BE IN SPECIAL FLOOD HAZARD AREAS PER FEMA'S FLOOD INSURANCE RATE MAP #48491C0125F, DATED DEC. 20, 2019, THIS STATEMENT IS NOT MADE IN LIEU OF AN ELEVATION CERTIFICATE.

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STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS
COUNTY OF WILLIAMSON §

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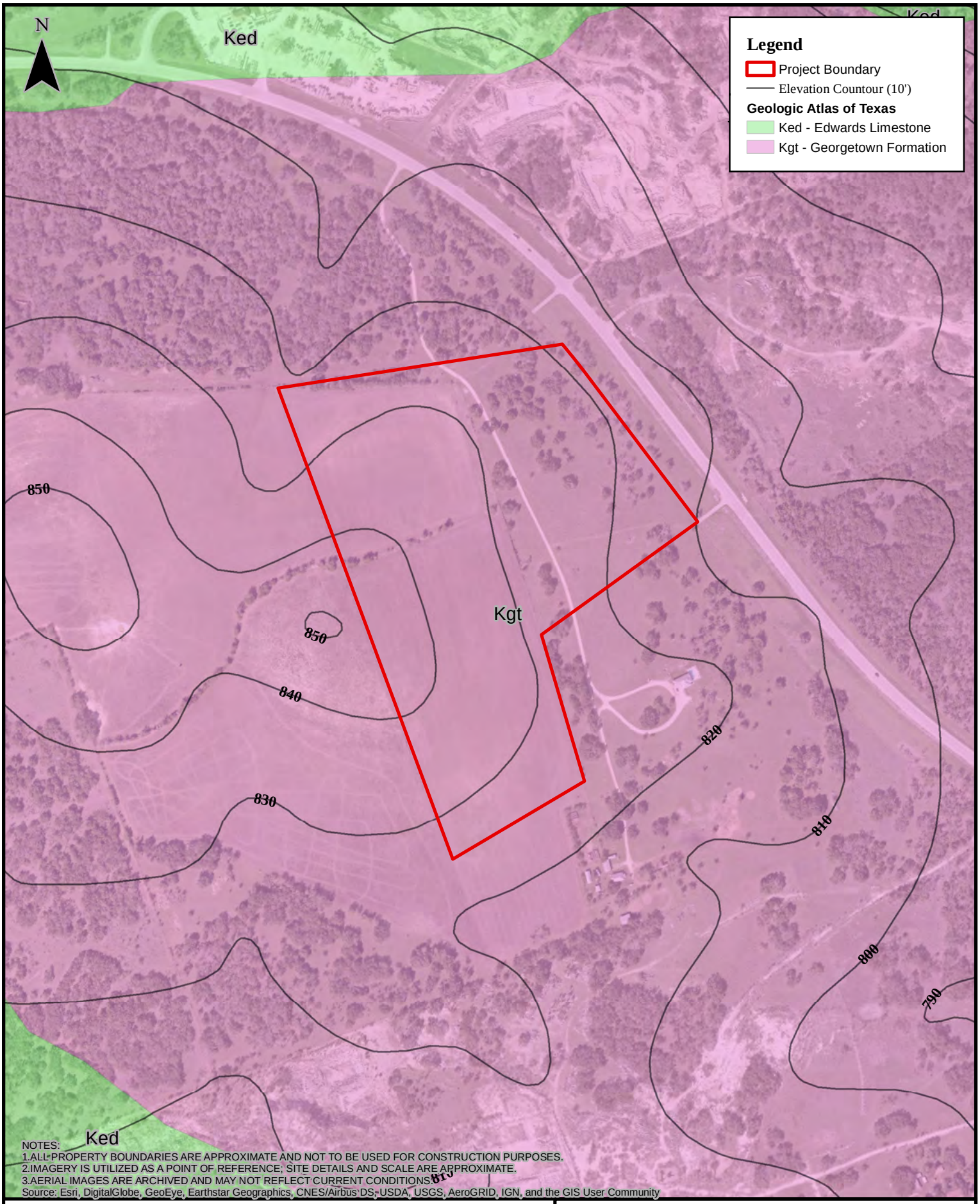
STATE OF TEXAS
REGISTERED
WILLIAM C. STEWART
5785
PROFESSIONAL
LAND SURVEYOR

3-12-25

Witness my hand and seal this the 26th Day of JULY, 2024 A.D.

S:\2022 PROJECTS\221283 LS WALTERS SURV 80.446 AC – 34148 RONALD REAGAN BOULEVARD\PORPERTY DIV 2024\ 221283 11.138 AC (WITH T.C.) 03-11-2025.dwg Mar 12, 2025 – 8:19 am Texas

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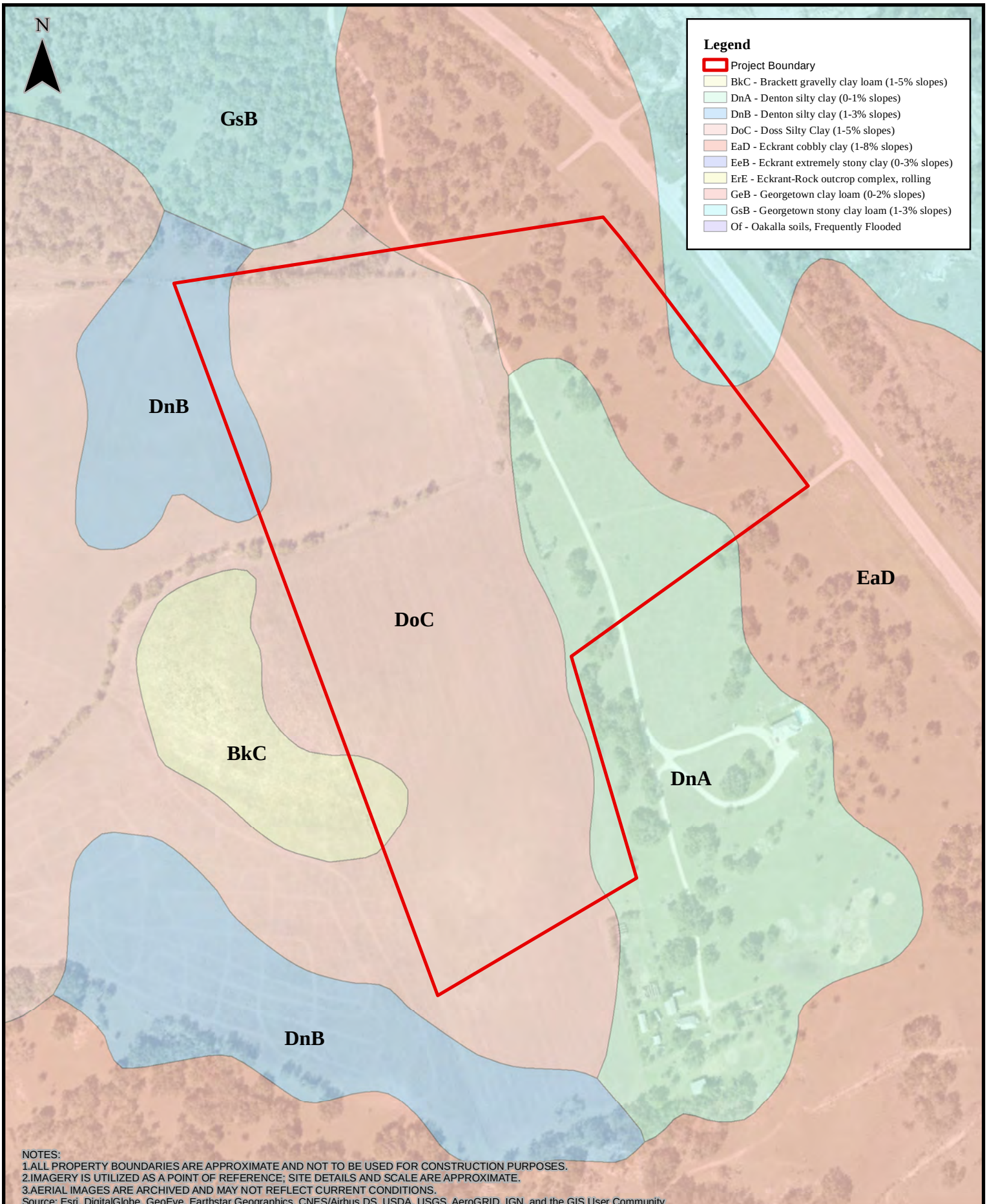
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RANGER ENVIRONMENTAL SERVICES, LLC

0 150 300 600 900 1,200 Feet

1:6,000

Geologic Site Map
Calibre Quarry
Calibre Stone, LLC



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RANGER ENVIRONMENTAL SERVICES, LLC

0 100 200 400 600 800 Feet

1:4,000

Site Soil Map

Calibre Quarry
Calibre Stone, LLC



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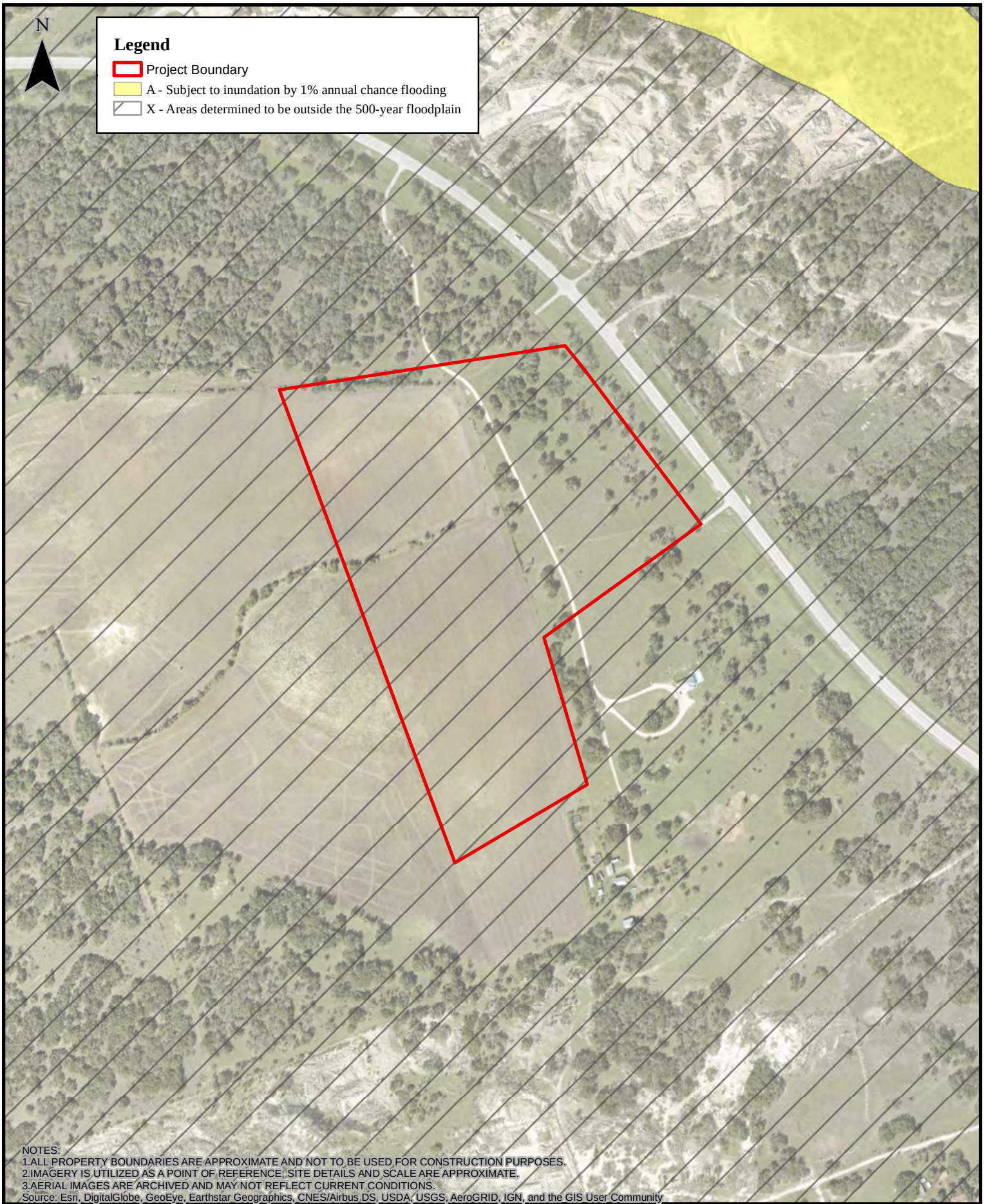
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0 100 200 400 600 800 Feet

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Edwards Aquifer Map

Calibre Quarry
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RANGER ENVIRONMENTAL SERVICES, LLC

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FEMA Floodplain Map

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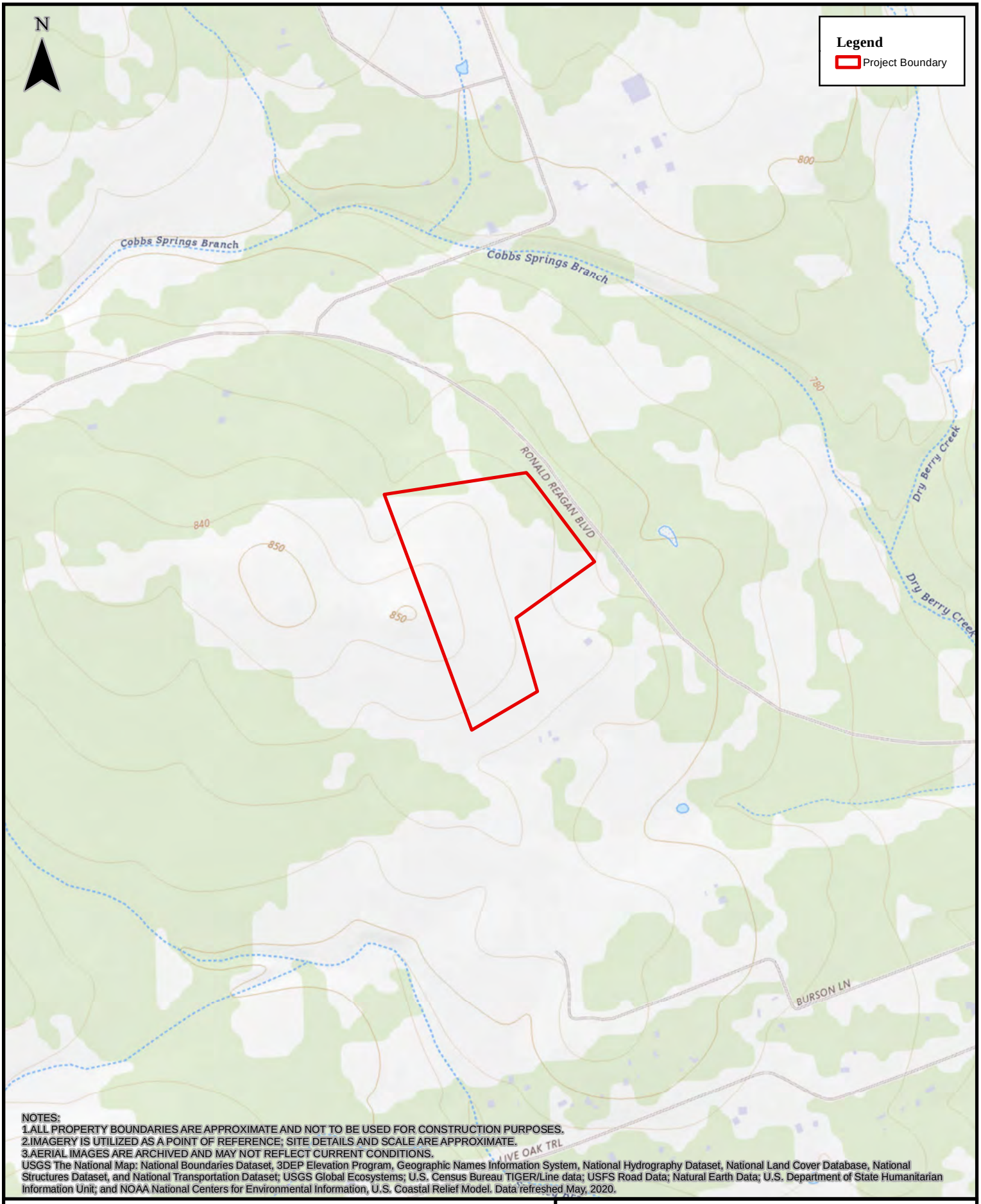
RANGER ENVIRONMENTAL SERVICES, LLC

0 150 300 600 900 1,200 Feet

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National Wetland Inventory Map

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

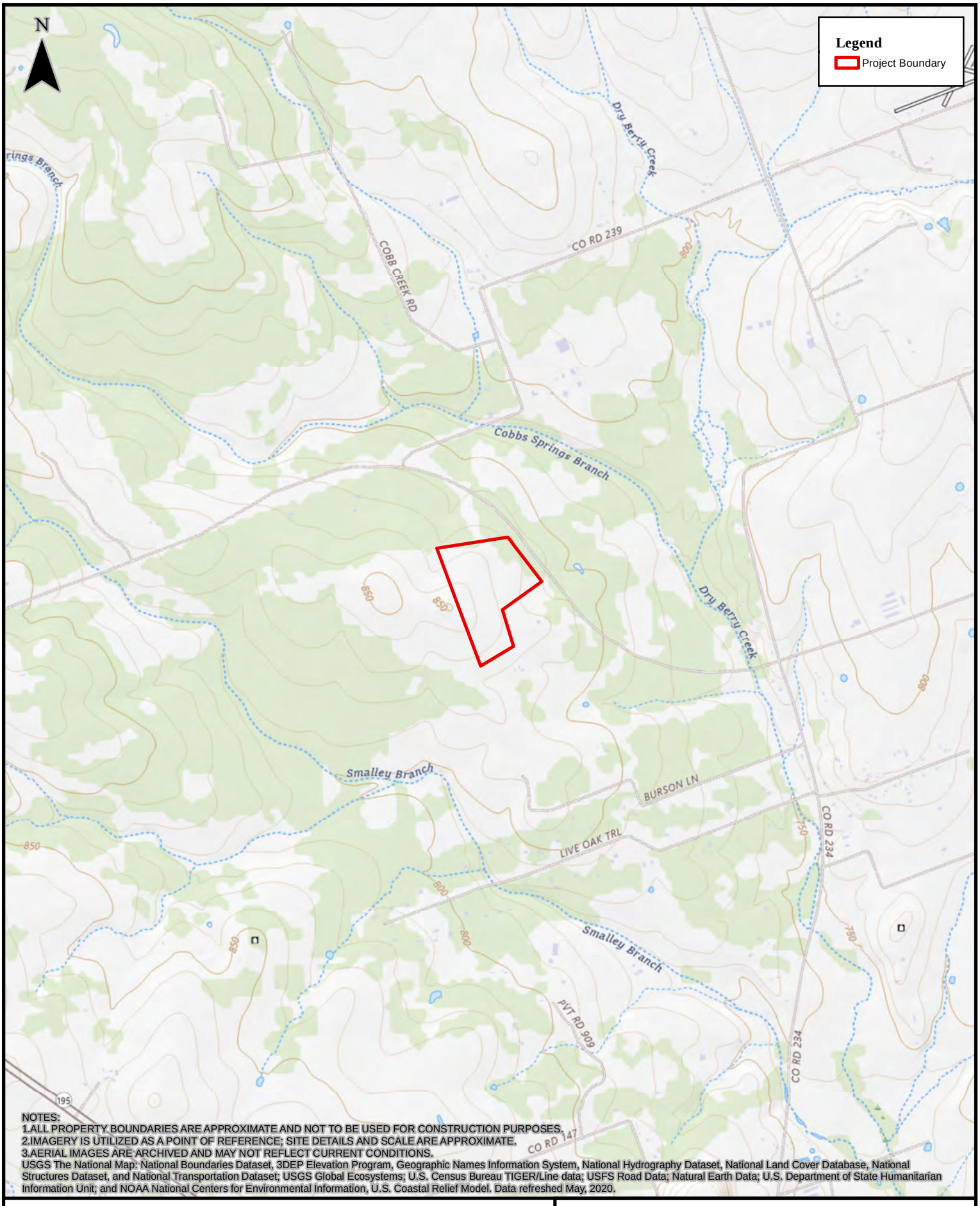
RANGER ENVIRONMENTAL SERVICES, LLC

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

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Topographic Map (Cobbs Cavern Quadrangle)

Calibre Quarry
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RANGER ENVIRONMENTAL SERVICES, LLC

0 600 1,200 2,400 3,600 4,800 Feet

1:24,000

Topographic Map (Cobbs Cavern Quadrangle)

Calibre Quarry
Calibre Stone, LLC

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Williamson County, Texas

Calibre Quarry



April 23, 2025

Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map



Map Scale: 1:4,050 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Williamson County, Texas
Survey Area Data: Version 25, Aug 30, 2024

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

Date(s) aerial images were photographed: Data not available.

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BktD	Brackett association, 1 to 8 percent slopes	0.5	1.2%
DnA	Denton silty clay, 0 to 1 percent slopes	6.8	15.3%
DnB	Denton silty clay, 1 to 3 percent slopes	1.5	3.4%
DoC	Doss silty clay, moist, 1 to 5 percent slopes	27.4	62.0%
EaD	Eckrant cobbly clay, 1 to 8 percent slopes	7.7	17.3%
GsB	Georgetown stony clay loam, 1 to 3 percent slopes	0.3	0.7%
Totals for Area of Interest		**44.1**	**100.0%**

Map Unit Descriptions

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

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

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

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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

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

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

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

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

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

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

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

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

Williamson County, Texas

BktD—Brackett association, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t26h
Elevation: 550 to 1,920 feet
Mean annual precipitation: 30 to 35 inches
Mean annual air temperature: 64 to 68 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Brackett and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brackett

Setting

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

Typical profile

A - 0 to 5 inches: clay loam
Bk - 5 to 14 inches: clay loam
Cr - 14 to 60 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Depth to restrictive feature: 5 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Minor Components

Eckrant

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Doss

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

Bolar

Percent of map unit: 3 percent
Landform: Ridges on plateaus
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Krum

Percent of map unit: 2 percent
Landform: Stream terraces on plateaus
Landform position (three-dimensional): Riser, tread
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

DnA—Denton silty clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tc46
Elevation: 400 to 1,900 feet
Mean annual precipitation: 29 to 37 inches
Mean annual air temperature: 64 to 67 degrees F
Frost-free period: 220 to 250 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Denton and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Denton

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey slope alluvium and/or residuum over calcareous residuum weathered from limestone

Typical profile

Ap - 0 to 13 inches: silty clay
Bw - 13 to 19 inches: silty clay
2Bk - 19 to 36 inches: silt loam
2CBk - 36 to 52 inches: silt loam
2R - 52 to 80 inches: bedrock

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: C
Ecological site: R085AY179TX - Clayey Slope 30-38
Hydric soil rating: No

Minor Components

Krum

Percent of map unit: 5 percent
Landform: Draws
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R085AY279TX - Clayey Swale 30-38
Hydric soil rating: No

Crawford

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R085AY180TX - Deep Redland 30-38" PZ
Hydric soil rating: No

DnB—Denton silty clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t26l
Elevation: 570 to 1,870 feet
Mean annual precipitation: 31 to 36 inches
Mean annual air temperature: 65 to 68 degrees F
Frost-free period: 220 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Denton and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Denton

Setting

Landform: Hillslopes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty and clayey slope alluvium over residuum weathered from limestone

Typical profile

A - 0 to 14 inches: silty clay
Bw - 14 to 25 inches: silty clay
Bk - 25 to 33 inches: silty clay
Ck - 33 to 36 inches: gravelly silty clay
R - 36 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 22 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: D
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Minor Components

Krum

Percent of map unit: 6 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Doss

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081BY343TX - Shallow 23-31 PZ
Hydric soil rating: No

Anhalt

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY358TX - Deep Redland 29-35 PZ
Hydric soil rating: No

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

Map Unit Setting

National map unit symbol: 2s0st
Elevation: 630 to 1,840 feet

Mean annual precipitation: 30 to 36 inches
Mean annual air temperature: 66 to 68 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Doss

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Brackett

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

Bolar

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

Eckrant

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

Purves

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

Denton

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

EaD—Eckrant cobbly clay, 1 to 8 percent slopes

Map Unit Setting

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

Map Unit Composition

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

Description of Eckrant

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Bexar

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Krum

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

GsB—Georgetown stony clay loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t277
Elevation: 620 to 1,250 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 65 to 68 degrees F
Frost-free period: 230 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Georgetown and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Georgetown

Setting

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

Typical profile

A - 0 to 7 inches: stony clay loam
Bt - 7 to 35 inches: cobbly clay
R - 35 to 60 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Minor Components

Tarpley

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Eckrant

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Fairlie

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

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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.

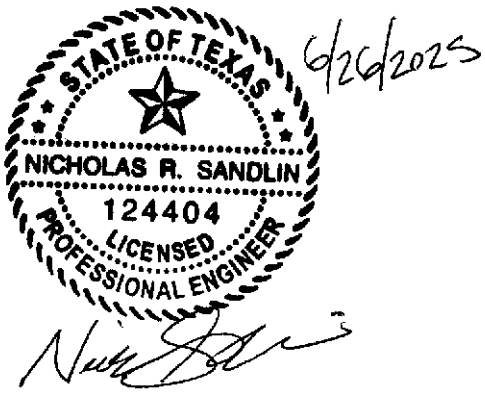
Signature

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: Nicholas Sandlin, P.E.

Date: 6/26/2025

Signature of Customer/Agent:



Regulated Entity Name: Calibre Quarry

Regulated Entity Information

1. The type of project is:

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

2. Total site acreage (size of property):185.35

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	3,951	÷ 43,560 =	0.091
Parking		÷ 43,560 =	
Other paved surfaces	494,056	÷ 43,560 =	11.342
Total Impervious Cover	498,007	÷ 43,560 =	11.433

Total Impervious Cover 11.433 **÷ Total Acreage** 185.35 **X 100 =** 6.17**% 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^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.

    Width of pavement area: _____ feet.
    L x W = _____ Ft^2 ÷ 43,560 Ft^2/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:

100% Domestic	2,502 Gallons/day
_____% Industrial	_____ Gallons/day
_____% Commingled	_____ Gallons/day

TOTAL gallons/day 2,502

15. Wastewater will be disposed of by:

☒ On-Site Sewage Facility (OSSF/Septic Tank): EXISTING SEPTIC FIELD TO REMAIN

- ☐ **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 _____ (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" = 200'.

18. 100-year floodplain boundaries:

☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
☒ No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM Map Panel 48491C0125F (effective 12/20/2019)

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

☐ The wells are not in use and have been properly abandoned.
☐ The wells are not in use and will be properly abandoned.
☒ The wells are in use and comply with 16 TAC §76.

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

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

☒ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
☐ No sensitive geologic or manmade features were identified in the Geologic Assessment.
☐ **Attachment D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.

23. ☒ Areas of soil disturbance and areas which will not be disturbed.

24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

25. ☒ Locations where soil stabilization practices are expected to occur.

26. ☐ Surface waters (including wetlands).

    ☒ N/A

27. ☐ Locations where stormwater discharges to surface water or sensitive features are to occur.

    ☒ There will be no discharges to surface water or sensitive features.

28. ☒ Legal boundaries of the site are shown.

Administrative Information

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

30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Water Pollution Abatement Plan Application Form (TCEQ-0584)

Attachment A: Factors Affecting Surface Water Quality

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

Dust and sediment from proposed construction activities will be managed with temporary BMPs, as described in the Temporary Best Management Practices section. Potential quarry dust onsite is monitored and when appropriate, a water truck is used to provide dust mitigation.

Other factors that have potential impact include fuels and lubricants from vehicles and equipment and trash/debris items. Staff will inspect Ronald Reagan Blvd on a daily basis and make sure any trash or debris are collected off of the road. Any spills or leaks from vehicles or other equipment will be cleaned up in a timely manner and will be disposed of properly. Trash receptacles are onsite for use by employees and visitors.

Port-a-potties are used by the workers around the site and these are regularly maintained by the company leasing the equipment to this operation. These Port-a-potties will be located within temporary basins created by constructing a perimeter earthen berm to contain potential spills.

Water Pollution Abatement Plan Application Form (TCEQ-0584)

Attachment B: Volume and Character of Stormwater

The proposed site is located within the Edwards Aquifer Recharge Zone. Stormwater from the developed IC within WQ DA-1 (33.77 AC) will convey to Batch Detention Basin BMP, and 1.61 AC (WQ DA-2) will drain to the Natural Vegetated Filter Strip BMP per the Water Quality Drainage Area Map sheets. Please see the water quality and drainage sheets of the construction plans for calculations and details. There are no anticipated off-site impacts as the Batch Detention Basin will detain flows to below existing conditions, and the quarry will be surrounded by a vegetated berm adjacent to neighboring properties.

Water Pollution Abatement Plan Application Form (TCEQ-0584)

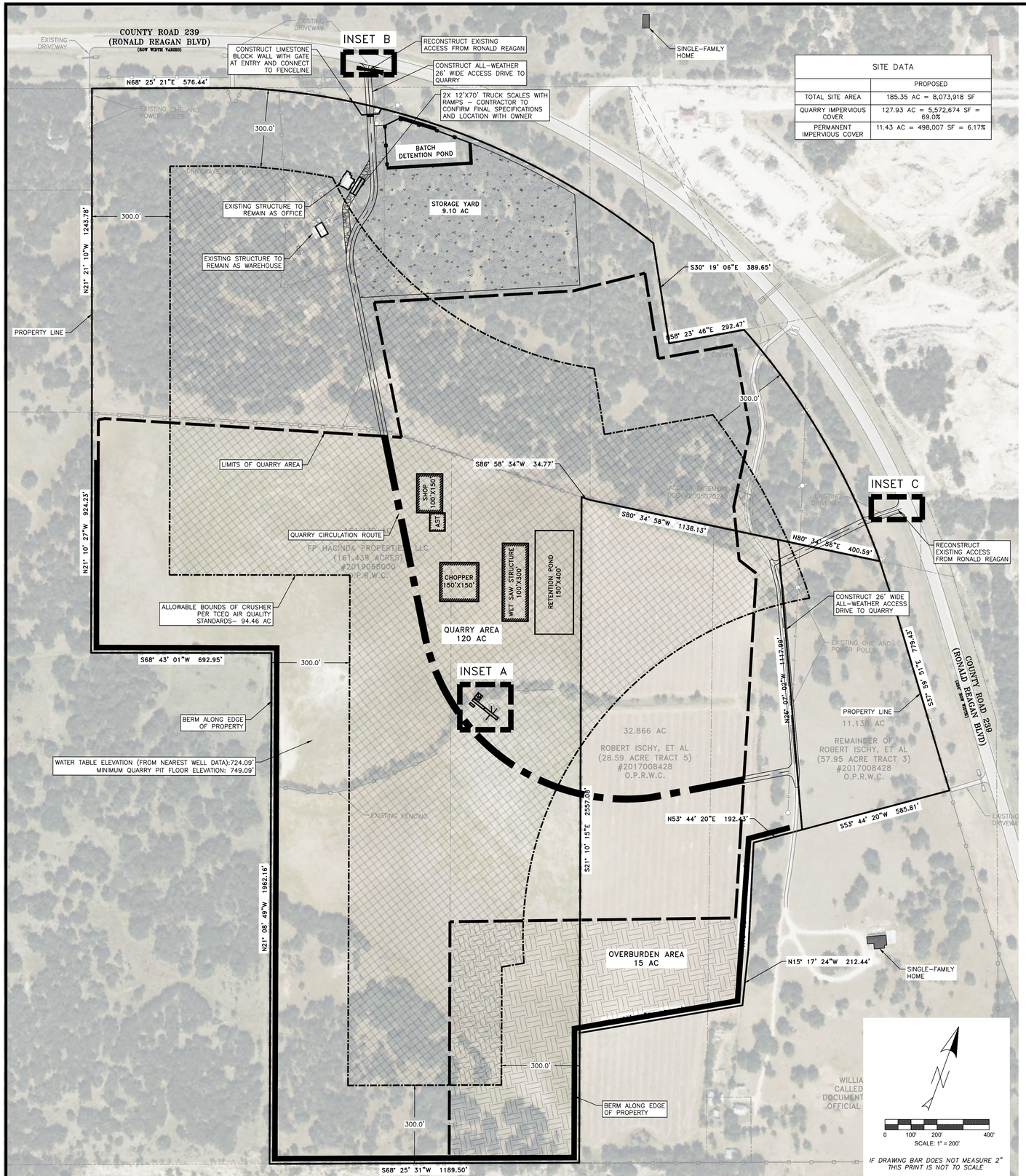
Attachment C:
Suitability Letter from authorized Agent (if OSSF is proposed)
N/A

Water Pollution Abatement Plan Application Form (TCEQ-0584)

Attachment D:
Exception to the Required Geologic Assessment (if requested)
N/A

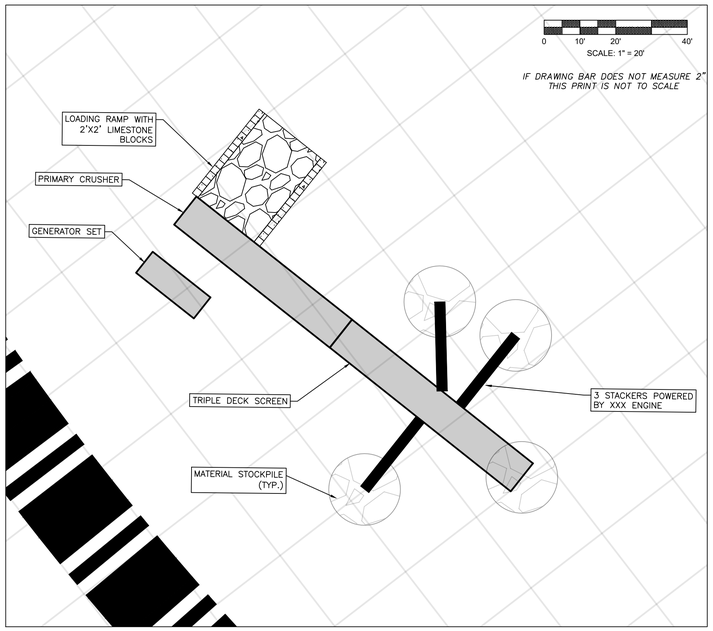
Water Pollution Abatement Plan Application Form (TCEQ-0584)

Site Plan

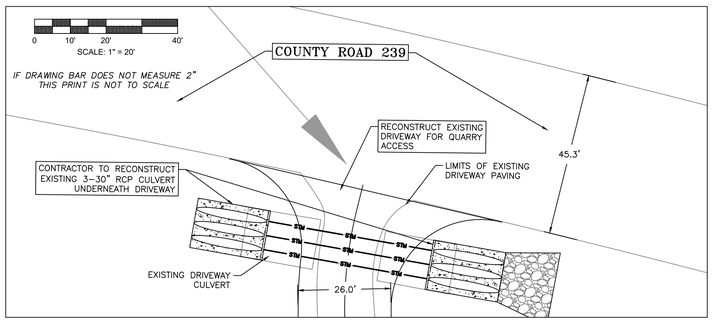


SITE DATA	
	PROPOSED
TOTAL SITE AREA	185.35 AC = 8,073,918 SF
QUARRY IMPERVIOUS COVER	127.93 AC = 5,572,674 SF = 69.0%
PERMANENT IMPERVIOUS COVER	11.43 AC = 498,007 SF = 6.17%

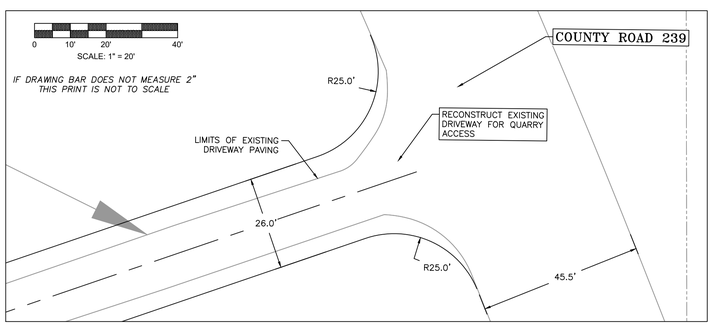
INSET A



INSET B



INSET C



STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

QUARRY PLAN LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER
- STREET CENTERLINE
- FENCE
- SITE WALLS
- ALLOWABLE BOUNDS OF CRUSHER
- OVERBURDEN AREA
- LIMITS OF QUARRY
- W — EX. WATER LINE
- WW — EX. WASTEWATER
- STM — EX. STORM SEWER LINE
- EX. FIRE HYDRANT
- WM EX. WATER METER
- WW EX. WASTEWATER MANHOLE
- FITTINGS AS NOTED
- GATE VALVE AS NOTED
- WW CLEAN OUT
- BFP BACK FLOW PREVENTER
- W — PR. WATER LINE
- F — FIRE LINE
- WW — PR. WASTEWATER
- STM — PR. STORM SEWER LINE
- PR. FIRE HYDRANT
- PR. WATER METER
- WW PR. WASTEWATER MANHOLE
- FLOW ARROW
- P — EX. UTILITY POLE

SITE LEGEND

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

TEXAS 811 811 OR 1-800-DIG-TESS BEFORE YOU DIG

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

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ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC
TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

QUARRY PLAN

PROJECT CASE: XXXXXXX

CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 7 OF 21

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S AGU STE.dwg-QUARRY PLAN Plotted Jun 27, 2025 at 11:18am by Engineer | Last Saved by: Engineer

Aboveground Storage Tank Facility Plan
(TCEQ-0575)

Aboveground Storage Tank Facility Plan Application

Texas Commission on Environmental Quality

For Permanent Storage on The Edwards Aquifer Recharge and Transition Zones And Relating to 30 TAC §213.5(e), 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

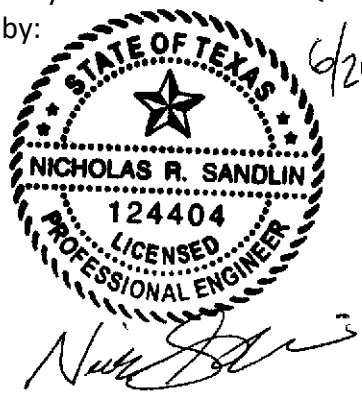
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Aboveground Storage Tank Facility Plan Application** is hereby submitted for TCEQ review and Executive Director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

Print Name of Customer/Agent: Nicholas Sandlin, P.E.

Date: 06/26/2025

Signature of Customer/Agent:





Regulated Entity Name: Calibre Quarry

Aboveground Storage Tank (AST) Facility Information

1. Tanks and substance stored:

Table 1 - Tank and Substance Storage

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
1	6,000	Diesel	DOUBLE WALLED HR CARBON STEEL (UL 142)
2	6,000	Diesel	DOUBLE WALLED HR CARBON STEEL (UL 142)

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
3			
4			
5			

Total x 1.5 = 18,000 HOWEVER, DOUBLE WALL CONTAINMENT **Gallons**

2. ☐ The AST will be placed within a containment structure that is sized to capture one and one-half (1 1/2) times the storage capacity of the system. For facilities with more than one tank system, the containment structure is sized to capture one and one-half (1 1/2) times the cumulative storage capacity of all systems.

   ☒ **Attachment A - Alternative Methods of Secondary Containment**. Alternative methods for providing secondary containment are proposed. Specifications that show equivalent protection for the Edwards Aquifer are attached.

3. Inside dimensions and capacity of containment structure(s):

Table 2 - Secondary Containment

Length (L) (Ft.)	*Width (W) (Ft.)*	*Height (H) (Ft.)*	*L x W x H = (Ft3)*	*Gallons*

Total: _____ Gallons

4. ☐ All piping, hoses, and dispensers will be located inside the containment structure.

   ☒ Some of the piping to dispensers or equipment will extend outside the containment structure.
   - ☒ The piping will be aboveground
   - ☐ The piping will be underground

5. ☐ The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of N/A - DOUBLE WALLED.

6. ☒ **Attachment B - Scaled Drawing(s) of Containment Structure**. A scaled drawing of the containment structure that shows the following is attached:

   - ☒ Interior dimensions (length, width, depth and wall and floor thickness).
   - ☐ Internal drainage to a point convenient for the collection of any spillage.
   - ☒ Tanks clearly labeled.
   - ☒ Piping clearly labeled.

☒ Dispenser clearly labeled.

Site Plan Requirements

Items 7 - 18 must be included on the Site Plan.

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

   Site Plan Scale: 1" = 5'.

8. 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): _____.

9. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.

   ☐ The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.

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

    ☒ There are 2 (#) 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.

11. 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 C - Exception to the Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

12. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.

13. ☒ Areas of soil disturbance and areas which will not be disturbed.

14. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

15. ☒ Locations where soil stabilization practices are expected to occur.

16. ☐ Surface waters (including wetlands).

    ☒ N/A

17. ☐ Locations where stormwater discharges to surface water or sensitive features.

    ☒ There will be no discharges to surface water or sensitive features.

18. ☒ Legal boundaries of the site are shown.

Best Management Practices

19. ☒ Any spills must be directed to a point convenient for collection and recovery. Spills from storage tank facilities must be removed from the controlled drainage area for disposal within 24 hours of the spill.

    ☒ In the event of a spill, any spillage will be removed from the containment structure within 24 hours of the spill and disposed of properly.
    ☐ In the event of a spill, any spillage will be drained from the containment structure through a drain and valve within 24 hours of the spill and disposed of properly. The drain and valve system are shown in detail on the scaled drawing.

20. ☒ All stormwater accumulating inside the containment structure will be disposed of through an authorized waste disposal contractor.

    ☒ Containment area will be covered by a roof.
    ☐ Containment area will not be covered by a roof.

    ☐ A description of the alternate method of stormwater disposal is submitted for the executive director's review and approval and is attached.

21. ☒ **Attachment D - Spill and Overfill Control**. A site-specific description of the methods to be used at the facility for spill and overfill control is attached.

22. ☒ **Attachment E - Response Actions to Spills**. A site-specific description of the planned response actions to spills that will take place at the facility is attached.

Administrative Information

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

    ☐ The WPAP application for this project was approved by letter dated _____. A copy of the approval letter is attached at the end of this application.

☒ The WPAP application for this project was submitted to the TCEQ on CONCURRENT WITH THIS PLAN, but has not been approved.

☐ A WPAP application is required for an associated project, but it has not been submitted.

☐ There will be no building or structure associated with this project. In the event a building or structure is needed in the future, the required WPAP will be submitted to the TCEQ.

☐ The proposed AST is located on the Transition Zone and a WPAP is not required. Information requested in 30 TAC 213.5 subsection (b) (4)(B) and (C) and (5) is provided with this application. (Forms TCEQ-0600 Permanent Stormwater Section and TCEQ-0602 Temporary Stormwater Section or Stormwater Pollution Prevention Plan/SW3P).

24. ☒ This facility is subject to the requirements for the reporting and cleanup of surface spills and overfills pursuant to 30 TAC 334 Subchapter D relating to Release Reporting and Corrective Action.

25. ☒ 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.

26. ☒ Any modification of this AST Facility Plan application will require executive director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Aboveground Storage Tank Facility Plan (TCEQ-0575)

Attachment A: Alternative Methods of Secondary Containment (if proposed)

The proposed 6,000 Gallon HR carbon steel UL 142 rated ASTs will be double-walled and therefore provide the required secondary containment.

Aboveground Storage Tank Facility Plan (TCEQ-0575)

Attachment B:
Scaled Drawing(s) of Containment Structure
N/A

Aboveground Storage Tank Facility Plan (TCEQ-0575)

Attachment C:
Exception to the Geologic Assessment (if requested)
N/A

Aboveground Storage Tank Facility Plan (TCEQ-0575)

Attachment D: Spill and Overfill Control

The proposed storage tank connections will be within a remote fill basin with a lockable valve to drain any spills that may occur. The fuel system will also be equipped with an 85% alarm and an overfill valve that shuts at 95% filled. The overfill system shall be installed per TCEQ, state, federal, and local rules.

Aboveground Storage Tank Facility Plan (TCEQ-0575)

Attachment E: Response Actions to Spills

Spill response actions will be in accordance with Texas Administrative Code (TAC) 30.327. If the amount of material spilled or discharged within any 24-hour period is equal to or greater than the reportable quantities as listed within TAC.30.327.4, the responsible person shall notify the SERC (1-800-832-8224) and/or Williamson County Fire Department (911) and TCEQ Regional Office (512-339-2929) within 24-hours. During use of the fuel tank, operators will report any spill(s), released fluids or observed staining around the tank. A caliche berm will be constructed at the fuel filling location (approximately 4 feet by 4 feet). In addition, a spill bucket will be used during fueling. An onsite spill kit will be purchased.

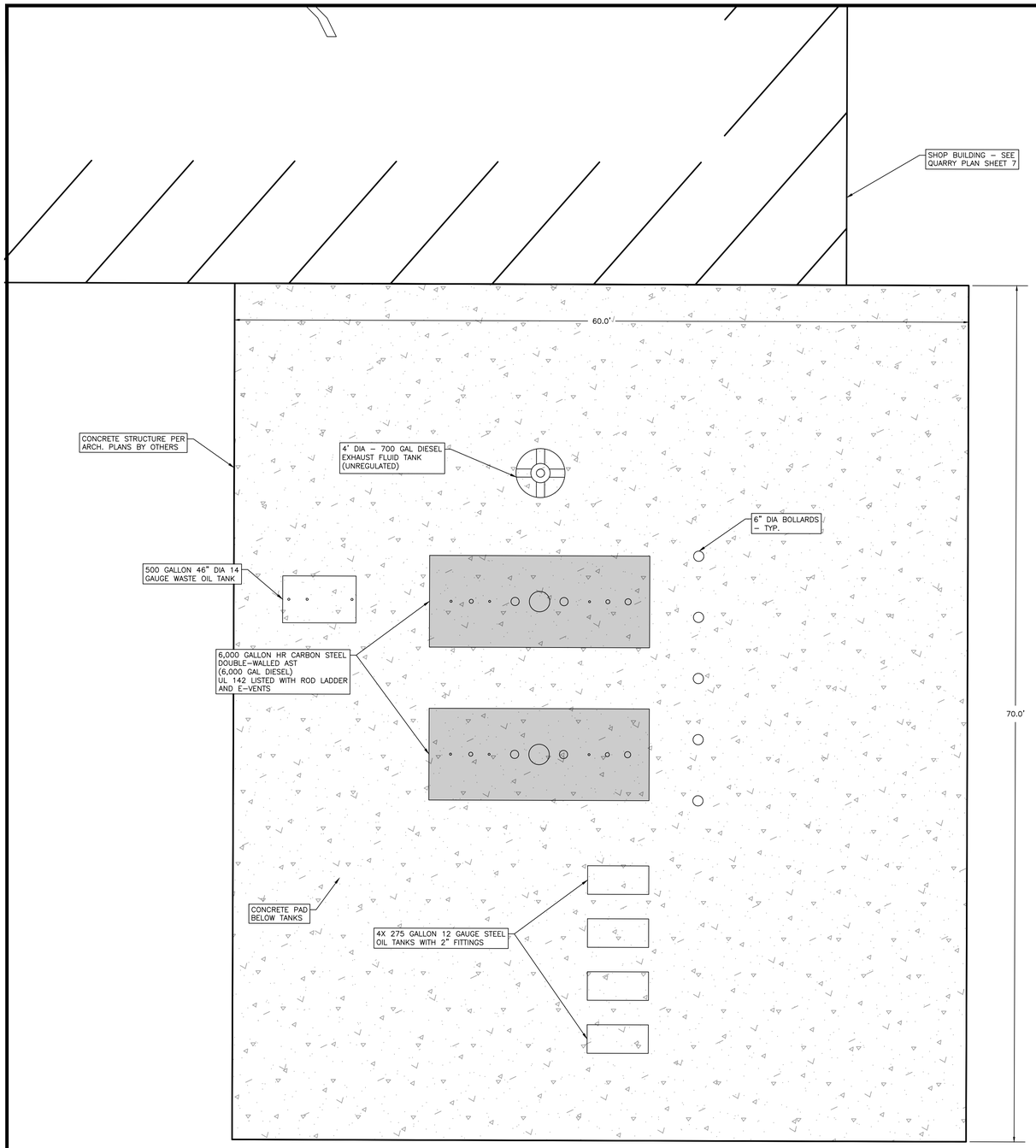
All spills coincide with the Spill Rule which requires the party responsible for causing a spill that by its nature and size resents the threat of contaminating groundwater or surface water to:

- **Control and contain the spill (or see that this is done).**
- **Clean up the results of the spill (or see that this is done).**
- **Notify the appropriate authorities, which may range from the local fire department to TCEQ, depending on the threat posed by the spill.**
- **Make follow-up reports to TCEQ about the continuing progress of completion of the cleanup.**

During construction, the contractor will maintain a spill response kit on their vehicles consisting of sorbent material, shovels, brooms, and disposable containers on site to respond to accidental spills. The contractor personnel will immediately clean up any oil, fuel or hydraulic fluid if observed being released from equipment or vehicles. Vehicles or equipment will cease operation until required repairs are made to the equipment.

Aboveground Storage Tank Facility Plan (TCEQ-0575)

Site Plan

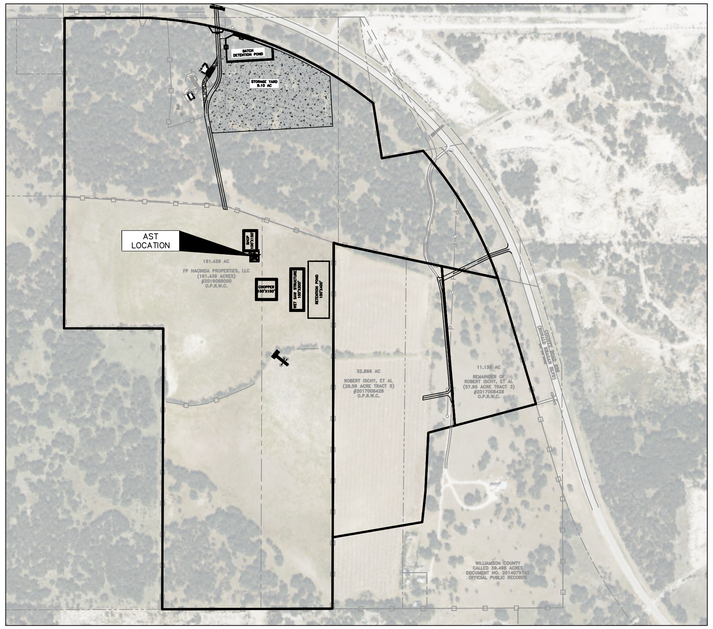


0 2.5' 5' 10'

SCALE: 1" = 5'

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

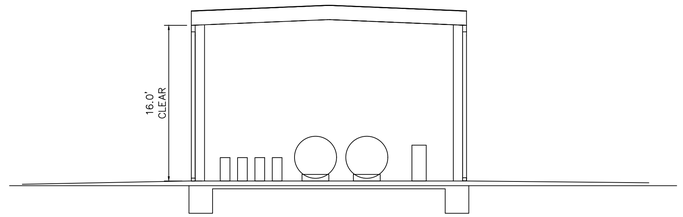
PROPERTY KEY MAP



0 250' 500' 1000'

SCALE: 1" = 500'

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



STRUCTURE ELEVATION

(N.T.S.)

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
6/26/2025

AST PLAN LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER

NOTES:

1. ABOVEGROUND STORAGE TANK SIZE AND SPECIFICATION TO BE PER ASSOCIATED AST APPLICATION.
2. SEE ALL SPECIFICATIONS SHEET 11.

SCHEDULE OF WORK

SUPPLY AND INSTALL THE FOLLOWING:
1. (2) 6,000 GALLON DOUBLE WALL HR CARBON STEEL TANKS – UL 142 RATED TANK WITH ROD LADDER AND E–VENTS.
2. (4) 275 GALLON 12 GAUGE STEEL OIL TANKS WITH 2" FITTINGS AND ½" SUPPLY TAPPING
3. (1) 700 GALLON BAILIFF ENTERPRISES INC. VERTICAL DEF HDPE TANK WITH 8" VENTED LID
4. (1) 500 GALLON 46" DIA SINGLE WALL 14 GAUGE STEEL WASTE OIL TANK

TEXAS 811 BEFORE YOU DIG

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

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ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC

TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

ABOVEGROUND STORAGE TANK PLAN

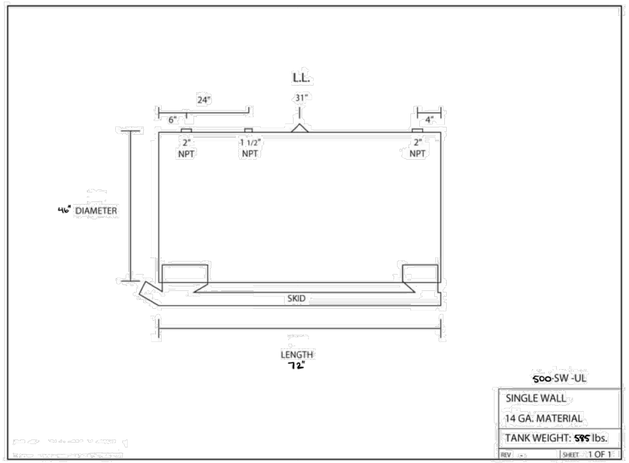
PROJECT CASE: XXXXXXX

CALIBRE QUARRY

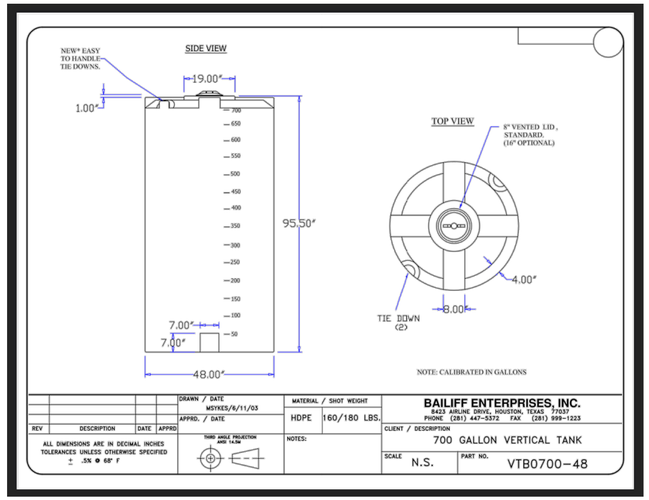
#	REVISION DESCRIPTION	SIGNATURE	DATE

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S AGU AST.dwg-ABOVEGROUND STORAGE TANK PLAN Plotted Jun 27, 2025 at 11:18am by Engineer | Last Saved by: Engineer

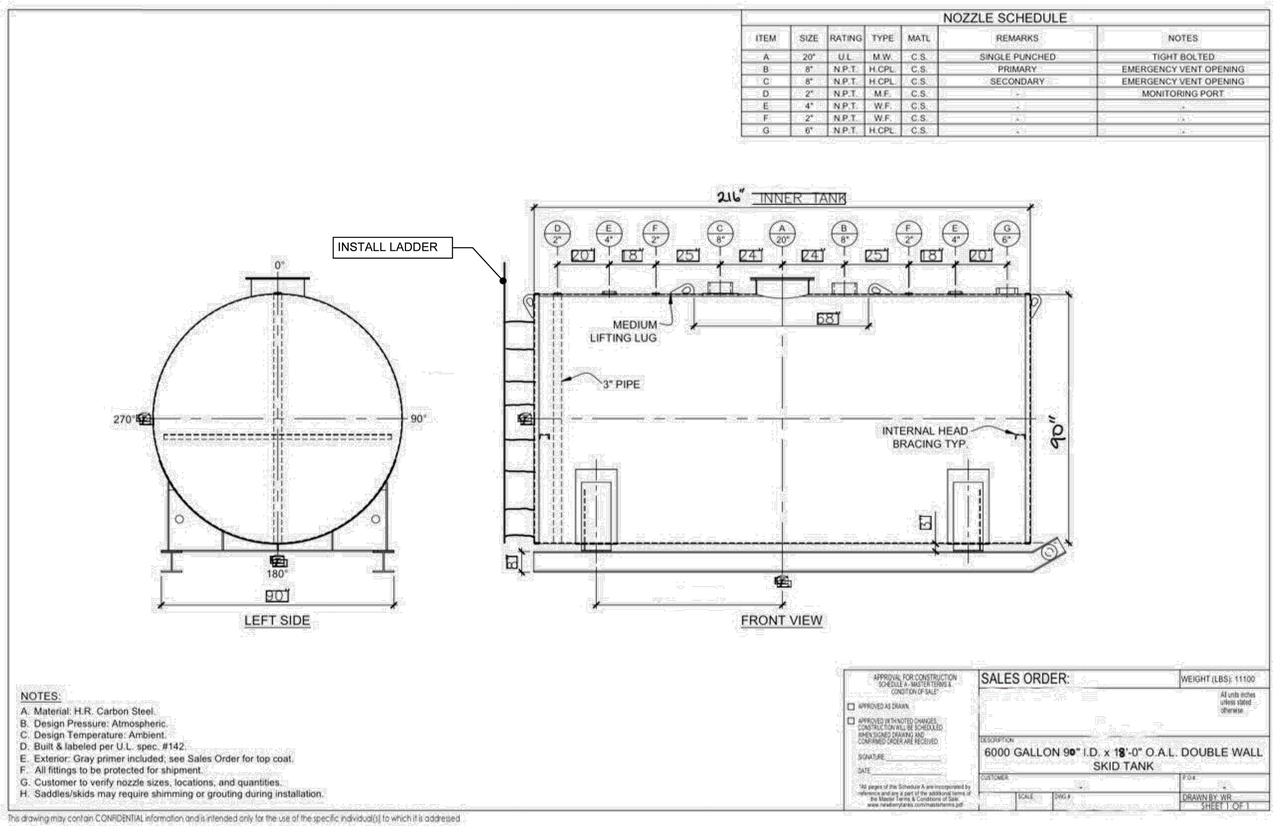
500 GALLON WASTE OIL TANK



700 GALLON DEF TANK

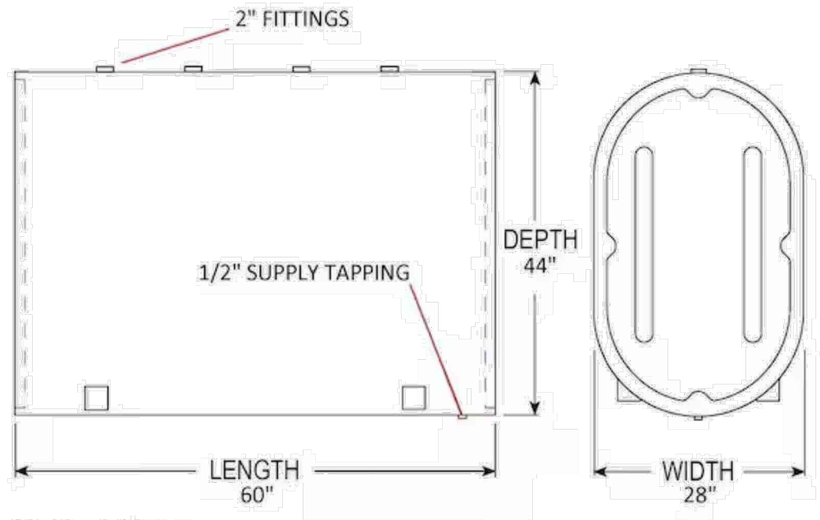


6000 GALLON FUEL TANK



This drawing may contain CONFIDENTIAL information and is intended only for the use of the specific individual(s) to which it is addressed

275 GALLON OIL TANK



Vertical Style
- 12 Gauge Steel

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

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

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SANDLIN SERVICES, LLC
TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

ABOVEGROUND STORAGE TANK DETAILS

PROJECT CASE: XXXXXXX

CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 11 OF 21

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S AGU AST.dwg-ABOVEGROUND STORAGE TANK DETAILS Plotted Jun 27, 2025 at 11:18am by Engineer | Last Saved by: Engineer

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.

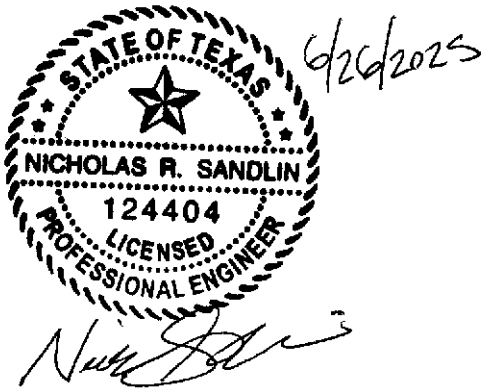
Signature

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: Nicholas Sandlin, P.E.

Date: 06/26/2025

Signature of Customer/Agent:



Regulated Entity Name: Calibre Quarry

Project Information

Potential Sources of Contamination

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

1. Fuels for construction equipment and hazardous substances which will be used during construction:

   ☐ The following fuels and/or hazardous substances will be stored on the site: _____

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

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

☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

☒ Fuels and hazardous substances will not be stored on the site.

2. ☒ **Attachment A - Spill Response Actions**. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.

3. ☒ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. ☒ **Attachment B - Potential Sources of Contamination**. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

5. ☒ **Attachment C - Sequence of Major Activities**. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.

   ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

   ☐ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Berry 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.

Temporary Stormwater Section (TCEQ-0602)

Attachment A: Spill Response Actions

Spill Response Actions

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

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

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

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

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

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

1) All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids paints, paint solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) shall be stored in a secure location, under cover and in appropriate, tightly sealed containers when not in use.

2) The minimum practical quantity of all such materials shall be kept on the job site and scheduled for delivery as close to the time of use as practical. Post Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

3) A spill control and containment kit (containing for example: absorbent material such as kitty litter or sawdust, acid neutralizing agent, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) shall be provided on the construction site and construction employees shall be trained in when and how to use spill containment materials.

4) The contractor personnel will immediately clean up any oil, fuel or hydraulic fluid if observed being released from equipment or vehicles. Vehicles or equipment will cease operation until required repairs are made to the equipment.

5) All of the product in a container shall be used before the container is disposed of. All such containers shall be triple rinsed with water prior to disposal. The rinse water used in these containers shall be disposed of in a manner in compliance with State and Federal regulations and shall not be allowed to mix with stormwater discharges.

6) All products shall be stored in and used from the original container with the original product label.

7) All products shall be used in strict compliance with instructions on the product label.

8) The disposal of the excess or used products shall be in strict compliance with instructions on the product's label.

Spill Prevention and Control

Education

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

5) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

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

Cleanup

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

Minor Spills

1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

2) Use absorbent materials on small spills rather than hosing down or burying the spill.
3) Absorbent materials should be promptly removed and disposed of properly.
4) Follow the practice below for a minor spill:
5) Contain the spread of the spill.
6) Recover spilled materials.
7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

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

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

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

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

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

Vehicle and Equipment Maintenance

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

Vehicle and Equipment Fueling

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

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

SPILL REPORT FORM

Notes to General Contractor:

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

SPILL REPORT FORM

DATE:
PROJECT:
PROJECT ADDRESS:

Spill Reported By: _____

Date / Time of Spill: _____

Describe spill location and events leading to spill: _____

_____

Material Spilled: _____

Source of Spill: _____

Amount Spilled: _____

Amount Spilled to Waterway (Name Waterway): _____

Containment or Clean up Action: _____

_____

Approximate depth (yards) of soil excavation: _____

List injuries or Personal Contamination: _____

Action to be taken to prevent future spills:
_____

Agencies notified of spill:
_____

_____

_____ _____
Contractor Signature and Printed Name **Date**

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

Temporary Stormwater Section (TCEQ-0602)

Attachment B: Potential Sources of Contamination

Potential Sources of Contamination and Preventive Measures:

Potential Source: Concrete and concrete products used on-site during construction.
Preventive Measures: Concrete washout structure will be used if necessary.

Potential Source: Oil, grease, fuel, and hydraulic fluid contamination from construction equipment and vehicle dripping.
Preventative Measures: Vehicle maintenance will be performed at a local maintenance shop.

Potential Source: Miscellaneous trash and litter from construction workers and material wrappings.
Preventative Measures: Trash containers will be placed throughout the site to encourage proper disposal of trash.

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

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

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

Potential Source: Sediment from soil, sand, gravel, and excavated materials stockpiled on site.
Preventative Measures: Silt fence shall be installed on the downgradient side of the stockpiled materials. Reinforced rock berms shall be installed at all downstream discharge locations.

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

Temporary Stormwater Section
(TCEQ-0602)

Attachment C:
Sequence of Major Activities

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

Intended Schedule or Sequence of Major Activities:

1. Submit written notice of construction to TCEQ regional office at least 48 hours prior to the start of any regulated activities. (See Permanent Stormwater Section – Attachment F)

2. A pre-construction conference prior to commencement of construction. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.

3. Contractors must follow requirements as outlined in TCEQ General Construction Notes for the Water Pollution Abatement Plan (WPAP). WPAP Construction Notes are included on the Construction Plan sheets (See Permanent Stormwater Section – Attachment F).

4. Prior to beginning any construction activity, all temporary erosion and sedimentation BMPs and control measures must be properly installed and maintained in accordance with the approved plans and manufacturers specifications (206.34 Acres).

5. Evaluate temporary erosion control installation. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.

6. Review construction schedule and the Water Pollution Abatement Plan (WPAP) requirements.

7. Install the Mobile Rock Crusher equipment (94.46 Acres).

8. Complete Permanent BMP construction and install landscaping (206.34 Acres).

9. Topsoil, Irrigation and Landscaping: Revegetate all disturbed areas according to plan.

10. Site cleanup and removal of temporary erosion/sedimentation BMP controls. (206.34 Acres). Maximum total construction time of permanent infrastructure is not expected to exceed 1 year.

Temporary Stormwater Section
(TCEQ-0602)

Attachment D:
Temporary Best Management Practices and Measures

1. There is approximately 2.33 AC of storm water that originates up gradient from the site and flows across the site through an onsite BMP. The Batch Detention Basin BMP has been appropriately sized to treat this offsite area.

2. Temporary BMPs will be installed prior to soil disturbing construction activity. Silt fencing will be placed along the down-gradient sides of the property and limits of construction to prevent silt from escaping the construction area during permanent BMP construction. Install rock berms in areas of concentrated flow to intercept sediment and release upstream stormwater as sheet flow. Utilize rock berms where runoff volume exceeds the effectiveness of silt fencing. Temporary rock berms shall be removed by the contractor following construction.

3. A gravel construction entrance is proposed to reduce vehicle "tracking" onto adjoining streets. A concrete washout pit may be used to collect all excess concrete during construction, if needed.

4. Temporary BMPs for this project will protect surface water or groundwater from turbid water, phosphorus, sediment, oil and other contaminants, which may mobilize in stormwater flows by slowing the flow of runoff to allow sediment and suspended solids to settle out of the runoff.

5. Practices may also be implemented on site for interim and permanent stabilization. Stabilization practices may include but are not limited to establishment of temporary vegetation; establishment of permanent vegetation; mulching; geotextiles; sod stabilization; vegetative buffer strips; protection of existing trees and vegetation; and other similar measures.

6. There are no sensitive features or surface streams within the boundaries of the project that would require temporary BMPs. The temporary onsite BMPs will be used to treat stormwater runoff before it leaves the project and prevent pollutants from entering into surface streams or any sensitive features down gradient of the site.

Temporary Stormwater Section
(TCEQ-0602)

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

Temporary Stormwater Section (TCEQ-0602)

Attachment F: Structural Practices

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

Description of Temporary BMPs

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

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

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

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

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

Concrete Washout Area (if applicable)

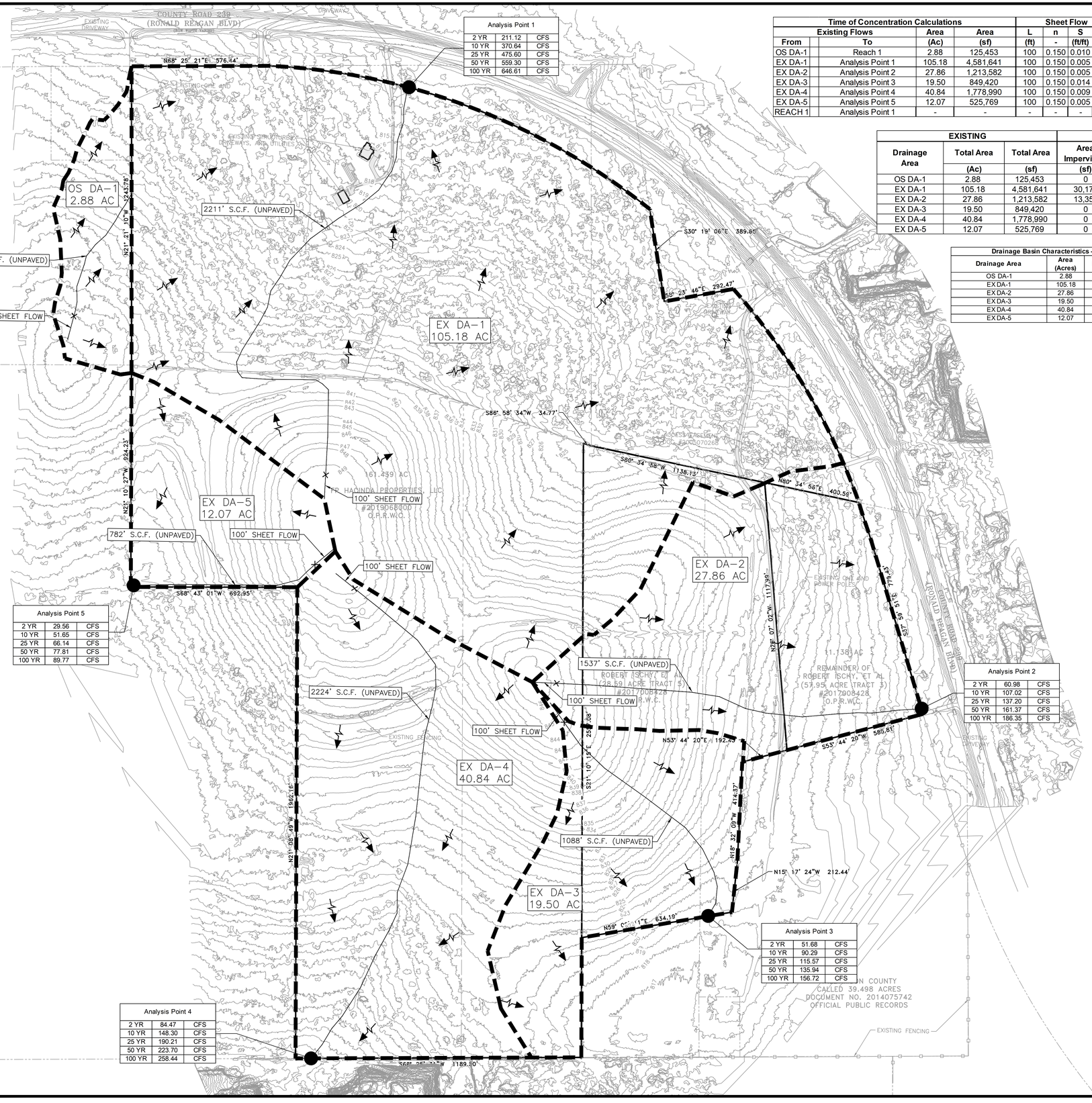
The purpose of concrete washout areas is to prevent or reduce the discharge of pollutants to stormwater from concrete waste by conducting washout offsite, performing onsite washout in a designated area, and training employees and subcontractors.

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

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

Temporary Stormwater Section
(TCEQ-0602)

Attachment G:
Drainage Area Map



Analysis Point 1		
2 YR	211.12	CFS
10 YR	370.64	CFS
25 YR	475.60	CFS
50 YR	559.30	CFS
100 YR	646.61	CFS

Analysis Point 2		
2 YR	60.98	CFS
10 YR	107.02	CFS
25 YR	137.20	CFS
50 YR	161.37	CFS
100 YR	186.35	CFS

Analysis Point 3		
2 YR	51.68	CFS
10 YR	90.29	CFS
25 YR	115.57	CFS
50 YR	135.94	CFS
100 YR	156.72	CFS

Analysis Point 4		
2 YR	84.47	CFS
10 YR	148.30	CFS
25 YR	190.21	CFS
50 YR	223.70	CFS
100 YR	258.44	CFS

Analysis Point 5		
2 YR	29.56	CFS
10 YR	51.65	CFS
25 YR	66.14	CFS
50 YR	77.81	CFS
100 YR	89.77	CFS

Time of Concentration Calculations

Existing Flows		Area	Area	Sheet Flow				Shallow Conc. Flow				Channel Flow			Total
				L	n	S	T_t	L	Surface	S	T_t	L	Vavg	T_t	T_c
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	(ft/s)	(min)	(min)
OS DA-1	Reach 1	2.88	125,453	100	0.150	0.010	12.47	579	Unpaved	0.019	4.34	-	-	0.00	**16.81**
EX DA-1	Analysis Point 1	105.18	4,581,641	100	0.150	0.005	16.45	2,211	Unpaved	0.017	17.47	-	-	0.00	**33.92**
EX DA-2	Analysis Point 2	27.86	1,213,582	100	0.150	0.005	16.45	1,537	Unpaved	0.023	10.55	-	-	0.00	**27.00**
EX DA-3	Analysis Point 3	19.50	849,420	100	0.150	0.014	10.90	1,088	Unpaved	0.023	7.36	-	-	0.00	**18.25**
EX DA-4	Analysis Point 4	40.84	1,778,990	100	0.150	0.009	13.31	2,224	Unpaved	0.018	16.92	-	-	0.00	**30.23**
EX DA-5	Analysis Point 5	12.07	525,769	100	0.150	0.005	16.45	782	Unpaved	0.024	5.21	-	-	0.00	**21.66**
REACH 1	Analysis Point 1	-	-	-	-	-	0	1,012	Unpaved	0.019	7.63	-	-	0.00	**7.63**

Drainage Area	EXISTING Total Area	EXISTING Total Area	IMPERVIOUS Area Impervious	IMPERVIOUS Area Impervious	IMPERVIOUS Area Impervious	GRASS Area Grass	GRASS Area Grass	GRASS Area Grass
	(Ac)	(sf)	(sf)	(Ac)	(%)	(sf)	(Ac)	(%)
OS DA-1	2.88	125,453	0	0.00	0.0%	125,453	2.88	100.0%
EX DA-1	105.18	4,581,641	30,175	0.69	0.7%	4,551,466	104.49	99.3%
EX DA-2	27.86	1,213,582	13,356	0.31	1.1%	1,200,226	27.55	98.9%
EX DA-3	19.50	849,420	0	0.00	0.0%	849,420	19.50	100.0%
EX DA-4	40.84	1,778,990	0	0.00	0.0%	1,778,990	40.84	100.0%
EX DA-5	12.07	525,769	0	0.00	0.0%	525,769	12.07	100.0%

Drainage Basin Characteristics - Existing Conditions

Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q50 (cfs)	Q100 (cfs)
OS DA-1	2.88	0.00%	84.0	16.81	7.92	13.81	17.68	20.80	23.97
EX DA-1	105.18	0.66%	84.0	33.92	205.11	359.78	461.82	543.20	628.00
EX DA-2	27.86	1.10%	83.8	27.00	60.98	107.02	137.20	161.37	186.35
EX DA-3	19.50	0.00%	84.0	18.25	51.68	90.29	115.57	135.94	156.72
EX DA-4	40.84	0.00%	84.0	30.23	84.47	148.30	190.21	223.70	258.44
EX DA-5	12.07	0.00%	84.0	21.66	29.56	51.65	66.14	77.81	89.77

EXISTING FLOW PATTERNS

NOTES:

1. PER THE WILLIAMSON COUNTY SUBDIVISION REGULATIONS, ATLAS 14 RAINFALL DATA AND NRCS METHODOLOGY AS RECOGNIZED WITHIN THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL UTILIZED FOR THIS STUDY.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

EXISTING DRAINAGE LEGEND

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

0 100' 200' 400'
SCALE: 1" = 200'

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

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

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SANDLIN SERVICES, LLC
TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

EXISTING DRAINAGE AREA MAP

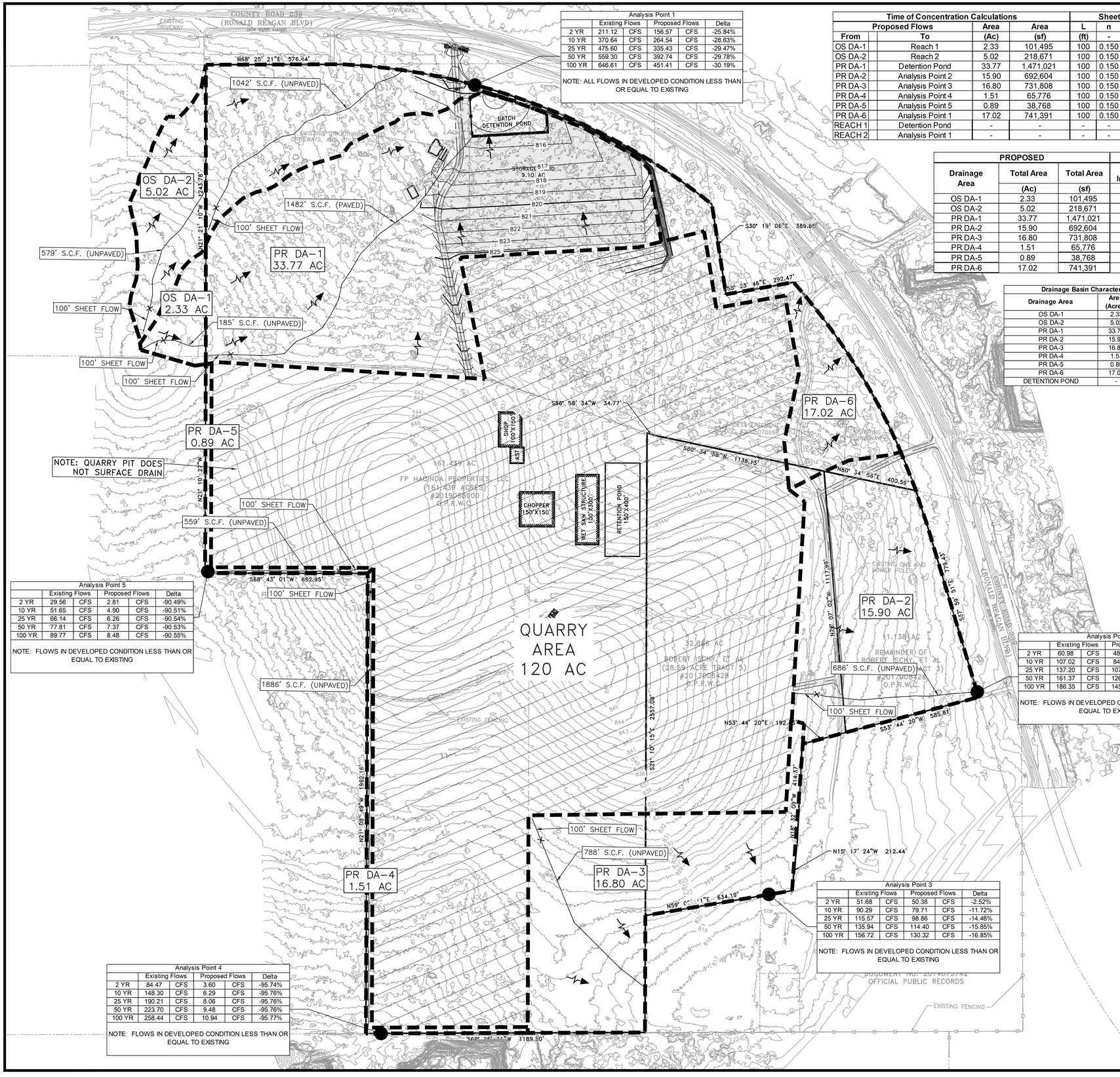
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CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 12 OF 21

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\5 AGU EDAM.dwg-EXISTING DRAINAGE AREA MAP Plotted Jun 27, 2025 at 11:19am by Engineer | Last Saved by: Engineer



Analysis Point 1					
	Existing Flows		Proposed Flows		Delta
2 YR	211.12	CFS	156.57	CFS	-25.84%
10 YR	370.64	CFS	264.54	CFS	-28.63%
25 YR	475.60	CFS	335.43	CFS	-29.47%
50 YR	559.30	CFS	392.74	CFS	-29.78%
100 YR	646.61	CFS	451.41	CFS	-30.19%

NOTE: ALL FLOWS IN DEVELOPED CONDITION LESS THAN OR EQUAL TO EXISTING

Analysis Point 5					
	Existing Flows		Proposed Flows		Delta
2 YR	29.56	CFS	2.81	CFS	-90.49%
10 YR	51.65	CFS	4.90	CFS	-90.51%
25 YR	66.14	CFS	6.26	CFS	-90.54%
50 YR	77.81	CFS	7.37	CFS	-90.53%
100 YR	89.77	CFS	8.48	CFS	-90.55%

NOTE: FLOWS IN DEVELOPED CONDITION LESS THAN OR EQUAL TO EXISTING

Analysis Point 4					
	Existing Flows		Proposed Flows		Delta
2 YR	84.47	CFS	3.60	CFS	-95.74%
10 YR	148.30	CFS	6.29	CFS	-95.76%
25 YR	190.21	CFS	8.06	CFS	-95.76%
50 YR	223.70	CFS	9.48	CFS	-95.76%
100 YR	258.44	CFS	10.94	CFS	-95.77%

NOTE: FLOWS IN DEVELOPED CONDITION LESS THAN OR EQUAL TO EXISTING

Analysis Point 2					
	Existing Flows		Proposed Flows		Delta
2 YR	60.98	CFS	48.98	CFS	-19.68%
10 YR	107.02	CFS	84.68	CFS	-20.87%
25 YR	137.20	CFS	107.98	CFS	-21.30%
50 YR	161.37	CFS	126.81	CFS	-21.42%
100 YR	186.35	CFS	145.91	CFS	-21.70%

NOTE: FLOWS IN DEVELOPED CONDITION LESS THAN OR EQUAL TO EXISTING

Analysis Point 3					
	Existing Flows		Proposed Flows		Delta
2 YR	51.68	CFS	50.38	CFS	-2.52%
10 YR	90.29	CFS	79.71	CFS	-11.72%
25 YR	115.57	CFS	98.86	CFS	-14.46%
50 YR	135.94	CFS	114.40	CFS	-15.85%
100 YR	156.72	CFS	130.32	CFS	-16.85%

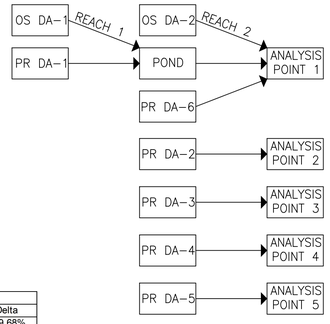
NOTE: FLOWS IN DEVELOPED CONDITION LESS THAN OR EQUAL TO EXISTING

Time of Concentration Calculations				Sheet Flow				Shallow Conc. Flow				Channel Flow				Total
Proposed Flows		Area	Area	L	n	S	T_t	L	Surface	S	T_t	L	Vavg	T_t		T_c
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	(ft/s)	(min)		(min)
OS DA-1	Reach 1	2.33	101,495	100	0.150	0.010	12.47	185	Unpaved	0.013	1.66	-	-	0.00		**14.13**
OS DA-2	Reach 2	5.02	218,671	100	0.150	0.010	12.47	579	Unpaved	0.019	4.34	-	-	0.00		**16.81**
PR DA-1	Detention Pond	33.77	1,471,021	100	0.150	0.011	12.05	1,482	Paved	0.018	9.02	-	-	0.00		**21.06**
PR DA-2	Analysis Point 2	15.90	692,604	100	0.150	0.029	8.14	686	Unpaved	0.019	5.19	-	-	0.00		**13.33**
PR DA-3	Analysis Point 3	16.80	731,808	100	0.150	0.008	13.63	788	Unpaved	0.011	7.88	-	-	0.00		**21.52**
PR DA-4	Analysis Point 4	1.51	65,776	100	0.150	0.021	9.30	1,886	Unpaved	0.020	13.63	-	-	0.00		**22.93**
PR DA-5	Analysis Point 5	0.89	38,768	100	0.150	0.027	8.38	559	Unpaved	0.026	3.57	-	-	0.00		**11.95**
PR DA-6	Analysis Point 1	17.02	741,391	100	0.150	0.024	8.84	1,042	Unpaved	0.019	7.79	-	-	0.00		**16.63**
REACH 1	Detention Pond	-	-	-	-	-	0	1,551	Paved	0.018	9.42	-	-	0.00		**9.42**
REACH 2	Analysis Point 1	-	-	-	-	-	0	1,012	Unpaved	0.019	7.63	-	-	0.00		**7.63**

PROPOSED			IMPERVIOUS			GRASS		
Drainage Area	Total Area	Total Area	Area Impervious	Area Impervious	Area Impervious	Area Grass	Area Grass	Area Grass
	(Ac)	(sf)	(sf)	(Ac)	(%)	(sf)	(Ac)	(%)
OS DA-1	2.33	101,495	0	0.00	0.0%	101,495	2.33	100.0%
OS DA-2	5.02	218,671	0	0.00	0.0%	218,671	5.02	100.0%
PR DA-1	33.77	1,471,021	445,217	10.22	30.3%	1,025,804	23.55	69.7%
PR DA-2	15.90	692,604	40,288	0.92	5.8%	652,316	14.98	94.2%
PR DA-3	16.80	731,808	365,904	8.40	50.0%	365,904	8.40	50.0%
PR DA-4	1.51	65,776	0	0.00	0.0%	65,776	1.51	100.0%
PR DA-5	0.89	38,768	0	0.00	0.0%	38,768	0.89	100.0%
PR DA-6	17.02	741,391	12,502	0.29	1.7%	728,889	16.73	98.3%

Drainage Basin Characteristics - Proposed Conditions									
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q50 (cfs)	Q100 (cfs)
OS DA-1	2.33	0.00%	84	14.13	6.90	12.03	15.37	18.06	20.80
OS DA-2	5.02	0.00%	84	16.81	13.80	24.08	30.82	36.25	41.79
PR DA-1	33.77	30.27%	84	21.06	94.97	155.80	195.51	227.63	260.51
PR DA-2	15.90	5.82%	84	13.33	48.98	84.68	107.98	126.81	145.91
PR DA-3	16.80	50.00%	84	21.52	50.38	79.71	98.86	114.40	130.32
PR DA-4	1.51	0.00%	84	22.93	3.60	6.29	8.06	9.48	10.94
PR DA-5	0.89	0.00%	84	11.95	2.81	4.90	6.26	7.37	8.48
PR DA-6	17.02	1.69%	84	16.63	47.33	82.37	105.27	123.75	142.56
DETENTION POND	-	-	-	-	99.78	165.31	207.98	242.53	278.15

PROPOSED FLOW PATTERNS



PROPOSED DRAINAGE LEGEND

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

NOTES:

1. PER THE WILLIAMSON COUNTY SUBDIVISION REGULATIONS, ATLAS 14 RAINFALL DATA AND NRCS METHODOLOGY AS RECOGNIZED WITHIN THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL UTILIZED FOR THIS STUDY.

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SCALE: 1" = 200'

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

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

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SANDLIN
SERVICES, LLC
TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

PROPOSED DRAINAGE AREA MAP

PROJECT CASE: XXXXXXX

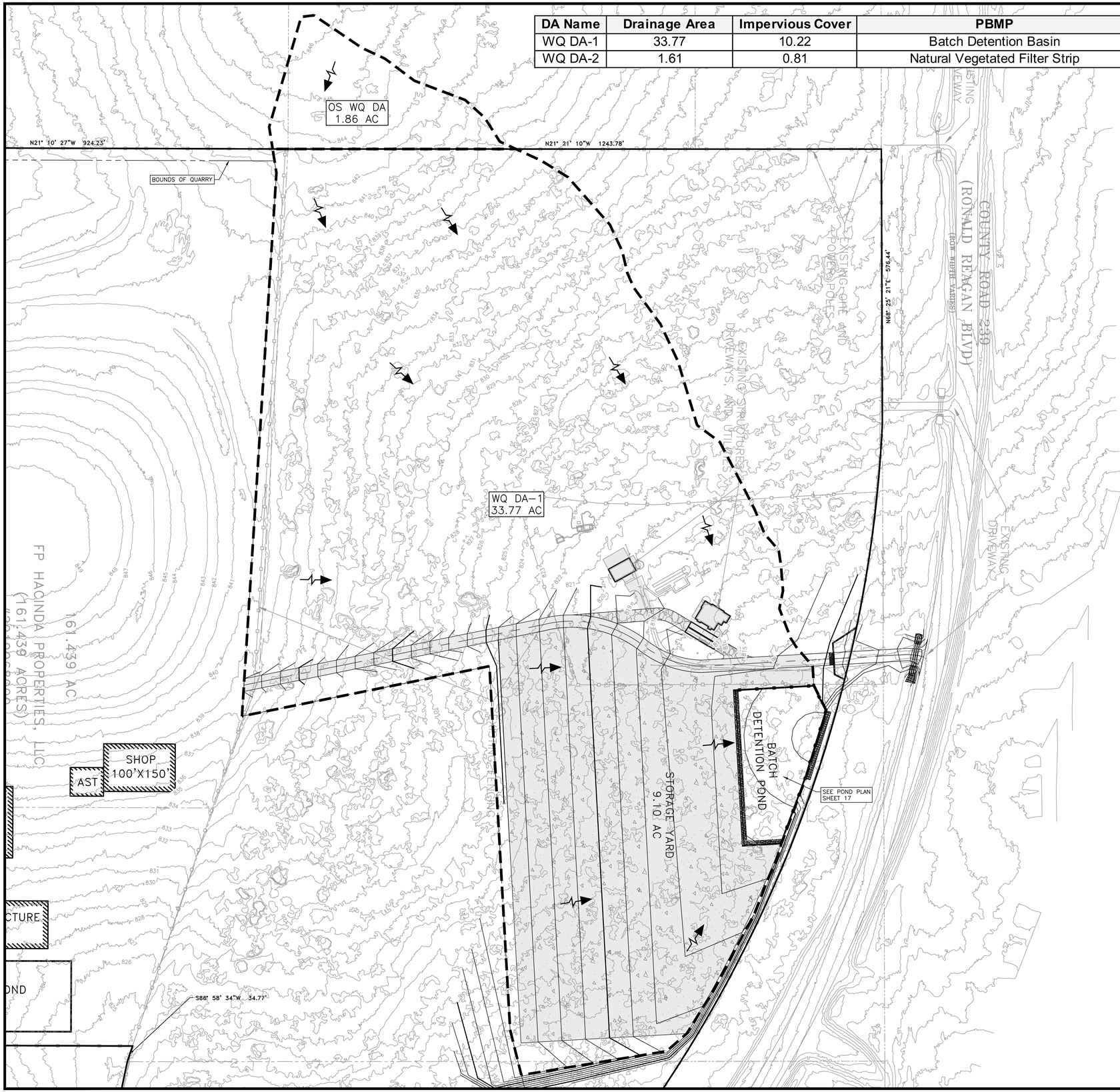
CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 13 OF 21

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S AGU PDAM.dwg-PROPOSED DRAINAGE AREA MAP Plotted Jun 27, 2025 at 11:19am by Engineer | Last Saved by: Engineer

DA Name	Drainage Area	Impervious Cover	PBMP	TSS Removal	Designed TSS Removal
WQ DA-1	33.77	10.22	Batch Detention Basin	10668	9181
WQ DA-2	1.61	0.81	Natural Vegetated Filter Strip	770	770



WATER QUALITY LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- WQ. DA-X XX.XX AC — DRAINAGE AREA DESIGNATION AND AREA DRAINED
- FLOW ARROW
- VEGETATED FILTER STRIP
- GRANDFATHERED IMPERVIOUS COVER
- 750 — EXISTING CONTOURS
- 755 — PROPOSED CONTOURS

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
6/26/2025

0 50' 100' 200'
SCALE: 1" = 100'

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

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

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SANDLIN
SERVICES, LLC

TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

WATER QUALITY PLAN (1 OF 2)

PROJECT CASE: XXXXXXX

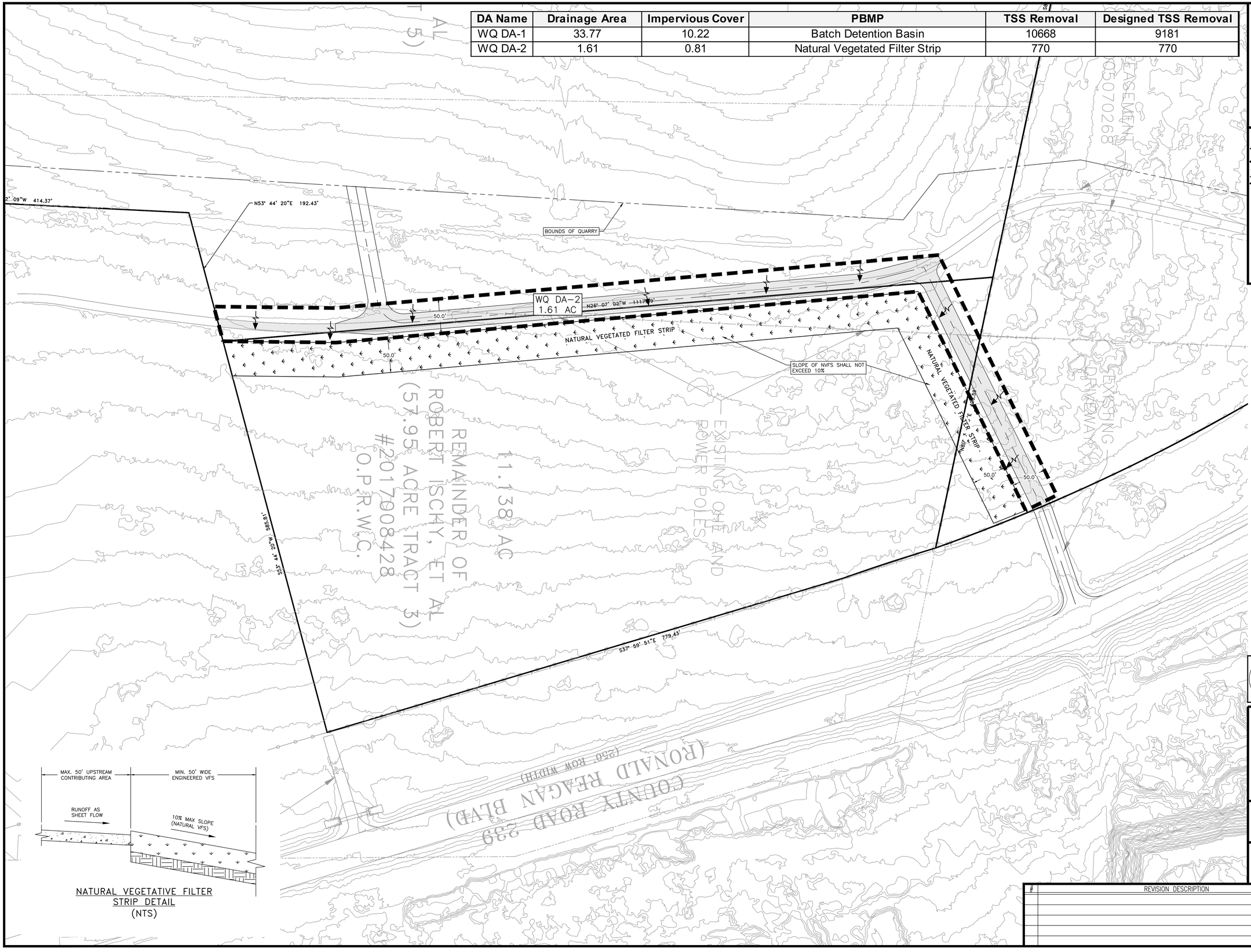
CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 14 OF 21

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S AGU WQ.dwg-WATER QUALITY PLAN (1 OF 2) Plotted Jun 27, 2025 at 11:19am by Engineer | Last Saved by: Engineer

DA Name	Drainage Area	Impervious Cover	PBMP	TSS Removal	Designed TSS Removal
WQ DA-1	33.77	10.22	Batch Detention Basin	10668	9181
WQ DA-2	1.61	0.81	Natural Vegetated Filter Strip	770	770



NATURAL VEGETATIVE FILTER STRIP DETAIL
(NTS)

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

WATER QUALITY LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- WQ. DA-X XX.XX AC — DRAINAGE AREA DESIGNATION AND AREA DRAINED
- FLOW ARROW
- VEGETATED FILTER STRIP
- GRANDFATHERED IMPERVIOUS COVER
- 750 — EXISTING CONTOURS
- 755 — PROPOSED CONTOURS

0 30' 60' 120'
SCALE: 1" = 60'

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

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

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SERVICES, LLC
TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

WATER QUALITY PLAN (2 OF 2)

PROJECT CASE: XXXXXXX

CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 15 OF 21

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S AGU WQ.dwg-WATER QUALITY PLAN (2 OF 2) Plotted: Jun 27, 2025 at 11:19am by Engineer | Last Saved by: Engineer

Temporary Stormwater Section
(TCEQ-0602)

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

Temporary Stormwater Section
(TCEQ-0602)

Attachment I:
Inspection and Maintenance for BMPs

Inspection and Maintenance Guidelines for Construction BMPs

Silt Fence – Section 1.4.3
(1) Inspect all fencing weekly, and after any rainfall.
(2) Remove sediment when buildup reaches 6 inches.
(3) Replace any torn fabric or install a second line of fencing parallel to the torn section.
(4) Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
(5) When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

Rock Berms – Section 1.4.5
(1) Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.
(2) Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause any additional siltation.
(3) Repair any loose wire sheathing.
(4) The berm should be reshaped as needed during inspection.
(5) The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
(6) The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

Temporary Construction Entrance/Exit – Section 1.4.2
(1) The entrance should be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.
(2) All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
(3) When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.

(4) When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
(5) All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Concrete Washout Area

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

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

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

Personnel Responsible for Inspections

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

Inspection Schedule

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

☐ **Option 1:** Once every seven calendar days. If this alternative schedule is developed, then the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.

☐ **Option 2:** Once every 14 calendar days and within 24 hours of the end of a storm event of two inches or greater.

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

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

Personnel provided by the permittee must inspect:

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

Reductions in Inspection Frequency

Where sites have been finally or temporarily stabilized or where runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or frozen ground exists), inspections must be conducted at least once every month. In arid, semi-arid, or drought-stricken areas, inspections must be conducted at least once every month and within 24 hours after the end of a storm event of 0.5 inches or greater. A record of the total rainfall measured, as well as the approximate beginning and ending dates of winter or drought conditions resulting in monthly frequency of inspections in the attached Rain Gauge Log.

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

Inspection Report Forms

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

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

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

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

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

Corrective Action

Personnel Responsible for Corrective Actions

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

Corrective Action Forms

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

Inspector Qualifications Log*

Inspector Name: _____
Qualifications (Check as appropriate and provide description):
☐ Training Course _____
☐ Supervised Experience _____
☐ Other _____

Inspector Name: _____
Qualifications (Check as appropriate and provide description):
☐ Training Course _____
☐ Supervised Experience _____
☐ Other _____

Inspector Name: _____
Qualifications (Check as appropriate and provide description):
☐ Training Course _____
☐ Supervised Experience _____
☐ Other _____

Inspector Name: _____
Qualifications (Check as appropriate and provide description):
☐ Training Course _____
☐ Supervised Experience _____
☐ Other _____

Inspector Name: _____
Qualifications (Check as appropriate and provide description):
☐ Training Course _____
☐ Supervised Experience _____
☐ Other _____

Inspector Name: _____
Qualifications (Check as appropriate and provide description):
☐ Training Course _____
☐ Supervised Experience _____
☐ Other _____

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

Amendment Log

No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

Construction Activity Sequence Log*

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

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

Stormwater Control Installation and Removal Log

Stormwater Control	Location On-Site	Installation Date	Removal Date

Stabilization Activities Log*

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

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

Inspection Frequency Log

Date	Frequency

Rain Gauge Log

Date	Location of Rain Gauge	Gauge Reading

General Information

Name of Project		**Tracking Number**		**Inspection Date**	
Inspector Name, Title & Contact Information					
Present Phase of Construction					
Inspection Location (if multiple inspections are required, specify location where this inspection is being conducted)					

Inspection Frequency

Standard Frequency: ☐ Weekly ☐Every 14 days and within 24 hours of a 0.25" rain

Increased Frequency: ☐ Every 7 days and within 24 hours of a 0.25" rain

Reduced Frequency:

☐ Once per month (for stabilized areas)

☐ Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought)

☐ Once per month (for frozen conditions where earth-disturbing activities are being conducted)

Was this inspection triggered by a 0.25" storm event? ☐ Yes ☐ No

If yes, how did you determine whether a 0.25" storm event has occurred?

☐ Rain gauge on site ☐Weather station representative of site. Specify weather station source.

Total rainfall amount that triggered the inspection (in inches):

Unsafe Conditions for Inspection

Did you determine that any portion of your site was unsafe for inspection? ☐ Yes ☐No

If "yes," complete the following:

- Describe the conditions that prevented you from conducting the inspection in this location:
- Location(s) where conditions were found:

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

Condition and Effectiveness of Pollution Prevention (P_2) Practices				
Type / Location of P_2 Practices	**Repairs or Other Maintenance Needed?**	**Corrective Action Required?**	**Identification Date**	**Notes**
1.	☐ Yes ☐ No	☐ Yes ☐ No		
2.	☐ Yes ☐ No	☐ Yes ☐ No		
3.	☐ Yes ☐ No	☐ Yes ☐ No		
4.	☐ Yes ☐ No	☐ Yes ☐ No		
5.	☐ Yes ☐ No	☐ Yes ☐ No		
6.	☐ Yes ☐ No	☐ Yes ☐ No		
7.	☐ Yes ☐ No	☐ Yes ☐ No		
8.	☐ Yes ☐ No	☐ Yes ☐ No		
9.	☐ Yes ☐ No	☐ Yes ☐ No		

Stabilization of Exposed Soil			
Stabilization Area	**Stabilization Method**	**Have you Initiated Stabilization?**	**Notes**
1.		☐ YES ☐ NO If yes, provide date:	
2.		☐ YES ☐ NO If yes, provide date:	
3.		☐ YES ☐ NO If yes, provide date:	
4.		☐ YES ☐ NO If yes, provide date:	

Description of Discharges	
Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? ☐ YES ☐ NO **If "YES," provide the following information for each point of discharge:**	
Discharge Locations	**Observations**
1.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and / or sediment accumulation that can be attributed to your discharge? ☐ YES. ☐ NO If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
2.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and / or sediment accumulation that can be attributed to your discharge? ☐ YES. ☐ NO If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
3.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and / or sediment accumulation that can be attributed to your discharge? ☐ YES. ☐ NO If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:

Contractor or Subcontractor Certification and Signature

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

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

Printed Name and Affiliation:

Certification and Signature by Permittee

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

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

Printed Name and Affiliation:

Section A – Initial Report **(Complete this section within 24 hours of discovering the condition that triggered corrective action.)**		
Name of Project:	Tracking Number:	Today's Date
Date Problem First Discovered:	Time Problem First Discovered:	
Name of Individual Completing this Form:	Contact Information:	

What site conditions triggered the requirement to conduct corrective action:

☐ A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or Part 3

☐ The stormwater controls that have been installed and maintained are not effective enough for the discharge to meet applicable water quality standards

☐ A prohibited discharge has occurred or is occurring

Provide a description of the problem:

Deadline for completing corrective action (Enter date that is either: (1) no more than 7 calendar days after the date you discovered the problem, or (2) if it is infeasible to complete work within the first 7 days, enter the date that is as soon as practicable following the 7th day):

If your estimated date of completion falls after the 7-day deadline, explain (1) why you believe it is infeasible to complete work within 7 days, and (2) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe:

Section B – Corrective Action Progress

(Complete this section no later than 7 calendar days after discovering the condition that triggered corrective action.)

Section B.1 – Why the Problem Occurred

Cause(s) of Problem (Add an additional sheet if necessary)	How This Was Determined and the Date You Determined the Cause
1.	1.
2.	2.

Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem

List of Stormwater control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	Completion Date	SWPPP Update Necessary?	Notes
1.		☐ Yes ☐ No Date:	
2.		☐ Yes ☐ No Date:	

Section A – Initial Report **(Complete this section within 24 hours of discovering the condition that triggered corrective action.)**		
Name of Project:	Tracking Number:	Today's Date
Date Problem First Discovered:	Time Problem First Discovered:	
Name of Individual Completing this Form:	Contact Information:	

What site conditions triggered the requirement to conduct corrective action:

☐ A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or Part 3

☐ The stormwater controls that have been installed and maintained are not effective enough for the discharge to meet applicable water quality standards

☐ A prohibited discharge has occurred or is occurring

Provide a description of the problem:

Deadline for completing corrective action (Enter date that is either: (1) no more than 7 calendar days after the date you discovered the problem, or (2) if it is infeasible to complete work within the first 7 days, enter the date that is as soon as practicable following the 7th day):

If your estimated date of completion falls after the 7-day deadline, explain (1) why you believe it is infeasible to complete work within 7 days, and (2) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe:

Section B – Corrective Action Progress

(Complete this section no later than 7 calendar days after discovering the condition that triggered corrective action.)

Section B.1 – Why the Problem Occurred

Cause(s) of Problem (Add an additional sheet if necessary)	How This Was Determined and the Date You Determined the Cause
1.	1.
2.	2.

Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem

List of Stormwater control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	Completion Date	SWPPP Update Necessary?	Notes
1.		☐ Yes ☐ No Date:	
2.		☐ Yes ☐ No Date:	

Contractor or Subcontractor Certification and Signature

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

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

Printed Name and Affiliation:

Certification and Signature by Permittee

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

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

Printed Name and Affiliation:

Temporary Stormwater Section
TCEQ-0602)

Attachment J:
Schedule of Interim and Permanent
Soil Stabilization Practices

Interim Vegetative Stabilization

Interim soil stabilization will not be required.

Permanent Vegetative Stabilization

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

1. Hydraulic Mulch and Seeding: Disturbed areas subject to erosion shall be stabilized with hydraulic mulch and/or seeded and watered to provide interim stabilization.

2. Sodding and Wood Mulch: As per the project landscaping plan, sodding and wood mulch will be applied to landscaped areas to provide permanent stabilization prior to project completion.

Records of the following shall be maintained:

1. The dates when major grading activities occur,

2. The dates when construction activities temporarily or permanently cease on a portion of the site, and

3. The dates when stabilization measures are initiated.

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

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

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

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

Permanent Stormwater Section
(TCEQ-0600)

Permanent Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

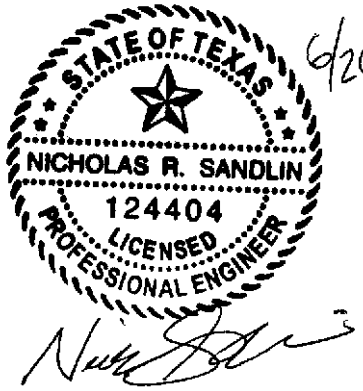
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The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

Print Name of Customer/Agent: Nicholas Sandlin, P.E.

Date: 6/26/2025

Signature of Customer/Agent





Regulated Entity Name: Calibre Quarry

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

Permanent Stormwater Section
(TCEQ-0600)

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

Permanent Stormwater Section
(TCEQ-0600)

Attachment B:
BMPs for Upgradient Stormwater

In the developed condition, 2.33 AC of offsite area with 0 AC of IC is routed through the site to the proposed Batch Detention Basin BMP (OS DA-1). The Basin has been designed to treat the additional offsite flows and impervious cover per the TSS Removal Calculations as established by RG-348.

Permanent Stormwater Section
(TCEQ-0600)

Attachment C:
BMPs for On-Site Stormwater

This quarry development will increase impervious cover (IC) and the volume of potential on-site stormwater. Batch Detention Pond and Natural Vegetated Filter Strip BMPs are designed to capture and mitigate potential onsite stormwater flows.

Runoff from the WQ DA-1 (33.77 AC) developed area will convey to a Batch Detention Pond BMP that is designed to capture and detain the required water quality volume. Runoff from the fully developed WQ DA-2 (1.61 AC) will be conveyed to a Natural Vegetated Filter Strip BMP. Please refer to the approved water quality and drainage plans and calculations for details. Upstream runoff and stormwater originating from within the quarry will be detained within the proposed bounds of the quarry, which will be revegetated to existing conditions following quarry activities. Earthen berms and grading will be utilized to prevent stormwater from exiting the quarry and increasing downstream flows.

Permanent Stormwater Section
(TCEQ-0600)

Attachment D:
BMPs for Surface Streams
N/A

No surface streams flow across the property.

Permanent Stormwater Section
(TCEQ-0600)

Attachment E:
Request to Seal Features (if sealing a feature)
N/A

Permanent Stormwater Section (TCEQ-0600)

Attachment F: Construction Plans

CALIBRE QUARRY

QUARRY, DRIVEWAY, AST
WATER POLLUTION ABATEMENT, & DRAINAGE IMPROVEMENT PLANS

ADDRESS: 33952 RONALD REAGAN BLVD./CR 239, GEORGETOWN, TX 78633

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

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

PROJECT CONTACTS

OWNER:
FP HACIENDA PROPERTIES LLC
P.O. BOX 706
JARRELL, TX 76537
512-914-3963
PEDRO@COBRASTONE.COM
CONTACT: PEDRO AGUADO

ENGINEER:
SANDLIN SERVICES, LLC
9111 JOLLYVILLE RD, SUITE 212
AUSTIN, TEXAS 78759
806-679-7303
CONTACT: NICHOLAS SANDLIN, P.E.

LAND SURVEYOR:
QUICK INC. LAND SURVEYING
831 N MAIN ST
SALADO, TX 76571
512-915-4950
CONTACT: TRAVIS QUICKSALL, R.P.L.S.

SURVEY AND BENCHMARK

CONTACT SURVEYOR FOR SITE BENCHMARKS – INFORMATION THIS SHEET

BEARINGS ARE BASED ON THE TEXAS STATE PLAN COORDINATE SYSTEM OF 1983, TEXAS CENTRAL ZONE (NAD 83)

LEGAL DESCRIPTION

AW0653 AW0653 – WALTERS, L.S. SUR., ACRES 161.439
AW0653 AW0653 – WALTERS, L.S. SUR., ACRES 11.138
AW0653 AW0653 – WALTERS, L.S. SUR., ACRES 32.866

SEE PLAT SHEET

JURISDICTION AND USE

JURISDICTION:	WILLIAMSON COUNTY
EXISTING LAND USE:	RURAL RESIDENTIAL
PROPOSED LAND USE:	QUARRY

WATERSHED

WATERSHED:	BERRY CREEK

EDWARDS AQUIFER

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

FLOODPLAIN NOTE

NO PORTION OF THIS TRACT IS WITHIN THE BOUNDARIES OF THE 100-YEAR FLOODPLAIN OF ANY WATERWAY THAT IS WITHIN THE LIMITS OF THE STUDY OF THE FEDERAL INSURANCE ADMINISTRATION FIRM PANEL #48491C0125F, AND INCORPORATED AREAS EFFECTIVE DATE 12/20/2019 FOR WILLIAMSON COUNTY, TEXAS.

SITE DATA	
	PROPOSED
TOTAL SITE AREA	185.35 AC = 8,073,918 SF
QUARRY IMPERVIOUS COVER	127.93 AC = 5,572,674 SF = 69.0%
PERMANENT IMPERVIOUS COVER	11.43 AC = 498,007 SF = 6.17%
TOTAL IMPERVIOUS COVER	139.36 AC = 6,070,681 SF = 75.19%

NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, WILLIAMSON COUNTY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. THIS SITE IS LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE. A TCEQ WPAP PERMIT IS REQUIRED.
3. WPAP #: XXX
4. ANY STREET CLOSURE REQUIRES PRIOR APPROVAL FROM WILLIAMSON COUNTY.

ACCEPTED FOR CONSTRUCTION:

APPROVED BY TCEQ EAPP DATE

REVIEWED FOR COMPLIANCE WITH COUNTY REQUIREMENTS:

PERMIT NUMBER 2025-XXX-COC
APPROVED PER CERTIFICATE OF COMPLIANCE LETTER XXXXX, 2025

FOR WILLIAMSON COUNTY DATE

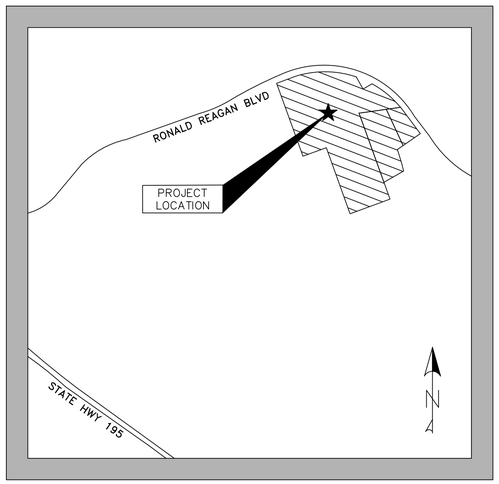
PERMIT NUMBER 2025-XXX-DW
APPROVED PER CERTIFICATE OF COMPLIANCE LETTER XXXXX, 2025

WILLIAMSON COUNTY DRIVEWAY PERMIT DATE

SHEET LIST	
NUMBER	TITLE
1	COVER PAGE
2	GENERAL NOTES (1 OF 2)
3	GENERAL NOTES (2 OF 2)
4	EXISTING CONDITIONS
5	EROSION CONTROL PLAN
6	EROSION CONTROL DETAILS
7	QUARRY PLAN
8	COUNTY DRIVEWAY PLAN (1 OF 2)
9	COUNTY DRIVEWAY PLAN (2 OF 2)
10	ABOVEGROUND STORAGE TANK PLAN
11	ABOVEGROUND STORAGE TANK DETAILS
12	EXISTING DRAINAGE AREA MAP
13	PROPOSED DRAINAGE AREA MAP
14	WATER QUALITY PLAN (1 OF 2)
15	WATER QUALITY PLAN (2 OF 2)
16	WATER QUALITY CALCULATIONS
17	DETENTION POND PLAN
18	DETENTION POND PROFILE
19	DETENTION POND DETAILS
20	DRIVEWAY DETAILS
21	CONSTRUCTION DETAILS

CONTRACTOR NOTES:

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



PROJECT LOCATION MAP
1" = 2000'

TEXAS 811 DIG RIGHT BEFORE YOU DIG

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

THESE PLANS COPYRIGHTED BY SANDLIN SERVICES, LLC

ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC

TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

COVER PAGE

PROJECT CASE: XXXXXXX

CALIBRE QUARRY

CORRECTIONS RECORD

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

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 1 OF 21

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S AGU CVR.dwg-COVER PAGE Plotted Jun 30, 2025 at 4:28pm by Engineer | Last Saved by: Engineer

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

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

SAFETY

1. CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL, AND UTILITY OWNER REGULATIONS PERTAINING TO WORK SETBACKS FROM POWER LINES.
2. ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED. STENCIL THE WORDS, "FIRE ZONE/TOW-AWAY ZONE", IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MY BE APPROVED BY THE FIRE CHIEF PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET.
3. WARNING ARE REQUIRED TO BE PLACED UNDER THE OVERHEAD ELECTRIC LINES TO MAKE ALL PERSONNEL AWARE OF THE ELECTRIC HAZARD.
4. ALL FDC'S TO BE TWO 2 ½ INCH SIAMESE CONNECTIONS.
5. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN MARKINGS AND ASSOCIATED HAZARD WARNING LIGHTS, DELINEATOR FENCE, AND OTHER ASSOCIATED FACILITIES AS REQUIRED FOR OPEN TRENCHES, EXCAVATIONS. TEMPORARY STOCK PILES AND PARKED CONSTRUCTION EQUIPMENT THAT MAY POSE A POTENTIAL HAZARD AS PART OF THE DAILY OPERATIONS AT THIS SITE. CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY.

ACCESSIBLE PARKING NOTE:

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

TRAFFIC CONTROL NOTES:

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

EARTHWORK NOTES AND REQUIREMENTS:

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

TRENCH EXCAVATION NOTES:

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

STORM WATER DISCHARGE AUTHORIZATION

THE CONTRACTOR AND WHERE APPLICABLE SUBCONTRACTORS ARE RESPONSIBLE FOR:

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

CONSTRUCTION MEANS, METHODS, & SAFETY PROTECTION NOTES:

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

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

INDEMNIFICATION

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

GENERAL NOTES AND REQUIREMENTS:

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

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT WILL BE PROVIDED BY THE CONTRACTOR.
2. IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4 FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET IN DEPTH OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGN BY A PROFESSIONAL ENGINEER, ARE RETAINED AND COPIES SUBMITTED TO THE CITY OF ROUND ROCK.

STREET AND DRAINAGE NOTES:

1. ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY INSPECTOR ANDO HE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING. TELEPHONE 218-5555 (INSPECTIONS)
2. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3' OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3' SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.
3. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.
4. STREET RIGHTS-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY OF ROUND ROCK ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT.
5. BARRICADES BUILT TO CITY OF ROUND ROCK STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.
6. ALL R.C.P. SHALL BE MINIMUM CLASS III
7. THE GEOTECHNICAL ENGINEER SHALL INSPECT THE SUBGRADE FOR COMPLIANCE WITH THE DESIGN ASSUMPTIONS MADE DURING PREPARATION OF THE SOILS REPORT. ANY ADJUSTMENTS THAT ARE REQUIRED SHALL BE MADE THROUGH REVISION OF THE CONSTRUCTION PLANS.
8. WHERE PI'S ARE OVER 20, SUBGRADES MUST SE STABILIZED UTILIZING A METHOD ACCEPTABLE TO THE CITY ENGINEER. THE GEOTECHNICAL ENGINEER SHALL RECOMMEND AN APPROPRIATE SUBGRADE STABILIZATION IF SULFATES ARE DETERMINED TO BE PRESENT

TRAFFIC MARKING NOTES:

1. ANY METHODS, STREET MARKING AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS LATEST EDITION
2. ALL PAVEMENT MARKING, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS, LATEST EDITIONS.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK EROSION AND SEDIMENTATION CONTROL ORDINANCE.
2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY APPLIED.
3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL OE REGULARLY INSPECTED BY THE CITY OF ROUND ROCK FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.
4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN. ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER,
5. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRASH OR OTHERWISE DEPOSITED ON EXISTING PAVED STREET DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.
6. ALL DISTURBED AREAS SHALL BE REVEGETATED

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF GEORGETOWN AND WILLIAMSON COUNTY STANDARD SPECIFICATIONS MANUAL.
2. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC... NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT HIS EXPENSE.
3. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS AS APPROPRIATE.
4. MANHOLE FRAMES, COVERS, WALVES, CLEANQUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
5. THE CONTRACTOR SHALL GIVE THE CITY OF GEORGETOWN OR AHJ 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE 218-5428 (PLANNING AND DEVELOPMENT SERVICES DEPARTMENT).
6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OF EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.
7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE BETWEEN THE CITY OF ROUND ROCK, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND AND OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.
8. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF ROUND ROCK ACCURATE "AS-BUILT" DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "AS-BUILT DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
9. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.
10. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES

CONSTRUCTION SEQUENCE NOTES (AS APPLICABLE)

INSTALL CONSTRUCTION ENTRANCE, SILT FENCE, AND OTHER BMP'S AS SHOWN ON THE PLANS. CONTACT THE DESIGN ENGINEER FOR A PRE-CONSTRUCTION MEETING. PEDERNALES ELECTRIC COOPERATIVE (PEC) AND ATMOS ENERGY (GAS COMPANY) ARE NOTIFIED BY THE TEXAS EXCAVATION SYSTEM (1-800-344-8377).

A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION MEASURES AND PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT AT LEAST THREE (3) DAYS PRIOR TO THE MEETING DATE.

CONTACT TEXAS EXCAVATION SYSTEM FOR EXISTING UTILITY LOCATIONS.

CLEAR SITE OF ANY EXISTING MATERIALS, DEBRIS AND VEGETATION ALONG CONSTRUCTION ROUTES.

BEGIN CONSTRUCTION OF PROJECT AS FOLLOWS:

A) SET UP CONTRACTOR TRAILER/OFFICE AND TEMPORARY UTILITIES
B) ROUGH GRADE POND FOR DRAINGE CONTROL
C) BEGIN EXCAVATION (COMPLY WITH OSHA AND CODES, ETC.)
D) INSTALL INFRASTRUCTURE MATERIALS (PIPE, FITTINGS, AND BEDDING MATERIAL, ETC.)
E) BEGIN BUILDING PAD/SLAB CONSTRUCTION
F) COMPLETE PIPE LAYING AND TESTING (COMPLY WITH SPECIFICATIONS)
G) COMPLETE BACKFILL (COMPLY WITH SPECIFICATIONS)
H) INSTALL CURB AND GUTTER
I) FINALIZE BUILDING CONSTRUCTION
J) FINALIZE PAVEMENT INSTALLATION

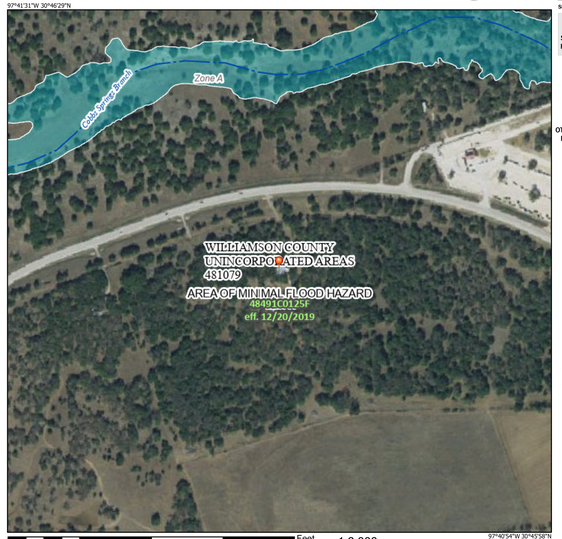
TEST STREET AND DRAINAGE CONSTRUCTION AS SPECIFIED.

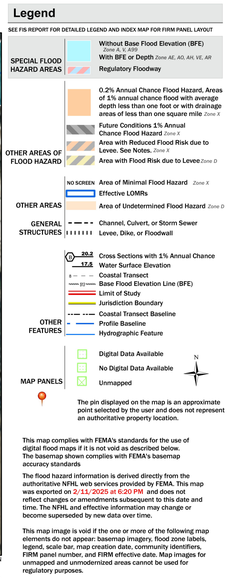
REVEGETATE DISTURBED AREAS AS REQUIRED.

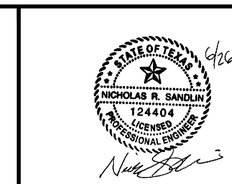
UPON ACCEPTANCE OF FINAL CONSTRUCTION AND PROPER REVEGETATION PER SPECIFICATIONS; REMOVE TEMPORARY EROSION CONTROLS.

MAINTAIN, REPAIR, OR REPLACE INTEGRITY OF EXISTING FENCES, PROPERTY CORNERS, AND LANDSCAPING AS REQUIRED.

PAVEMENT RECOMMENDATIONS SHALL BE PROVIDED BY THE CONTRACTOR/OWNER AND CONFORM TO H-20 LOADING AND THE WILLIAMSON COUNTY DRIVEWAY CONSTRUCTION STANDARDS







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

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ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC
TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

GENERAL NOTES
(2 OF 2)

PROJECT CASE: XXXXXXX

CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 3 OF 21

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S AGU CVR.dwg-GENERAL NOTES (2 OF 2) Plotted Jun 27, 2025 at 11:17am by Engineer | Last Saved by: Engineer



STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
6/26/2025

EXISTING CONDITIONS AND DEMOLITION PLAN LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- STREET CENTERLINE
- FENCE
- EXISTING CONCRETE SIDEWALK
- T — EXISTING TRANSFORMER PAD
- W — EX. WATER LINE
- WW — EX. WASTEWATER
- STM — EX. STORM SEWER LINE
- FITTINGS AS NOTED
- GATE VALVE AS NOTED
- BFP — BACK FLOW PREVENTER
- EX. FIRE HYDRANT
- WM — EX. WATER METER
- WW — EX. WASTEWATER MANHOLE
- WW CLEAN OUT
- P — UTILITY POLE
- 100 — EXISTING TREE (TO REMAIN)
- 100 — EXISTING TREE (TO BE REMOVED)
- 750 — EXISTING CONTOURS
- FLOW ARROW

DEMOLITION NOTES:

1. CONTRACTOR SHALL CONFIRM DEMOLITION REQUIREMENTS WITH AHJ PRIOR TO CONSTRUCTION AND SUBMIT ANY REQUIRED PERMITS UNDER SEPARATE COVER.

0 100' 200' 400'
SCALE: 1" = 200'

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

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

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EXISTING CONDITIONS

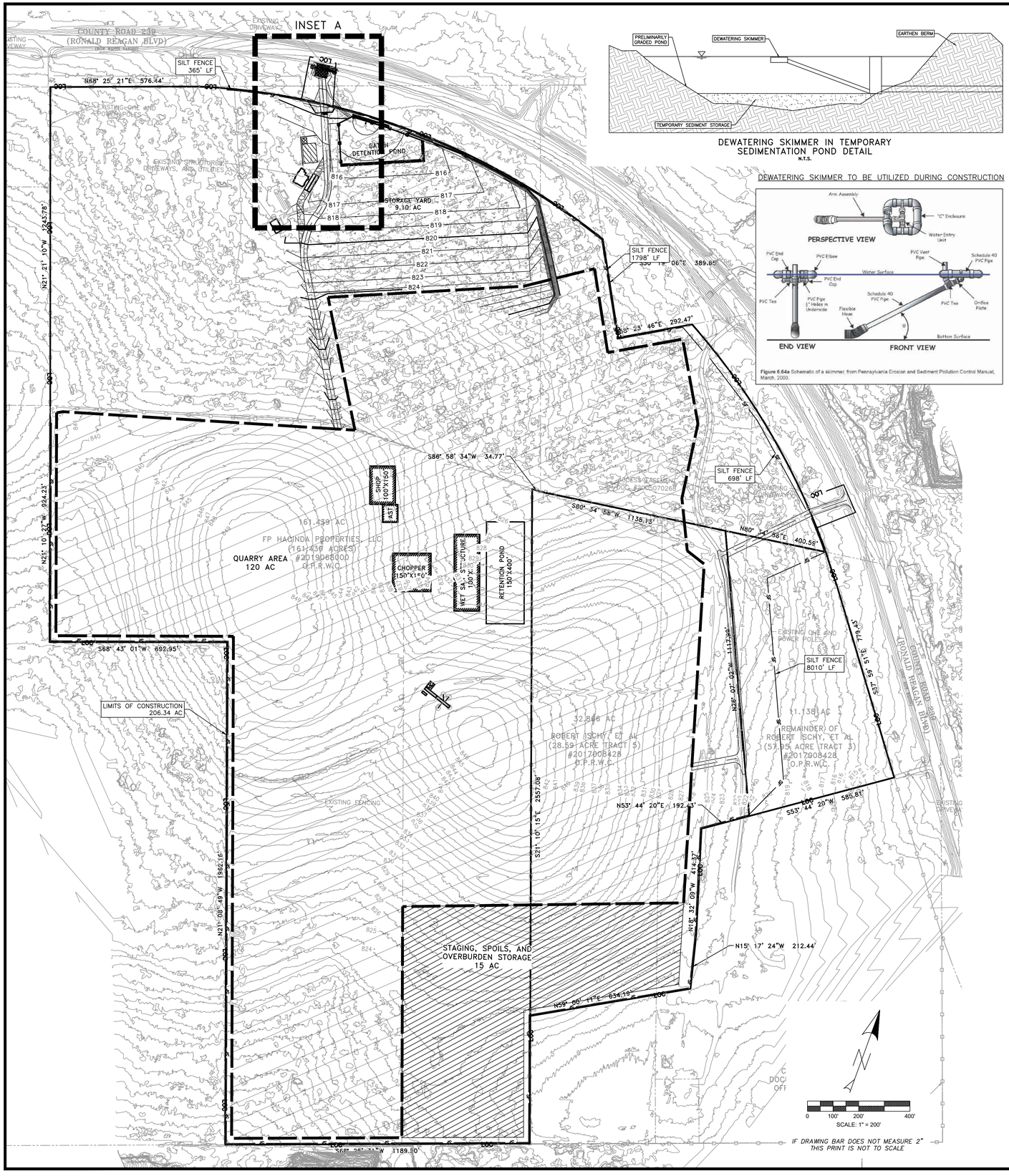
PROJECT CASE: XXXXXXX

CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 4 OF 21

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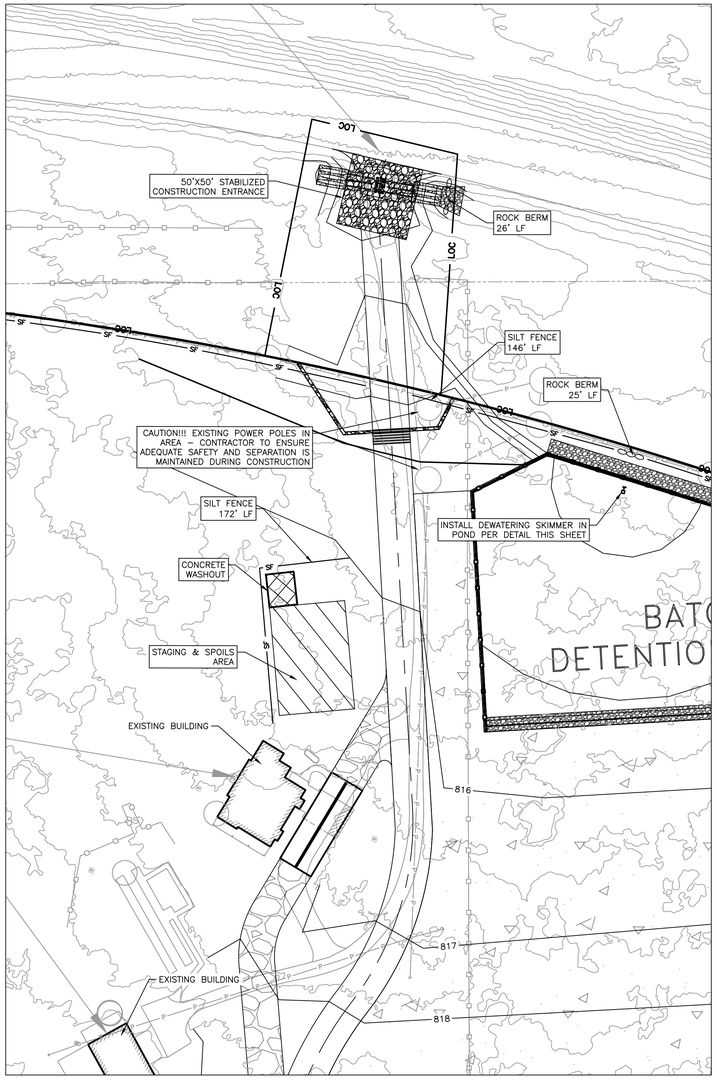


DEWATERING SKIMMER IN TEMPORARY SEDIMENTATION POND DETAIL
N.T.S.

DEWATERING SKIMMER TO BE UTILIZED DURING CONSTRUCTION

Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March 2000.

INSET A



NOTES:

1. THIS PROJECT IS SUBMITTED WITHOUT PHASING.
2. ALL EXISTING IMPERVIOUS COVER AND DRAINAGE PATTERNS WILL REMAIN UNCHANGED POST-DEVELOPMENT.
3. CONTRACTOR TO CUT AND REMOVE CONCRETE AS NECESSARY TO REMOVE ALL EXISTING PIPING. REFER TO PLANS BY OTHERS FOR EXACT LOCATION OF DISPENSERS AND PIPING.
4. ALL REQUIRED NOTICES AND PERMITS MUST BE PLACED IN A HIGHLY VISIBLE LOCATION ONSITE BEFORE THE COMMENCEMENT OF CONSTRUCTION.
5. ALL EROSION AND SEDIMENTATION CONTROLS (ESC) MUST BE INSTALLED PRIOR TO ANY DISTURBANCE TO THE PROJECT SITE.
6. ALL ESC USED ONSITE MUST BE REGULARLY MONITORED AND MAINTAINED AS NEEDED.
7. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING ONTO THE PUBLIC ROADWAY ON AN ONGOING/REGULAR BASIS. MUD AND OR DIRT TRACKED INTO THE ROADWAY MUST BE IMMEDIATELY REMOVED UPON DISCOVERY.
8. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY UPON INLET INSTALLATION.
9. INITIATE TEMPORARY STABILIZATION WHEN CONSTRUCTION CEASES IN A DISTURBED AREA FOR 14 DAYS.
10. INITIATE PERMANENT STABILIZATION IMMEDIATELY ONCE WORK HAS CEASED AND FINAL GRADE HAS BEEN ACHIEVED.
11. ALL DISTURBED/BARE AREAS WILL REQUIRE PERMANENT STABILIZATION BEFORE FINAL ACCEPTANCE CAN BE ACHIEVED. AVOID DISTURBING AREAS OF THE PROJECT THAT ARE NOT NECESSARY FOR CONSTRUCTION.
12. TEMPORARY ESC'S SHALL REMAIN IN PLACE IN ALL DISTURBED AREAS UNTIL ADEQUATE STABILIZATION HAS BEEN ACHIEVED.
13. THE TECHNICAL SPECS OF ESC DEVICES AND BEST MANAGEMENT PRACTICES (BMP) MEET OR EXCEED THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

EROSION CONTROL LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- LOC LOC LOC — LIMITS OF CONSTRUCTION
- SF SF SF — SILT FENCE
- T T T — TREE PROTECTION FENCE
- STAGING & TEMPORARY SPOILS AREA
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- TEMPORARY ROCK BERM
- AREA INLET PROTECTION
- CURB INLET PROTECTION
- 750 EXISTING CONTOURS
- 755 PROPOSED CONTOURS
- 100 EXISTING TREE (TO REMAIN)
- 100 EXISTING TREE (TO BE REMOVED)

NOTE: ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY INSPECTOR AT TIME OF CONSTRUCTION.

EROSION CONTROL NOTES:

1. LIMITS OF CONSTRUCTION 206.34 AC (TOTAL DISTURBED ACREAGE)
2. THERE ARE NO HERITAGE OR PROTECTED TREES ONSITE
3. ALL STAGING & STORAGE SHALL OCCUR WITHIN THE BOUNDARIES OF THE PROPERTY AND LIMITS OF CONSTRUCTION.
4. INSTALL EROSION CONTROLS PER PLAN. WITH THE APPROVAL OF THE ENVIRONMENTAL INSPECTOR, ADJUST AS NEEDED DURING CONSTRUCTION.
5. CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS FROM ALL EXISTING OR NEWLY PAVED SURFACES AT THE END OF CONSTRUCTION.
6. TEMPORARY STAGING & STORAGE AREA/TEMPORARY SPOILS AREA IS TO BE USED DURING NORMAL WORK HOURS (7 A.M. TO 7 P.M.). ONCE CONSTRUCTION IS COMPLETE, CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS FROM AREA AND RESTORE TO ORIGINAL CONDITION OR BETTER.
7. ALL INLETS SHALL HAVE INLET PROTECTION IN PLACE UNTIL THE COMPLETION OF GRADING AND REVEGETATION.
8. IN AREAS WHERE SILT FENCE IS TO BE INSTALLED CROSSING CONTOURS, J-HOOKS SHALL BE ADDED TO THE SILT FENCE EVERY 100 FEET.
9. STABILIZATION OF ALL SLOPES 3:1 OR GREATER, SUITABLE MATTING (TYPE I) WILL BE UTILIZED IN CONJUNCTION WITH REVEGETATIVE EFFORTS ONSITE. CHANNEL STABILIZATION WILL USE TYPE II.

TEXAS 811 BEFORE YOU DIG

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

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EROSION CONTROL PLAN

PROJECT CASE: XXXXXXX

CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 5 OF 21

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\5 AGU ESC.dwg-EROSION CONTROL PLAN Plotted Jun 27, 2025 at 11:18am by Engineer | Last Saved by: Engineer

GUIDELINES FOR DESIGN AND INSTALLATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS

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

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

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

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

REVISION NOTE: ADOPTED 6/21/2006

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

DRAWING NAME: EC01 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

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

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

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

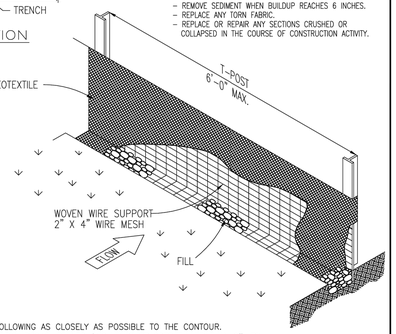
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES

DRAWING NAME: EC01A | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



CROSS SECTION



INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
- REMOVE SEDIMENT WHEN BULDUP REACHES 6 INCHES.
- REPLACE ANY TORN FABRIC.
- REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY.

INSTALLATION:
- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS, PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY T-POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW.
- ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE T-POST WITH 11 1/2 GAUGE GALVANIZED T-POST CLIPS. THE TOP OF THE WIRE TO BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND TIED AT LEAST 6 TIMES WITH HOG RINGS.
- THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1".
- ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").
- GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
- SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

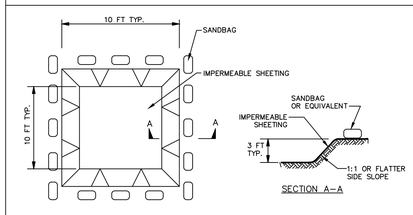
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REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SILT FENCE DETAIL

DRAWING NAME: EC02 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

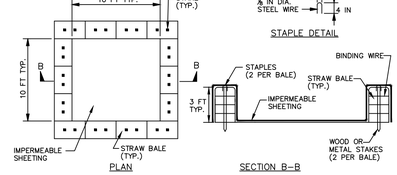
ONSITE CONCRETE WASHOUT STRUCTURE



PLAN

SECTION A–A

EXCAVATED WASHOUT STRUCTURE

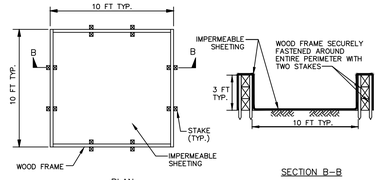


PLAN

SECTION B–B

NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

WASHOUT STRUCTURE WITH STRAW BALES



PLAN

SECTION B–B

WASHOUT STRUCTURE WITH WOOD PLANKS

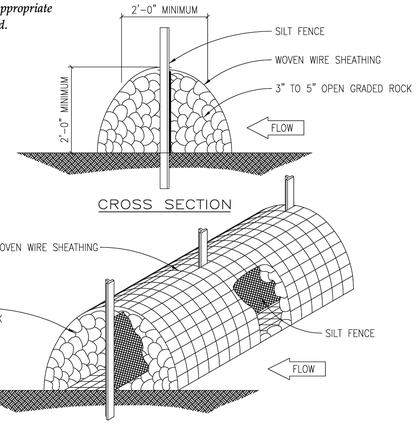
CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

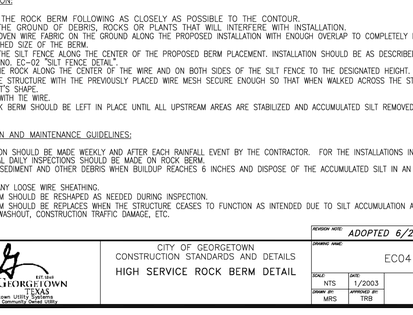
Recommended Silt Fence Spacing on Sloping Sites

	Soil Type		
Slope angle	Silty	Clays	Sandy
Very steep (1:1)	50 ft.	75 ft.	100 ft.
Steep (2:1)	75 ft.	100 ft.	125 ft.
Moderate (4:1)	100 ft.	125 ft.	150 ft.
Slight (10:1)	125 ft.	150 ft.	200 ft.

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



CROSS SECTION



INSTALLATION:
- LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCIRCLE THE FINISHED SIZE OF THE BERM.
- INSTALL THE SILT FENCE ALONG THE CENTER OF THE PROPOSED BERM PLACEMENT. INSTALLATION SHOULD BE AS DESCRIBED IN DRAWING NO. EC-02 "SILT FENCE DETAIL".
- PLACE THE ROCK ALONG THE CENTER OF THE WIRE AND ON BOTH SIDES OF THE SILT FENCE TO THE DESIGNATED HEIGHT.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE.
- SECURE WITH TIE WIRE.
- THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

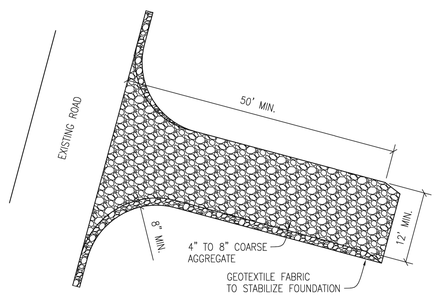
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE CONTRACTOR. FOR THE INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE ON ROCK BERM.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
- REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- THE BERM SHOULD BE REPLACES WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

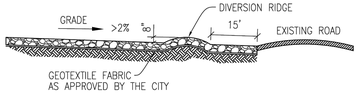
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
HIGH SERVICE ROCK BERM DETAIL

DRAWING NAME: EC04 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB





INSTALLATION:
- CLEAR THE AREA OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- GRADE THE AREA FOR THE ENTRANCE TO FLOW BACK ON TO THE CONSTRUCTION SITE. RUNOFF FROM THE STABILIZED CONSTRUCTION
- PLACE GEOTEXTILE FABRIC AS APPROVED BY THE CITY.
- PLACE ROCK AS APPROVED BY THE CITY.

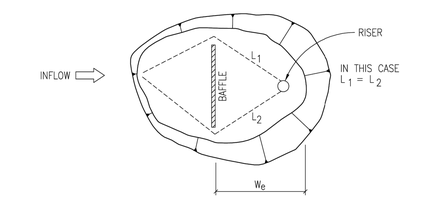
INSPECTIONS AND MAINTENANCE GUIDELINES:
- THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO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

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

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STABILIZED CONSTRUCTION ENTRANCE

DRAWING NAME: EC06 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



SEDIMENT BASIN BAFFLE DESIGN

$W_e = A / (L_1 + L_2)$

W_e = EFFECTIVE WIDTH OF BASIN

A = SURFACE AREA OF BASIN WHEN FILLED TO RISER CREST

L_1, L_2 = SHORTEST TRAVEL DISTANCE AROUND THE BAFFLE FROM INLET TO OUTLET

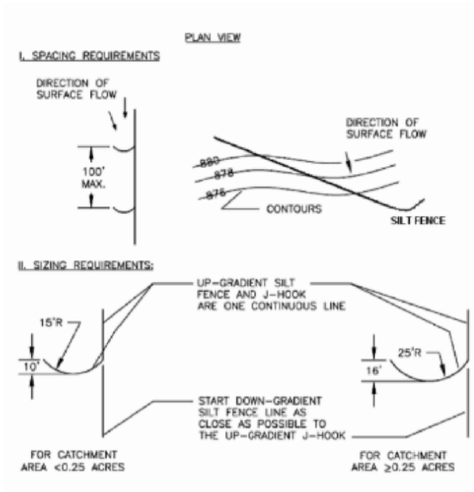
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIR SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- TRASH AND OTHER DEBRIS SHOULD BE REMOVED AFTER EACH RAINFALL TO PREVENT CLOGGING OF THE OUTLET STRUCTURE.
- ACCUMULATED SILT SHOULD BE REMOVED AND THE BASIN SHOULD BE RE-GRADED TO ITS ORIGINAL DIMENSIONS AT SUCH POINT THAT THE CAPACITY OF THE IMPOUNDMENT HAS BEEN REDUCED TO 1/2 OF ITS ORIGINAL STORAGE CAPACITY.
- THE REMOVED SEDIMENT SHOULD BE STOCKPILED OR REDISTRIBUTED IN AREAS THAT ARE PROTECTED FROM EROSION.

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

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEDIMENT BASIN BAFFLE DESIGN

DRAWING NAME: EC08 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



J-hook Placement Details

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

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SERVICES, LLC
TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

EROSION CONTROL DETAILS

PROJECT CASE: XXXXXXX

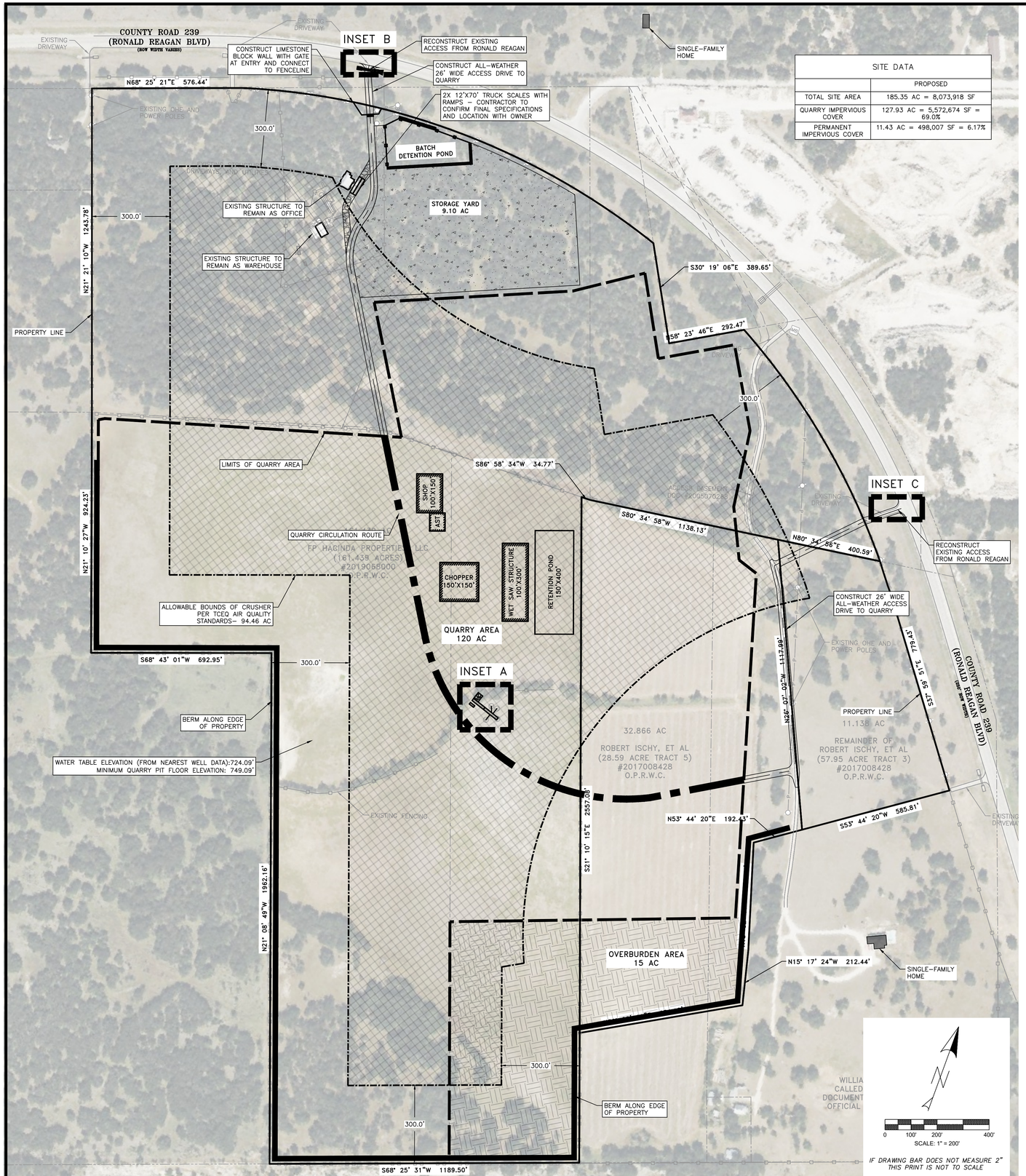
CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 6 OF 21

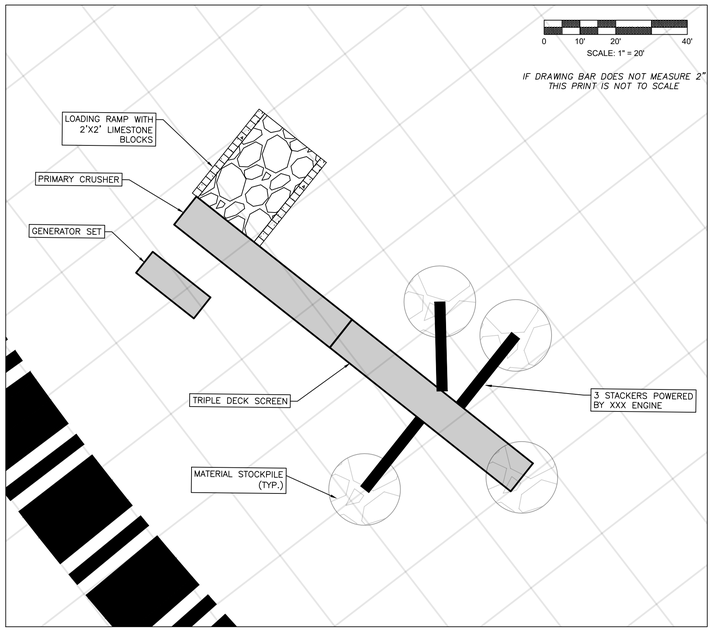
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S AGU DTL.dwg-EROSION CONTROL DETAILS Plotted Jun 27, 2025 at 11:18am by Engineer | Last Saved by: Engineer

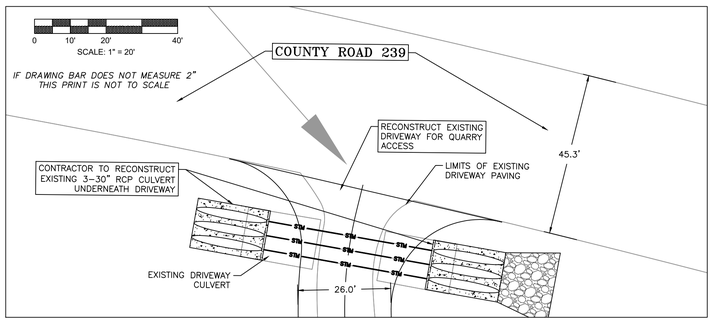


SITE DATA	
	PROPOSED
TOTAL SITE AREA	185.35 AC = 8,073,918 SF
QUARRY IMPERVIOUS COVER	127.93 AC = 5,572,674 SF = 69.0%
PERMANENT IMPERVIOUS COVER	11.43 AC = 498,007 SF = 6.17%

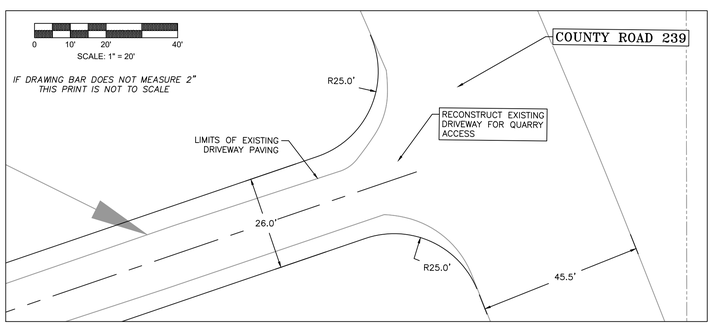
INSET A



INSET B



INSET C



STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

QUARRY PLAN LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER
- STREET CENTERLINE
- FENCE
- SITE WALLS
- ALLOWABLE BOUNDS OF CRUSHER
- OVERBURDEN AREA
- LIMITS OF QUARRY
- W — EX. WATER LINE
- WW — EX. WASTEWATER
- STM — EX. STORM SEWER LINE
- EX. FIRE HYDRANT
- WM EX. WATER METER
- WW EX. WASTEWATER MANHOLE
- FITTINGS AS NOTED
- GATE VALVE AS NOTED
- WW CLEAN OUT
- BFP BACK FLOW PREVENTER
- W — PR. WATER LINE
- F — FIRE LINE
- WW — PR. WASTEWATER
- STM — PR. STORM SEWER LINE
- PR. FIRE HYDRANT
- PR. WATER METER
- WW PR. WASTEWATER MANHOLE
- FLOW ARROW
- P — EX. UTILITY POLE

SITE LEGEND

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

TEXAS 811 811 OR 1-800-DIG-TESS BEFORE YOU DIG

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

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9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

QUARRY PLAN

PROJECT CASE: XXXXXXX

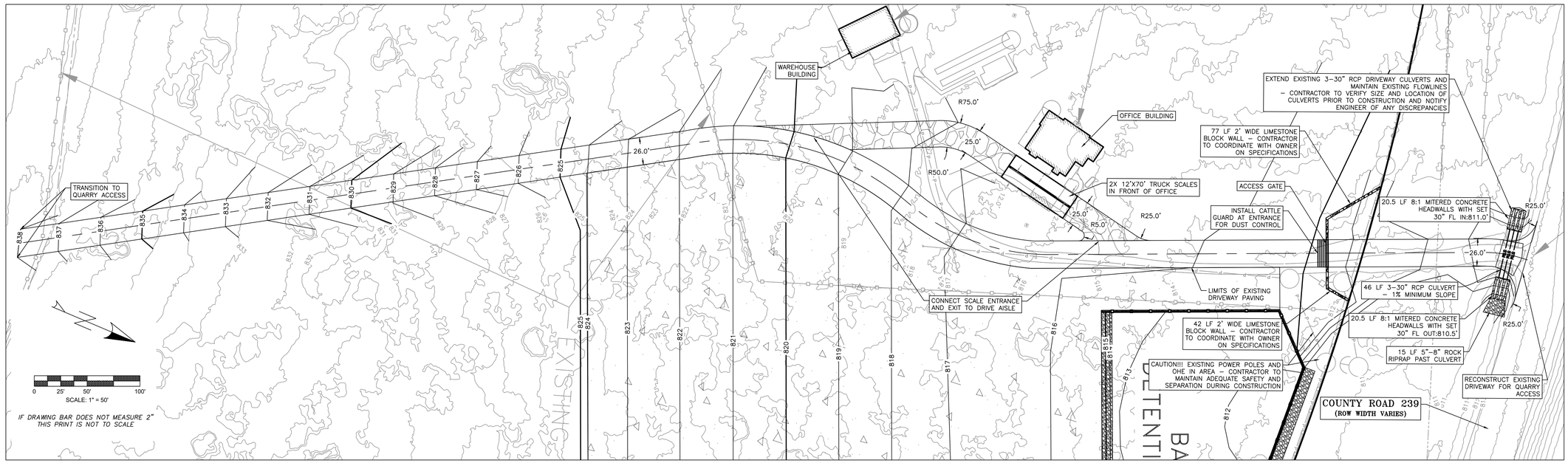
CALIBRE QUARRY

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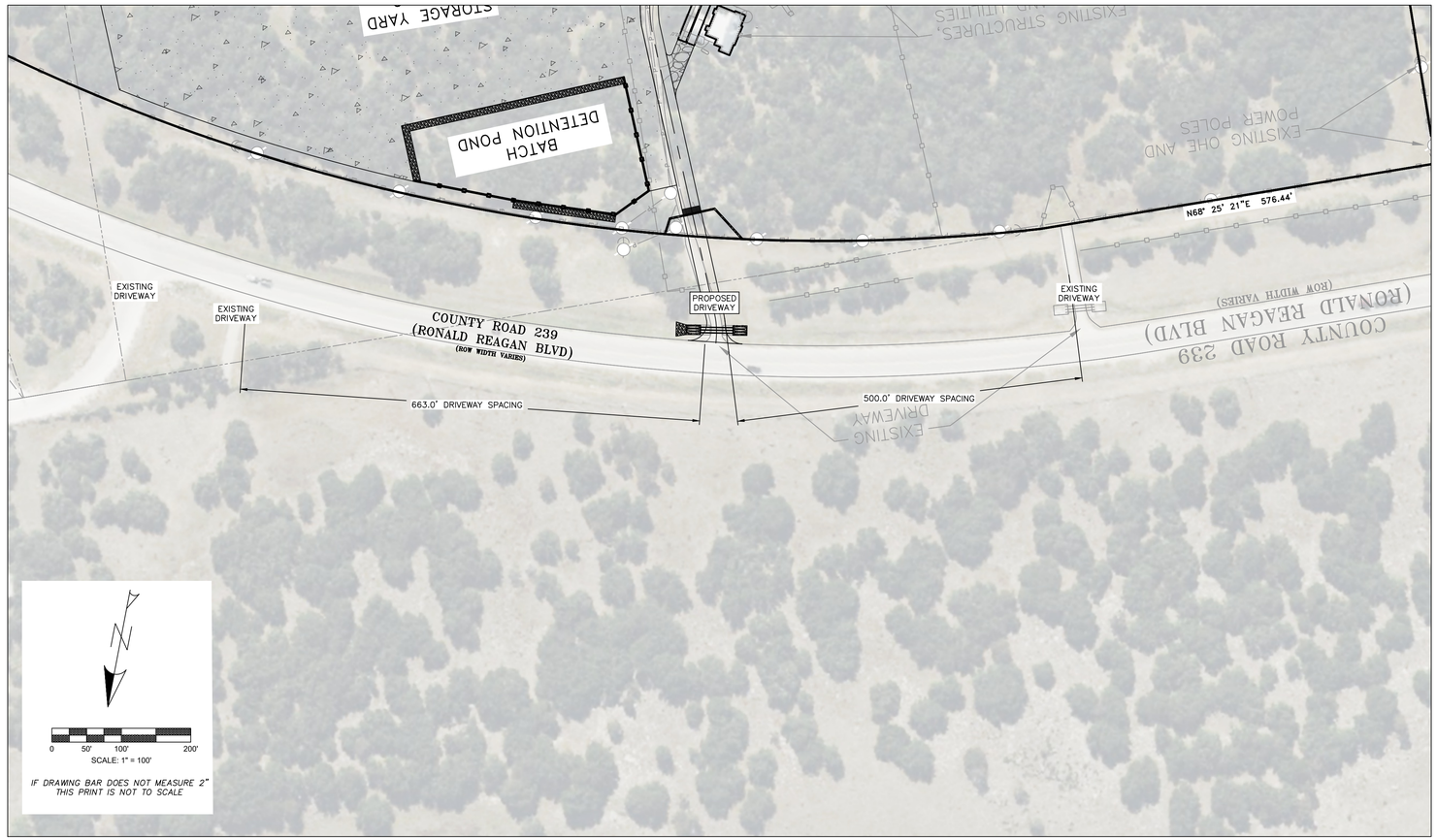
SHEET 7 OF 21

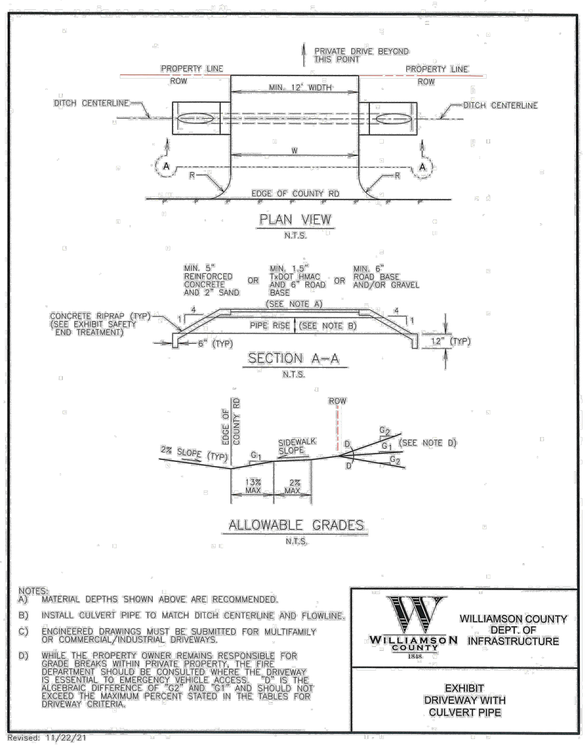
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DRIVEWAY, GRADING, AND CULVERT PLAN



DRIVEWAY SPACING





NOTES:
A) MATERIAL DEPTHS SHOWN ABOVE ARE RECOMMENDED.
B) INSTALL CULVERT PIPE TO MATCH DITCH CENTERLINE AND FLOWLINE.
C) ENGINEERED DRAWINGS MUST BE SUBMITTED FOR MULTIFAMILY OR COMMERCIAL/INDUSTRIAL DRIVEWAYS.
D) WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, THE FIRE DEPARTMENT SHOULD BE CONSULTED WHERE THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS. "D" IS THE ALGEBRAIC DIFFERENCE OF "G2" AND "G1" AND SHOULD NOT EXCEED THE MAXIMUM PERCENT STATED IN THE TABLES FOR DRIVEWAY CRITERIA.

WILLIAMSON COUNTY DEPT. OF INFRASTRUCTURE

EXHIBIT
DRIVEWAY WITH CULVERT PIPE

Revised: 11/22/21

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

DRIVEWAY AND TURN LANE LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER
- STREET CENTERLINE
- PROPOSED CONCRETE SIDEWALK
- TRAFFIC DIRECTION
- EXISTING CONTOURS (750)
- PROPOSED CONTOURS (755)
- UTILITY POLE (P)
- EX. WATER LINE (W)
- EX. WASTEWATER (WW)
- EX. STORM SEWER LINE (STM)
- EX. FIRE HYDRANT
- EX. WATER METER (WM)
- EX. WASTEWATER MANHOLE (WW)
- FIRE LINE (F)
- PR. WATER LINE (W)
- PR. WASTEWATER (WW)
- PR. STORM SEWER LINE (STM)
- PR. FIRE HYDRANT
- PR. WATER METER
- PR. WASTEWATER MANHOLE (WW)

NOTES:

1. DRAINAGE FOR THIS DEVELOPMENT HAS BEEN DESIGNED SUCH THAT THERE WILL BE NO ADVERSE IMPACTS ON THE CAPACITY, FUNCTION OR INTEGRITY OF TEXAS DEPARTMENT OF TRANSPORTATION RIGHT OF WAY DRAINAGE FACILITIES.
2. ALL DRIVEWAY CULVERTS MUST BE INSTALLED PRIOR TO ISSUANCE OF BUILDING PERMITS OR CLOSEOUT OF CONSTRUCTION ACTIVITIES.
3. CONTRACTOR TO VERIFY EXISTING ROADWAY CROSS–SECTIONS MATCH ON–SITE CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

TXDOT TRAFFIC CONTROL NOTES:

1. CONTRACTOR SHALL DEVELOP A TRAFFIC CONTROL PLAN PER TXDOT STANDARD DETAILS BASED ON SCHEDULE AND MEANS AND METHODS. THIS TRAFFIC CONTROL PLAN SHALL BE COORDINATED WITH THE TXDOT AREA OFFICE PRIOR TO IMPLEMENTATION/CONSTRUCTION.
2. ALL WORK WITHIN THE TXDOT RIGHT OF WAY SUCH AS STRIPING, MILLING, AND OVERLAYS SHALL BE TO TXDOT SPECIFICATIONS.

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

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9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

COUNTY DRIVEWAY PLAN (1 OF 2)

PROJECT CASE: XXXXXXX

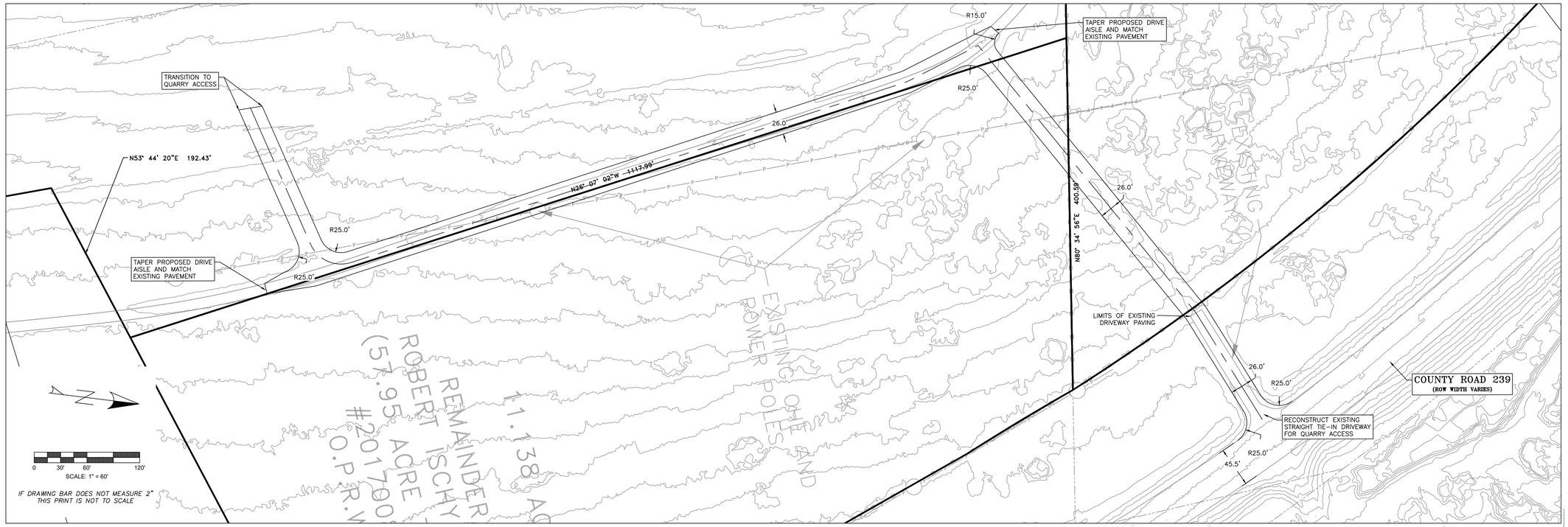
CALIBRE QUARRY

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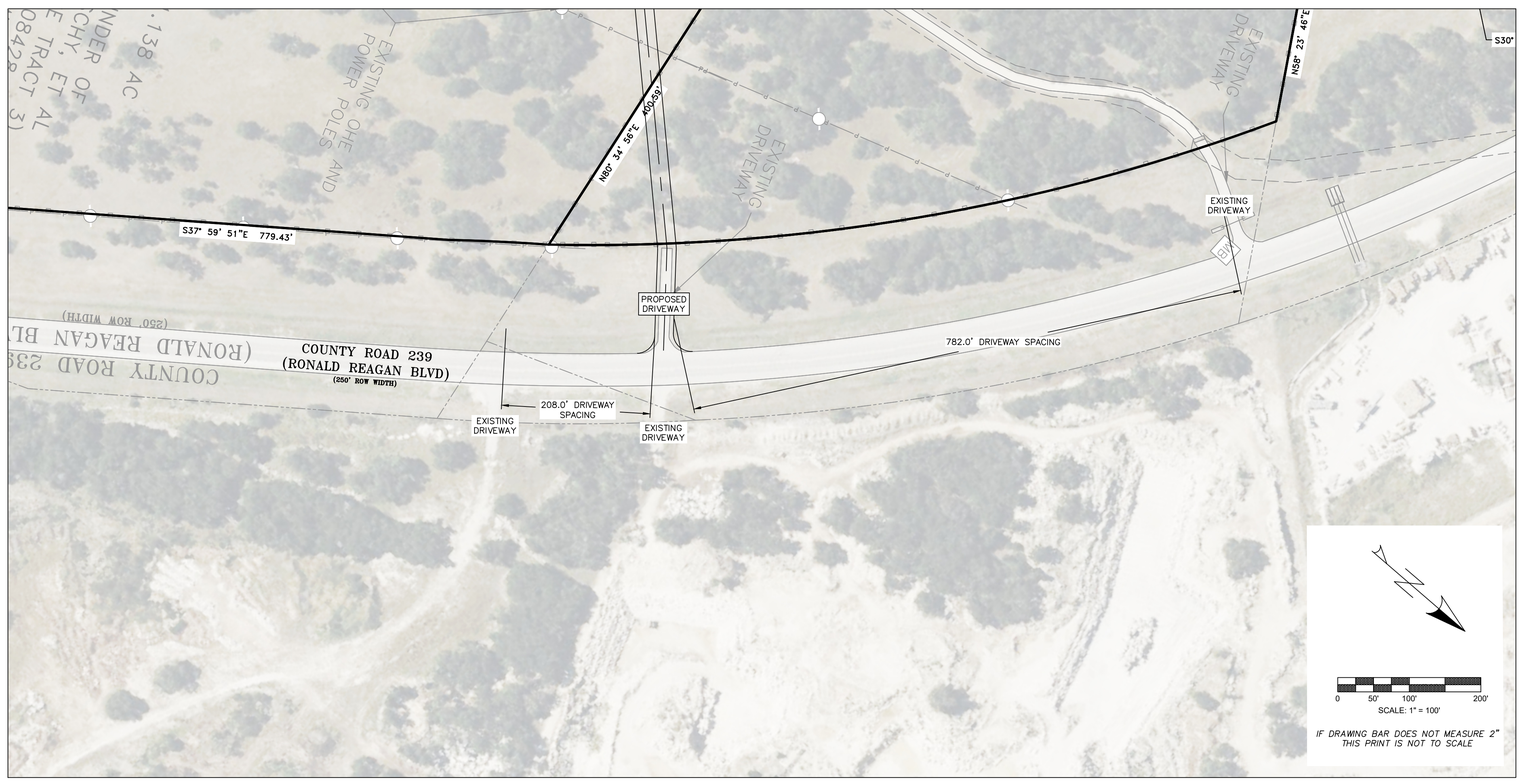
SHEET 8 OF 21

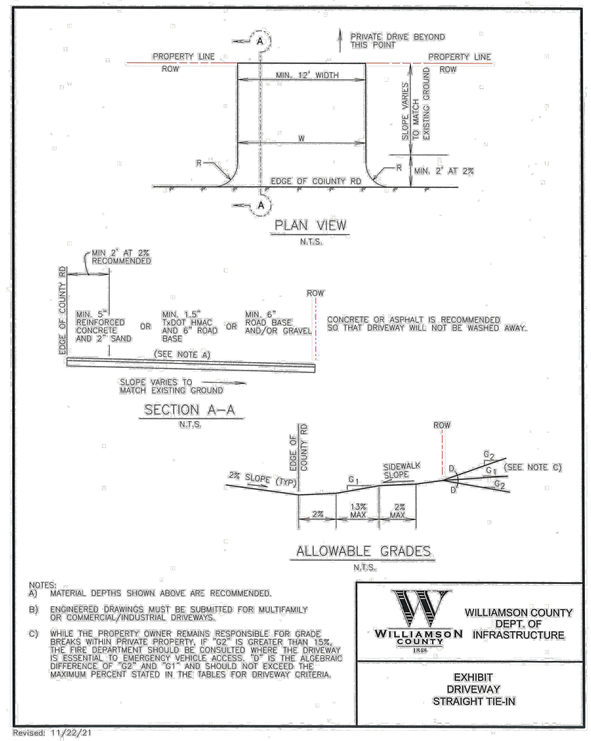
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DRIVEWAY, GRADING, AND CULVERT PLAN



DRIVEWAY SPACING





NOTES:
A) MATERIAL DEPTHS SHOWN ABOVE ARE RECOMMENDED.
B) ENGINEERED DRAWINGS MUST BE SUBMITTED FOR MULTIFAMILY OR COMMERCIAL/INDUSTRIAL DRIVEWAYS.
C) WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, IF "G2" IS GREATER THAN 15%, THE FIRE DEPARTMENT SHOULD BE CONSULTED WHERE THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS. "D" IS THE ALGEBRAIC DIFFERENCE OF "G2" AND "G1" AND SHOULD NOT EXCEED THE MAXIMUM PERCENT STATED IN THE TABLES FOR DRIVEWAY CRITERIA.

Revised: 11/22/21

WILLIAMSON COUNTY DEPT. OF INFRASTRUCTURE

EXHIBIT
DRIVEWAY
STRAIGHT TIE-IN

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

DRIVEWAY AND TURN LANE LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER
- STREET CENTERLINE
- PROPOSED CONCRETE SIDEWALK
- TRAFFIC DIRECTION
- EXISTING CONTOURS (750)
- PROPOSED CONTOURS (755)
- UTILITY POLE
- EX. WATER LINE
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- EX. STORM SEWER LINE
- EX. FIRE HYDRANT
- EX. WATER METER
- EX. WASTEWATER MANHOLE
- FIRE LINE
- PR. WATER LINE
- PR. WASTEWATER
- PR. STORM SEWER LINE
- PR. FIRE HYDRANT
- PR. WATER METER
- PR. WASTEWATER MANHOLE

NOTES:

1. DRAINAGE FOR THIS DEVELOPMENT HAS BEEN DESIGNED SUCH THAT THERE WILL BE NO ADVERSE IMPACTS ON THE CAPACITY, FUNCTION OR INTEGRITY OF TEXAS DEPARTMENT OF TRANSPORTATION RIGHT OF WAY DRAINAGE FACILITIES.
2. ALL DRIVEWAY CULVERTS MUST BE INSTALLED PRIOR TO ISSUANCE OF BUILDING PERMITS OR CLOSEOUT OF CONSTRUCTION ACTIVITIES.
3. CONTRACTOR TO VERIFY EXISTING ROADWAY CROSS-SECTIONS MATCH ON-SITE CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

TXDOT TRAFFIC CONTROL NOTES:

1. CONTRACTOR SHALL DEVELOP A TRAFFIC CONTROL PLAN PER TXDOT STANDARD DETAILS BASED ON SCHEDULE AND MEANS AND METHODS. THIS TRAFFIC CONTROL PLAN SHALL BE COORDINATED WITH THE TXDOT AREA OFFICE PRIOR TO IMPLEMENTATION/CONSTRUCTION.
2. ALL WORK WITHIN THE TXDOT RIGHT OF WAY SUCH AS STRIPING, MILLING, AND OVERLAYS SHALL BE TO TXDOT SPECIFICATIONS.

TEXAS 811 BEFORE YOU DIG

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

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COUNTY DRIVEWAY PLAN (2 OF 2)

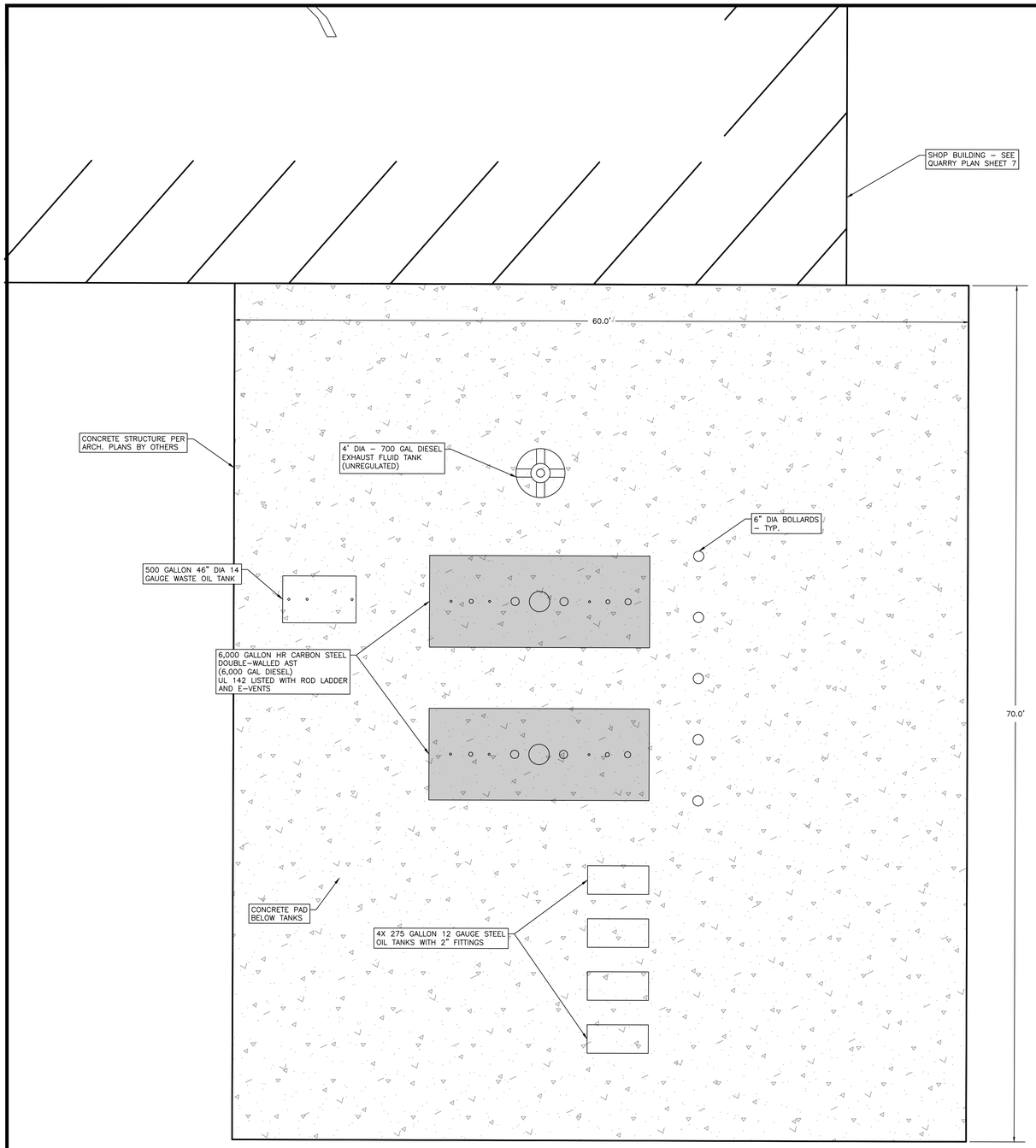
PROJECT CASE: XXXXXXX

CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 9 OF 21

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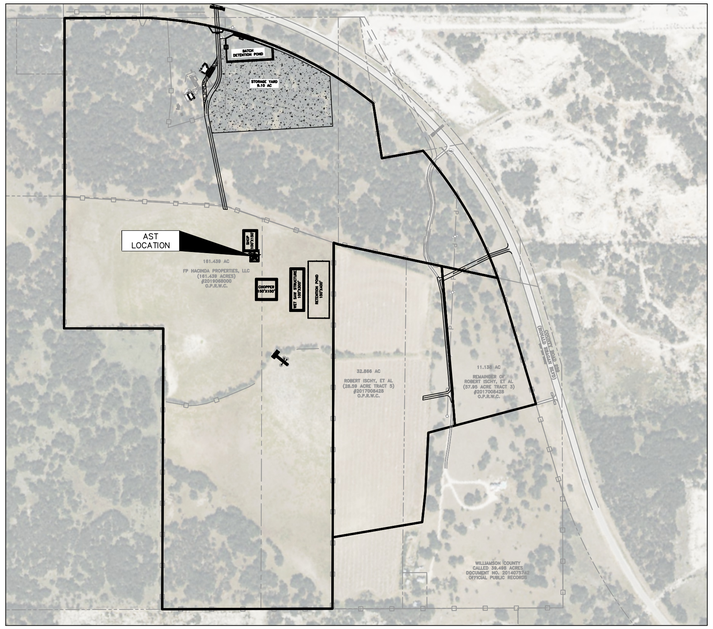


0 2.5' 5' 10'

SCALE: 1" = 5'

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

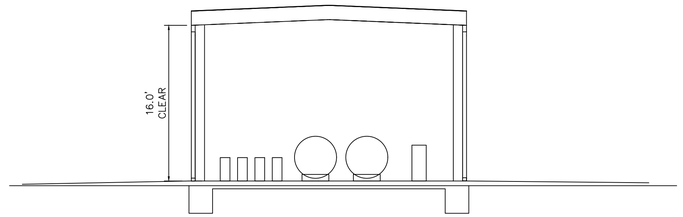
PROPERTY KEY MAP



0 250' 500' 1000'

SCALE: 1" = 500'

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



STRUCTURE ELEVATION

(N.T.S.)

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
6/26/2025

AST PLAN LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER

NOTES:

1. ABOVEGROUND STORAGE TANK SIZE AND SPECIFICATION TO BE PER ASSOCIATED AST APPLICATION.
2. SEE ALL SPECIFICATIONS SHEET 11.

SCHEDULE OF WORK

SUPPLY AND INSTALL THE FOLLOWING:
1. (2) 6,000 GALLON DOUBLE WALL HR CARBON STEEL TANKS – UL 142 RATED TANK WITH ROD LADDER AND E–VENTS.
2. (4) 275 GALLON 12 GAUGE STEEL OIL TANKS WITH 2" FITTINGS AND ½" SUPPLY TAPPING
3. (1) 700 GALLON BAILIFF ENTERPRISES INC. VERTICAL DEF HDPE TANK WITH 8" VENTED LID
4. (1) 500 GALLON 46" DIA SINGLE WALL 14 GAUGE STEEL WASTE OIL TANK

TEXAS 811 BEFORE YOU DIG

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ABOVEGROUND STORAGE TANK PLAN

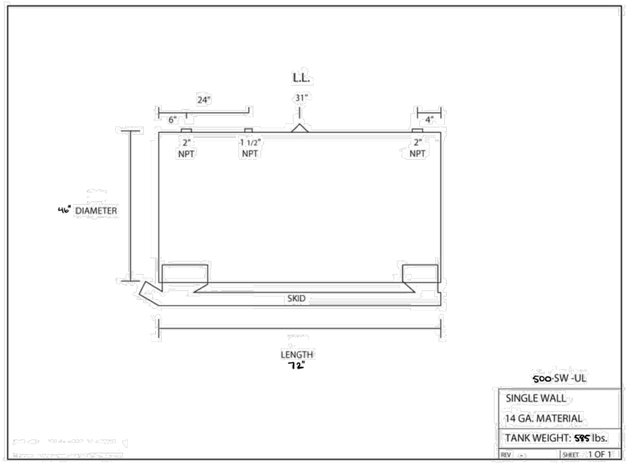
PROJECT CASE: XXXXXXX

CALIBRE QUARRY

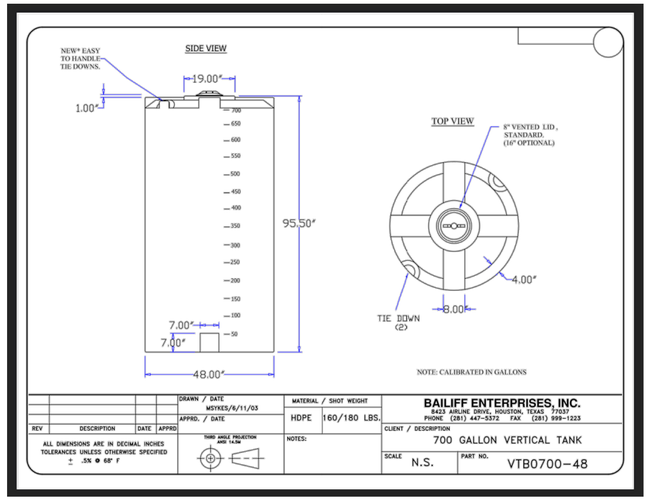
#	REVISION DESCRIPTION	SIGNATURE	DATE

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S AGU AST.dwg-ABOVEGROUND STORAGE TANK PLAN Plotted Jun 27, 2025 at 11:18am by Engineer | Last Saved by: Engineer

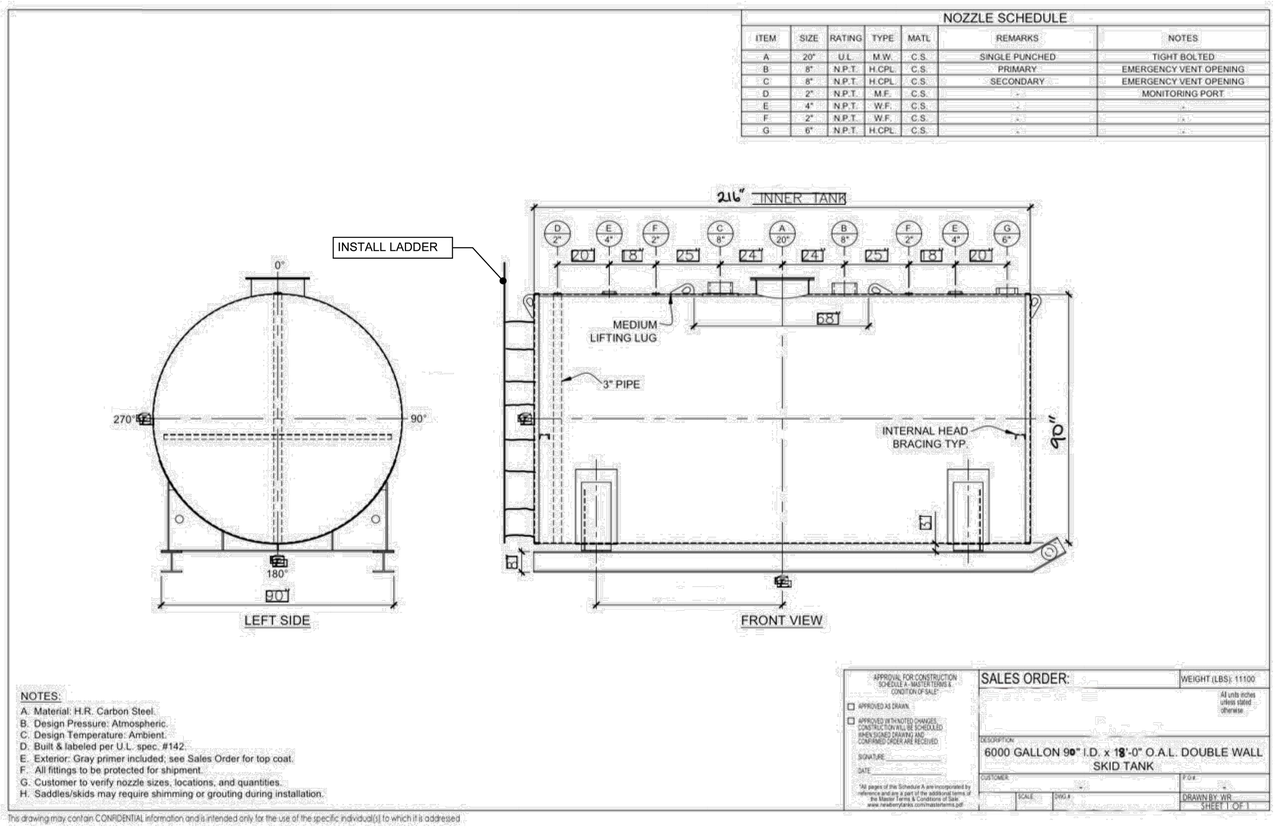
500 GALLON WASTE OIL TANK



700 GALLON DEF TANK

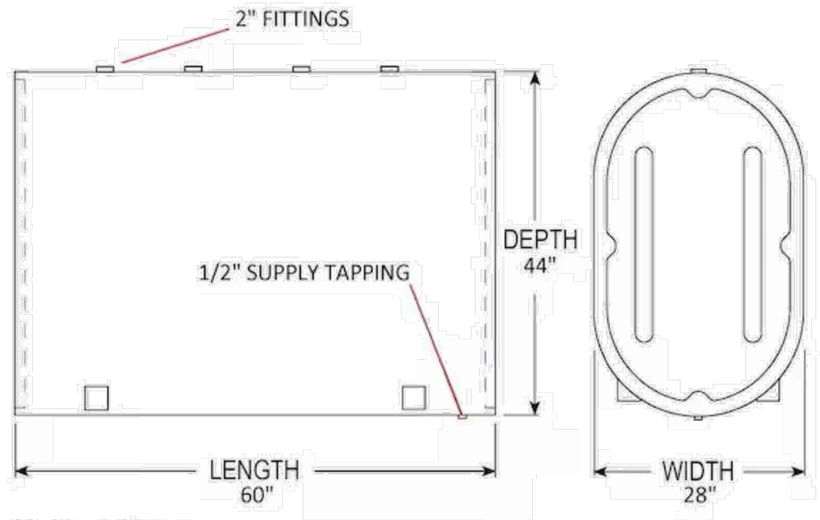


6000 GALLON FUEL TANK



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275 GALLON OIL TANK



Vertical Style
- 12 Gauge Steel

STATE OF TEXAS
NICHOLAS R. SANDLIN
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LICENSED
PROFESSIONAL ENGINEER
9/26/2025

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ABOVEGROUND STORAGE TANK DETAILS

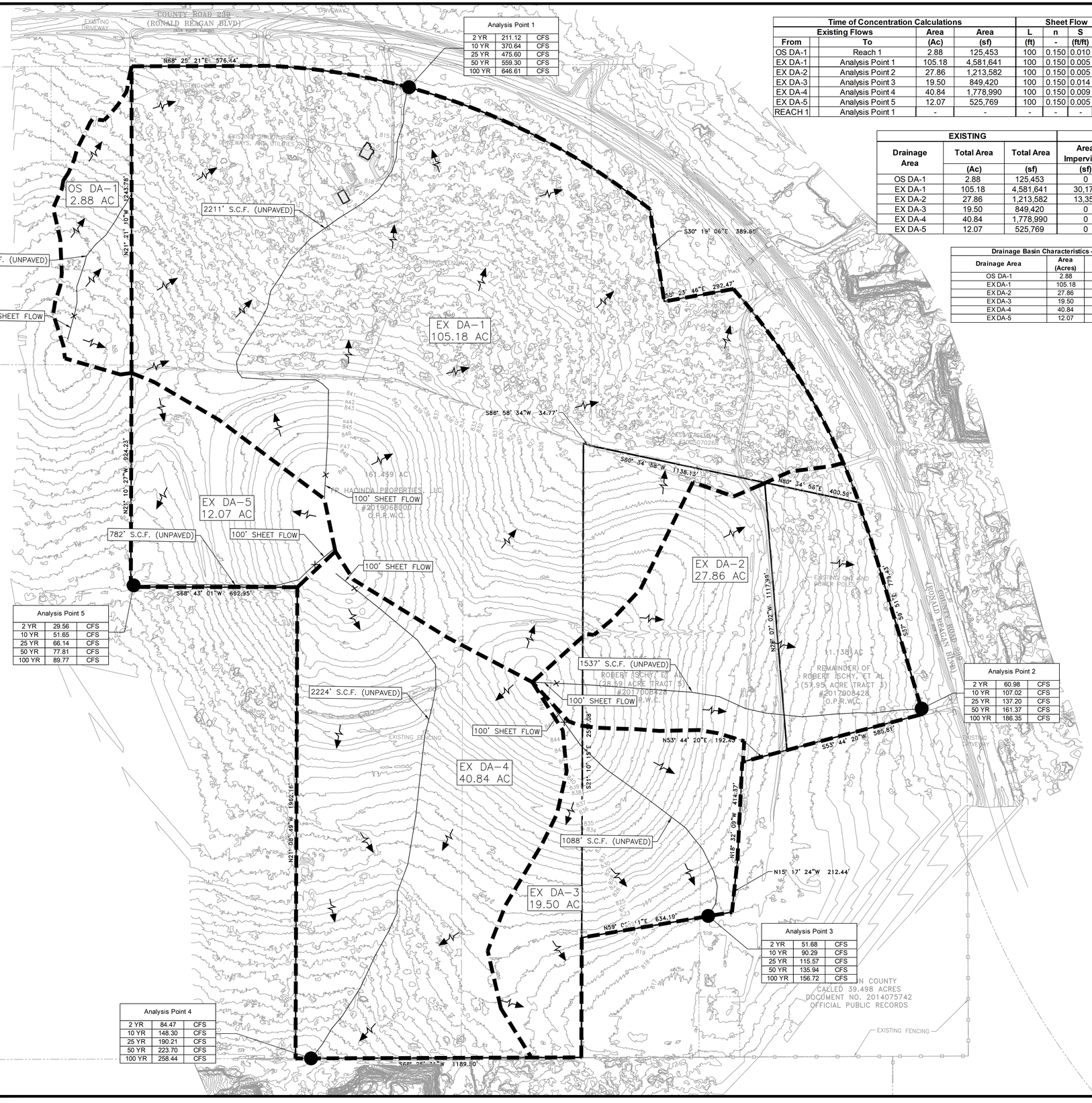
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SHEET 11 OF 21

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Analysis Point 1		
2 YR	211.12	CFS
10 YR	370.64	CFS
25 YR	475.60	CFS
50 YR	559.30	CFS
100 YR	646.61	CFS

Analysis Point 2		
2 YR	60.98	CFS
10 YR	107.02	CFS
25 YR	137.20	CFS
50 YR	161.37	CFS
100 YR	186.35	CFS

Analysis Point 3		
2 YR	51.68	CFS
10 YR	90.29	CFS
25 YR	115.57	CFS
50 YR	135.94	CFS
100 YR	156.72	CFS

Analysis Point 4		
2 YR	84.47	CFS
10 YR	148.30	CFS
25 YR	190.21	CFS
50 YR	223.70	CFS
100 YR	258.44	CFS

Analysis Point 5		
2 YR	29.56	CFS
10 YR	51.65	CFS
25 YR	66.14	CFS
50 YR	77.81	CFS
100 YR	89.77	CFS

Time of Concentration Calculations

Existing Flows		Area	Area	Sheet Flow				Shallow Conc. Flow				Channel Flow			Total
				L	n	S	T_t	L	Surface	S	T_t	L	Vavg	T_t	T_c
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	(ft/s)	(min)	(min)
OS DA-1	Reach 1	2.88	125,453	100	0.150	0.010	12.47	579	Unpaved	0.019	4.34	-	-	0.00	**16.81**
EX DA-1	Analysis Point 1	105.18	4,581,641	100	0.150	0.005	16.45	2,211	Unpaved	0.017	17.47	-	-	0.00	**33.92**
EX DA-2	Analysis Point 2	27.86	1,213,582	100	0.150	0.005	16.45	1,537	Unpaved	0.023	10.55	-	-	0.00	**27.00**
EX DA-3	Analysis Point 3	19.50	849,420	100	0.150	0.014	10.90	1,088	Unpaved	0.023	7.36	-	-	0.00	**18.25**
EX DA-4	Analysis Point 4	40.84	1,778,990	100	0.150	0.009	13.31	2,224	Unpaved	0.018	16.92	-	-	0.00	**30.23**
EX DA-5	Analysis Point 5	12.07	525,769	100	0.150	0.005	16.45	782	Unpaved	0.024	5.21	-	-	0.00	**21.66**
REACH 1	Analysis Point 1	-	-	-	-	-	0	1,012	Unpaved	0.019	7.63	-	-	0.00	**7.63**

Drainage Area	EXISTING Total Area	EXISTING Total Area	IMPERVIOUS Area Impervious	IMPERVIOUS Area Impervious	IMPERVIOUS Area Impervious	GRASS Area Grass	GRASS Area Grass	GRASS Area Grass
	(Ac)	(sf)	(sf)	(Ac)	(%)	(sf)	(Ac)	(%)
OS DA-1	2.88	125,453	0	0.00	0.0%	125,453	2.88	100.0%
EX DA-1	105.18	4,581,641	30,175	0.69	0.7%	4,551,466	104.49	99.3%
EX DA-2	27.86	1,213,582	13,356	0.31	1.1%	1,200,226	27.55	98.9%
EX DA-3	19.50	849,420	0	0.00	0.0%	849,420	19.50	100.0%
EX DA-4	40.84	1,778,990	0	0.00	0.0%	1,778,990	40.84	100.0%
EX DA-5	12.07	525,769	0	0.00	0.0%	525,769	12.07	100.0%

Drainage Basin Characteristics - Existing Conditions

Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q50 (cfs)	Q100 (cfs)
OS DA-1	2.88	0.00%	84.0	16.81	7.92	13.81	17.68	20.80	23.97
EX DA-1	105.18	0.66%	84.0	33.92	205.11	359.78	461.82	543.20	628.00
EX DA-2	27.86	1.10%	83.8	27.00	60.98	107.02	137.20	161.37	186.35
EX DA-3	19.50	0.00%	84.0	18.25	51.68	90.29	115.57	135.94	156.72
EX DA-4	40.84	0.00%	84.0	30.23	84.47	148.30	190.21	223.70	258.44
EX DA-5	12.07	0.00%	84.0	21.66	29.56	51.65	66.14	77.81	89.77

EXISTING FLOW PATTERNS

NOTES:

1. PER THE WILLIAMSON COUNTY SUBDIVISION REGULATIONS, ATLAS 14 RAINFALL DATA AND NRCS METHODOLOGY AS RECOGNIZED WITHIN THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL UTILIZED FOR THIS STUDY.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

EXISTING DRAINAGE LEGEND

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

0 100' 200' 400'
SCALE: 1" = 200'

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EXISTING DRAINAGE AREA MAP

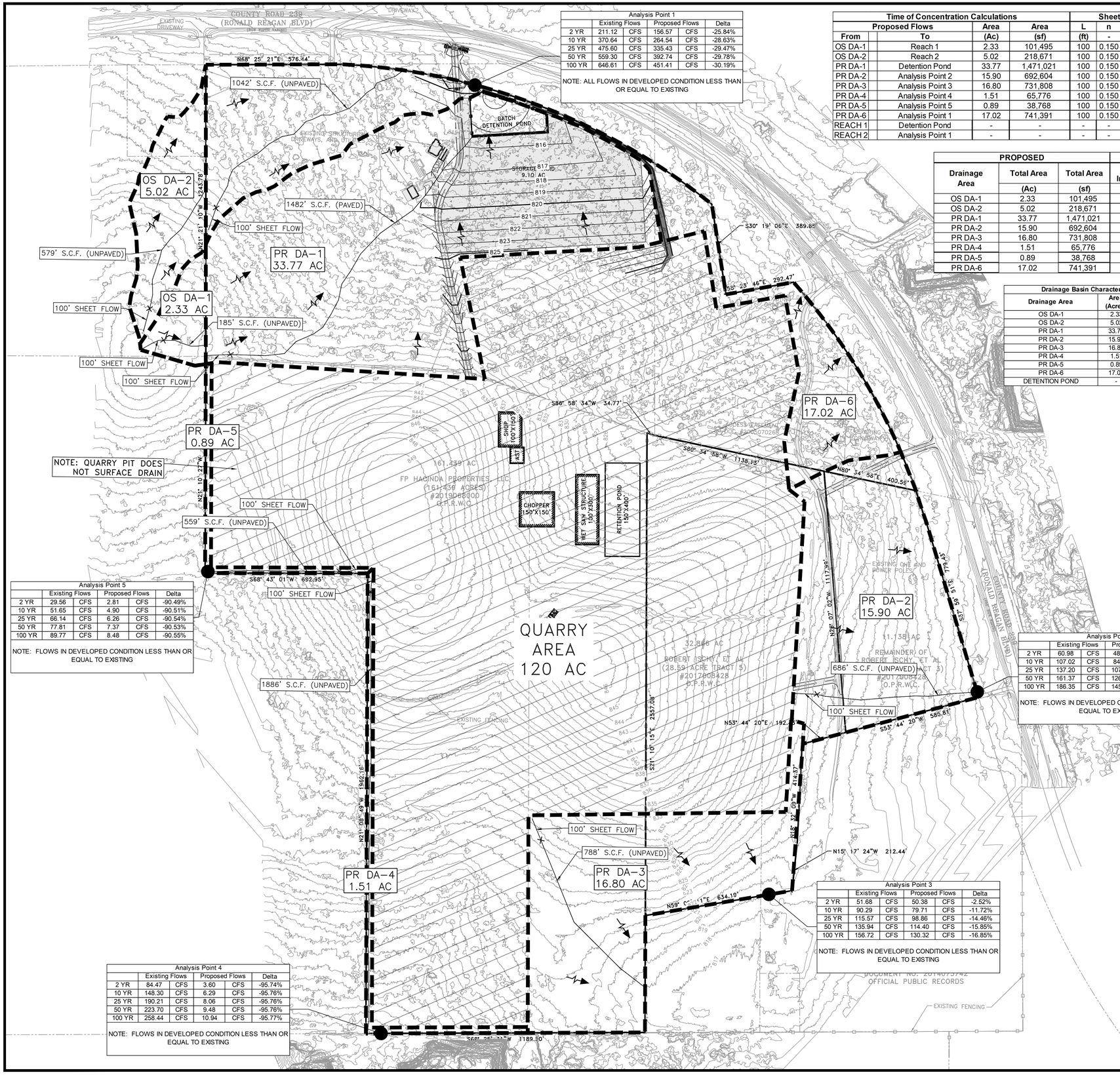
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SHEET 12 OF 21

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Analysis Point 1					
	Existing Flows		Proposed Flows		Delta
2 YR	211.12	CFS	156.57	CFS	-25.84%
10 YR	370.64	CFS	264.54	CFS	-28.63%
25 YR	475.60	CFS	335.43	CFS	-29.47%
50 YR	559.30	CFS	392.74	CFS	-29.78%
100 YR	646.61	CFS	451.41	CFS	-30.19%

NOTE: ALL FLOWS IN DEVELOPED CONDITION LESS THAN OR EQUAL TO EXISTING

Analysis Point 5					
	Existing Flows		Proposed Flows		Delta
2 YR	29.56	CFS	2.81	CFS	-90.49%
10 YR	51.65	CFS	4.90	CFS	-90.51%
25 YR	66.14	CFS	6.26	CFS	-90.54%
50 YR	77.81	CFS	7.37	CFS	-90.53%
100 YR	89.77	CFS	8.48	CFS	-90.55%

NOTE: FLOWS IN DEVELOPED CONDITION LESS THAN OR EQUAL TO EXISTING

Analysis Point 4					
	Existing Flows		Proposed Flows		Delta
2 YR	84.47	CFS	3.60	CFS	-95.74%
10 YR	148.30	CFS	6.29	CFS	-95.76%
25 YR	190.21	CFS	8.06	CFS	-95.76%
50 YR	223.70	CFS	9.48	CFS	-95.76%
100 YR	258.44	CFS	10.94	CFS	-95.77%

NOTE: FLOWS IN DEVELOPED CONDITION LESS THAN OR EQUAL TO EXISTING

Analysis Point 2					
	Existing Flows		Proposed Flows		Delta
2 YR	60.98	CFS	48.98	CFS	-19.68%
10 YR	107.02	CFS	84.68	CFS	-20.87%
25 YR	137.20	CFS	107.98	CFS	-21.30%
50 YR	161.37	CFS	126.81	CFS	-21.42%
100 YR	186.35	CFS	145.91	CFS	-21.70%

NOTE: FLOWS IN DEVELOPED CONDITION LESS THAN OR EQUAL TO EXISTING

Analysis Point 3					
	Existing Flows		Proposed Flows		Delta
2 YR	51.68	CFS	50.38	CFS	-2.52%
10 YR	90.29	CFS	79.71	CFS	-11.72%
25 YR	115.57	CFS	98.86	CFS	-14.46%
50 YR	135.94	CFS	114.40	CFS	-15.85%
100 YR	156.72	CFS	130.32	CFS	-16.85%

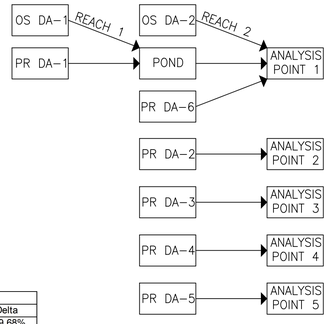
NOTE: FLOWS IN DEVELOPED CONDITION LESS THAN OR EQUAL TO EXISTING

Time of Concentration Calculations				Sheet Flow				Shallow Conc. Flow				Channel Flow				Total
Proposed Flows		Area	Area	L	n	S	T_t	L	Surface	S	T_t	L	Vavg	T_t		T_c
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	(ft/s)	(min)		(min)
OS DA-1	Reach 1	2.33	101,495	100	0.150	0.010	12.47	185	Unpaved	0.013	1.66	-	-	0.00		**14.13**
OS DA-2	Reach 2	5.02	218,671	100	0.150	0.010	12.47	579	Unpaved	0.019	4.34	-	-	0.00		**16.81**
PR DA-1	Detention Pond	33.77	1,471,021	100	0.150	0.011	12.05	1,482	Paved	0.018	9.02	-	-	0.00		**21.06**
PR DA-2	Analysis Point 2	15.90	692,604	100	0.150	0.029	8.14	686	Unpaved	0.019	5.19	-	-	0.00		**13.33**
PR DA-3	Analysis Point 3	16.80	731,808	100	0.150	0.008	13.63	788	Unpaved	0.011	7.88	-	-	0.00		**21.52**
PR DA-4	Analysis Point 4	1.51	65,776	100	0.150	0.021	9.30	1,886	Unpaved	0.020	13.63	-	-	0.00		**22.93**
PR DA-5	Analysis Point 5	0.89	38,768	100	0.150	0.027	8.38	559	Unpaved	0.026	3.57	-	-	0.00		**11.95**
PR DA-6	Analysis Point 1	17.02	741,391	100	0.150	0.024	8.84	1,042	Unpaved	0.019	7.79	-	-	0.00		**16.63**
REACH 1	Detention Pond	-	-	-	-	-	0	1,551	Paved	0.018	9.42	-	-	0.00		**9.42**
REACH 2	Analysis Point 1	-	-	-	-	-	0	1,012	Unpaved	0.019	7.63	-	-	0.00		**7.63**

PROPOSED			IMPERVIOUS			GRASS		
Drainage Area	Total Area	Total Area	Area Impervious	Area Impervious	Area Impervious	Area Grass	Area Grass	Area Grass
	(Ac)	(sf)	(sf)	(Ac)	(%)	(sf)	(Ac)	(%)
OS DA-1	2.33	101,495	0	0.00	0.0%	101,495	2.33	100.0%
OS DA-2	5.02	218,671	0	0.00	0.0%	218,671	5.02	100.0%
PR DA-1	33.77	1,471,021	445,217	10.22	30.3%	1,025,804	23.55	69.7%
PR DA-2	15.90	692,604	40,288	0.92	5.8%	652,316	14.98	94.2%
PR DA-3	16.80	731,808	365,904	8.40	50.0%	365,904	8.40	50.0%
PR DA-4	1.51	65,776	0	0.00	0.0%	65,776	1.51	100.0%
PR DA-5	0.89	38,768	0	0.00	0.0%	38,768	0.89	100.0%
PR DA-6	17.02	741,391	12,502	0.29	1.7%	728,889	16.73	98.3%

Drainage Basin Characteristics - Proposed Conditions									
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q50 (cfs)	Q100 (cfs)
OS DA-1	2.33	0.00%	84	14.13	6.90	12.03	15.37	18.06	20.80
OS DA-2	5.02	0.00%	84	16.81	13.80	24.08	30.82	36.25	41.79
PR DA-1	33.77	30.27%	84	21.06	94.97	155.80	195.51	227.63	260.51
PR DA-2	15.90	5.82%	84	13.33	48.98	84.68	107.98	126.81	145.91
PR DA-3	16.80	50.00%	84	21.52	50.38	79.71	98.86	114.40	130.32
PR DA-4	1.51	0.00%	84	22.93	3.60	6.29	8.06	9.48	10.94
PR DA-5	0.89	0.00%	84	11.95	2.81	4.90	6.26	7.37	8.48
PR DA-6	17.02	1.69%	84	16.63	47.33	82.37	105.27	123.75	142.56
DETENTION POND	-	-	-	-	99.78	165.31	207.98	242.53	278.15

PROPOSED FLOW PATTERNS



PROPOSED DRAINAGE LEGEND

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

NOTES:

1. PER THE WILLIAMSON COUNTY SUBDIVISION REGULATIONS, ATLAS 14 RAINFALL DATA AND NRCS METHODOLOGY AS RECOGNIZED WITHIN THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL UTILIZED FOR THIS STUDY.

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PROPOSED DRAINAGE AREA MAP

PROJECT CASE: XXXXXXX

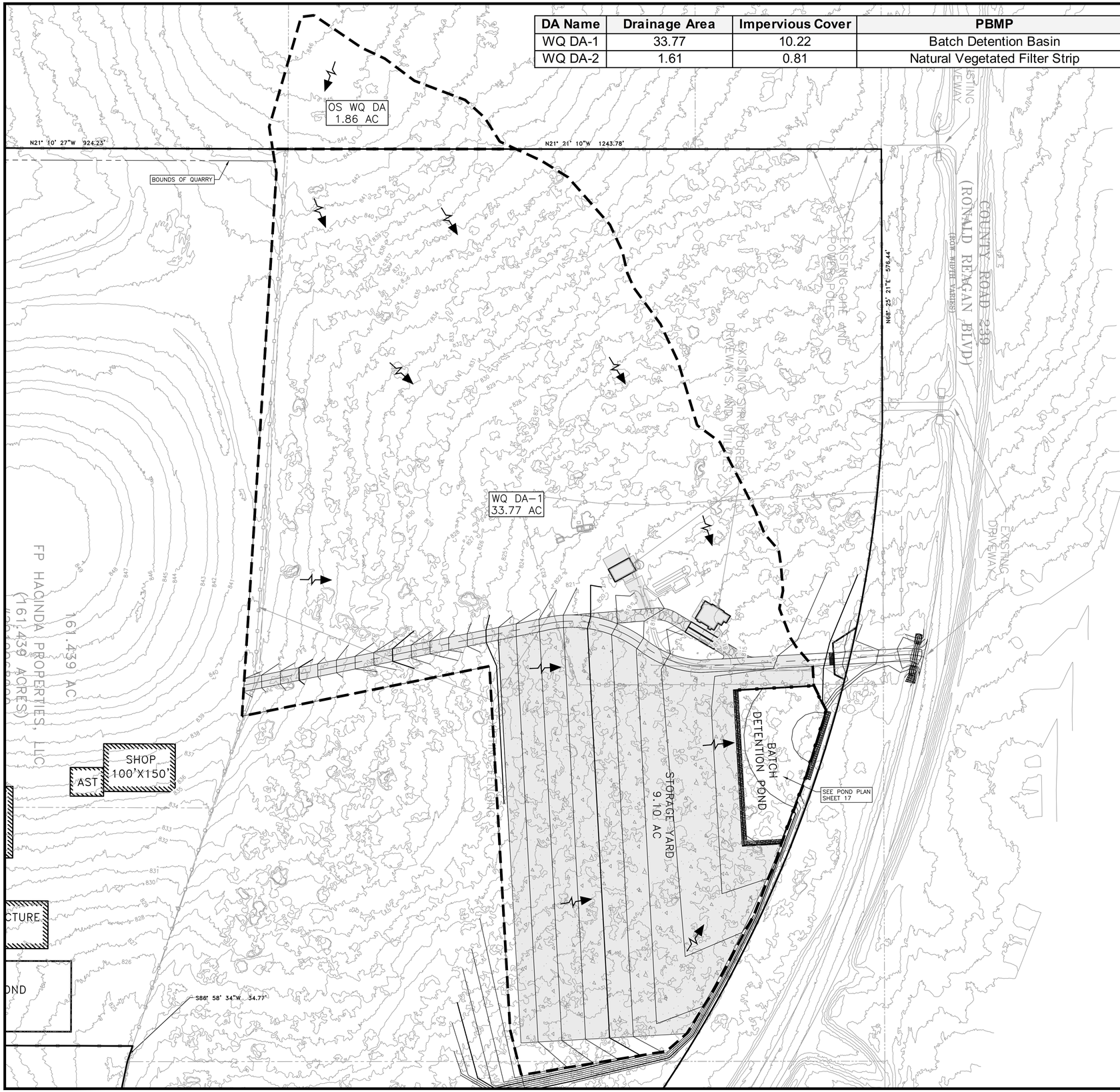
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#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 13 OF 21

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DA Name	Drainage Area	Impervious Cover	PBMP	TSS Removal	Designed TSS Removal
WQ DA-1	33.77	10.22	Batch Detention Basin	10668	9181
WQ DA-2	1.61	0.81	Natural Vegetated Filter Strip	770	770



WATER QUALITY LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- WQ. DA-X XX.XX AC — DRAINAGE AREA DESIGNATION AND AREA DRAINED
- FLOW ARROW
- VEGETATED FILTER STRIP
- GRANDFATHERED IMPERVIOUS COVER
- 750 — EXISTING CONTOURS
- 755 — PROPOSED CONTOURS

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
6/26/2025

0 50' 100' 200'
SCALE: 1" = 100'

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WATER QUALITY PLAN (1 OF 2)

PROJECT CASE: XXXXXXX

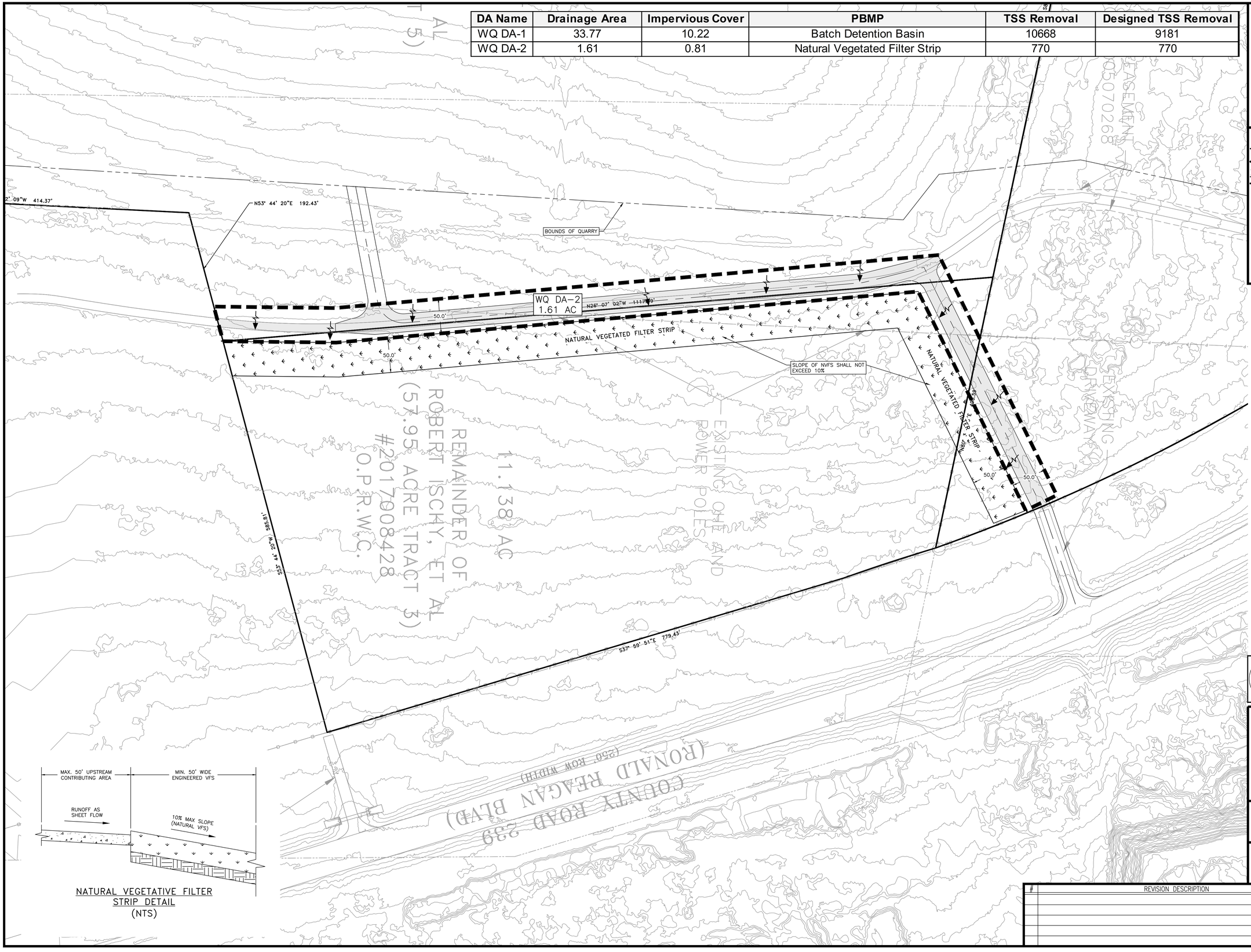
CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 14 OF 21

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DA Name	Drainage Area	Impervious Cover	PBMP	TSS Removal	Designed TSS Removal
WQ DA-1	33.77	10.22	Batch Detention Basin	10668	9181
WQ DA-2	1.61	0.81	Natural Vegetated Filter Strip	770	770



NATURAL VEGETATIVE FILTER STRIP DETAIL
(NTS)

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

WATER QUALITY LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- WQ. DA-X XX.XX AC — DRAINAGE AREA DESIGNATION AND AREA DRAINED
- FLOW ARROW
- VEGETATED FILTER STRIP
- GRANDFATHERED IMPERVIOUS COVER
- 750 — EXISTING CONTOURS
- 755 — PROPOSED CONTOURS

0 30' 60' 120'
SCALE: 1" = 60'

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

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

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9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

WATER QUALITY PLAN (2 OF 2)

PROJECT CASE: XXXXXXX

CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 15 OF 21

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Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Calibre Quarry
Date Prepared: 6/10/2025

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance M
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

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

County =	Williamson		
Total project area included in plan * =	185.35	acres	
Predevelopment impervious area within the limits of the plan * =	0.000	acres	
Total post-development impervious area within the limits of the plan* =	11.43	acres	*Permanent Improvements Only
Total post-development impervious cover fraction * =	0.06		
P =	32	inches	
$L_{M\ TOTAL\ PROJECT}$ =	9951	lbs.	

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

Number of drainage basins / outfalls areas leaving the plan area = 2

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

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

Total drainage basin/outfall area =	33.77	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	10.22	acres
Post-development impervious fraction within drainage basin/outfall area =	0.30	
$L_{M\ THIS\ BASIN}$ =	8896	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention
Removal efficiency = 91 percent

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

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	33.77	acres
A_I =	10.22	acres
A_P =	23.55	acres
L_R =	10668	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 9181 lbs.

F = 0.86

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth =	1.38	inches
Post Development Runoff Coefficient =	0.26	
On-site Water Quality Volume =	43899	cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP =	1.86	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	186	cubic feet
Storage for Sediment =	8817	
Total Capture Volume (required water quality volume(s) x 1.20) =	52902	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

BATCH DETENTION POND		
Contributing Drainage Area =	"WQ DA-1"	
Total Drainage Area =	185.35	acre
Pre-Development I.C. =	0.00	acre
Post-Development I.C. =	11.43	acre
Post-Development I.C. Fraction =	0.06	
$L_{M\ TOTAL\ PROJECT}$ =	9951	lbs
A_C =	33.77	acre
A_I =	10.22	acre
A_P =	23.55	acre
L_R =	10668	lbs
Fraction of Annual Runoff (F) =	0.86	
Rainfall Depth =	1.38	inch
Post Development Runoff Coefficient =	0.26	
On-site Water Quality Volume =	43899	cubic ft
Off-site area draining to BMP =	1.86	acre
Off-site Impervious cover draining to BMP =	0.00	acre
Impervious fraction of off-site area =	-	
Off-site Runoff Coefficient =	-	
Off-site Water Quality Volume =	186	cubic ft
Storage for Sediment =	8817	cubic ft
Total Capture Volume Required =	52902	cubic ft
Total Capture Volume Provided =	77762	cubic ft

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Calibre Quarry
Date Prepared: 6/10/2025

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County =	Williamson		
Total project area included in plan * =	185.35	acres	
Predevelopment impervious area within the limits of the plan * =	0.000	acres	
Total post-development impervious area within the limits of the plan* =	11.43	acres	*Permanent Improvements Only
Total post-development impervious cover fraction * =	0.06		
P =	32	inches	
$L_{M\ TOTAL\ PROJECT}$ =	9951	lbs.	

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

Number of drainage basins / outfalls areas leaving the plan area = 2

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

Drainage Basin/Outfall Area No. = 2 "WQ DA-2"

Total drainage basin/outfall area =	1.61	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.81	acres
Post-development impervious fraction within drainage basin/outfall area =	0.50	
$L_{M\ THIS\ BASIN}$ =	701	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

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

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	1.61	acres
A_I =	0.81	acres
A_P =	0.80	acres
L_R =	770	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 770 lbs.

F = 1.00

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
6/6/2025

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WATER QUALITY CALCULATIONS

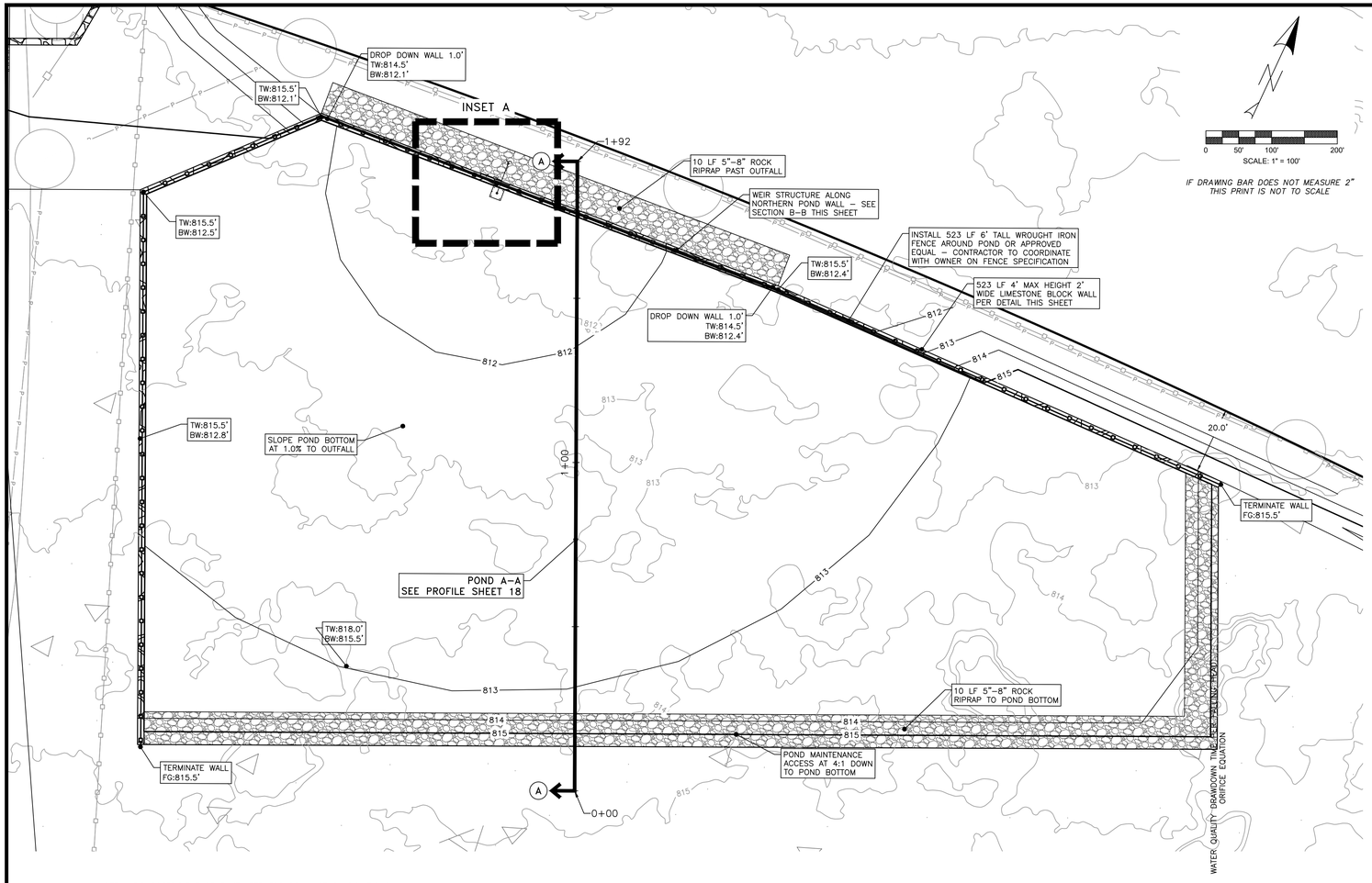
PROJECT CASE: XXXXXXX

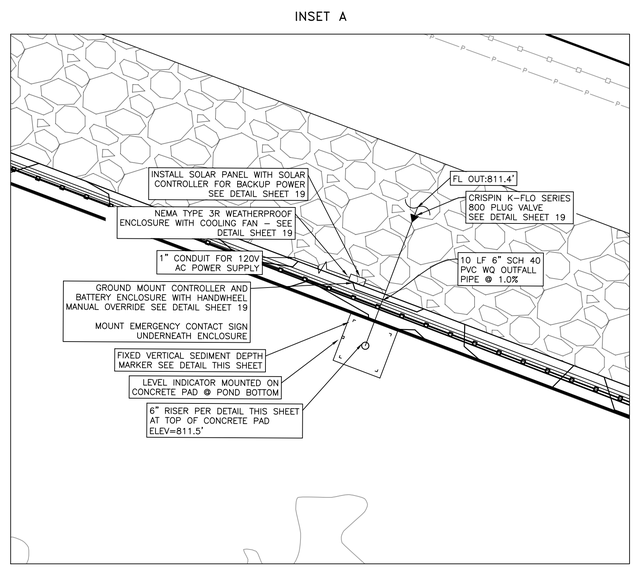
CALIBRE QUARRY

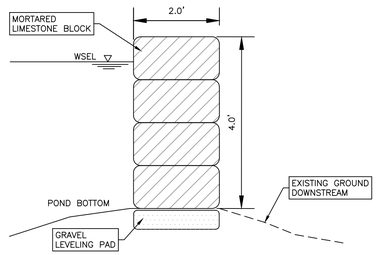
#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 16 OF 21

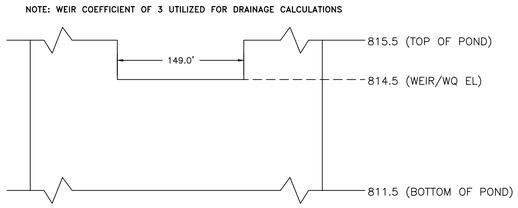
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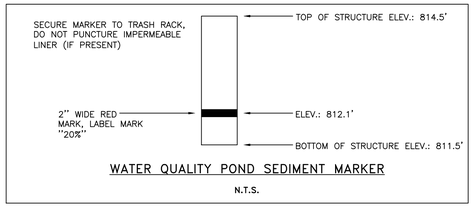




DETENTION POND ROCK WALL SECTION
N.T.S.



WEIR DETAIL
SECTION B-B
N.T.S.



WATER QUALITY POND SEDIMENT MARKER
N.T.S.

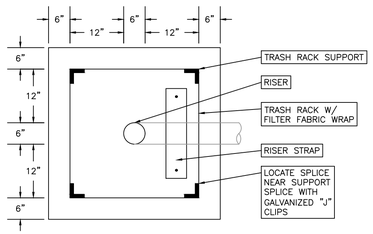
Surface Area (sq. ft.)	44583
Orifice coefficient (use 0.6 per DCM)	0.6
h_1 (ft)	3
h_2 (ft)	0
t (hrs.)	48
A_o orifice area (sq. ft.)	0.186
Orifice diameter (in.)	5.83

Detention Analysis Summary

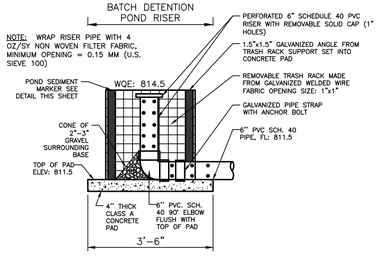
	Analysis Point #1		Peak Flow Entering Pond (cfs)	Peak Flow Leaving Pond (cfs)	Peak Elevation (m.s.l.)	Freeboard (ft)	Peak Storage (ac-ft)
	Peak Pre-Dev Flows(cfs)	Peak Post-Dev Flows(cfs)					
2-YR	211.12	156.57	101.80	99.78	814.87	0.63	0.38
10-YR	370.64	264.54	167.77	165.31	815.02	0.48	0.53
25-YR	475.60	335.43	210.83	207.98	815.10	0.40	0.62
50-YR	559.30	392.74	245.66	242.53	815.17	0.33	0.69
100-YR	646.61	451.41	281.29	278.15	815.23	**0.27**	0.76

CALIBRE QUARRY
DETENTION POND STAGE-STORAGE-DISCHARGE

	Stage (ft msl)	Area (sf)	Area (acres)	Storage Incremental	Storage Cumulative	Storage Cumulative (ac-ft)	Discharge (CFS)
	811.50	0	0.0000	0	0	0.0000	N/A
	812.00	4,515	0.1037	1,129	1,129	0.0259	N/A
	813.00	30,380	0.6974	17,448	18,576	0.4265	N/A
	814.00	43,800	1.0055	37,090	55,666	1.2779	N/A
WQE	**814.50**	**44,583**	**1.0235**	**22,096**	**77,762**	**1.7852**	N/A
	815.00	45,627	1.0475	22,553	100,315	2.3029	154.9
	815.50	46,479	1.0670	23,027	123,341	2.8315	438.0



BATCH DETENTION
POND RISER PIPE
N.T.S.



WATER QUALITY RISER PIPE
SECTION
N.T.S.

LENGTH OF RIP RAP APRON

LA = LENGTH OF RIP RAP, FT
V = CULVERT DISCHARGE VELOCITY, FT/S
D = DIAMETER OR HEIGHT OF CULVERT, FT
LA = 0.5 V*D
V = Q/A = 281.29 CFS / 93.87 FT^2 = 3.0 FT/S

LA = 0.5(3.0)(1.0) = 3.0 FT REQUIRED, 10 FT OF RIP RAP PROVIDED

OUTFALL AND RIP RAP NOTES

1. CLASS 2 RIP-RAP (OUTFALL OF ALL CULVERTS) NO MORE THAN 10% OF THE STONE WILL HAVE A DIAMETER GREATER THAN SIXTEEN (1 6) INCHES; NO MORE THAN 50% OF THE STONE WILL HAVE A DIAMETER LESS THAN TWELVE (12) INCHES; AND NO MORE THAN 10% OF THE STONE WILL HAVE A DIAMETER OF LESS THAN SIX (6) INCHES. THE THICKNESS OF THE RIP-RAP LINER WILL BE NO LESS THAN SIXTEEN (16) INCHES.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
6/26/2025

POND LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- STRUCTURAL RETAINING WALL (BY OTHERS)
- SITE WALLS
- POND FENCE
- EXISTING CONTOURS (750)
- PROPOSED CONTOURS (750)
- EX. WATER LINE (W)
- PR. WATER LINE (W)
- EX. WASTEWATER (WW)
- PR. WASTEWATER (WW)
- EX. STORM SEWER LINE (STM)
- PR. STORM SEWER LINE (STM)
- EX. FIRE HYDRANT
- PR. FIRE HYDRANT
- EX. WATER METER (WM)
- PR. WATER METER
- EX. WASTEWATER MANHOLE (WW)
- PR. WASTEWATER MANHOLE (WW)
- DETAIL NUMBER (A)
- SECTION A-A (A)
- SECTION LABEL WITH DETAIL CALLOUT REFERENCE WITH BUBBLE

NOTES:

1. POST THE FOLLOWING SIGN UNDER THE VISIBLE ALARM FOR EMERGENCY CONTACT:

EMERGENCY CONTACT:
OWNER: XXX-XXX-XXXX
TCEQ: 512-339-2929

2. POND BOTTOM SHALL BE VEGETATED PER THE SEEDING SPECIFICATION ON THE EROSION CONTROL PLAN SHEET.

811.5 BLUE STAKE, INC. TEXAS ONE-CALL SYSTEM
TEXAS811.ORG
811 BEFORE YOU DIG

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DETENTION POND PLAN

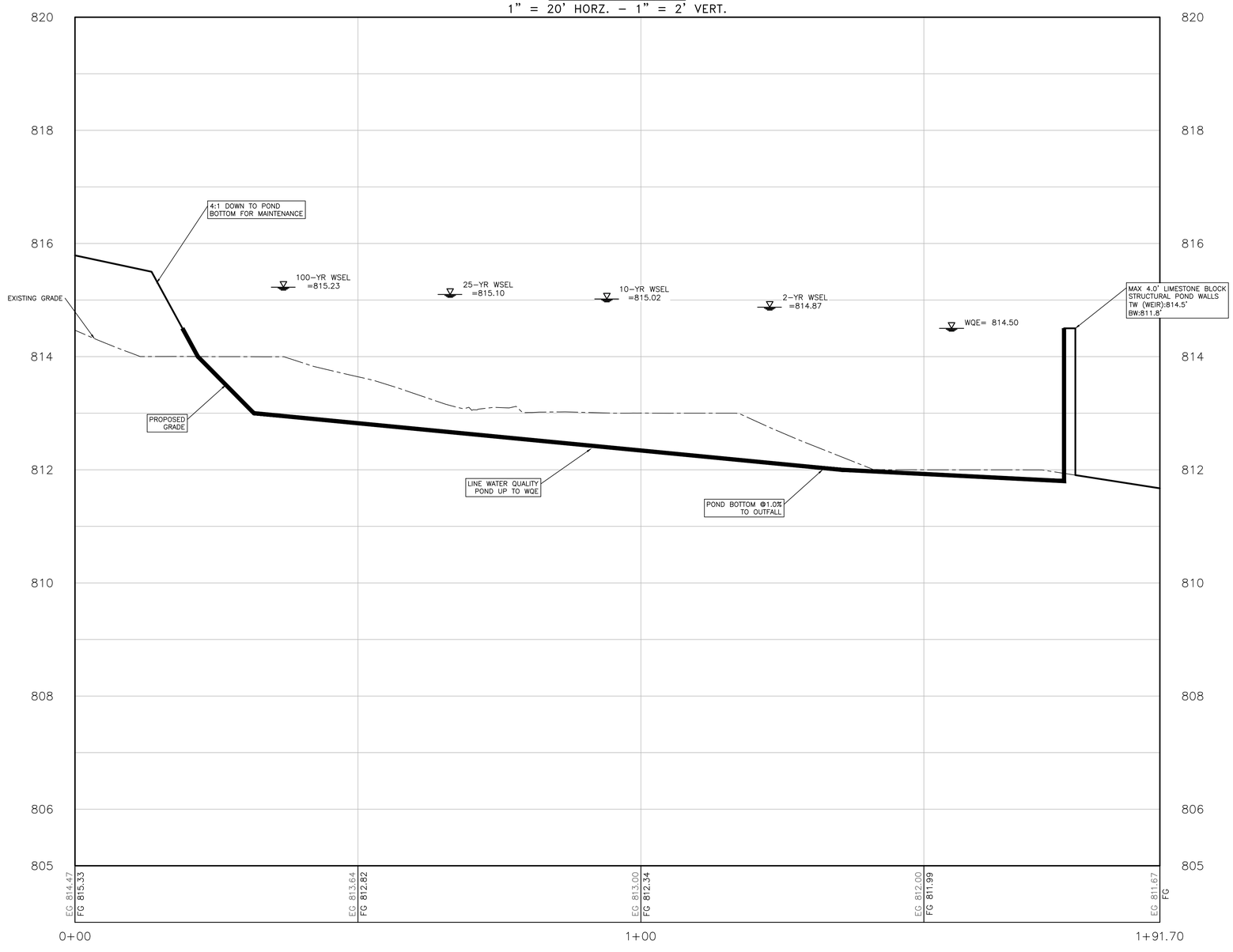
PROJECT CASE: XXXXXXX

CALIBRE QUARRY

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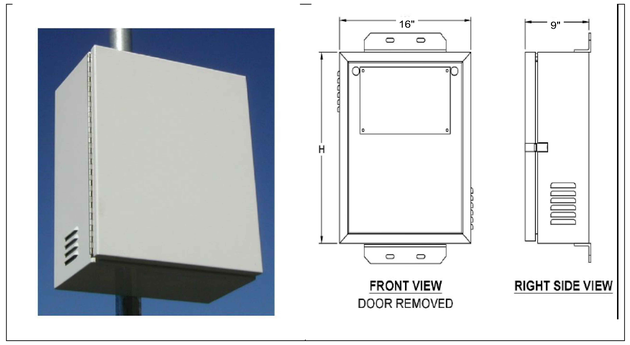
DETENTION POND PROFILE

PROJECT CASE: XXXXXXX

CALIBRE QUARRY

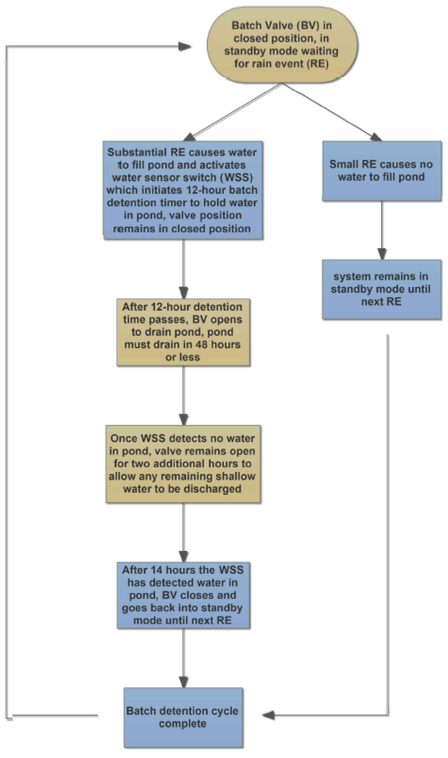
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Ground Mount Controller and Battery Enclosure



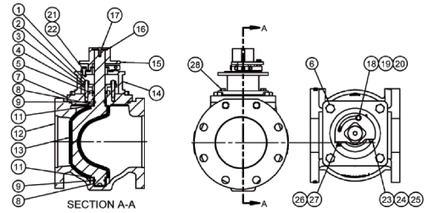
- Standard boxes are fabricated from .125" thick 5052--H32 aluminum
- Heavy--duty stainless steel continuous
- Heavy--duty stainless steel continuous hinge
- Seams are continuously welded and then sanded smooth
- Adjustable tension stainless steel padlock hasp
- Removable component mounting plate
- Standard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

Batch Valve Programmable Logic Flow Chart



800 SERIES MATERIAL LIST

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



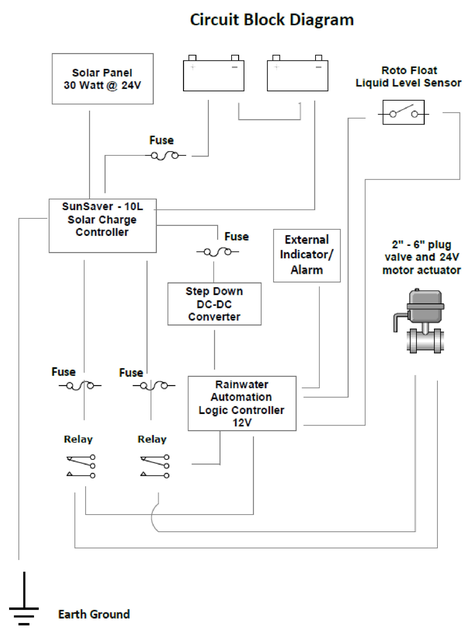
Item	Description	Material	Item	Description	Material
1	Gland Stud	Stainless Steel	15	Torque Collar	A536 GR 65-45-12
2	Hex Nut	Stainless Steel	16	Flat Washer	Q235-A Zinc Plated
3	Flat Washer	Stainless Steel	17	Socket Head Capscrew	Stainless Steel
4	Gland	ASTM A126 CL B	18	Hex Head Capscrew	Stainless Steel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

800 SERIES Cv Data (GPM@1PSI)

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

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

Circuit Block Diagram



PROMATION ENGINEERING

Precision Actuation for Industry

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

POND LINER TO FOLLOW RG-348 SEC. 3.4.2. TABLE 3-7: GEOTEXTILE FABRIC SPECIFICATIONS OR APPROVED EQUAL

Property	Test Method	Unit	Specification (min)
Unit Weight	ASTM D-5261	oz/yd^2	8
Filtration Rate	ASTM D-4491	cm/sec	0.20
Puncture Strength	ASTM D-4833	lb	125
Mullen Burst Strength	ASTM D-3786	psi	400
Tensile Strength	ASTM D-4632	lb	200
Equiv. Opening Size	US Standard Sieve	No.	80

LINER NOTES:

1. GEOMEMBRANE LINER SHALL BE ULTRAVIOLET RESISTANT AND POSSESS MIN. THICKNESS OF 30 MILS.
2. FABRIC SHALL BE PLACED ON TOP AND BOTTOM OF MEMBRANE FOR PUNCTURE PROTECTION AND COVERED WITH MIN. 6" COMPACTED TOPSOIL.
3. GEOTEXTILE FABRIC SHALL BE STABILIZED WITH APPROPRIATE VEGATATION, AND NONWOVEN PER TABLE 3-7 SPECIFICATIONS.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
9/26/2025

MORNINGSTAR
PROFESSIONAL SERIES
World's Leading Solar Controllers & Inverters

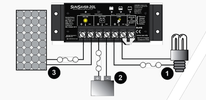
+1-215-321-4457
sales@morningstarcorp.com

Technical Specifications

Versions	SS-10L-24V, SS-10L-12V, SS-6-12V, SS-6L-12V, SS-20L-12V, SS-10-12V, SS-20L-24V	
Electrical		
Max. PV and load ratings	Shown to the right	
System voltage	12V or 24V	
Min. battery voltage	6V*	
Regulation voltage	12 volt	24 volt
Sealed battery	14.1 V	28.2 V
Flooded battery	14.6 V	29.2 V
Load disconnect	11.5 V	23.0 V
LVD reconnect	12.6 V	25.2 V
Max. solar voltage		
12V battery	30 volts	
24V battery	60 volts	
Load in-rush capability		
SunSaver-6	45 amps	
SunSaver-10	65 amps	
SunSaver-20	140 amps	
Self-consumption	< 8 mA	
Voltage accuracy	12V: +/- 25 mV (typical) 24V: +/- 48 mV (typical)	
Transient surge protection	1500W per connection	
Mechanical		
Wire size	5 mm² / #10 AWG	
Weight (unpacked)	0.23kg / 8 oz.	
Dimensions	15.2 x 5.5 x 3.2 cm 6.0 x 2.2 x 1.3 inch	
Environmental		
Ambient temperature	-40°C to +60°C	
Storage temperature	-55°C to +80°C	
Humidity	100% non-condensing	
Tropicalization	Epoxy encapsulation Marine rated terminals Anodized aluminum case	

WARRANTY: Five year warranty period.
Contact Morningstar or your authorized distributor for complete terms.

*In periods following excessive battery drain, provided the controller is not power cycled, the controller can self-recover from a battery voltage of 1V and provide intermittent charging operation up to 6V at which normal operation will resume.



SunSaver shown with included wire terminal cover.

Specification Summary

Ratings	SS-6/6L	SS-10/10L	SS-20L
System voltage	12V	12V or 24V	12V or 24V
Min. battery voltage	6V*	6V*	6V*
Max. solar voltage	30V	30V or 60V	30V or 60V
Max. solar current	6.5A	10A	20A
Max. load current	6A	10A	20A

Battery Charging
- Charging method: 4 stage series PWM
- Charging stages: Bulk, absorption, float, equalize
- Temperature compensation
  - Coefficient: 12V: -30mV/°C; 24V: -60mV/°C
  - Range: -30°C to +60°C
  - Set points: Absorption, float, equalize

LED Indications
- Status LED (1): Charging or not charging; Solar error conditions
- Battery LED's (3): Battery level; Charging stage

Certifications
- Hazardous Locations:
  - UL121201/CSA C22.2 #213 Class I, Div. 2 Groups A-D T5
  - ATEX II 3G Ex ec IIC T4...T5 Gc
  - IECEx Ex ec IIC T4...T5 Gc
- CE, RoHS and REACH Compliant
- IEC/EN 62109-1 Ed.1 2010
- UL 1604/ANSI/ISA 12.12.01-2000 (USA) and CSA C22.2 No. 213-M1987 (Reaffirmed 2004) (CANADA) Listed
- ETL Listed: UL 1741 (terminal cover required for compliance)
- FCC Title 47 (CFR), Part 15 Subpart B for Class B Device
- Manufactured in a Certified ISO 9001 Facility

Electronic Protections
- Solar: Overload, short-circuit, high voltage
- Load: Overload, short-circuit, high voltage
- Battery: High voltage
- All: Reverse polarity, high temperature, lightning and transient surges
- Reverse current at night

8 Pheasant Run, Newtown, PA 18940 USA Control # MS-002634 REV 8/2022.EN www.morningstarcorp.com

Due to Morningstar's policy of continuous improvement, product availability, features and specifications are subject to change without notice. Information in this publication has been checked for accuracy; however, no responsibility is assumed for typos or errors. ©2022 Morningstar Corporation

NOTE: CONTRACTOR TO USE 30W @ 24V SOLAR PANEL WITH THIS CONTROLLER OR APPROVED EQUAL

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

THESE PLANS COPYRIGHTED BY SANDLIN SERVICES, LLC

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC

TBPELS FIRM #21356
9111 JOLLYVILLE RD. STE 212 AUSTIN, TX 78759

DETENTION POND DETAILS

PROJECT CASE: XXXXXXX

CALIBRE QUARRY

#	REVISION DESCRIPTION	SIGNATURE	DATE

SHEET 19 OF 21

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0162-001 Calibre Quarry\CAD\Construction Sheets\S_AGU_POND.dwg-DETENTION POND DETAILS Plotted Jun 27, 2025 at 11:19am by Engineer | Last Saved by: Engineer

Permanent Stormwater Section
(TCEQ-0600)

Attachment G:
Inspection, Maintenance, Repair and Retrofit Plan

Batch Detention Basin BMP

Recommended Maintenance Guidelines for Batch Detention Basin BMP

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

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

Mowing
The basin, basin side-slopes, and embankment of the basin must be mowed to prevent woody growth and control weeds. A mulching mower should be used, or the grass clippings should be caught and removed. Mowing should take place at least twice a year, or more frequently if vegetation exceeds 18 inches in height. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. Basin access is along the western portion of the water quality and detention pond, sloped at 4:1 down to the pond bottom.

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

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

Erosion Control

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

Nuisance Control

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

Structural Repairs and Replacement

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

Sediment Removal

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

Logic Controller

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

VEGETATIVE FILTER STRIP (VFS) BMP

Vegetative Filter Strip (VFS) BMP Establishment

Establishment of Vegetative Filter Strips may require irrigation immediately after planting and during particularly dry periods to ensure proper function of the filter strips. Once vegetated strip areas are well established, minimal maintenance is generally needed to ensure continued function of the vegetated filter strips. Corrective maintenance, such as manual weeding or replanting should be done more frequently in the first two to three years after installation to ensure stabilization.

Recommended Maintenance Guidelines for Vegetative Filter Strips (VFS) BMP

Watering

Watering will be limited to the quantity and timing necessary to establish the VFS and to maintain the filter strips over time. Overwatering should be avoided to prevent runoff of irrigation water offsite. Water conservation measures and seasonal watering restrictions, if applicable, should be followed. Dense vegetation may require irrigation immediately after planting and during particularly dry periods, particularly as the vegetation is initially established.

Seasonal Mowing and Filter Strip Care

Vegetative filter strips planted in turf grass should be mowed, as needed, but at least once every 6 months to maintain a dense vegetative cover and to limit vegetation height to 18 inches, using a mulching mower. If a traditional mower is used, grass clippings should be removed. If native grasses are used, the filter may require less frequent mowing, but a minimum of twice annually. Grass clippings and brush debris should not be deposited on VFS areas.

Regular mowing should also include weed control practices; however, herbicide use should be kept to a minimum and follow Integrated Pest Management (IPM) practices. Healthy grass can be maintained without using fertilizers because runoff usually contains sufficient nutrients.

Integrated Pest Management (IPM)

If problem insects and weeds require management, they will be controlled with minimal or no use of insecticides and herbicides. Herbicide and/or pesticide use, if absolutely necessary, must follow Integrated Pest Management (IPM) practices. An Integrated Pest Management (IPM) Plan should be developed for vegetated areas. This plan should specify how problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides. Manual weed control should be implemented and if herbicides or pesticides become necessary, they should be limited to organic-derived compounds with short half-lives. Any necessary herbicides or pesticides will be stored off-site and according to manufacturer recommendations. Healthy grass can typically be maintained without using fertilizers because runoff usually contains sufficient nutrients. The use of persistent and harmful petroleum-based herbicides and pesticides are prohibited. Any necessary use of approved IPM practices and organic-derived compounds will be minimally applied as recommended and follow local, state, and federal regulations for application, storage, and disposal of the chemicals.

Vegetative Filter Strip (VFS) Inspection

Vegetative filter strips will be inspected annually for erosion or damage to vegetation. Additional inspection after periods of heavy rainfall and runoff are necessary to identify erosion or vegetation damage. The VFS should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. More frequent inspections of the grass cover during the first few years after establishment will help to determine if any problems are developing, and to plan for repair and long-term restorative maintenance needs.

Vegetative Filter Strip (VFS) Repair

Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Damaged or thinning vegetation areas should be repaired and reseeded to maintain a dense vegetation cover. A healthy dense grass should be maintained on the filter strip. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level. Sediment removal is not normally required in filter strips since the vegetation normally grows through it and binds it to the soil. However, sediment may accumulate along the upstream boundary of the strip preventing uniform overland flow. Excess sediment should be removed by hand or with flat-bottomed shovels. Grass damaged during the sediment removal process should be promptly replace using the same seed mix used during filter strip establishment. If possible, flow should be diverted from the damaged areas until the grass is firmly established. Bare spots and areas of erosion identified during annual inspections must be replanted and restored to meet specifications. A level, dense filter strip will reestablish shallow overland flow.

Debris and Trash Removal

The VFS should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The site will be inspected monthly (at a minimum quarterly) for the presence of trash and debris. Trash and debris on the site will be removed and disposed of properly in a solid waste container for subsequent removal by the City's solid waste collection service. No batteries or open/unopened containers of motor oil, antifreeze, petroleum products, or hazardous materials should be openly stored or left on the property. Used batteries are to be recycled. Used motor oil should be recycled.

Record Keeping

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

General Owner Responsibility

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

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

An amended copy of this document will be provided to the TCEQ within thirty (30) days of any changes in the following information:

Responsible Party for Maintenance:	FP HACIENDA PROPERTIES LLC
Address:	P.O. BOX 706
City, State, Zip:	JARRELL, TX 76537
Telephone Number:	512-914-3963

OWNER ACKNOWLEDGEMENT AND ACCEPTANCE:

Pedro Aguado
Print Name

Manager
Title


Signature

06 / 27 / 2025
Date

PREPARED AND CERTIFIED BY ENGINEER:


Nick Sandlin, P.E.

6/27/2025
Date

Doc ID: 329d16ff0a9cd08ba058241bff138d45bb9d08f7

Permanent Stormwater Section
(TCEQ-0600)

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

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

Permanent Stormwater Section
(TCEQ-0600)

Attachment I:
Measures for Minimizing Surface Stream Contamination

No surface streams flow across the property.

Agent Authorization Form
(TCEQ-0599)

Owner Authorization Form

Edwards Aquifer Protection Program

Instructions

Complete the following form by adding the requested information in the fields below. The form must be notarized for it to be considered complete. Attach it to other programmatic submittals required by 30 Texas Administrative Code (30 TAC), Chapter 213, and provide it to TCEQ's Edwards Aquifer Protection Program (EAPP) as part of your application.

If you have questions on how to fill out this form or about EAPP, please contact us by phone at 512-339-2929 or by e-mail at eapp@tceq.texas.gov.

Landowner Authorization

I, Pedro Aguado of FP HACIENDA PROPERTIES LLC

am the owner of the property located at:

WCAD ID #R012262, AW0653 AW0653 - Walters, L.s. Sur., ACRES 161.439

WCAD ID #R665599, AW0653 AW0653 - Walters, L.s. Sur., ACRES 11.138

WCAD ID #R665598, AW0653 AW0653 - Walters, L.s. Sur., ACRES 32.866

and am duly authorized in accordance with 30 TAC 213.4(c)(2) and 213.4(d)(1), or 30 TAC 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 Nick Sandlin, P.E. (Sandlin Services, LLC)
To conduct Water Pollution Abatement Plan
At 30°46'11.27"N, 97°41'11.46"W

Landowner Acknowledgement

I understand that FP HACIENDA PROPERTIES LLC

Is ultimately responsible for the 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 and subject to administrative rule or orders and penalties as provided under 30 TAC 213.10, relating to enforcement. Such violations may also be subject to civil penalties.

Landowner Signature

Pedro Aguado

Landowner Signature

June 11, 2025

Date

THE STATE § OF TX

County § of Williamson

BEFORE ME, the undersigned authority, on this day personally appeared

Pedro Aguado

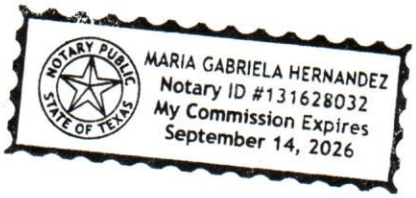
known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 11 day of June, 2025

NOTARY PUBLIC

Maria G. Hernandez

MY COMMISSION EXPIRES: Sep/14/2026



Optional Attachments

Select All that apply:

☐ Lease Agreement

☐ Signed Contract

☐ Deed Restricted Easement

☐ Other legally binding documents

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

Agent Authorization Regarding the Calibre Quarry Development

To whom it may concern:

Please accept this letter as verification that Sandlin Services, LLC and its representatives are hereby authorized to act as my agent(s) for the purposes of filing Preliminary Plans, Construction plans, and all other necessary applications to Williamson County, the TCEQ, or any required entity for the properties included within the Calibre Quarry development, WCAD # R012262, R665599, and R665598.

Name: PEDRO AGUADO

Signed: Pedro Aguado Date: 6/11/25

Title: MANAGER

Entity: FP HACIENDA PROPERTIES LLC

Sincerely,

Nick Sandlin, P.E.
President & Principal
TBPELS Firm# 21356

Application Fee Form
(TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: CALIBRE QUARRY
Regulated Entity Location: 33952 RONALD REAGAN BLVD, GEORGETOWN, TX 78633
Name of Customer: FP HACIENDA PROPERTIES LLC
Contact Person: PEDRO AGUADO Phone: 512-914-3963
Customer Reference Number (if issued):CN 605334903
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

☒ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	185.35 Acres	$ 10,000
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	2 Tanks	$ 1,300
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: 

Date: 7/1/2025

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	***Fee***
Extension of Time Request	$150

Check Payable to the "Texas Commission on Environmental Quality"

Core Data Form
(TCEQ-10400)

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 605334903		**RN**

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	7/1/2025

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* *If new Customer, enter previous Customer below:*

FP HACIENDA PROPERTIES, LLC

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0802459118	32060519033		

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☒ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	PO BOX 706						
	City	JARRELL	**State**	TX	**ZIP**	76537	**ZIP + 4**

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	pedro@cobrastone.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 914-3963		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

CALIBRE QUARRY

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	33952 RONALD REAGAN BLVD							
	City	GEORGETOWN	**State**	TX	**ZIP**	78633	**ZIP + 4**	
24. County	WILLIAMSON							

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

25. Description to Physical Location:	

26. Nearest City	**State**	**Nearest ZIP Code**
GEORGETOWN	TX	78633

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.769953		**28. Longitude (W) In Decimal:**	-97.686308	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	46	11.83	-97	41	10.71

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)
1411		212311	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

STONE QUARRY

34. Mailing Address:	**33952 RONALD REAGAN BLVD**							
	City	**GEORGETOWN**	**State**	**TX**	**ZIP**	**78633**	**ZIP + 4**	
35. E-Mail Address:	**PEDRO@COBRASTONE.COM**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 914-3963		( ) -

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

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	NICHOLAS SANDLIN	**41. Title:**	PROFESSIONAL ENGINEER

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(806 **)** 679-7303		**( ) -**	operations@sandlinservices.com

SECTION V: Authorized Signature

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

Company:	SANDLIN SERVICES, LLC	**Job Title:**	PRINCIPAL & PROFESSIONAL ENGINEER
Name *(In Print):*	NICHOLAS SANDLIN	**Phone:**	**(** 806 **)** 679- **7303**
Signature:		**Date:**	6/26/2025