WATER POLLUTION ABATEMENT PLAN (WPAP)
MODIFICATION

For

NORTHBOUND SH 195 TO RONALD REAGAN RAMP

NE of SH 195 and Ronald Reagan Blvd

Williamson County, TX 78268

September 2023

Prepared for:
Williamson County

TABLE OF CONTENTS

c. Attachment C: BMPs for On-site Stormwater
d. Attachment D: BMPs for Surface Streams
e. Attachment E: Request to Seal Features (if sealing)
f. Attachment F: Construction Plans
g. Attachment G: Inspection, Maintenance, Repair and Retrofit Plan
h. Attachment H: Pilot-Scale Field Testing plan (if proposed)
i. Attachment I: Measures for Minimizing Surface Stream Contamination

Section 9: Agent Authorization Form (TCEQ-0599)

a. Attachment A: TxDOT SH195 ROW Deed

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: Northbound SH 195 to Ronald Reagan Ramp						**2. Regulated Entity No.:** 106455728			
3. Customer Name: Williamson County						**4. Customer No.:** 600803456			
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):**			
9. Application Fee:	$4,000		**10. Permanent BMP(s):**			Vegetated Filter Strips, Grass Swales, Permeable Friction Course Overlay			
11. SCS (Linear Ft.):	0		**12. AST/UST (No. Tanks):**			N/A			
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.)	___	___	_X_
Region (1 req.)	___	___	_X_
County(ies)	___	___	___
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 _X_Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. David Gerber, P.E.
Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent — Date: 9/12/23

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):	

TCEQ Core Data Form

TCEQ Use Only

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

SECTION I: General Information

1. Reason 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 600803456		RN

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☐ 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:*

Texas Department of Transportation (TxDOT)

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☒ Federal ☐ 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 ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address: 2727 S. Austin Avenue

City	Georgetown	State	TX	ZIP	78626	ZIP + 4	6342

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 930-5402		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected below this form should be accompanied by a permit application*)

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name (*Enter name of the site where the regulated action is taking place.*)

SH 195 North of Rattlesnake Road to South of Rattlesnake Road

23. Street Address of the Regulated Entity: *(No PO Boxes)*	2727 S. Austin Avenue						
	City	Georgetown	**State**	TX	**ZIP**	78626	**ZIP + 4**	6342
24. County							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	North East Corner of SH 195 and Ronald Reagan Blvd				
26. Nearest City			**State**	**Nearest ZIP Code**	
Georgetown			TX	78626	
27. Latitude (N) In Decimal:	30.75676		**28. Longitude (W) In Decimal:**	-97.719405	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	45	24	97	43	10

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)
1611		237310	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Roadway/Highway

34. Mailing Address:	2727 S. Austin Avenue						
	City	Georgetown	**State**	TX	**ZIP**	78626	**ZIP + 4**	6342
35. E-Mail Address:							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
( ) -		( ) -

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

☐ 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	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Irving Aguilar	**41. Title:**	Engineer

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(210) 860-9224		( ) -	Irving.Aguilar@wginc.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:	WGI	**Job Title:**	Project Engineer
Name *(In Print):*	David Gerber, P.E.	**Phone:**	(512) 582- **5608**
Signature:		**Date:**	9/12/23

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.

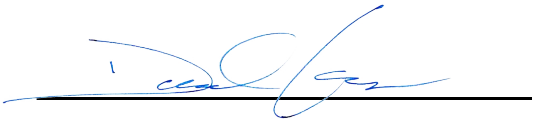
Signature

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: David Gerber, P.E.

Date: 9/12/23

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: SH 195 North of Rattlesnake Road to South of Rattlesnake Road
2. County: Williamson
3. Stream Basin: Berry Creek
4. Groundwater Conservation District (If applicable): Edwards Aquifer Recharge Zone
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

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

7. Customer (Applicant):

   Contact Person: John Peters
   Entity: TxDOT
   Mailing Address: 2727 S. Austin Ave.
   City, State: Georgetown, TX Zip: 78626
   Telephone: 512-930-5402 FAX: _____
   Email Address: _____

8. Agent/Representative (If any):

   Contact Person: Irving Aguilar, P.E. & David Gerber, P.E.
   Entity: WGI
   Mailing Address: 2021 E 5th St., #200
   City, State: Austin, TX Zip: 78702
   Telephone: (512) 669-5560 FAX: _____
   Email Address: Irving.Aguilar@wginc.com & David.Gerber@wginc.com

9. Project Location:

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

    SH 195 at Ronald Raegan Blvd, Georgetown, Williamson County, 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: 5/30/2023

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

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

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

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

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

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

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

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

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

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

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

Administrative Information

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

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

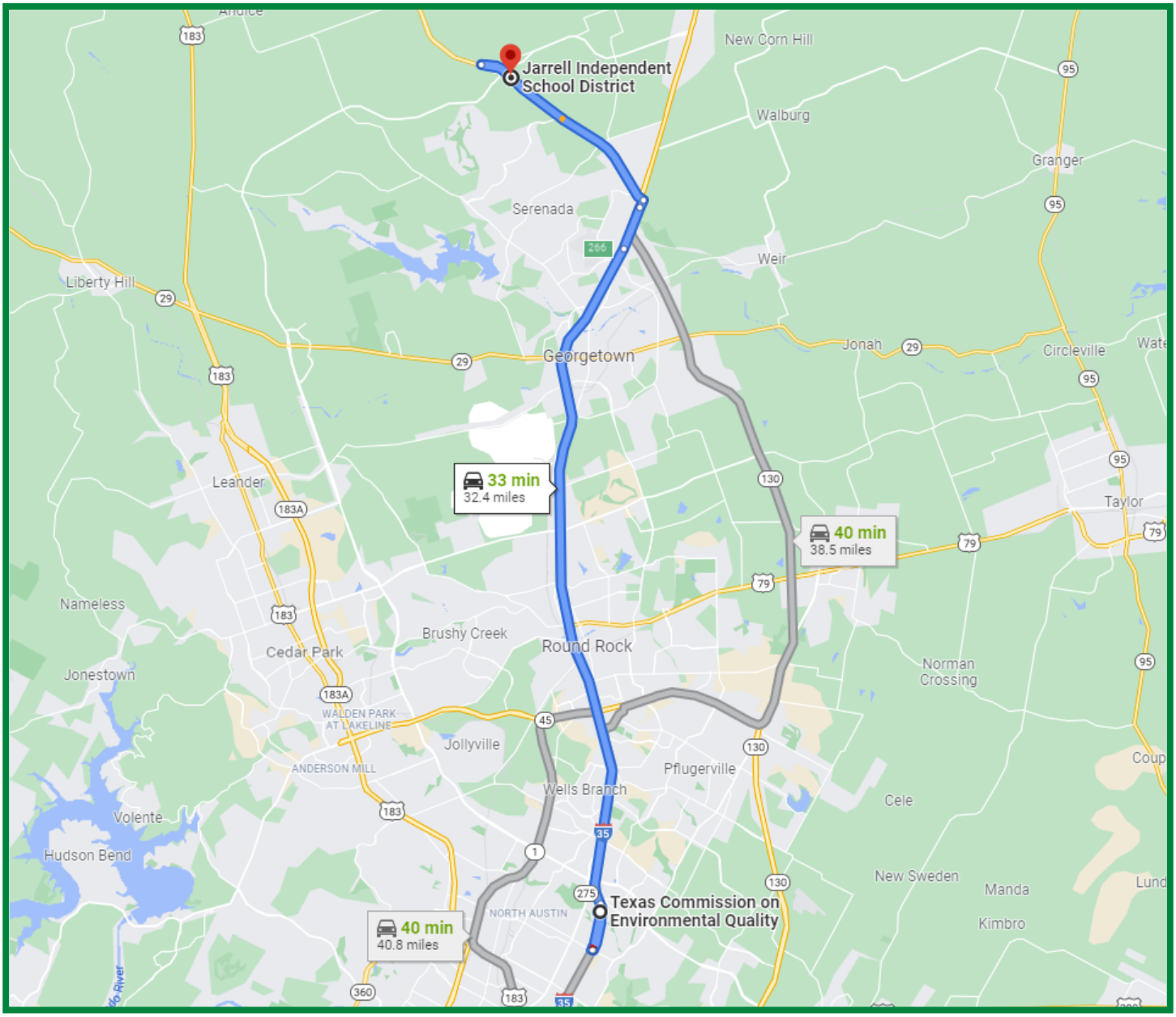
19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

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

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

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

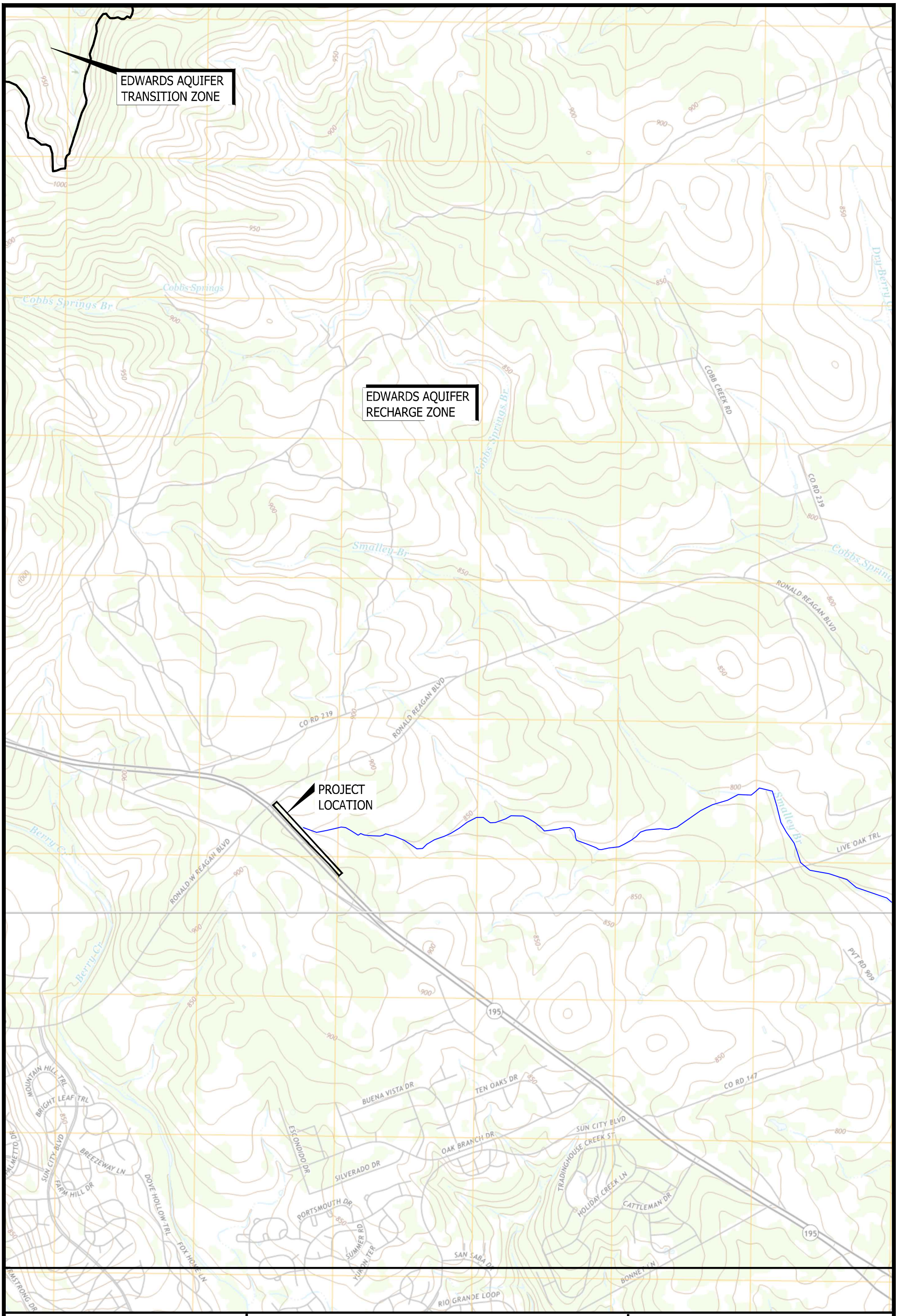
ATTACHMENT A:
ROAD MAP



SH 195 NORTH OF RATTLESNAKE RD TO SOUTH OF RATTLESNAKE RD MAP DIRECTIONS

20727 Stone Oak Parkway, San Antonio, Texas 78258

ATTACHMENT B:
USGS/EDWARDS AQUIFER RECHARGE ZONE MAP



0 1000 2000
500 1500
GRAPHIC SCALE: 1" = 2000'

USGS QUADRANGLE MAP

SH 195 NORTH OF RATTLESNAKE RD TO SOUTH OF RATTLESNAKE RD
WILLIAMSON COUNTY, TX 78633

FIRM No.:F-15085
WGI.
WGInc.com
210.860.9224
5710 WEST HAUSMAN ROAD, SUITE 115, SAN ANTONIO, TEXAS 78249

ATTACHMENT C:
PROJECT DESCRIPTION

The proposed project will consist of a right lane exit ramp from northbound SH 195 Ronald Reagan Blvd to provide direct access. This connection will replace the existing cross-over from SH 195 to Rattlesnake Rd. The existing connection from Rattlesnake Rd will be converted into an exit ramp from southbound SH 195 and access ramp to SH 195 southbound only. The project site consists of approximately 12.79-acres and has approximately 4.40-acres of impervious cover. The proposed improvements will generate a net increase of 1.57-acres of impervious cover from existing conditions. Approximately 0.67-acres of existing pavement (impervious cover) will be demolished.

The entirety of the project is included with the previously approved WPAP application for SH 195 CR 240 to IH-35; from 3 miles south of FM 487 to IH 35; Georgetown (EAPP ID No. 11-12070201)

The project site is in the Berry Creek Watershed and is within the Edwards Aquifer Recharge zone. No portion of the subject site is located within the FEMA 100-year floodplain according to Flood Insurance Rate Map (FIRM) #48491C0125F (dated December 20, 2019).

Geologic Assessment for the SH-195 Improvements Project, Williamson County, Texas

OCTOBER 2022

PREPARED FOR

HNTB Corporation

PREPARED BY

SWCA Environmental Consultants

Texas Board of Professional Geoscientists, Firm Registration No. 50159

GEOLOGIC ASSESSMENT FOR THE SH 195 IMPROVEMENTS PROJECT, WILLIAMSON COUNTY, TEXAS

Prepared for

Randy Ehresman
HNTB Corporation
101 East Old Settlers Boulevard, Suite 100
Round Rock, Texas 78664

On behalf of
Williamson County

Prepared by

Kenadi Sutton and Philip Pearce, P.G.

SWCA Environmental Consultants
Texas Board of Professional Geoscientists, Firm Registration No. 50159
4949 North Loop 1604 West, Suite 235
San Antonio, Texas 78249
www.swca.com

SWCA Project No. 59147.18

October 2022

CONTENTS

Appendices

Figures

Tables

This page intentionally left blank.

1 INTRODUCTION

Williamson County proposes to improve two intersections along State Highway (SH) 195, one at Ronald Reagan Boulevard and one at Rattlesnake Road (project; Figure 1). More specifically, northbound SH 195 will receive an exit ramp onto Ronald Reagan Boulevard and the entrance ramp from southbound Rattlesnake Road to southbound SH 195 will be widened and straightened. The project is approximately 0.9 mile long and encompasses approximately 7.5 acres (Project Area). New right-of-way acquisition along roadway managed by the Texas Department of Transportation (TxDOT) is proposed for this project. The Project Area overlies the Edwards Aquifer Recharge Zone as mapped by the Texas Commission on Environmental Quality (TCEQ).

2 METHODOLOGY

SWCA scientists studied information sources pertaining to all reputed caves from the Project Area to gather information related to documented caves in the vicinity prior to conducting field work. These information sources include the following:

- Internal SWCA data
- Unpublished data related to SWCA et al. (2008)
- ESRI® ArcGIS® Online Basemap Map Services
- U.S. Geological Survey (2022a, 2022b) 7.5-minute topographic digital raster graphics
- Geologic maps (Barnes 1974)
- Mapped fault lines (Collins 1997, 2005)

SWCA licensed geoscientist Philip Pearce, P.G., conducted a field survey for a Geologic Assessment on August 12, 2022. The pedestrian survey was completed by traversing parallel transects spaced approximately 30 to 50 feet apart as directed by the TCEQ (2004) in the *Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (Rev. 10-01-04).

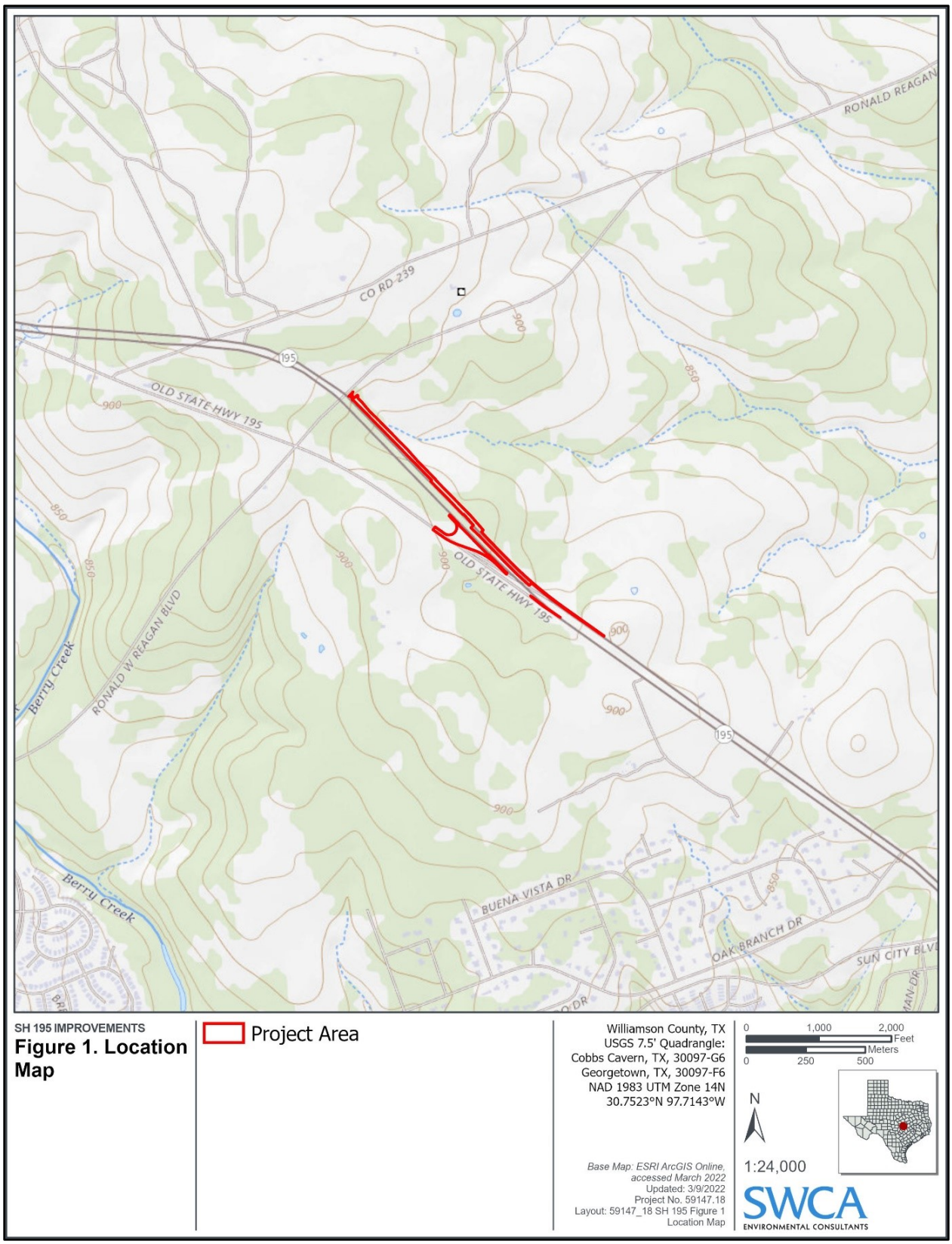


Figure 1. Project Area location map.

3 RESULTS

3.1 Project Area Overview

The Project Area lies within the Recharge Zone of the Northern Segment of the Edwards Aquifer (TCEQ 2022). Topography within and surrounding the Project Area lacks significant elevation changes. Project Area topography ranges from approximately 882 feet above mean sea level (amsl) at the eastern side of Project Area, to 900 feet amsl near the western extent of the Project Area, with a gentle undulation of elevation from the western to eastern Project Area extent.

The Project Area includes existing roadway, open spaces surrounding existing roadways, and the southern edge of a quarry pit (north of SH 195). Most development in the surrounding area are rock quarries, otherwise the land is currently agricultural.

3.2 Geology

The Cretaceous-age Georgetown Formation covers the Project Area (Figure 2). Project Area geology has been mapped most recently at a useful scale by Collins (1997, 2005), and SWCA finds his interpretation of the geology to be generally accurate. The Stratigraphic Column is included as Attachment B within Appendix A.

The Project Area occurs along the Balcones Fault Zone (BFZ) within the Edwards Aquifer Contributing and Recharge Zones (TCEQ 2022). Structural down-warping occurred with the Gulf of Mexico's ancestral formation during the middle Tertiary. The earth's crust was stretched in response and the BFZ formed along a zone of weakness, which currently marks the boundary between the Edwards Plateau and the Gulf Coastal Plain in central Texas. The BFZ is characterized by a series of northeast-trending, predominantly normal, nearly vertical, en echelon faults.

Recharge into the Edwards Aquifer primarily occurs in areas where the Edwards Limestone and Georgetown Formation are exposed at the surface. Most recharge is from direct infiltration via precipitation and streamflow loss. Recharge occurs predominantly along secondary porosity features such as faults, fractures, and karst features (caves, solution cavities, sinkholes, etc.). Karst features are commonly formed along joints, fractures, and bedding plane surfaces in the Edwards Limestone and Georgetown Formation. Water that recharges the Edwards Aquifer in the vicinity of the Project Area commonly discharges near the contact between the Edwards Limestone and underlying Comanche Peak Formation.

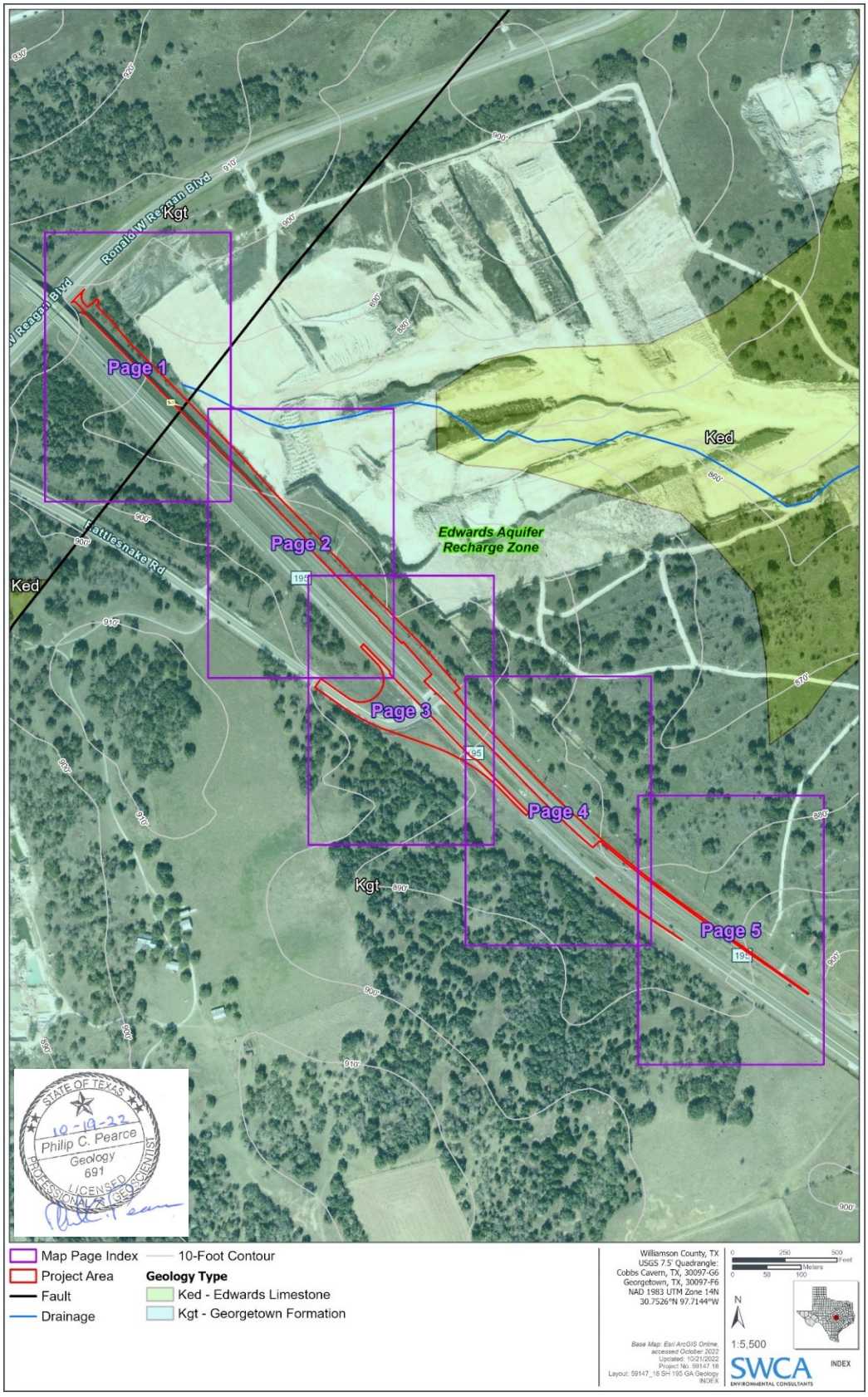


Figure 2a. Project Area geologic map (1 of 6).

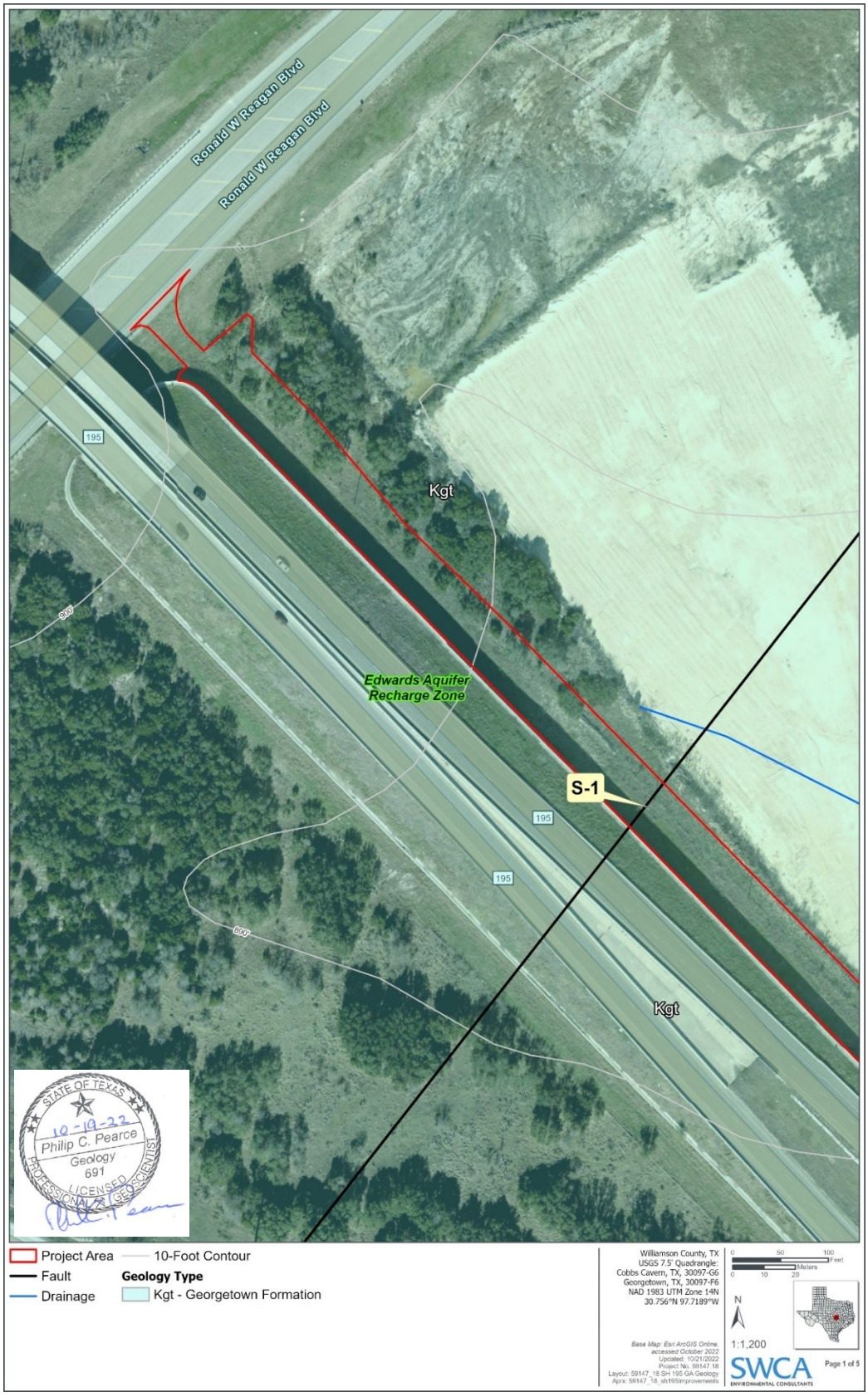


Figure 2b. Project Area geologic map (2 of 6).

Figure 2c. Project Area geologic map (3 of 6).

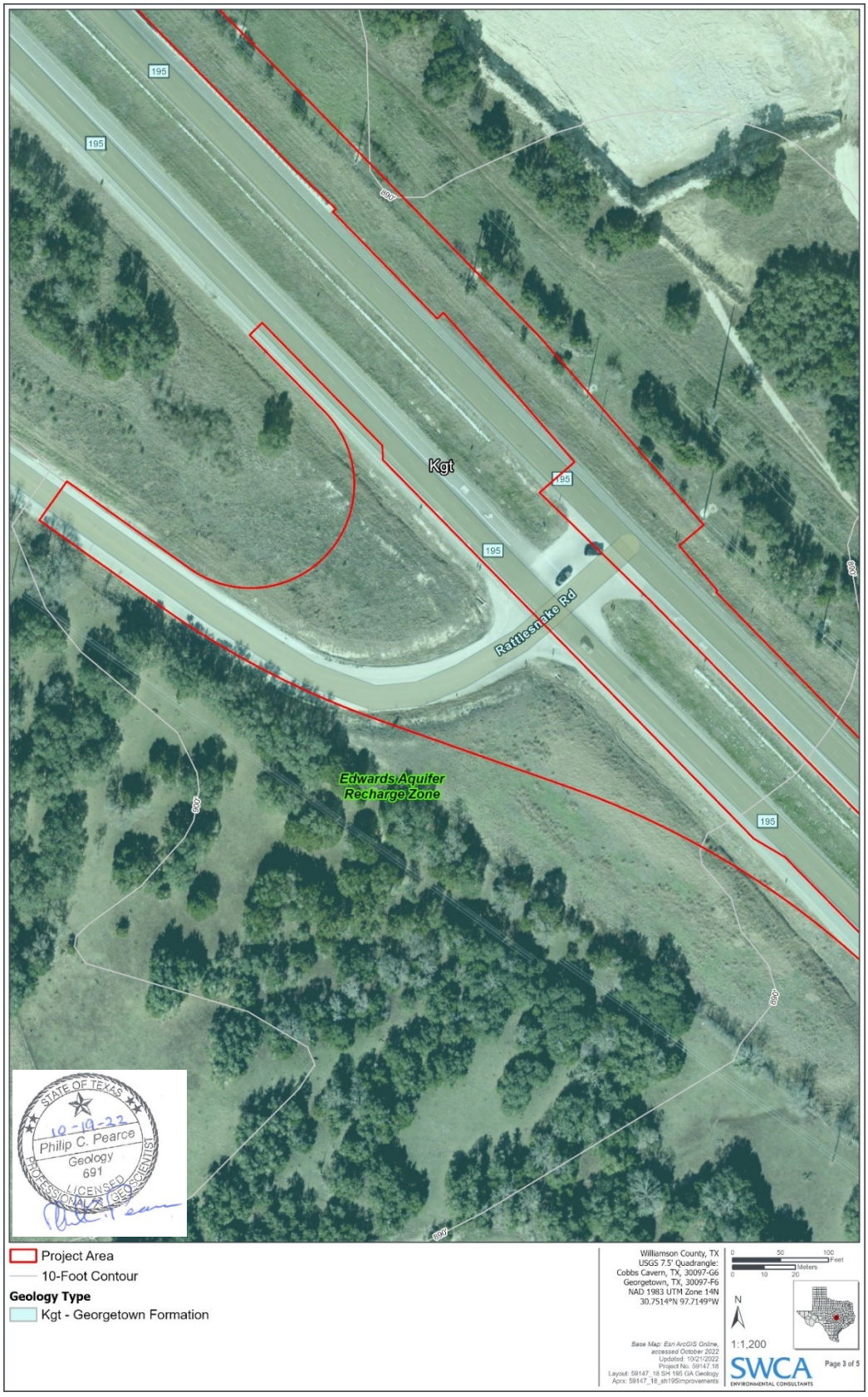


Figure 2d. Project Area geologic map (4 of 6).

Figure 2e. Project Area geologic map (5 of 6).

Figure 2f. Project Area geologic map (6 of 6).

3.3 Soils

The Natural Resources Conservation Service (NRCS) (2022) identifies six soil units within the Project Area (Figure 3). Table 1 provides additional detail for these soil types.

Table 1. Project Area Soils Detail

Soil Name	Hydric	Hydrologic Soil Group*	Drainage Class	Frequency of Flooding/ Ponding
EaD: Eckrant cobbly clay, 1 to 8 percent slopes	No	D	Well drained	None
CfB: Crawford clay, 1 to 3 percent slopes				

Data Source: NRCS (2022).

* Group D – Soils had very slow infiltration rates when thoroughly wetted and exhibit the highest potential for runoff.

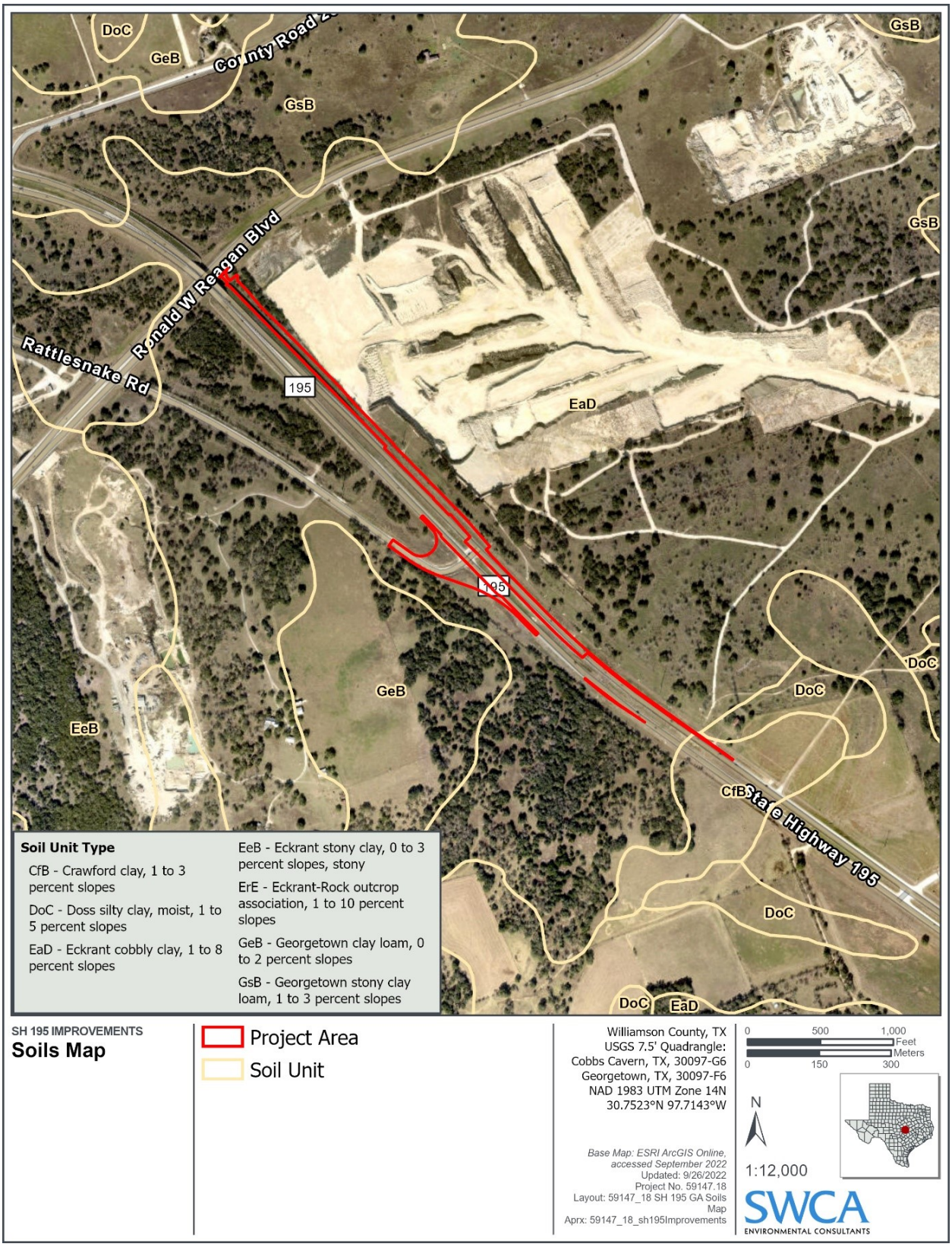


Figure 3. Project Area soils map (NRCS 2022).

4 HYDROGEOLOGIC ASSESSMENT

The overall potential for fluid migration to the Edwards Aquifer for the Project Area appears relatively low compared to background infiltration rates, due to the presence of paved and landscaped surfaces and a lack of sensitive geologic features. Two wells near the Project Area are drilled through the Edwards Aquifer and into the underlying Trinity Aquifers, and one well nearby has been drilled into the Edwards Aquifer (Figure 4). Table 2 shows water well number, depth to water and distance from the project (Texas Water Development Board 2022).

Table 2. Nearby Water Wells Showing Depth to Water

Water Well (Report Tracking Number)	Aquifer	Depth To Water	Year Measured	Distance From Project (feet)
370297	Trinity	100 ft	2014	<100
289260	Trinity	234 ft	2012	<100
5811704	Edwards	108 ft	1985	1,488

Source: Texas Water Development Board (2022).

4.1 Feature Descriptions

S-1 Fault: SWCA observed no evidence of permeability greater than background in the field in the vicinity of the fault (S-1) mapped by Collins (2005). Due to lack of enhanced permeability and presence of thick soil and vegetation, the probability of rapid infiltration is low.

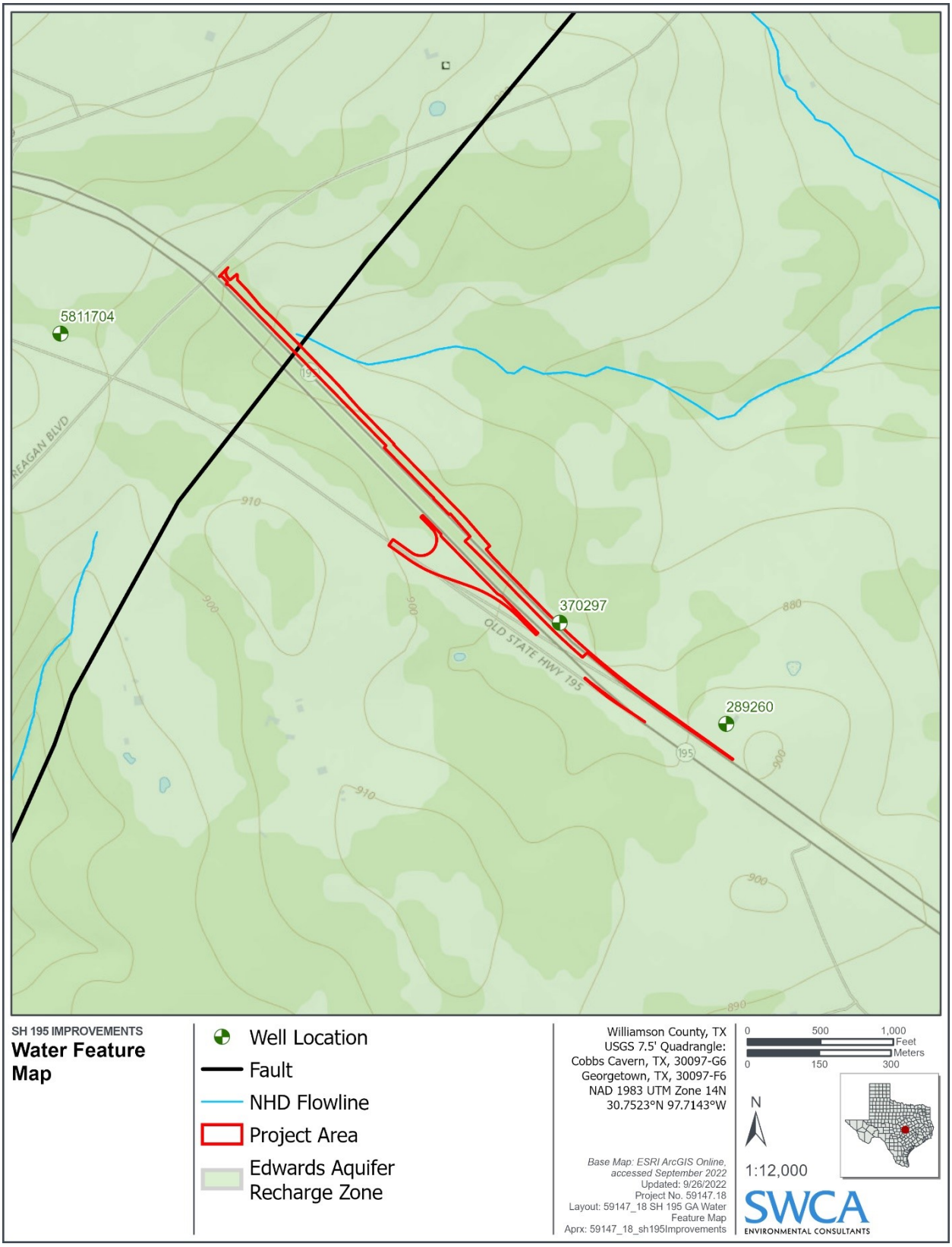


Figure 4. Project Area water feature map.

5 LITERATURE CITED

Barnes, V.E. 1974. Geologic Atlas of Texas, Austin Sheet. University of Texas at Austin, Bureau of Economic Geology. Scale 1:250,000.

Collins, E.W. 1997. Geologic map of the Georgetown quadrangle, Texas: University of Texas at Austin, Bureau of Economic Geology, series unknown, scale 1:24,000.

Collins, E.W. 2005. Geologic Map of the West Half of the Taylor, Texas, 30 x 60 Minute Quadrangle: Central Texas Urban Corridor, Encompassing Round Rock, Georgetown, Salado, Briggs, Liberty Hill, and Leander. Miscellaneous Map: Bureau of Economic Geology, No. 43, p. 16.

Natural Resources Conservation Service (NRCS). 2022. United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database. Available at: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed September 16, 2022.

SWCA Environmental Consultants (SWCA), Smith, Robertson, Elliott, Glen, Klein, & Bell, LLP, Prime Strategies, Inc., Texas Perspectives, Inc. 2008. Williamson County Regional Habitat Conservation Plan. Prepared for Williamson County Conservation Foundation and The Honorable Lisa Birkman.

Texas Commission on Environmental Quality (TCEQ). 2004. *Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (Rev. 10-01-04). Austin, Texas. 34 pp.

———. 2022. Edwards Aquifer Viewer, Version 5.0. Available at: https://www.tceq.texas.gov/gis/edwards-viewer.html. Accessed September 2022.

Texas Water Development Board (TWDB). 2022. Water Data Interactive— Viewer. Available at: https://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer. Accessed September 2022.

U.S. Geological Survey. 2022a. Cobbs Cavern, Texas 7.5-minute quadrangle topographic map.

———. 2022b. Georgetown, Texas 7.5-minute quadrangle topographic map.

APPENDIX A

Texas Commission on Environmental Quality (TCEQ) Forms

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: Philip C. Pearce, P.G.

Date: 10/19/2022

Telephone: 210.877.2847

Fax: 210.877.2848

Representing: SWCA Environmental Consultants (TBPG Firm Registration #50159) (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:

Regulated Entity Name: SH 195 Improvements Project

Project Information

1. Date(s) Geologic Assessment was performed: August 16, 2022
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)

Soil Name	Group*	Thickness(feet)
Crawford Clay, 1 to 3 percent slopes (CfB)	D	1.6-3.3
Eckrant cobbly clay, 1 to 8 percent slopes (EaD)	D	0.3-1.6

** Soil Group Definitions (Abbreviated)*

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate infiltration rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

   Applicant's Site Plan Scale: 1" = 100'
   Site Geologic Map Scale: 1" = 100'
   Site Soils Map Scale (if more than 1 soil type): 1" = 1,000'

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

Geologic Assessment Table

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: SH 195 IMPROVEMENTS

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	
S-1	30.7563361	-97.717728	F	20	Kgt	-	-	-	-	10	-	-	F	5	35	X		X	-	Hillside

* DATUM: NAD83

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 19-Oct-22

Sheet 1 of 1

STATE OF TEXAS
10-19-22
Philip C. Pearce
Geology
691
LICENSED
PROFESSIONAL GEOSCIENTIST

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

Attachment B

Stratigraphic Column

Stratigraphic Column

Upper Cretaceous	Upper Confining Units	Navarro and Taylor Groups, undivided; 600 feet thick
		Austin Group; 325–420 feet thick
		Eagle Ford Group; 25–65 feet thick
		Buda Limestone; 40–50 feet thick
		Del Rio Clay; 40–70 feet thick
Lower Cretaceous	Edwards Aquifer	Georgetown Formation; 30–80 feet thick
		Edwards Limestone; Up to 200 feet thick
		Comanche Peak Formation; 80 feet thick
	Lower Confining Units	Walnut Formation; Up to 120 feet thick
		Upper member of Glen Rose Limestone; 500 feet thick

Note: The shaded areas represent the lithology that outcrops in the Project Area.

Attachment C

Narrative Description of Geology

Please refer to Section 3.2 of this report for geologic narrative description.

Attachment D

Site Geologic Map and Soils Map

Please refer to Section 3.3 of this report for geologic and soils maps.

Attachment E

Photographic Log

Photograph 1. Culvert located near north end of project area.

Photograph 2. Defined channel for culvert near north end of project area.

Photograph 3. Culvert overview near north end of project area.

Photograph 4. Quarry pit near project limits.

Modification of a Previously Approved Plan

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), Effective June 1, 1999

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

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

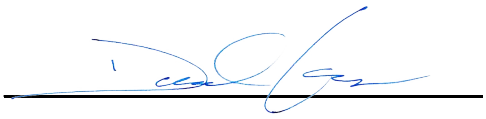
Signature

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

Print Name of Customer/Agent: David Gerber, P.E.

Date: 9/12/23

Signature of Customer/Agent:



Project Information

1. Current Regulated Entity Name: SH 195 CR 240 to IH 35
   Original Regulated Entity Name: SH 195 CR 240 to IH 35
   Regulated Entity Number(s) (RN): RN106455728
   Edwards Aquifer Protection Program ID Number(s): 11-12070201 and 11001720
   ☐ The applicant has not changed and the Customer Number (CN) is: _____
   ☒ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.

2. ☒ **Attachment A: Original Approval Letter and Approved Modification Letters**. A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):
   - ☒ Physical or operational modification of any water pollution abatement structure(s) including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
   - ☐ Change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
   - ☒ Development of land previously identified as undeveloped in the original water pollution abatement plan;
   - ☐ Physical modification of the approved organized sewage collection system;
   - ☐ Physical modification of the approved underground storage tank system;
   - ☐ Physical modification of the approved aboveground storage tank system.

4. ☒ Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

WPAP Modification Summary	***Approved Project***	***Proposed Modification***
Acres	424	424
Type of Development	Roadway	Roadway
Number of Residential Lots	N/A	N/A
Impervious Cover (acres)	133.21	134.78
Impervious Cover (%	31.42	31.79
Permanent BMPs	VFS & PFC Pavement	Grassy Swales *
Other	0	0

**Grassy swales only to replace VFS within the proposed 12.79 acre project site. Remaining area to remain treated with VFS & PFC*

SCS Modification Summary	***Approved Project***	***Proposed Modification***
Linear Feet	0	0
Pipe Diameter	0	0
Other	0	0

AST Modification Summary	***Approved Project***	***Proposed Modification***
Number of ASTs	0	0
Volume of ASTs	0	0
Other	0	0

UST Modification Summary	***Approved Project***	***Proposed Modification***
Number of USTs	0	0
Volume of USTs	0	0
Other	0	0

5. ☒ **Attachment B: Narrative of Proposed Modification**. A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved, including any previous modifications, and how this proposed modification will change the approved plan.

6. ☒ **Attachment C: Current Site Plan of the Approved Project**. A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
   - ☐ The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
   - ☒ The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
   - ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
   - ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
   - ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.

7. ☐ The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.
   ☒ Acreage has not been added to or removed from the approved plan.

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

ATTACHMENT A:
ORIGINAL APPROVAL LETTER & APPROVED MODIFICATION LETTERS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 11, 2012

Mr. John Wagner, P.E.
Georgetown Area Office
Texas Department of Transportation
2727 South Austin Avenue
Georgetown, Texas 78626

Re: Edwards Aquifer, Williamson County
SH 195 CR 240 to IH 35; From 3 miles south of FM 487 to IH 35; Georgetown, Texas
Request for Approval of a Water Pollution Abatement Plan (WPAP)
30 Texas Administrative Code (TAC) Chapter 213
Edwards Aquifer Protection Program ID No. 11-12070201

Dear Mr. Wagner:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the referenced project submitted to the Austin Regional Office by Arcadis on behalf of Texas Department of Transportation on July 2, 2012. Final review of the WPAP submittal was completed after additional material was received on August 20 and September 5, 2012. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas licensed professional engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas licensed professional engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this WPAP. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10% of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

This project connects roadway on SH 195 in Segments 2, 3 & 4 with previously approved SH 195 in Florence, EAPP ID 11-10070701 (Segment 1) granted August 16, 2010.

PROJECT DESCRIPTION

The proposed roadway project consists of new construction to occur within 11.75 miles of right-of-way (ROW). Segment 4 on the Recharge Zone will be constructed first with a conversion to a 4-lane divided highway with a depressed grassy median. The proposed roadway will require some new alignments. The existing roadway section of SH 195 through the Behrnville community will remain intact and will tie-in to the new route north and south of that alignment. The roadway section near CR 239 will remain intact as well, and tie-in north and south of that intersection. The remainder of the roadway will be widened. Construction will occur within an area of approximately 420.0 acres.

The project lies within the Recharge Zone and Contributing Zone and approves:

- Construction of 11.75 miles of SH 195,
- Constructing tie-ins to CR 241, and CR 239 and other intersection improvements,
- Installing engineered filter strips (VFS) to treat runoff and permeable friction course overlay (PFC) to assist,
- Removal of CC-65 karst feature, preserving CC-64 (Corn Cobb Cave),
- Re-stabilizing the ROW after construction, and preserving other nearby karst features.

In addition to the described activities, temporary erosion and sedimentation controls will be installed prior to commencing site disturbance and maintained during construction. No wastewater will be generated by this roadway project.

PERMANENT POLLUTION ABATEMENT MEASURES

The improved BMPs for the project area are a combination of placement of VFS and the addition of PFC, as shown on the erosion control sheets.

The ultimate impervious cover will be increased to approximately 118.4 acres (28%). No wastewater will be generated by this roadway project. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project. Treatment design calculations were sealed by Jason Verner, P.E., on June 5, 2012 to demonstrate the total treatment load removal to exceed the required 57,307 lbs. increase caused by the project.

GEOLOGY

The WPAP includes a geologic assessment performed by TxDOT which identified three sensitive geologic features, two of which are just outside the ROW. However, CC-65, a sinkhole, is to be filled with flowable fill concrete because it is below and beside the project area. .Features Coke Box Cave and Corn Cobb Cave (CC-64) are located off the project ROW. The area has previously been disturbed during the construction of the original SH 195 and with the addition of overhead utility power lines.

A request to seal feature CC-65 was received and is approved as TxDOT aligned the roadway to avoid impacts to the known other sensitive features nearby.

Based on the site assessment of August 2, 2012, the site is generally as described by the geologist. Extra precautions will be advised near Corn Cobb Cave.

SPECIAL CONDITIONS

I. Since this is a roadway construction project, deed recordation of this approval letter is not required.

II. A staging area was not proposed for this project. If the contractor desires a staging area, information indicating the proposed location and placement of appropriate temporary erosion and sedimentation controls must be submitted to the TCEQ for review and approved prior to its installation.

STANDARD CONDITIONS

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

Prior to Commencement of Construction:

2. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

3. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

4. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

5. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

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

During Construction:

7. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

8. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment.

9. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas licensed professional engineer.

10. No evidence of wells exist. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

12. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.

13. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

14. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

15. 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 Austin Regional Office within 30 days of site completion.

16. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through Austin Regional Office within 30 days of the transfer.

17. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

18. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

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

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. Kevin Lee Smith, P.E. of the Edwards Aquifer Protection Program of the Austin Regional Office at 512-339-2929.

Sincerely,

Carolyn Runyon, Water Section Manager
Austin Region Office
Texas Commission on Environmental Quality

CDR/kls

cc: Mr. J. Gary Lantrip, P.E., Austin District, Texas Department of Transportation
Mr. Tom Benz, P.E., System Engineering Manager, City of Georgetown
Mr. Joe M. England, P.E., County Engineer, Williamson County
TCEQ Central Records, Building F, MC 212

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution
August 13, 2012

Mr. Gary Lantrip, P.E.
TxDOT
P.O. Box 15462
Austin, Texas 78701

Re: Edwards Aquifer, Williamson County
SH 195 CR 240 to IH 35; From south of SH 138 to IH 35; Georgetown, Texas
Request for Approval of a Water Pollution Abatement Plan (WPAP)
30 Texas Administrative Code (TAC) Chapter 213
Edwards Aquifer Protection Program ID No. 11-12070201

Dear Mr. Lantrip:

We are in the process of technically reviewing the WPAP application you submitted on the above-referenced project. Before we can proceed, the following additional information is being requested for review:

1. Within the Geologic Assessment:
    a. There is no discussion or rating of faulting which occurs along the length of the roadway, please address by adding a note regarding supporting evidence for delineating the faults, i.e., field evidence, air photos, and/or published sources and thereby rating the features.
    b. Please provide rationale for choosing the alignment near sensitive features Corn Cobb Cave and its related solution cavity CC-65. The alignment choice may be justified if it minimizes the impact to karst features.
2. Please revise the SW3P E&S cover sheets to match the application.
    a. It is unclear where the project limits are as they conflict with the rest of the application. How far South of SH 138?
    b. The Sequence of Construction does not describe the amounts or percentages disturbed by each phase.
    c. The description and interplay among Segments and Stormwater plan phases needs clarification. Are the Segments being built in a certain order? Is one Segment completed and then another begun?
3. Attachment E of the Permanent Section is missing. There should be a request to seal features Corn Cobb Cave and its related solution cavity CC-65.
4. The calculations and Inspection and Maintenance Plans do not include PFC portions. Please provide.

We ask that you submit one original and two copies of the amended materials to supplement the WPAP application to this office no later than 14 **days from the date of this letter**. If the response to this notice is not received, we ask that you provide written notification that the application is being withdrawn.

If you have any questions or require additional information, please contact Mr. Kevin Lee Smith, P.E. of the Edwards Aquifer Protection Program of the Austin Regional office at 512-339-2929.

Sincerely,

Kevin Lee Smith - for -

Carolyn Runyon
Section Manager

CDR/kls

ORIGINAL

Texas Department of Transportation

P.O. DRAWER 15426 • AUSTIN, TEXAS 78761-5426 • (512) 832-7000

August 20, 2012

Mr. Kevin Smith, P.E.
TCEQ Edwards Program
MC R11
P.O. Box 13087
Austin, TX. 78711-3087

Dear Mr. Smith:

Please find attachments and this narrative as response to your letter of August 13, 2012 requesting information for the SH 195 project.

Supplemental Information:

SH 195 - Request for WPAP approval; EAPP ID #11-12070201.
Edwards Aquifer, Williamson County

The TCEQ Letter of August 13, 2012 requested the following information:

1. Within the Geologic Assessment:
   a. discussion of faulting
   b. rationale for choosing alignment
2. Revision of the SW3P E&S cover sheets to match the application
   a. clarify project limits
   b. describe amounts or percentages of disturbance in each phase of construction.
   c. clarify phase and order of segments (of project).
3. Attachment E of permanent Section is missing and request to seal features (Corn Cob cave and feature CC-65).
4. Provide calculations and Inspection and Maintenance plans relating to Porous Friction Course pavement (PFC).

The response to the specific requests of this letter, are listed (numbered as referenced above) or attached as additional sheets.

1.a.

Geologic faults in the region of SH 195 were mapped and generally described in the geologic narrative. These normal faults have a strike, dip angle and displacement consistent with the alignment of the Balcones Fault zone to the south. In this regional

sense, their location and extent comes from published sources (Geologic Atlas of Texas, Austin Sheet, Univ. of Texas, Bureau of Economic Geology).

The fault lines themselves are usually not visible on the ground. To infer the continuity of a major fault it requires the evaluation of bedrock exposures over extended distances. This is why, for purposes of a WPAP report, most submittals rely upon reference maps that have conducted these lengthy surveys. Maps of major faults provide the geologist insight to the development, timing and result of geomorphic changes. And the minor faults, joints, fractures and associated flexures that are likely to accompany large faults, are usually more important for recharge capability.

Within the scope of this WPAP however, the existence of these features are only relevant if they occur within the ROW; or within the drainage area related to the ROW. A "rating" or assessment of potential for recharge around faults can be implied with a site-specific evaluation, whereby that potential is directly involved with the areas proposed for change. However, if conditions for direct and unfiltered recharge are not identified in a fault zone related to the project area, they are not considered reportable.

During the time of active fault movement, the lineaments that intersected a change of lithology, i.e. facies change from Edwards to Georgetown, created conditions conducive to the formation of sinkholes and caves. However, a site specific fault must be locally investigated to evaluate whether the associated voids, joints, or fractures are susceptible to the altered surface or runoff water from the proposed project. The TxDOT surveys were performed accordingly. The features that were near the ROW and most likely to be affected by the proposed project were listed. i.e. (CC 65, CC64).

1.b.

Corn Cobb cave (CC64) is beyond TxDOT ROW. It is owned and will be managed by LCRA. It is not proposed for plugging (by TxDOT). The shallow sinkhole, CC65 must be plugged. It will be under the pavement of the new roadway.

The cave CC64 is near the ROW, and for that reason, was included in the Geologic Assessment. BMPs will be in place during and after construction to mitigate for impacts to the cave. The proximity of this cave is the result of the change the roadway alignment. This adjusted alignment, which deviates from the existing SH 195, was specifically chosen in order to avoid several other caves that would have been impacted. The decision for a new alignment was preferred since it would affect fewer karst features, some which contain endangered species.

2. a.,b., and **c.**

(See Attached map and addl. sheets) - Segment 4 will be constructed first. Segment(s) 2 & 3 will follow as separate contract. Each Segment has several phases. (Not all were submitted since they are quite complex and understandably confusing). But generally speaking, half of the ROW will undergo construction in manageable lengths. Then when driveable, it becomes the detour lanes while the other half is under construction. Later will be the final surfacing for the first half, then final for the other.

Final construction on Segment 4 may be not complete before Segments 2 & 3 begins; but only after sufficient capacity has been provided for safe travel through both.

3.

(ATTACHMENT E *is attached as individual sheet.*)

As noted above CC64 will not be sealed. The sinkhole CC65 will be sealed and covered with the roadway structure.

4.

The calculations were provided using the vegetated filter strip and side slope grasses proposed in the project. This type of mitigation alone would attain 80% TSS removal. Although the pavement will be PFC, known to remove >90% TSS, it was not used in conjunction, nor needed for TSS calculations to provide sufficient runoff quality for this project.

Addendum to ATTACHMENT G (Inspection and Maintenance Plans) for use of PFC is attached as individual sheet.

The original of this supplemental information is accompanied with two copies as you've requested. Thank you for your timely review of this complex project submittal.

Sincerely,

J. Gary Lantrip, P.G.,P.E.
Transportation Engineer
Austin District, TxDOT

COPY

R-11

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 25, 2019

Mr. Bobby Ramthun, P.E.
Georgetown Area Office
Texas Department of Transportation
2727 South Austin Avenue
Georgetown, Texas 78626

Re: Edwards Aquifer, Williamson County
SH 195 at Berry Creek Dr; 0.2 miles west of Berry Creek Drive, Georgetown, Texas
Request for Approval of an Exception Request from the Requirements for a Water Pollution Abatement Plan (WPAP)
30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program ID No. 11001720; RN106455728

Dear Mr. Ramthun:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of a Request for an Exception from submitting an WPAP application for the above-referenced project submitted to the Austin Regional Office by the Texas Department of Transportation on September 13, 2019. As presented to the TCEQ, the Request for Exception proposed is in general compliance with the requirements of 30 TAC Chapter 213. Therefore, the Exception request from the requirements for a WPAP is hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

This plan is supplemental to the overall WPAP EAPP ID 11-12070201, SH 195 CR 240 to IH 35, approved May 11, 2015.

PROJECT DESCRIPTION

This WPAP exception request consists of the removal of the existing median crossover at Berry Creek Drive and replacing it with two U-turn lanes, a right turn lane and an acceleration lane at or near that intersection.

In addition to the described activities, temporary erosion and sedimentation controls will be installed prior to commencing site disturbance and the disturbed areas will be re-stabilized upon completion of construction. The impervious cover will be increased by 0.07 acres. No wastewater will be generated by this roadway project.

PERMANENT POLLUTION ABATEMENT MEASURES

It is the opinion of the TCEQ that this project will not result in a significant increase in the potential for pollution of the Edwards Aquifer based on the minor increase in impervious cover, and the proposed temporary best management practices to be utilized and maintained during construction. New vegetated filter strips (BMP) have width to accommodate the increased loading.

STANDARD CONDITIONS

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

2. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

3. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. Kevin Lee Smith, P.E. of the Edwards Aquifer Protection Program of the Austin Regional Office at 512-239-7044.

Sincerely,

Robert Sadlier, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

RCS/kls

ATTACHMENT B:
NARRATIVE OF PROPOSED MODIFICATION

The original WPAP that was approved for the SH 195 roadway project consisted of a total of 397-acres which was split into two (2) basin areas; Basin 1 – Salado Creek (45.68-acres) and Basin 2 – Berry Creek (351.32 acres). A WPAP exception was recently approved (10/25/19) for the project which resulted in an increase of approximately 0.07-acres of impervious cover within Basin 2. This additional impervious cover was accounted for as the existing conditions for this application. The proposed modification will include the addition of a deceleration ramp near the SH 195 and Ronald Reagan Blvd intersection. The proposed ramp will also replace sections of ineffective cross-over ramps located within the limits of the modification which will result in a decrease of 0.67-acres of impervious cover. The proposed changes result in a net increase of approximately 1.57-acres of impervious cover. The limit area of the proposed modification totals approximately 12.79-acres and is located within the Berry Creek basin (351.32 acres) in its entirety.

In addition to the net increase in impervious cover, the BMP associated with the modification will also be changed from the previously approved WPAP. In the originally approved WPAP, vegetated filter strips (VFS) and Permeable Friction Course (PFC) pavement were used as the primary permanent pollution abatement measures for the project. The proposed WPAP modification will replace the approved vegetated strip filters within the 12.79-acre limits with grassy swales. Although grassy swales are less efficient at removing TSS loads than vegetated filter strips, it was found that the TSS removal provided by the combined VFS of the overall project exceeds the required TSS removal. Based on the Edwards Aquifer Technical Guidance Manual only requires the removal of 58,038 lbs TSS. The total TSS removal achieved by the combination of the VFS and proposed grassy swales is 130,174 lbs. Please reference the TSS calculations included with this report.

ATTACHMENT C:
CURRENT SITE PLAN OF APPROVED PROJECT

MATCHLINE NB STA 31695+65.28
MATCHLINE SB STA 31682+54.17

MATCHLINE NB STA 31707+77.86
MATCHLINE SB STA 31694+58.99

OBLITERATE ROAD
SEE SHELL ROAD
PLAN & PROFILE SHEET
FOR QUANTITY

END SPL DITCH
BL STA 1687+26.45
299.14' LT

BL STA 1686+52.57
OFFSET 396.21 LT

BL STA 1682+77.51
OFFSET 279.57 LT

PROP ROW

BL STA 1684+94.45
OFFSET 298.29 LT

EXIST ROW

R=50'

PT 31700+68.93

R=100'

BL STA 1688+99.89
OFFSET 410.57 LT

R=50'

PROP ROW

BL STA 1689+25.00
OFFSET 318.41 LT

EXIST ROW

#21
BL STA 1693+92

PC 31702+24.78

4' SHLDR

12' TURN LN
12' TRAV LN
12' TRAV LN
12' TURN LN

10' SHLDR
12' TRAV LN
12' TRAV LN
4' SHLDR

1680+00

PC 678+79.33

SH195
EXIST CL

S 55° 46' 51.55" E

31700+00

1685+00

NB SH195

31705+00

1690+00

4' SHLDR

R=15'

R=75'

R=100'

R=5'

R=15'

END SPL DITCH
SHELL RD STA 16+26.92
153.39' RT

EXIST SHELL RD

PROP SHELL RD CL

FLOW

S 54° 09' 23.46" E

1685+00

1690+00

BL SH195

R=15'

R=100'

R=75'

BL STA 1685+50
(SB STA 31685+54)
PROP 3-30" X 92' RCP

R=100'

R=75'

BEGIN SPL DITCH
SHELL RD STA 12+10.73
160.71' RT

PC 31693+58.34

4' SHLDR

12' TURN LN
12' TRAV LN
12' TRAV LN
12' TURN LN

6' SHLDR

31685+00

R=15'

S 54° 09' 23.48" E

12' ACCEL LN
12' TRAV LN
12' TRAV LN

SB SH195

31690+00

18' SHLDR

SB STA 31692+75
30' RT
BEGIN TRANSITION

R=80'

R=80'

PROP ROW

END SPL DITCH
BL STA 1685+44.72
281.71' RT

BL STA 1685+45.00
OFFSET 300.00 RT

FLOW

BL STA 1688+65.00
OFFSET 300.00 RT

PROP ROW

#20
BL STA 1693+62

STA 1686+63
362.14' RT
BEGIN TRANSITION

BL STA 1687+72.44
OFFSET 382.05 RT

LEGEND

- EXIST ROW
- DRAINAGE EASEMENT
- PROP ROW
- ACCESS DENIAL
- PROP TEMP FENCING
- SPECIAL DITCH
- PROP TRAFFIC
- EXIST TRAFFIC
- DITCH BLOCK

NOTES:

1. SEE "ALIGNMENT DATA" SHEET FOR HORIZANTAL ALIGNMENT DATA.
2. # DRIVEWAY (SEE SUMMARY FOR DETAILS)
3. SEE SUPER-ELEVATION DATA SHEET FOR SUPER-ELEVATION LOCATIONS.

HORIZ: 0 50 100
VERT: 0 5 10
SCALE IN FEET

ARCADIS
211 E. Shepherd Ave.
Suite 108
Lufkin, Texas 75901
Tel: 936.632.9722
Fax: 936.634.4116
www.groadis-us.com

ARCADIS U.S., INC.
FIRM ID #533

STATE OF TEXAS
JASON N. VERNER
95935
LICENSED
PROFESSIONAL ENGINEER

5-24-2012

PLAN
MAINLANES

SHEET 15 OF 26 SHEETS

FED. RD. DIV. NO.	PROJECT NO.	SHEET NO.
6		169

STATE	DIST.	COUNTY
TEXAS	AUS	WILLIAMSON

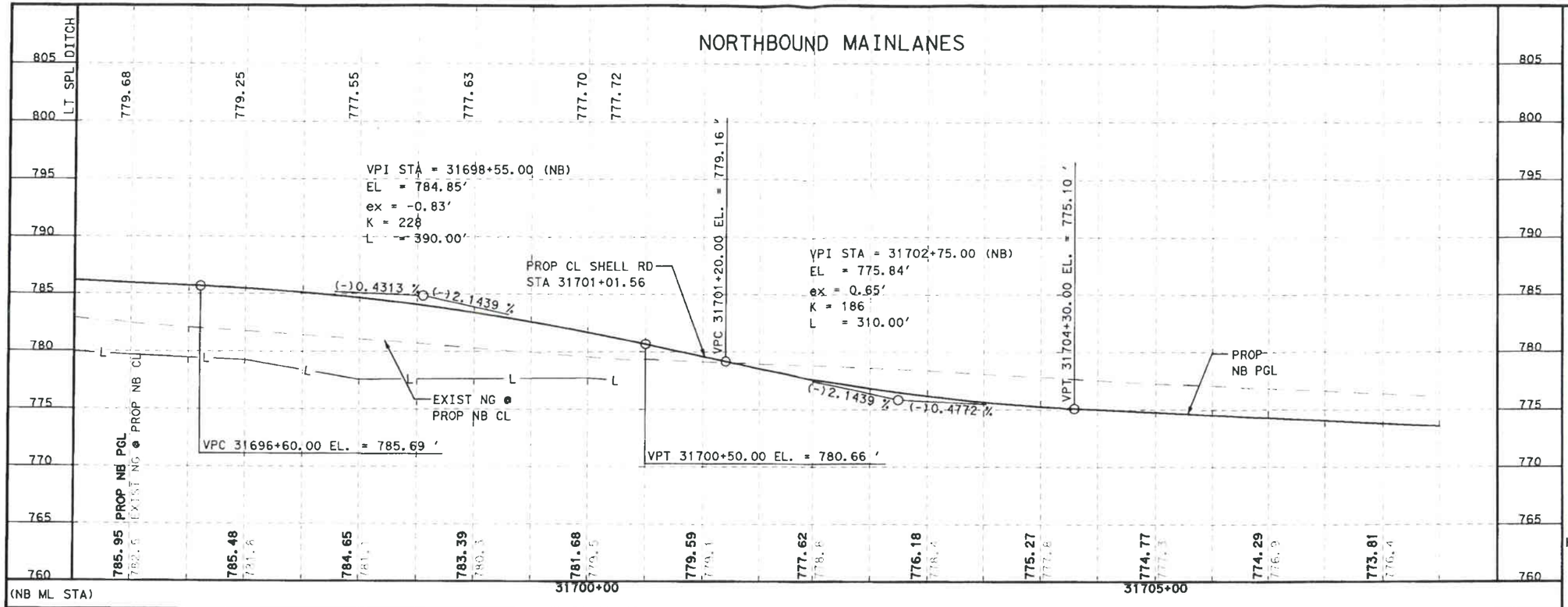
CONT.	SECT.	JOB	HIGHWAY NO.
0440	02	010	SH 195

* Sheets from approved WPAP

1 of 6

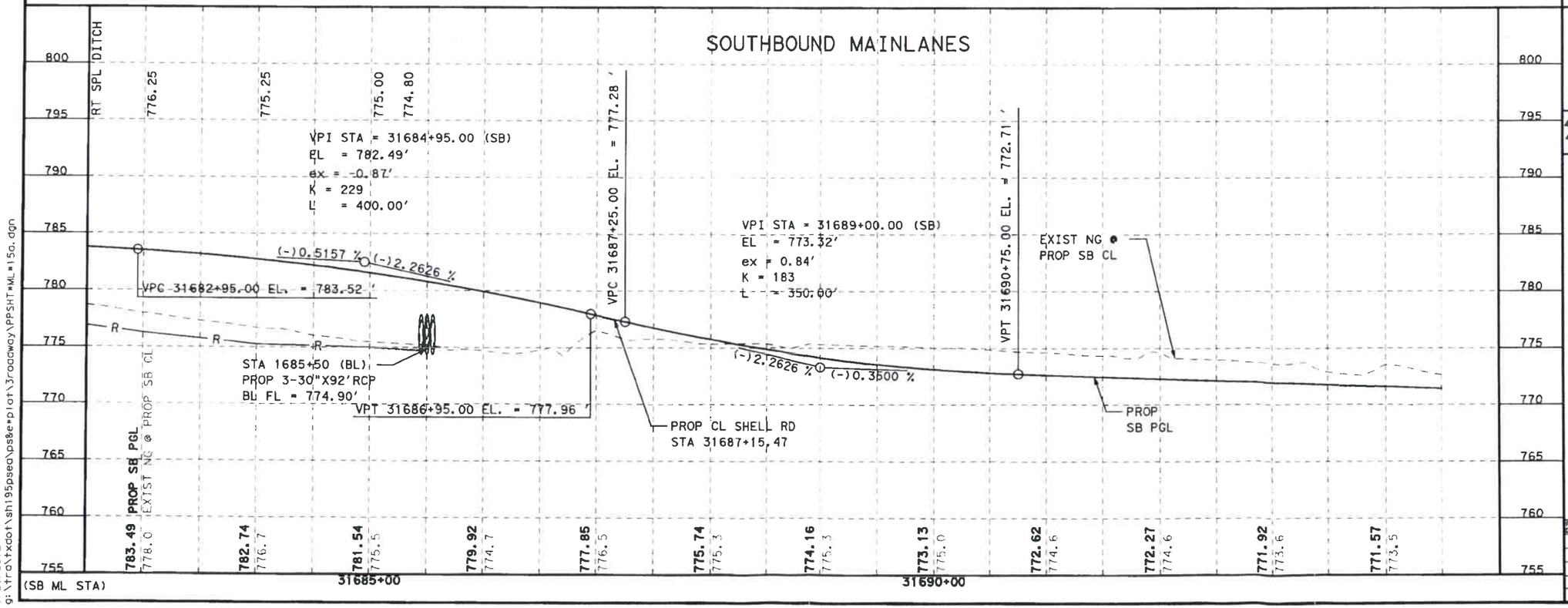
5/24/2012
g:\tra\txdot\sh195pseq\ps&e*plot\3roadway\PPSHT*ML*15.dgn

NORTHBOUND MAINLANES



HORIZ: 0 50 100
VERT: 0 5 10
SCALE IN FEET

SOUTHBOUND MAINLANES



5/23/2012
g:\traf\txdot\sh195pseo\ps&e*plot\3roadway\PPSHT*ML*15a.dgn

ARCADIS
211 E. Shepherd Ave.
Suite 108
Lufkin, Texas 75901
Tel: 936.632.9722
Fax: 936.634.4116
www.arcadis-us.com

TEXAS DEPARTMENT OF TRANSPORTATION

ARCADIS U.S., INC.
FIRM ID #533

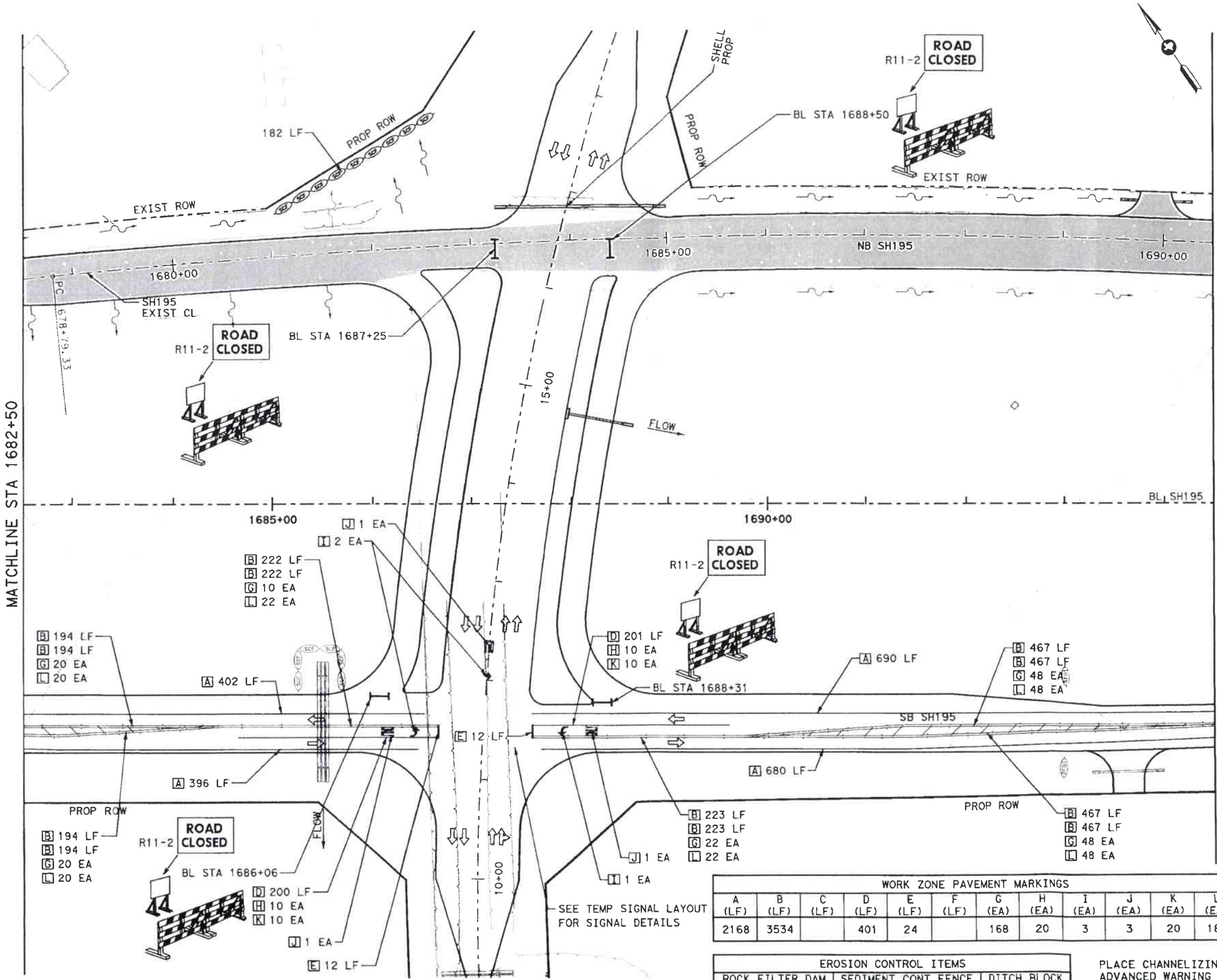
STATE OF TEXAS
JASON N. VERNER
95935
LICENSED
PROFESSIONAL ENGINEER
J. N. Verner, P.E.
5-24-2012

PROFILE MAINLANES

SHEET 16 OF 26 SHEETS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			170
STATE	DIST.	COUNTY	
TEXAS	AUS	WILLIAMSON	
CONT.	SECT.	JOB	HIGHWAY NO.
0440	02	010	SH 195

2 of 6



LEGEND

- EXISTING RDWY
- PROPOSED RDWY CONSTRUCTION
- TRAFFIC FLOW
- REMOVE EXIST RD
- CHANNELIZING DEVICE
- SIGN ASSEMBLY
- A NON-REMOV 4" (W) (SLD)
- B NON-REMOV 4" (Y) (SLD)
- C NON-REMOV 4" (W) (BRK)
- D NON-REMOV 8" (W) (SLD)
- E NON-REMOV 24" (W) (SLD)
- F NON-REMOV 4" (Y) (BRK)
- G REMOV (REFL) TY II-A-A
- H REMOV (REFL) TY I-C
- I NON-REMOV (W) ARROW
- J NON-REMOV (W) WORD
- K SHT TERM (TAB) TY W
- L SHT TERM (TAB) TY Y-2
- RFD ROCK FILTER DAM (TY I)
- SCF SEDIMENT CONT FENCE
- PHASE 1 ROCK FILTER DAM (TY I)
- PHASE 1 SEDIMENT CONT FENCE
- FLOW ARROW
- DITCH BLOCK
- CONSTRUCTION EXIT
- OVERLAY

SCALE 1" = 100'

WORK ZONE PAVEMENT MARKINGS											
A (LF)	B (LF)	C (LF)	D (LF)	E (LF)	F (LF)	G (EA)	H (EA)	I (EA)	J (EA)	K (EA)	L (EA)
2168	3534		401	24		168	20	3	3	20	180

EROSION CONTROL ITEMS		
ROCK FILTER DAM (LF)	SEDIMENT CONT FENCE (LF)	DITCH BLOCK (EA)
	182	

PLACE CHANNELIZING DEVICES, ADVANCED WARNING SIGNS, AND BARRICADES AND CONSTRUCTION SIGNS AS SHOWN ON APPLICABLE BC AND TCP STANDARDS. (SEE INDEX OF SHEETS)

ARCADIS
211 E. Shepherd Ave.
Suite 108
Lufkin, Texas 75901
Tel: 936.632.9722
Fax: 936.634.4116
www.groadis-us.com

ARCADIS U.S., INC.
FIRM ID #533

STATE OF TEXAS
JASON N. VERNER
95935
LICENSED PROFESSIONAL ENGINEER
P.E.
5-25-2012

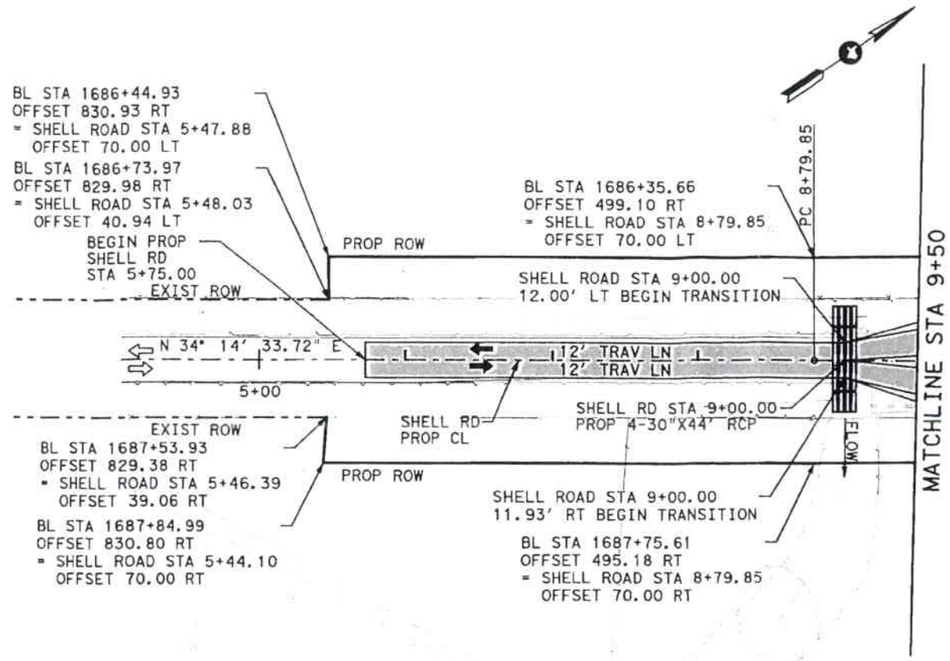
TCP & SW3P

SHEET 18 OF 25 SHEETS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			
STATE	DIST.	COUNTY	
TEXAS	AUS	WILLIAMSON	
CONT.	SECT.	JOB	HIGHWAY NO.
0440	02	010	SH 195

5/23/2012
g:\traf\txdot\sh195pseq\ps&e\plot\2tcp\Phase#2\TCP+SW3P+44.dgn

3 of 6



LEGEND

- EXIST ROW
- DRAINAGE EASEMENT
- PROP ROW
- ACCESS DENIAL
- PROP TEMP FENCING
- SPECIAL DITCH
- PROP TRAFFIC
- EXIST TRAFFIC
- DITCH BLOCK

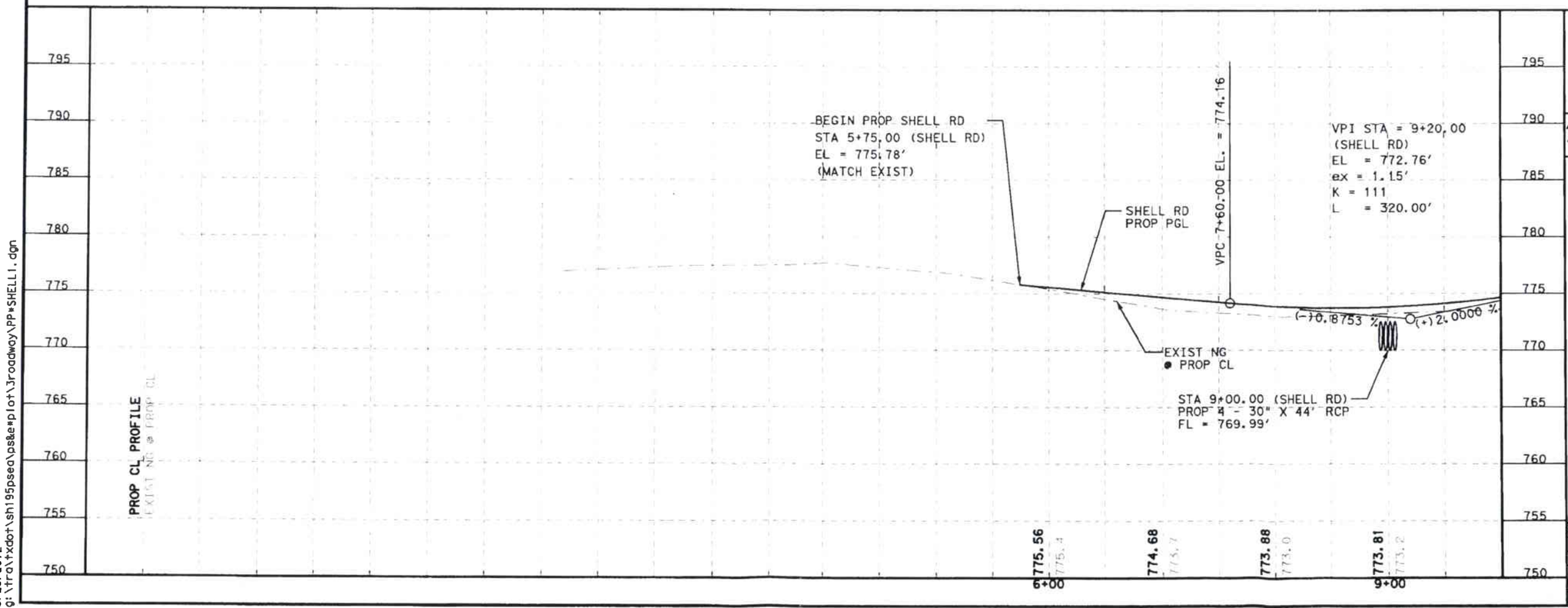
NOTES:

① SEE "ALIGNMENT DATA" SHEET FOR HORIZANTAL ALIGNMENT DATA.

②# DRIVEWAY (SEE SUMMARY FOR DETAILS)

③ SEE SUPER-ELEVATION DATA SHEET FOR SUPER-ELEVATION LOCATIONS.

HORIZ: 0 50 100
VERT: 0 5 10
SCALE IN FEET



5/23/2012
g:\fro\txdot\sh195pseo\ps&eplot\roadway\PP*SHELL1.dgn

ARCADIS
211 E. Shepherd Ave.
Suite 108
Lufkin, Texas 75901
Tel: 936.632.9722
Fax: 936.634.4116
www.arcadis-us.com

TEXAS DEPARTMENT OF TRANSPORTATION
©2012

ARCADIS U.S., INC.
FIRM ID #533

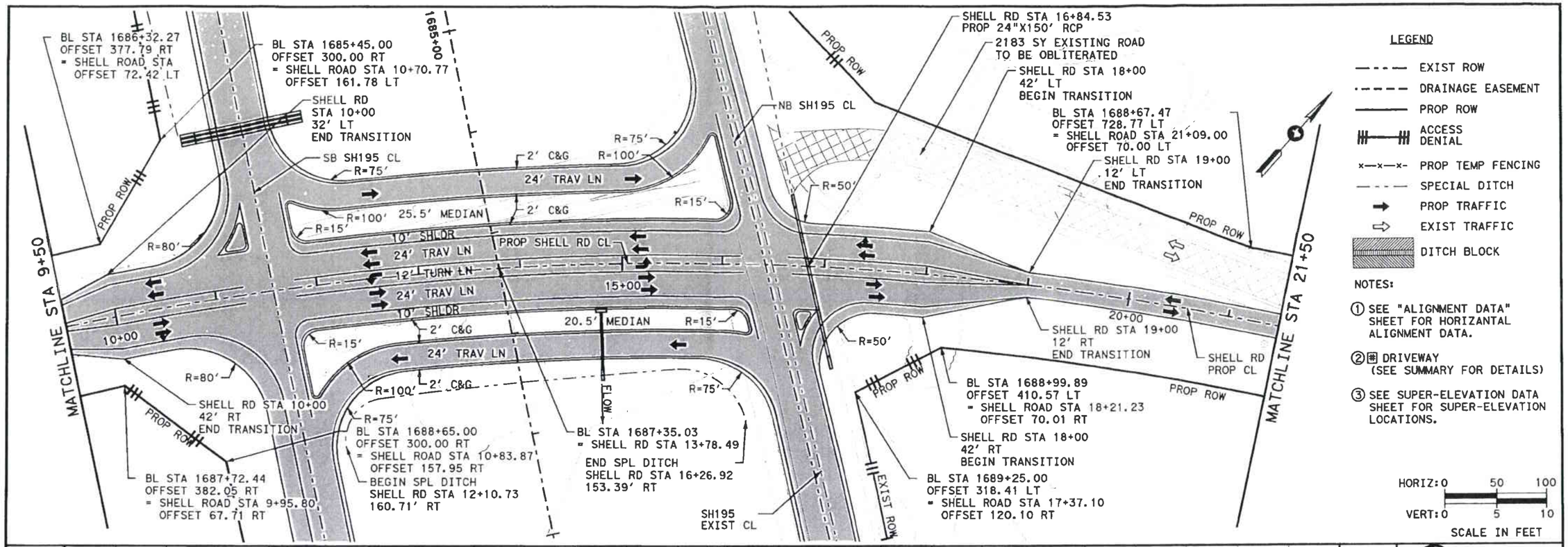
STATE OF TEXAS
JASON N. VERNER
95935
LICENSED
PROFESSIONAL ENGINEER
P.E.
5-24-2012

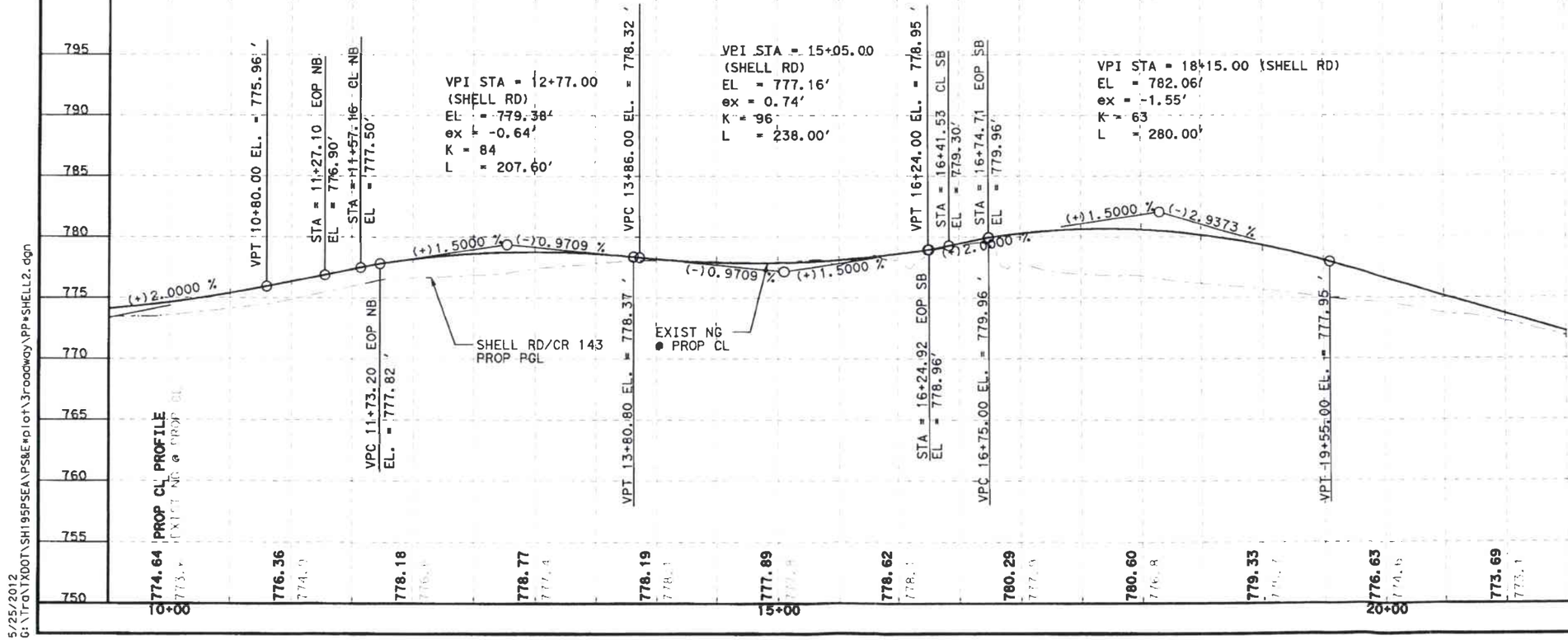
PLAN & PROFILE SHELL ROAD

SHEET 1 OF 3 SHEETS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			185
STATE	DIST.	COUNTY	
TEXAS	AUS	WILLIAMSON	
CONT.	SECT.	JOB	HIGHWAY NO.
0440	02	010	SH 195

4 of 6





ARCADIS
211 E. Shepherd Ave.
Suite 108
Lufkin, Texas 75901
Tel: 936.632.9722
Fax: 936.634.4116
www.arcadis-us.com

ARCADIS U.S., INC.
FIRM ID #533

JASON N. VERNER
95935
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
P.E.
5-25-2012

PLAN & PROFILE SHELL ROAD

SHEET 2 OF 3 SHEETS

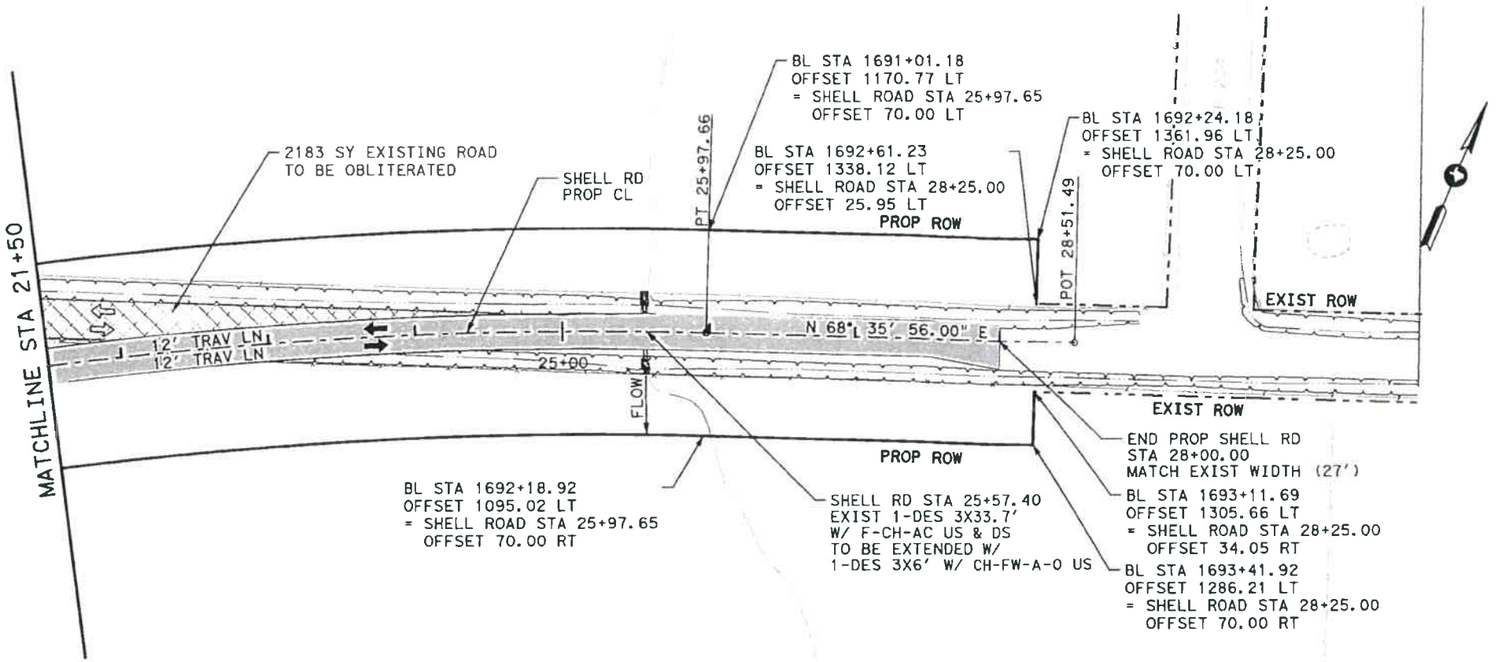
FED. RD. DIV. NO.	PROJECT NO.	SHEET NO.
6		186

STATE	DIST.	COUNTY
TEXAS	AUS	WILLIAMSON

CONT.	SECT.	JOB	HIGHWAY NO.
0440	02	010	SH 195

5/25/2012
G:\TrafTXDOT\SH195PSEA\PS&E\plot\3roadway\PP*SHELL2.dgn

5 of 6



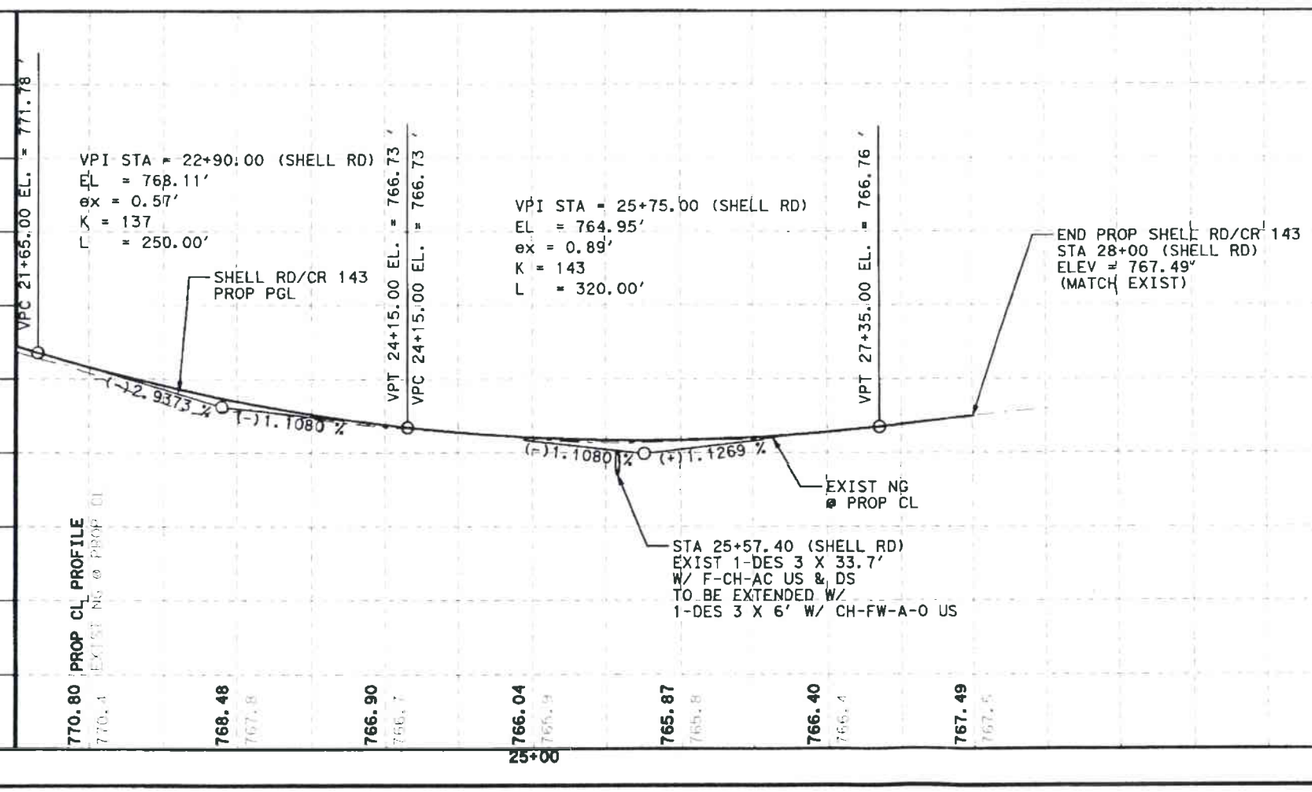
LEGEND

- EXIST ROW
- DRAINAGE EASEMENT
- PROP ROW
- ACCESS DENIAL
- PROP TEMP FENCING
- SPECIAL DITCH
- PROP TRAFFIC
- EXIST TRAFFIC
- DITCH BLOCK

NOTES:

1. SEE "ALIGNMENT DATA" SHEET FOR HORIZANTAL ALIGNMENT DATA.
2. DRIVEWAY (SEE SUMMARY FOR DETAILS)
3. SEE SUPER-ELEVATION DATA SHEET FOR SUPER-ELEVATION LOCATIONS.

HORIZ: 0 50 100
VERT: 0 5 10
SCALE IN FEET



ARCADIS
211 E. Shepherd Ave.
Suite 108
Lufkin, Texas 75901
Tel: 936.632.9722
Fax: 936.634.4116
www.arcadis-us.com

ARCADIS U.S., INC.
FIRM ID #533

STATE OF TEXAS
JASON N. VERNER
95935
LICENSED PROFESSIONAL ENGINEER

Jason N. Verner, P.E.
5-24-2012

PLAN & PROFILE SHELL ROAD

SHEET 3 OF 3 SHEETS

FED. RD. DIV. NO.	PROJECT NO.	SHEET NO.
6		187

STATE	DIST.	COUNTY
TEXAS	AUS	WILLIAMSON

CONT.	SECT.	JOB	HIGHWAY NO.
0440	02	010	SH 195

5/24/2012
g:\traf\txdot\sh195pse\ps&e\plot\3roadway\PP*SHELL3.dgn

Edwards Aquifer Protection Program Roadway Application

Texas Commission on Environmental Quality

This application is intended only for projects which a major roadway is designed for construction, such as State highways, County roads, and City thoroughfares.

Designed for Regulated Activities on the Contributing Zone to the Edwards Aquifer in relation to 30 TAC §213.24, Regulated Activities on the Edwards Aquifer Recharge Zone, in relation 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.

The application was prepared by:

Print Name of Customer/Agent: David Gerber, P.E.

Date: 9/12/23

Signature of Customer/Agent:

Project Information

1. Regulated Entity (Project) Name: SH 195 North of Rattlesnake Road to South of Rattlesnake Road
2. County: Williamson
3. Stream Basin(s): Berry Creek
4. Groundwater Conservation District (if applicable): Edwards Aquifer Recharge Zone
5. Customer (Applicant):

   Contact Person: John Peters
   Entity: TxDOT
   Mailing Address: 2727 S. Austin Ave.
   City, State: Georgetown, TX 78626
   Telephone: 512-930-5402
   Email Address: _____

6. Agent (Representative):

Contact Person: Irving Aguilar, P.E. & David Gerber, P.E.
Entity: WGI
Mailing Address: 5710 W Hausman Rd., Suite 115
City, State: San Antonio, TX 78626
Telephone: 210-860-9224
Email Address: Irving.Aguilar@wginc.com & David.Gerber@wginc.com

7. Landowner of R.O.W. (Right of Way)
Person or entity responsible for maintenance of water quality Best Management Practices (BMPs), if not applicant.

Contact Person: SAME AS APPLICANT
Entity: _____
Mailing Address: _____
City, State: _____ Zip: _____
Telephone: _____
Email Address: _____

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

   [X] Survey marking will be completed by this date: 12/30/2023

9. [X] **Attachment A - Road Map**. A road map showing directions to and the location of the project site is attached. The map clearly shows the boundary of the project site.

10. [X] **Attachment B - USGS Quadrangle**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') is attached. The map(s) clearly show:

    [X] Project site boundaries
    [X] USGS Quadrangle Name(s)
    [X] All drainage paths from site to surface waters

11. [ ] **This project extends into (Check all that apply):**

    [X] Recharge Zone (RZ)
    [ ] Contributing Zone (CZ)
    [ ] Transition Zone (TZ)
    [ ] Contributing Zone within Transition Zone (CZ/TZ)
    [ ] Zone not regulated by EAPP

12. [X] **Attachment C - Project Description**. A detailed narrative description of the proposed project is attached. The project description is consistent throughout the application and contains, at a minimum, the following details:

- [X] Complete site area [Acres]
- [X] Offsite upgradient stormwater areas to be captured
- [X] Impervious area [Acres]
- [X] Permanent BMP(s)
- [X] Proposed site use
- [X] Existing roadway (paved and/or unpaved)
- [X] Structures to be demolished [Include demo phase]
- [ ] Major interim phases (N/A)

13. Existing project site conditions are noted below:

- [X] Existing paved and/or unpaved roads
- [ ] Undeveloped (Cleared)
- [X] Undeveloped (Undisturbed/Not cleared)
- [ ] Existing commercial site
- [ ] Existing industrial site
- [ ] Existing residential site
- [ ] Other: _____

14. [X] **Attachment D - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water quality is attached.

15. [X] Only inert materials as defined by 30 TAC §330.3 will be used as fill material.

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

- [ ] Concrete
- [X] Asphaltic concrete pavement
- [ ] Permeable Friction Course (PFC)
- [ ] Other: _____

17. Right of Way (R.O.W.) and Pavement Area:

R.O.W. for project: 12.79 (ac.)
Length: 7185 ft.
Width: varies from 83 ft. to 90 ft.
Impervious cover (IC): 5.97 (ac.)
Total of Pavement area 5.97 (ac.) ÷ R.O.W. area 12.79 (ac.) x 100 = 46.68 % IC.

- [X] CAD program was used to determine areas.
- [X] Number of travel lanes: proposed: 1, existing: 0
- [X] Typical widths of lanes: 22 (ft.)
- [ ] Are intersections also being improved? (Y/N) NO

Site Plan Requirements

Items 18 - 28 must be included on the Site Plan.

18. [X] The Site Plan must have a minimum scale of 1" = 400'.
    Site Plan Scale: 1" = _____'

19. 100-year floodplain boundaries:

    [ ] Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled. The 100-year floodplain boundaries are based on the following specific (including date of material) source(s):_____.

    [X] No part of the project site is located within the 100-year floodplain.

20. [X] A layout of the development with existing and finished contours at appropriate, but not greater than ten-foot contour intervals is shown. Sensitive features, lots, wells, buildings, roads, culverts, etc. are shown on the site plan.

21. [X] A figure (map) indicating all paths of drainage from the site to surface waters.
    - [ ] Name all stream crossings: _____
    - [ ] Drainage patterns and approximate slopes.
    - [X] There will be no discharge to surface waters.

22. [X] Distinguish between areas of soil disturbance and areas which will not be disturbed.

23. [X] Show locations of major structural and nonstructural controls. These are the temporary and permanent best management practices. Include the following:
    - [X] Show design and location of any hazardous materials traps.
    - [ ] Show design at outfalls of major control structures and conveyances.
    - [ ] A description of the BMPs and measures that prevent pollutants from entering surface streams.

24. Show locations of staging areas or project specific locations (PSL). Are they:
    - [X] Onsite, within project R.O.W.
    - [ ] Offsite.
    - [ ] Not yet determined. (Requires future authorization)

25. [X] Show locations where soil stabilization practices are expected to occur.

26. [ ] Show surface waters (including wetlands).

27. Temporary aboveground storage tank facilities:
    - [ ] Temporary aboveground storage tank facilities will be located on this site. Show on site plan.
    - [X] Temporary aboveground storage tank facilities will not be located on this site.

28. [ ] Plan(s) also include:
    - [ ] Sidewalks
    - [ ] Related turn lanes
    - [X] Demolition plans
    - [ ] Other improved areas: _____
    - [ ] Shared-use paths
    - [ ] Off-site improvements and staging areas
    - [ ] Utility relocations

Permanent Best Management Practices (BMPs)

Description of practices and measures that will be used after construction is completed.

29. [X] Permanent BMPs and measures have been designed, and will be constructed, operated, and maintained to ensure 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 accepted by the executive director.

    [X] 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: _____

30. [X] **Attachment E - BMPs for Upgradient (Offsite) 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.

31. [X] **Attachment F - BMPs for On-site Stormwater**.

    [X] 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.

32. [X] **Attachment G - Construction Plans**. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. Construction plans for the proposed permanent BMPs and measures are attached and include all proposed structural plans and specifications, and appropriate details.

    [ ] Major bridge cross-sections, and roadway plan and profiles

    [X] BMP plans and details

    [X] Design calculations

    [ ] Erosion control

    [ ] TCEQ Construction Notes

    [ ] SW3P

    [ ] EPIC, as necessary

33. [X] **Attachment H - Inspection, Maintenance, Repair and Retrofit Plan**. A site and BMP specific plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan fulfills all the following:

    [X] Prepared and certified by the engineer designing the permanent BMPs and measures.
    [X] Signed by the owner or responsible party.
    [X] Outlines specific procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofit.
    [X] Contains a discussion of recordkeeping procedures.

34. [ ] **Attachment I - 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.

    [X] N/A

35. [ ] **Attachment J - 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 effects caused by the regulated activity which increase erosion or may result in water quality degradation.

    (N/A) [ ] Include permanent spill measures used to contain hydrocarbons or hazardous substances by way of traps, or response contingencies.

36. 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.

    If the applicant intends to transfer responsibility, check the box below.

    [ ] Yes

    A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days.

Stormwater to be generated by the Proposed Project

Description of practices and measures that will be used during construction.

37. ☐ The site description, controls, maintenance, and inspection requirements for the Storm Water Pollution Prevention Plan (SWPPP or SW3P) developed under the Texas Pollutant Discharge Elimination System (TPDES) general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) & §213.5(b) of the technical report.

    ☐ The Temporary Stormwater Section (TCEQ-0602) is included with the application.
    ☐ The SWPPP (SW3P) will serve as the Temporary Stormwater Section (TCEQ-0602).

38. ☐ **Attachment K - Volume and Character of Stormwater**. A detailed description of the volume (quantity) and character (quality) of the stormwater runoff expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on area and type of impervious cover.

    ☐ Include the pre-construction runoff coefficient.
    ☐ Include the post-construction runoff coefficient.

Administrative Information

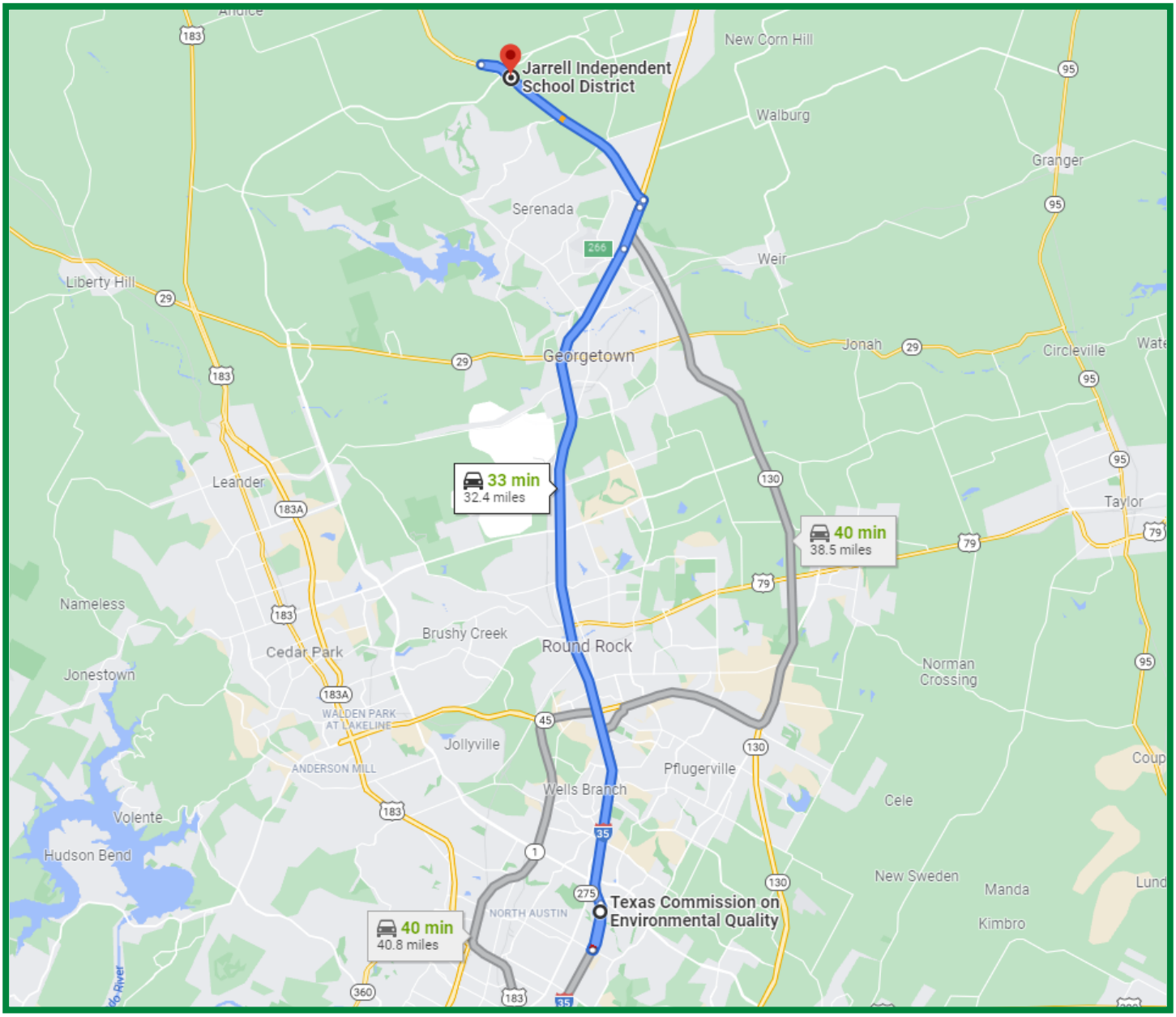
39. ☐ Submit one (1) original and one (1) copy of the application, plus one electronic copy as needed, for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ is required to distribute the additional copies to these jurisdictions.

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

    ☐ The total R.O.W. (as in Item 17).

    ☐ TxDOT roadway project.

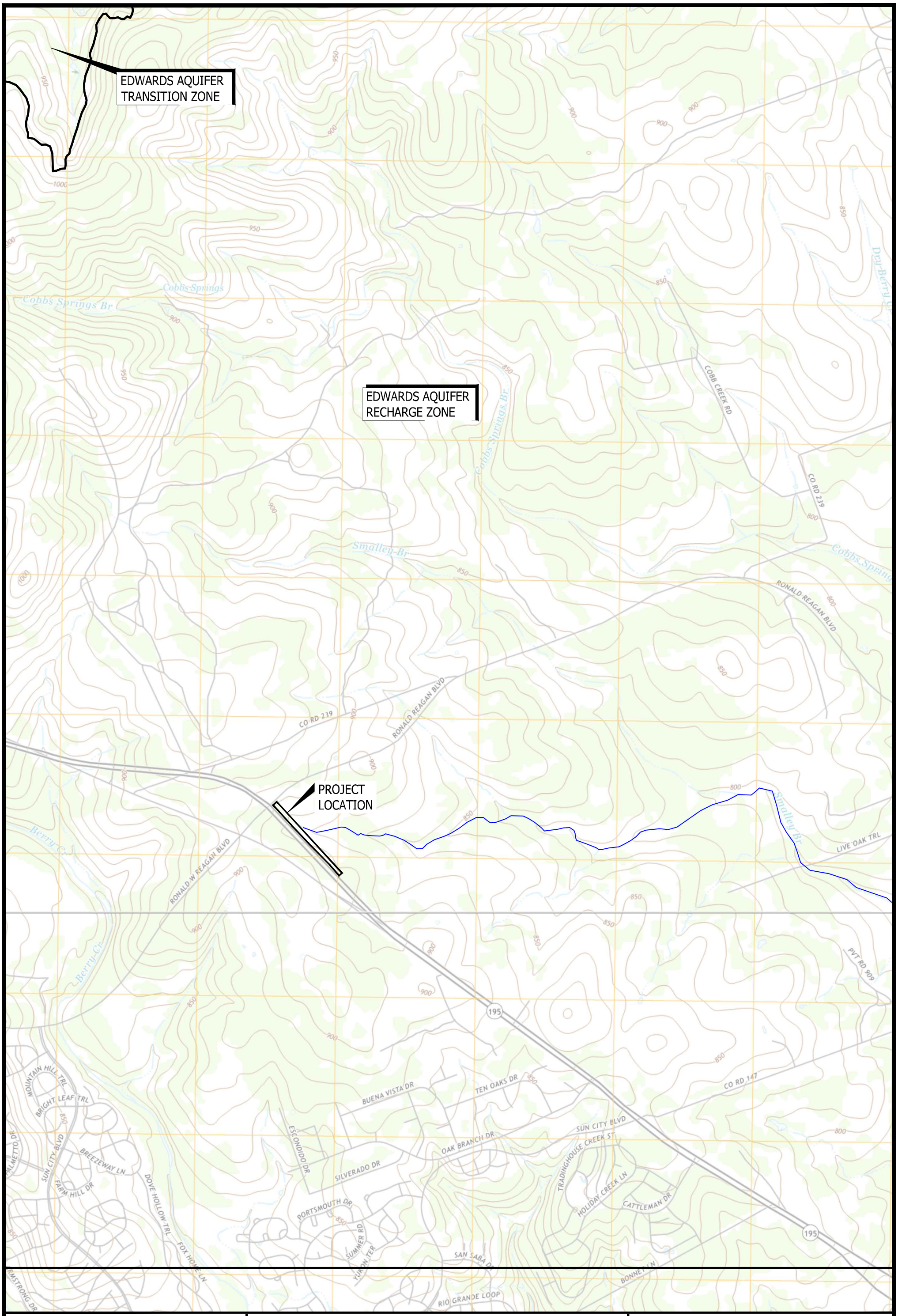
ATTACHMENT A:
ROAD MAP



SH 195 NORTH OF RATTLESNAKE RD TO SOUTH OF RATTLESNAKE RD MAP DIRECTIONS

20727 Stone Oak Parkway, San Antonio, Texas 78258

ATTACHMENT B:
USGS/EDWARDS AQUIFER RECHARGE ZONE MAP



0 1000 2000
500 1500
GRAPHIC SCALE: 1" = 2000'

USGS QUADRANGLE MAP

SH 195 NORTH OF RATTLESNAKE RD TO SOUTH OF RATTLESNAKE RD
WILLIAMSON COUNTY, TX 78633

FIRM No.:F-15085
WGI.
WGInc.com
210.860.9224
5710 WEST HAUSMAN ROAD, SUITE 115, SAN ANTONIO, TEXAS 78249

ATTACHMENT C:
PROJECT DESCRIPTION

The proposed project will consist of a right lane exit ramp from northbound SH 195 Ronald Reagan Blvd to provide direct access. This connection will replace the existing cross-over from SH 195 to Rattlesnake Rd. The existing connection from Rattlesnake Rd will be converted into an exit ramp from southbound SH 195 and access ramp to SH 195 southbound only. The project site consists of approximately 12.79-acres and has approximately 4.40-acres of impervious cover. The proposed improvements will generate a net increase of 1.57-acres of impervious cover from existing conditions. Approximately 0.67-acres of existing pavement (impervious cover) will be demolished.

The entirety of the project is included with the previously approved WPAP application for SH 195 CR 240 to IH-35; from 3 miles south of FM 487 to IH 35; Georgetown (EAPP ID No. 11-12070201)

The project site is in the Berry Creek Watershed and is within the Edwards Aquifer Recharge zone. No portion of the subject site is located within the FEMA 100-year floodplain according to Flood Insurance Rate Map (FIRM) #48491C0125F (dated December 20, 2019).

ATTACHMENT D:
FACTORS AFFECTING WATER QUALITY

Urbanization will affect water quality by increasing sediment loading and introducing nutrients, pathogens, oxygen-demanding matter, and toxic pollutants to receiving waters.

Factors affecting water quality for the proposed development include the following:
(1) Proposed road and vehicular traffic,
(2) Human litter and pet waste,
(3) Hazardous substances from vehicular traffic (gasoline, diesel, and oil)

The proposed development will drain to grassy swales. This will help to mitigate pollutants from the factors listed above.

ATTACHMENT E:
BMPS FOR UPGRADIENT STORMWATER

Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site. Upgradient areas draining through the site are undeveloped in existing conditions and will require their own onsite permanent BMPs.

ATTACHMENT F:
BMPS FOR ON-SITE STORMWATER

The proposed modification will encompass a total of 12.79-acres out of the original 424-acre project area in the previously approved report. Out of the total 424-acres, the proposed modification is located within the drainage area labeled as "2-Berry Creek" consisting of 351.32-acres from the approved WPAP. The proposed modification will replace the vegetated strip filters within the 12.79-acre limit with grassy swales as the permanent onsite BMP. As such, the area of the proposed modification was isolated from the 351.32-acre drainage area. The following Table provides a breakdown summary of the impervious cover calculations:

SH 195 OUTFALL TO BARRY CREEK WPAP CALCULATIONS

Existing Conditions (Approved WPAP)		
Total overall drainage basin/outfall area (Berry Creek)	351.32	acres
Initial Impervious Cover	60.65	acres
Added Impervious Cover (IC) - SH 195 (2012)*	58.49	acres
Added Impervious Cover - Shell Road decel lanes**	0.07	acres
Cumulative impervious cover	119.21	acres
Remaining pervious area	232.11	acres
Project Site (WPAP Modification)		
Total drainage basin	12.79	acres
Initial Impervious Cover	4.4	acres
Added impervious cover - decel lane & riprap	2.24	acres
Removed impervious cover - removed crossover	0.67	acres
Total impervious cover	5.97	acres
Remaining Area of Outfall area to Berry Creek		
Total drainage basin	338.53	acres
Total impervious cover	114.81	acres
Total Net IC increase from Approved WPAP & Exceptions	1.57	acres

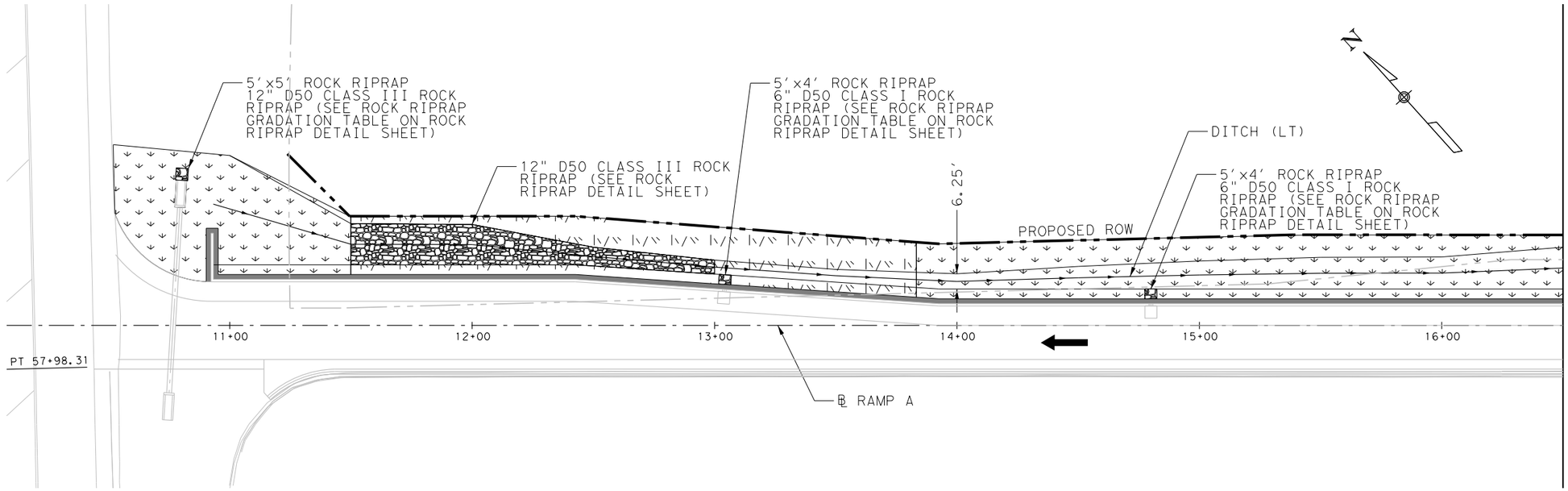
**Approved WPAP Dated September 11, 2012*

***Approved Exception Dated October 25, 2019*

The drainage basin out-falling to Salado creek did not change from the approved WPAP. However, it was still included with the TSS calculations for consistency and to show the total overall TSS removal that was required. Detailed TSS calculations for each drainage area is included with this report.

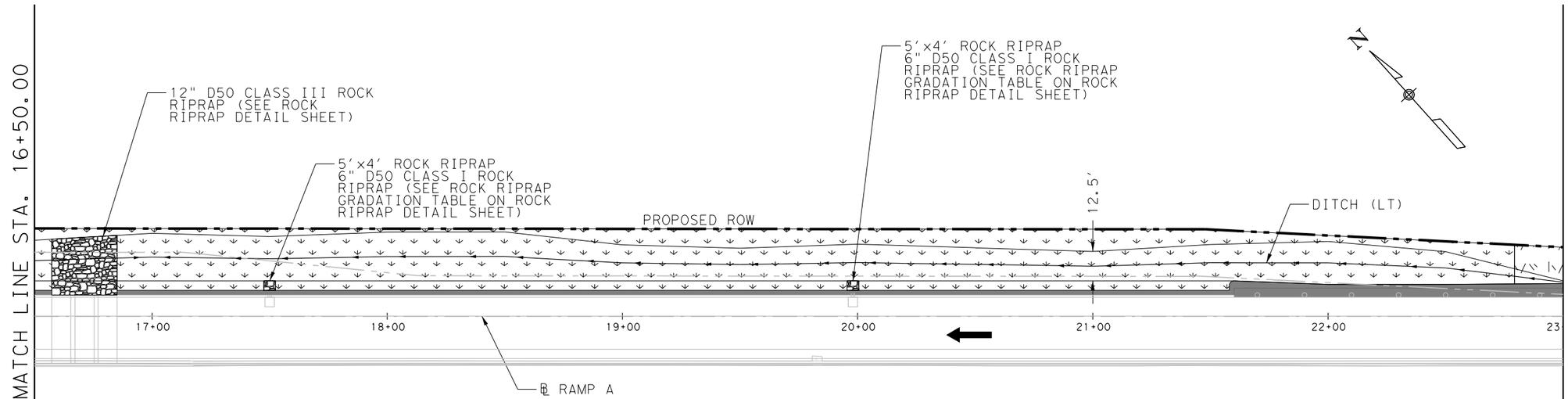
ATTACHMENT G:
CONSTRUCTION PLANS

Construction plans for this project have been prepared and submitted along with this WPAP application.



LEGEND

- GRASSED SWALE
- ROCK RIPRAP
- 4" CONC. RIPRAP
- SEEDING



0 25 50

SCALE IN FEET
HORIZ. 1"=50'

NOTES:

1. GRASSY SWALES AND AREAS OF PROPOSED RE-VEGETATION SHALL BE SEEDED WITH NATIVE GRASS MIXTURE: LITTLE BLUESTEM, BLUE GAMMA, OR OTHER SHORT AND LONG STEM MIDWEST GRASSES.
2. GEOMETRY OF GRASSY SWALE IS NOT CRITICAL AS LONG AS A BROAD, RELATIVELY FLAT, BOTTOM IS PROVIDED. SIDE SLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V).
3. GRASSY SWALES SHALL HAVE AT LEAST 80% VEGETATED COVER TO PROVIDED ADEQUATE TREATMENT OF RUNOFF.

512.669.5560 FIRM NO: F-15085
WGI
2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

STATE OF TEXAS
IRVING Y. AGUILAR
143754
LICENSED
PROFESSIONAL ENGINEER
9/12/23

SH 195 AT RONALD REAGAN

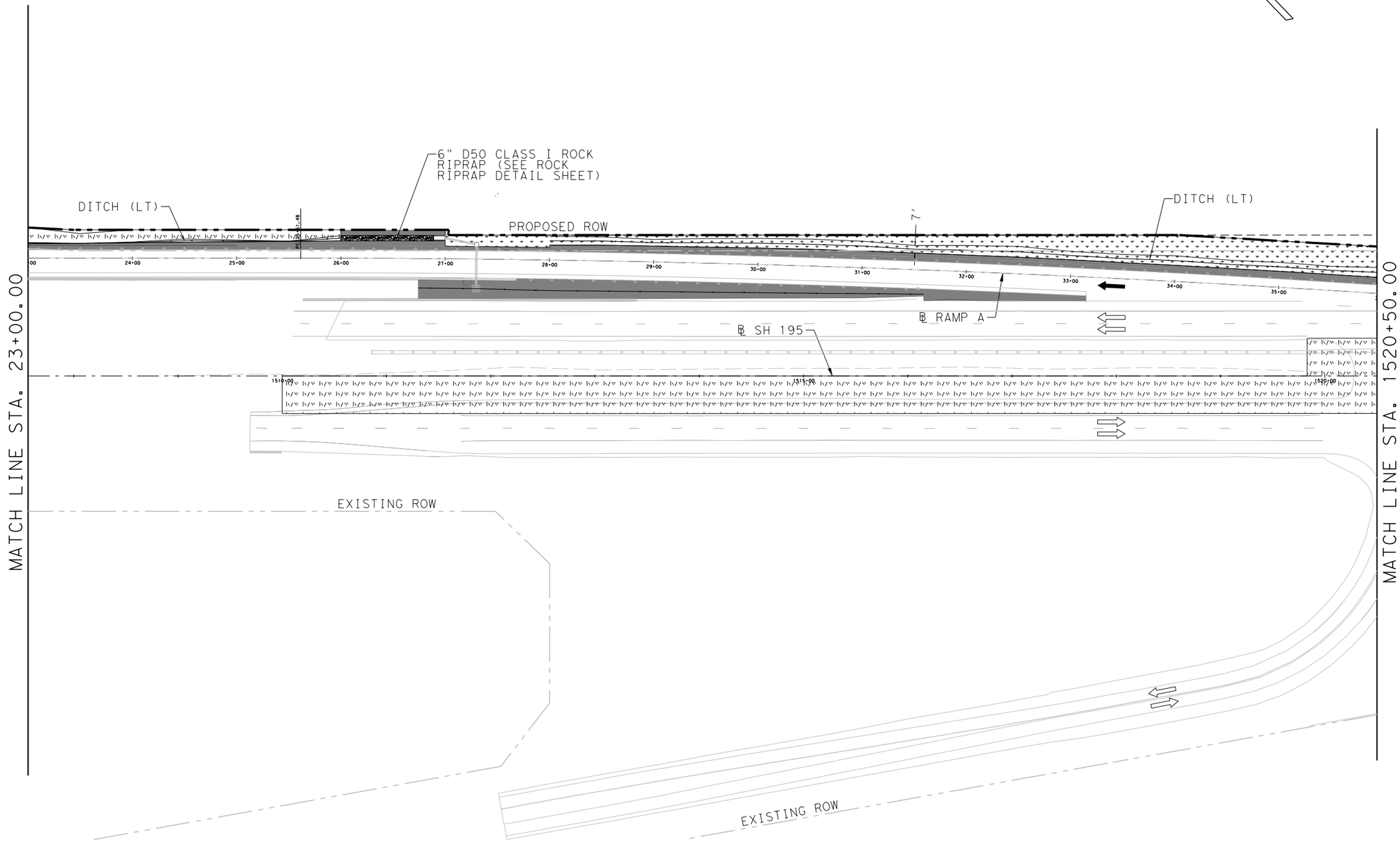
PERMANENT EROSION CONTROL

WILLIAMSON COUNTY
1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

DATE: $DATE$ $TIME$
FILE: $FILE$

CK1:
DN1:
CK1:
DN1:



NOTES:

1. GRASSY SWALES AND AREAS OF PROPOSED RE-VEGETATION SHALL BE SEEDED WITH NATIVE GRASS MIXTURE: LITTLE BLUESTEM, BLUE GAMMA, OR OTHER SHORT AND LONG STEM MIDWEST GRASSES.
2. GEOMETRY OF GRASSY SWALE IS NOT CRITICAL AS LONG AS A BROAD, RELATIVELY FLAT, BOTTOM IS PROVIDED. SIDE SLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V).
3. GRASSY SWALES SHALL HAVE AT LEAST 80% VEGETATED COVER TO PROVIDED ADEQUATE TREATMENT OF RUNOFF.

DATE: $DATE$ $TIME$
FILE: $FILE$

512.669.5560 FIRM NO: F-15085
WGI
2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

STATE OF TEXAS
IRVING Y. AGUILAR
143754
LICENSED PROFESSIONAL ENGINEER
9/12/23

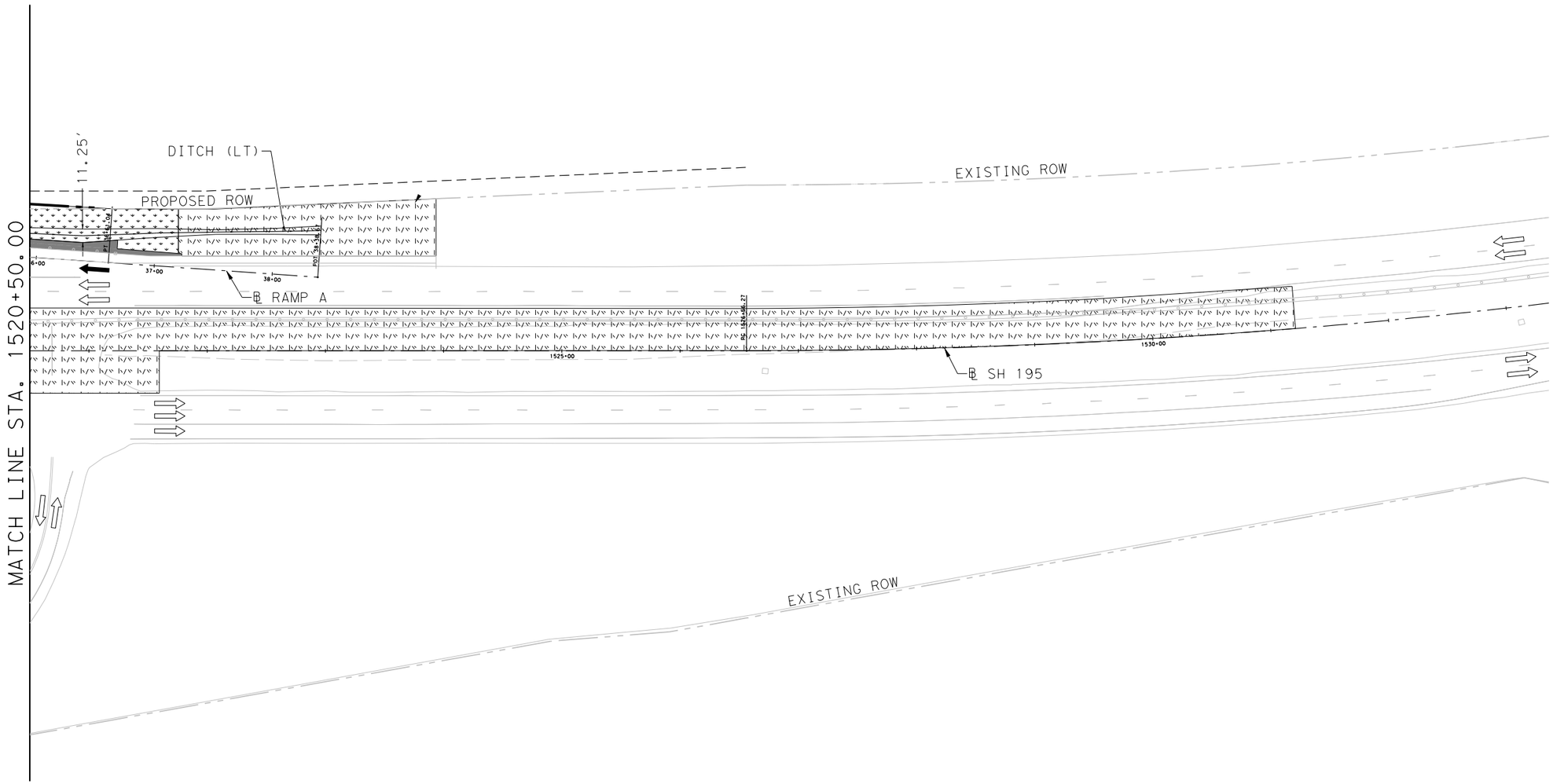
SH 195 AT RONALD REAGAN

PERMANENT EROSION CONTROL

WILLIAMSON COUNTY
1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

CK:
DN:
CK:
DN:



NOTES:

1. GRASSY SWALES AND AREAS OF PROPOSED RE-VEGETATION SHALL BE SEEDED WITH NATIVE GRASS MIXTURE: LITTLE BLUESTEM, BLUE GAMMA, OR OTHER SHORT AND LONG STEM MIDWEST GRASSES.
2. GEOMETRY OF GRASSY SWALE IS NOT CRITICAL AS LONG AS A BROAD, RELATIVELY FLAT, BOTTOM IS PROVIDED. SIDE SLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V).
3. GRASSY SWALES SHALL HAVE AT LEAST 80% VEGETATED COVER TO PROVIDED ADEQUATE TREATMENT OF RUNOFF.

DATE: $DATE$ $TIME$
FILE: $FILE$

512.669.5560 FIRM NO: F-15085
WGI
2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

STATE OF TEXAS
IRVING Y. AGUILAR
143754
LICENSED PROFESSIONAL ENGINEER
9/12/23

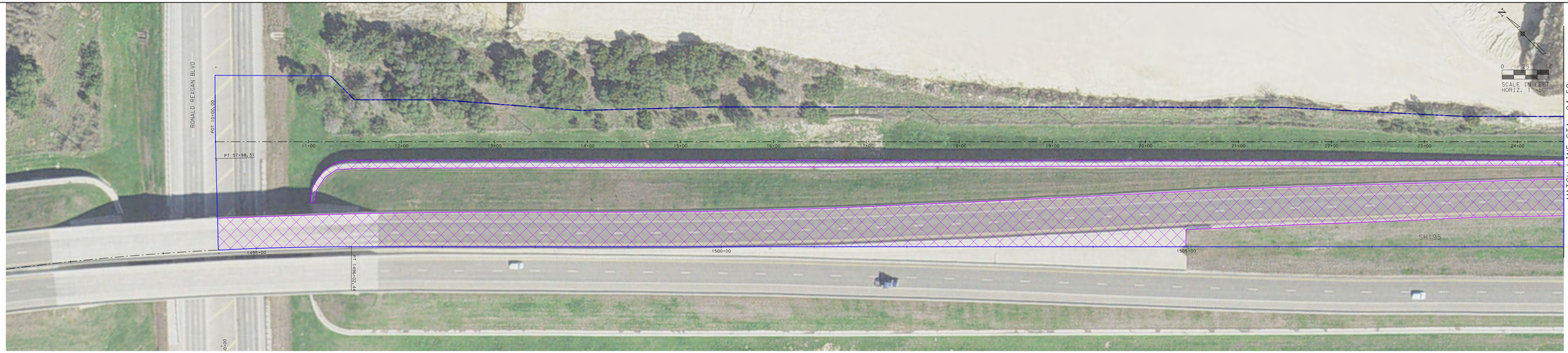
SH 195 AT RONALD REAGAN

PERMANENT EROSION CONTROL

WILLIAMSON COUNTY
1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

CK:
DW:
CK:
DN:



TOTAL PROJECT AREA ACREAGE: 12.7939 AC

EXISTING IMPERVIOUS INSIDE PROJECT LIMITS: 4.3987 AC

512.669.5560 FIRM NO: F-15085

WGI

2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

SH 195 RAMP TO RONALD REAGAN

IMPERVIOUS COVER EXHIBIT

EXISTING IMPERVIOUS

WILLIAMSON COUNTY
1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

DATE: 5/4/2023 5:07:18 PM
FILE: c:\pwworking\wgi\davidg\d2176396\WPAP Impervious Exhibit.dgn

CK:
DW:
CK:
DN:

TOTAL PROJECT AREA ACREAGE: 12.7939 AC

INCREASE IN IMPERVIOUS COVER (PAVEMENT AND CONC. RIP RAP): 2.2363

TOTAL AREA OF IMPERVIOUS TO BE REMOVED: 0.6707

512.669.5560 FIRM NO: F-15085

WGI

2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

SH 195 RAMP TO RONALD REAGAN

IMPERVIOUS COVER EXHIBIT

PROPOSED IMPERVIOUS

WILLIAMSON COUNTY 1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

DATE: 5/4/2023 4:05:10 PM
FILE: c:\pwworking\wgi\davidg\d2176396\WPAP Impervious Exhibit.dgn

THE SIZING REQUIREMENTS FOR THE FOLLOWING BMPs / LOAD REMOVALS ARE BASED UPON FLOW RATES - NOT CALCULATED WATER QUALITY VOLUMES

15. Grassy Swales Designed as Required in RG-348 Pages 3-51 to 3-54

Design parameters for the swale:

Drainage Area to be Treated by the Swale = A =	12.79	acres
Impervious Cover in Drainage Area =	6.64	acres
Rainfall intensity = i =	1.1	in/hr
Swale Slope =	0.01	ft/ft
Side Slope (z) =	4	
Design Water Depth = y =	1.00	ft
Weighted Runoff Coefficient = C =	0.54	

A_{CS} = cross-sectional area of flow in Swale =	10.23	sf
P_W = Wetted Perimeter =	14.48	feet
R_H = hydraulic radius of flow cross-section = A_{CS}/P_W =	0.71	feet
n = Manning's roughness coefficient =	0.2	

15A. Using the Method Described in the RG-348

Manning's Equation: $Q = \frac{1.49}{n} A_{CS} R_H^{2/3} S^{0.5}$

$b = \frac{0.134 \times Q}{y^{1.67} S^{0.5}} - zy$ = 6.23 feet

Q = CiA = 7.64 cfs

To calculate the flow velocity in the swale:

V (Velocity of Flow in the swale) = Q/A_{CS} = 0.75 ft/sec

To calculate the resulting swale length:

L = Minimum Swale Length = V (ft/sec) * 300 (sec) = 223.88 feet

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters must be modified and the solver rerun.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: SH195 Ramp to Ronald Reagan Blvd.
Date Prepared: 5/1/2023

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

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 * =		424.00	acres
Predevelopment impervious area within the limits of the plan * =		67.37	acres
Total post-development impervious area within the limits of the plan * =		134.05	acres
Total post-development impervious cover fraction * =		0.32	
P =		32	inches
$L_{M\ TOTAL\ PROJECT}$ =		58038	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 2

Total drainage basin/outfall area =	338.53	acres
Predevelopment impervious area within drainage basin/outfall area =	59.85	acres
Post-development impervious area within drainage basin/outfall area =	114.81	acres
Post-development impervious fraction within drainage basin/outfall area =	0.34	
$L_{M\ THIS\ BASIN}$ =	47837	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: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	338.53	acres
A_I =	114.81	acres
A_P =	223.72	acres
L_R =	111336	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 47837 lbs.

F = 0.43

9/12/2023

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: SH195 Ramp to Ronald Reagan Blvd.
Date Prepared: 5/1/2023

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

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 * =		424.00	acres
Predevelopment impervious area within the limits of the plan * =		67.37	acres
Total post-development impervious area within the limits of the plan * =		134.05	acres
Total post-development impervious cover fraction * =		0.32	
P =		32	inches
$L_{M\ TOTAL\ PROJECT}$ =		58038	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 3

Total drainage basin/outfall area =	45.68	acres
Predevelopment impervious area within drainage basin/outfall area =	6.65	acres
Post-development impervious area within drainage basin/outfall area =	14.00	acres
Post-development impervious fraction within drainage basin/outfall area =	0.31	
$L_{M\ THIS\ BASIN}$ =	6397	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: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	44.07	acres
A_I =	14.00	acres
A_P =	30.07	acres
L_R =	13617	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 6397 lbs.

F = 0.47

9/12/2023

ATTACHMENT H:
INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

The recommended inspection and maintenance plan for the proposed BMPs is as follows:

Grassy Swales

Maintenance for grassy swales is minimal and is largely aimed at keeping the grass cover dense and vigorous. Maintenance practices and schedules should be developed and included as part of the original plans to alleviate maintenance problems in the future. Recommended practices include:

Pest Management:

Problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.

Seasonal Mowing and Lawn Care:

If the filter strip is made up of turf grass, it should be mowed as needed to limit vegetation height to 18 inches, using a mulching mower (or removal of clippings). 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 within the grassy swales. Regular mowing should also include weed control practices, however herbicide use should be kept to a minimum (Urbonas et al., 1992). Healthy grass can be maintained without using fertilizers because runoff usually contains sufficient nutrients.

Inspection:

Inspect swales at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is most desirable. The swales 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 long-term restorative maintenance needs. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Construction of a level spreader device may be necessary to reestablish shallow overland flow.

Debris and Litter Removal:

Trash tends to accumulate in vegetated areas. Any swale structures should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection but should be performed no less than 2 times per year.

Sediment Removal:
Sediment accumulating near culverts and in channels needs to be removed when they build up to 3 inches at any spot, or cover vegetation. Excess sediment should be removed by hand or with flat-bottomed shovels. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level with the bottom of the swale. Sediment removal should be performed periodically, as determined through inspection.

Grass Reseeding and Mulching:
A healthy dense grass should be maintained in the channel and side slopes. Grass damaged during the sediment removal process should be promptly replaced using the same seed mix used during swale establishment. If possible, flow should be diverted from the damaged areas until the grass is firmly established.

Record Keeping:
Maintain a field logbook to record any relevant information noted at the collection time or during site visits. Include notations about any activities or issues that could affect the sample quality (e.g. sample integrity, test site alterations, maintenance activities, and improperly functioning equipment). At a minimum, the field notebook should include the date and time, field staff names, weather conditions, number of samples collected, sample description and label information, field measurements, field QC sample identification, and sampling equipment condition.

Irving Aguilar, PE

WGI

Chris Rizzo

TxDOT Georgetown Maintenance Office

ATTACHMENT I:
PILOT-SCALE FIELD TESTING PLAN

This attachment does not apply to this submittal. The (TCEQ) Technical Guidance Manual (TGM) was used to design permanent BMPs and measures on site, and therefore a Pilot-Scale Field Testing Plan is not required.

ATTACHMENT J:
MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

This attachment does not apply to this submittal. There are no surface streams existing on site.

ATTACHMENT K:
VOLUME & CHARACTER OF STORMWATER

The total project area is ±12.79 acres is part of a larger watershed of approximately 140.03-acres (drainage areas 9 through 21). The character of the storm water will not be changed from the previously approved WPAP. Roadside ditches will be graded to contain runoff and will also serve as grassy swales for water quality treatment. The increased area of impervious cover will create a higher runoff which will be controlled with grassy swales within the limits of the project. The proposed grassy swales will have relatively flat slopes which will maintain low velocities and shallow flows during the smaller rainfall events. In existing conditions, a runoff coefficient of 0.48 was used for undeveloped conditions and a runoff coefficient of 0.98 was used for paved surfaces. The tables below summarize the hydrologic data pertaining to the site in the existing and proposed conditions.

OVERALL HYDROLOGIC DATA (EXISTING CONDITIONS)

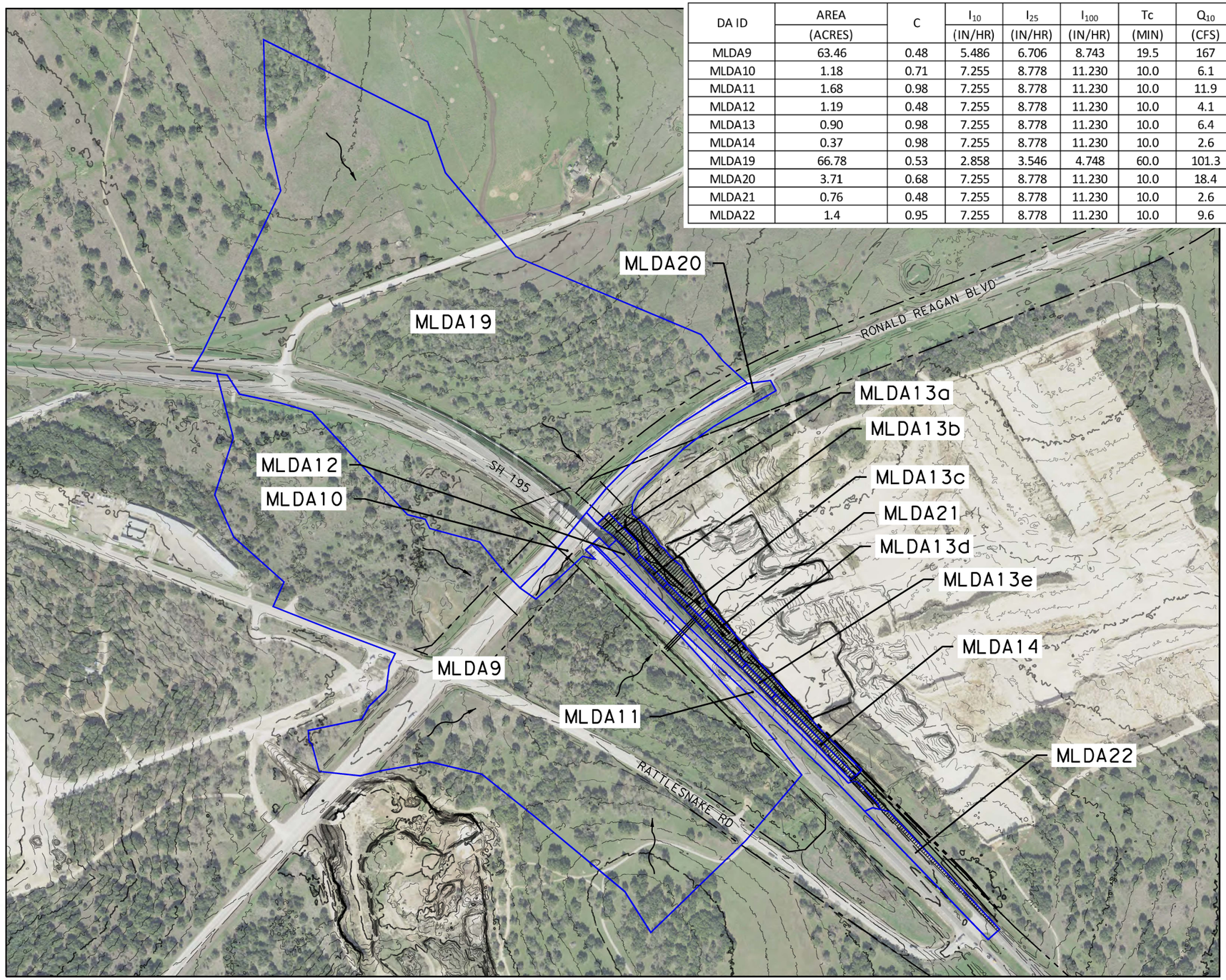
DA ID	AREA (ACRES)	C	I_{10} (IN/HR)	I_{25} (IN/HR)	I_{100} (IN/HR)	Tc (MIN)	Q_{10} (CFS)	Q_{25} (CFS)	Q_{100} (CFS)
MLDA9	63.46	0.48	5.486	6.706	8.743	19.5	167	204	266
MLDA10	1.18	0.71	7.255	8.778	11.230	10.0	6.1	7.4	9.4
MLDA11	1.68	0.98	7.255	8.778	11.230	10.0	11.9	14.5	18.5
MLDA12	1.19	0.48	7.255	8.778	11.230	10.0	4.1	5.0	6.4
MLDA13	0.90	0.48	7.255	8.778	11.230	10.0	3.1	3.8	4.9
MLDA14	0.37	0.48	7.255	8.778	11.230	10.0	1.3	1.6	2.0
MLDA19	66.78	0.53	2.858	3.546	4.748	60.0	101.3	125.6	168.2
MLDA20	3.71	0.68	7.255	8.778	11.230	10.0	18.4	22.2	28.4
MLDA21	0.76	0.48	7.255	8.778	11.230	10.0	2.6	3.2	4.1

OVERALL HYDROLOGIC DATA (PROPOSED CONDITIONS)

DA ID	AREA (ACRES)	C	I_{10} (IN/HR)	I_{25} (IN/HR)	I_{100} (IN/HR)	Tc (MIN)	Q_{10} (CFS)	Q_{25} (CFS)	Q_{100} (CFS)
MLDA9	63.46	0.48	5.486	6.706	8.743	19.5	167	204	266
MLDA10	1.18	0.71	7.255	8.778	11.230	10.0	6.1	7.4	9.4
MLDA11	1.68	0.98	7.255	8.778	11.230	10.0	11.9	14.5	18.5
MLDA12	1.19	0.48	7.255	8.778	11.230	10.0	4.1	5.0	6.4
MLDA13	0.90	0.98	7.255	8.778	11.230	10.0	6.4	7.7	9.9
MLDA14	0.37	0.98	7.255	8.778	11.230	10.0	2.6	3.2	4.1
MLDA19	66.78	0.53	2.858	3.546	4.748	60.0	101.3	125.6	168.2
MLDA20	3.71	0.68	7.255	8.778	11.230	10.0	18.4	22.2	28.4
MLDA21	0.76	0.48	7.255	8.778	11.230	10.0	2.6	3.2	4.1

OVERALL HYDROLOGIC DATA

DA ID	AREA (ACRES)	C	I_{10} (IN/HR)	I_{25} (IN/HR)	I_{100} (IN/HR)	Tc (MIN)	Q_{10} (CFS)	Q_{25} (CFS)	Q_{100} (CFS)
MLDA9	63.46	0.48	5.486	6.706	8.743	19.5	167	204	266
MLDA10	1.18	0.71	7.255	8.778	11.230	10.0	6.1	7.4	9.4
MLDA11	1.68	0.98	7.255	8.778	11.230	10.0	11.9	14.5	18.5
MLDA12	1.19	0.48	7.255	8.778	11.230	10.0	4.1	5.0	6.4
MLDA13	0.90	0.98	7.255	8.778	11.230	10.0	6.4	7.7	9.9
MLDA14	0.37	0.98	7.255	8.778	11.230	10.0	2.6	3.2	4.1
MLDA19	66.78	0.53	2.858	3.546	4.748	60.0	101.3	125.6	168.2
MLDA20	3.71	0.68	7.255	8.778	11.230	10.0	18.4	22.2	28.4
MLDA21	0.76	0.48	7.255	8.778	11.230	10.0	2.6	3.2	4.1
MLDA22	1.4	0.95	7.255	8.778	11.230	10.0	9.6	11.7	14.9



N

0 250 500
SCALE IN FEET

LEGEND:
- EXISTING CONTOUR
- DRAINAGE AREA
- FLOW ARROW
- EX. ROW
- PROJECT AREA (5.57 ACRES DISTURBED)

DRAINAGE AREA MAP

DRAINAGE AREAS WERE DELINEATED FROM A COMBINATION OF ON-THE-GROUND SURVEY AND 2015 LIDAR TOPOGRAPHY.
PROJECT LIMIT IS ENTIRELY WITHIN FEMA FLOOD ZONE "X" (UNSHADED) PER FIRM 48491C0125F EFFECTIVE DATE 12/20/2019

512.669.5560 FIRM NO: F-15085
WGI
2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

STATE OF TEXAS
IRVING Y. AGUILAR
143754
LICENSED PROFESSIONAL ENGINEER
9/12/2023

SH 195 AT RONALD REAGAN

DRAINAGE AREA MAP (OVERALL)

WILLIAMSON COUNTY 1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

DATE: 9/8/2023 2:59:58 PM
FILE: c:\pwworking\wgi\davidg\d2176392\Ramp A DrainageMap_WPAP2.dgn

CK1
DN1
CK1
DN1

MLDA19
MLDA20
BEGIN PROJECT RAMP A STA. 10+00.00
= RONALD REAGAN STA. 57+80.04
CULVERT 1 STA. 10+76
MLDA20
MLDA13a
MLDA13b
MLDA21
MLDA13c
MLDA13d
MLDA13e
MLDA14
MLDA12
STORM LINE SDL-A
MLDA11
MDLA22
POT 01+00.00
EXISTING CULVERT
RAMP A1
SH 195
1495+00
1500+00
1505+00
1510+00
SH 195
1515+00
MLDA12
MLDA11
℄ EXIST SH 195
MLDA10
CULVERT 2 STA. 16+71.29
MLDA19
RONALD REAGAN BLVD.
MLDA9
RATTLESNAKE ROAD
MATCH LINE STA. 1518+00

0 50 100 200
SCALE IN FEET

LEGEND:
- EXISTING CONTOUR
- DRAINAGE AREA
- FLOW ARROW
- EX. ROW

MATCH LINE STA. 1518+00
MDLA22
35+00
PT 36+61.04
POT 38+38.67
END RAMP A CONSTRUCTION
STA. 38+38.67
PC
EXISTING CULVERT
SH 195
1520+00
SH 195
1525+00
1530+00
1535+00
1540+00
℄ EXIST SH 195
EXISTING CULVERT
EXISTING CULVERT
END PROJECT RONALD REAGAN STA. 1531+11.02
RATTLESNAKE ROAD
EXISTING CULVERT

DRAINAGE AREA MAP

DRAINAGE AREAS WERE DELINEATED FROM A COMBINATION OF ON-THE-GROUND SURVEY AND 2015 LIDAR TOPOGRAPHY. PROJECT LIMIT IS ENTIRELY WITHIN FEMA FLOOD ZONE "X" (UNSHADED) PER FIRM 48491C0125F EFFECTIVE DATE 12/20/2019

512.669.5560 FIRM NO: F-15085
WGI
2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

STATE OF TEXAS
DAVID C. GERBER
140581
LICENSED PROFESSIONAL ENGINEER
5/4/2023

SH 195 AT RONALD REAGAN

DRAINAGE AREA MAP

WILLIAMSON COUNTY
1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		77

DATE: 5/2/2023 5:12:16 PM
FILE: c:\pwworking\wgi\davidg\d2176392\Ramp A DrainageMap2.dgn

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: David Gerber, P.E.

Date: 9/12/23

Signature of Customer/Agent:

Regulated Entity Name: SH 195 North of Rattlesnake Road to South of Rattlesnake Road

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.

ATTACHMENT A:
SPILL RESPONSE ACTIONS

Spills will be reported to the City of Georgetown (via 911 in emergencies). Hydrocarbons or hazardous substances spilled during construction will be cleaned up immediately upon detection. Waterways will be broomed and vacuumed as required. Contaminated soil will be excavated and removed to a TCEQ approved disposal site. The TCEQ will be notified immediately upon detection.

The objective of this section is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills. These measures include reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

The following steps will help reduce the stormwater impacts of leaks and spills:

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 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, and 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 waste 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 runoff during rainfall to the extent that it doesn't compromise clean-up 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 cleaning 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 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. 1-120

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 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 110,119, 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 spills-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/response/spills

Federal and State Spill Response Hotline Phone Numbers

Federal Spill Hotline: 1-800-424-8802
State Spill Hotline: 1-800-832-8224

ATTACHMENT B:
POTENTIAL SOURCES OF CONTAMINATION

Potential sources of contamination at the site include:

1. Construction vehicles tracking mud onto the roadway.
2. Fueling of construction vehicles.
3. Short-term storage and use of fertilizers in establishing vegetation.
4. Possible littering around the construction site.

All activities will be conducted in a manner to minimize the potential impact to the environment.

ATTACHMENT C:
SEQUENCE OF MAJOR ACTIVITIES

Sequence of major activities:

1. Install temporary erosion controls and tree protection fencing. (Disturbed acreage: Perimeter of 3.41-acres limits of construction)
2. Clearing and grubbing. Install silt fencing and rock berms (Disturbed acreage: 12.79 acres)
3. Rough grade site. Install silt fencing and rock berms (Disturbed acreage: 12.79 acres)
4. Construct stormwater infrastructure. Install inlet protection. (Disturbed acreage: 1 acre)
5. Roadway pavement repair for utility installation. Install silt fencing and rock berms (Disturbed acreage: 0.1 acre)
6. Complete final grading. Install silt fencing and rock berms as needed (Disturbed acreage: 12.79 acres)
7. Complete permanent erosion control and restoration of site vegetation. (Disturbed acreage: 0.97 acres)
8. Remove temporary erosion controls. (Disturbed acreage: Perimeter of 0.97 limits of construction)

ATTACHMENT D:
TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

Temporary Erosion and Sediment Control Best Management Practices (BMPs) shall be designed and placed in accordance with the City of Austin and TCEQ requirements. The temporary BMPs shall be installed prior to any site preparation work (clearing, grubbing, or excavation).

Silt Fence

Silt fence shall be installed immediately down gradient of areas of soil disturbance. See City of Austin Standard Detail on the Construction Plans for details on construction and installation.

Filter Dike or Mulch Socks

Where the limits of construction pass through the CRZ of a tree, triangular filter dikes or mulch socks shall be used in lieu of silt fence to prevent tree damage and minimize disturbance.

Tree Protection

Tree protection shall be installed around trees to prevent tree damage and potential damage or disturbance of the tree's root zone. See the City of Austin Standard Detail on the Construction Plans for details on construction of and installation.

Dust Control

Dust control can prevent blowing and movement of dust from exposed soil surfaces, reduce on-site and off-site damage, and improve traffic safety. Dust control will be implemented at the site during all phases of construction. Dust control during construction shall be done with mulch or irrigation.

Disturbed Area Minimization

An effective way of minimizing potential impact of storm water runoff from construction sites is to minimize the area of soil disturbance. The site will be developed in such a manner as to limit the necessary construction to as small an area as practical, thereby reducing the amount of run-off generated by a storm event.

Stabilized Construction Entrance

Anti-tracking pads consisting of stone will be installed at the entrance as identified on the site plan to prevent the off-site transport of sediment by construction vehicles. Crushed stone will be placed over a layer of geotextile filter fabric to reduce the mitigation of sediment from the underlying soil. The stabilization entrance will be installed prior to construction beginning on the site. The stone will remain in place until the sub grade of pavement is installed at the site.

Rock Berm

Rock berms will be utilized throughout the site to protect trees and other environmentally sensitive areas from erosion. Temporary erosion and sedimentation controls are to be installed prior to any site grading activities. The contractor is required to inspect the controls and fences at weekly intervals and after significant rainfall events to ensure that they are functioning properly.

Inlet Protection

Inlet filter inserts will be installed as the storm sewer system is constructed onsite. The catch basin filter inserts will be inspected weekly and immediately after storm events. If the basin insert becomes clogged with sediment, the insert will be removed and cleaned or replaced per the manufacturer’s recommendations.

Concrete Washout

A designated temporary, above-grade concrete washout area will be constructed. The temporary concrete washout area will be constructed with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. Concrete mixer trucks and chutes will be washed during or before an anticipated storm event in the designated area and any concrete waste will be properly disposed of off-site.

ATTACHMENT E:
REQUEST TO TEMPORARILY SEAL A FEATURE

This attachment is not applicable to this modification request.

ATTACHMENT F:
STRUCTURAL PRACTICES

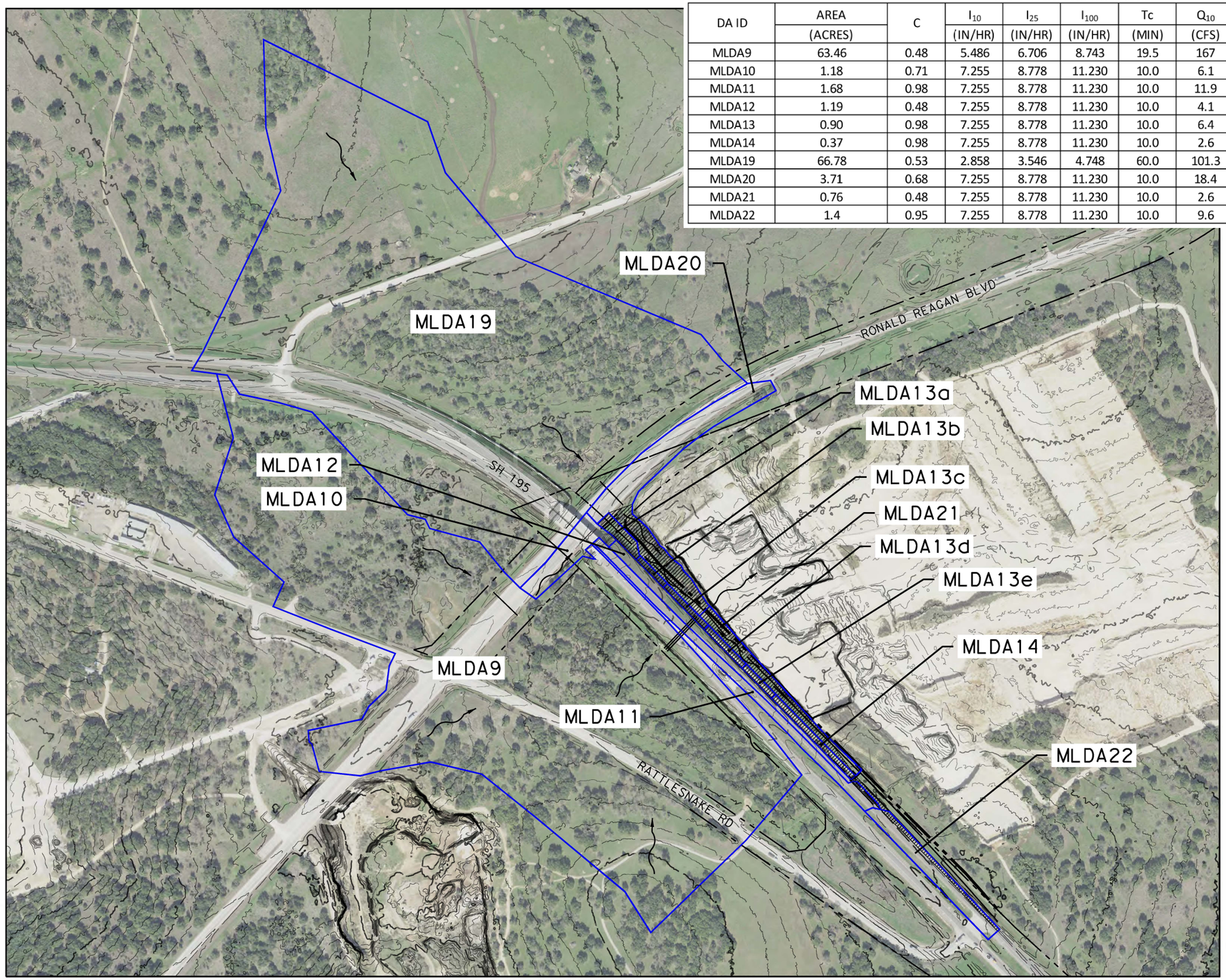
This attachment is not applicable to this modification request.

ATTACHMENT G:
DRAINAGE AREA MAP

There are no areas greater than 10-acres within a common drainage area that will be disturbed at one time. Please reference the drainage area map exhibit on the following page which shows the limits of the project area that will be disturbed in reference to the overall drainage areas upgradient of the project.

OVERALL HYDROLOGIC DATA

DA ID	AREA (ACRES)	C	I_{10} (IN/HR)	I_{25} (IN/HR)	I_{100} (IN/HR)	Tc (MIN)	Q_{10} (CFS)	Q_{25} (CFS)	Q_{100} (CFS)
MLDA9	63.46	0.48	5.486	6.706	8.743	19.5	167	204	266
MLDA10	1.18	0.71	7.255	8.778	11.230	10.0	6.1	7.4	9.4
MLDA11	1.68	0.98	7.255	8.778	11.230	10.0	11.9	14.5	18.5
MLDA12	1.19	0.48	7.255	8.778	11.230	10.0	4.1	5.0	6.4
MLDA13	0.90	0.98	7.255	8.778	11.230	10.0	6.4	7.7	9.9
MLDA14	0.37	0.98	7.255	8.778	11.230	10.0	2.6	3.2	4.1
MLDA19	66.78	0.53	2.858	3.546	4.748	60.0	101.3	125.6	168.2
MLDA20	3.71	0.68	7.255	8.778	11.230	10.0	18.4	22.2	28.4
MLDA21	0.76	0.48	7.255	8.778	11.230	10.0	2.6	3.2	4.1
MLDA22	1.4	0.95	7.255	8.778	11.230	10.0	9.6	11.7	14.9



N

0 250 500
SCALE IN FEET

LEGEND:
- EXISTING CONTOUR
- DRAINAGE AREA
- FLOW ARROW
- EX. ROW
- PROJECT AREA (5.57 ACRES DISTURBED)

DRAINAGE AREA MAP

DRAINAGE AREAS WERE DELINEATED FROM A COMBINATION OF ON-THE-GROUND SURVEY AND 2015 LIDAR TOPOGRAPHY.
PROJECT LIMIT IS ENTIRELY WITHIN FEMA FLOOD ZONE "X" (UNSHADED) PER FIRM 48491C0125F EFFECTIVE DATE 12/20/2019

512.669.5560 FIRM NO: F-15085
WGI
2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

STATE OF TEXAS
IRVING Y. AGUILAR
143754
LICENSED PROFESSIONAL ENGINEER
9/12/2023

SH 195 AT RONALD REAGAN

DRAINAGE AREA MAP (OVERALL)

WILLIAMSON COUNTY 1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

DATE: 9/8/2023 2:59:58 PM
FILE: c:\pwworking\wgi\davidg\d2176392\Ramp A DrainageMap_WPAP2.dgn

ATTACHMENT H:
TEMPORARY SEDIMENT POND(S) PLANS AND CALCULATIONS

This attachment is not applicable to this project.

ATTACHMENT I:
INSPECTION AND MAINTENANCE FOR BMP'S

The following is a schedule for inspection and maintenance for Temporary BMPs:

Silt Fence:	Inspect daily and after every rain event. Remove sediment when build-up reaches 6 inches. Replace torn fabric or add a secondary line of fabric parallel to the torn section. Replace or repair any sections crushed or collapsed during construction. When construction is complete, sediment should be disposed of in a manner that will not cause additional siltation and the silt fence area should be revegetated after the fence has been removed. Any repairs must be done within 24 hours of failure.
Temporary Inlet Protection:	Inspect weekly and after every rain event. Any repairs must be done within 24 hours of failure.
Tree Protection:	Inspect weekly.
Stabilized Construction Entrance:	The entrance should be maintained in a condition which will prevent tracking or flowing of sediment on to public rights-of-way. All sediment spilled, dropped, washed, or tracked onto public rights-of-way should be removed by contractor. Wheels should be cleaned to remove sediment prior to entrance onto public right-of-way when necessary. 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. Inspect weekly and after every rain event. Any repairs must be done within 24 hours of failure.
Concrete Washout Area:	Inspect weekly, after every rain event, and at the end of any day when concrete has been

	poured. Any overflowing of the washout facilities onto the ground must be cleaned up and removed within 24 hours of discovery. Break up hardened solids prior to removal and either reuse material on-site (as in the case for roadbeds) or haul away for recycling. Inspect structure for signs of weakening or damage after removal of materials and make any necessary repairs including re-lining with plastic that is free of holes or tears.
Rock Berms:	Inspect weekly and after every rain event to make repairs and clean out as necessary. Remove sediment and other debris when build-up reaches 6 inches and dispose of in an approved manner that will not cause any additional siltation. Repair any loose wire sheathing. The berm should be reshaped as needed during inspection. 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. The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.
Dewatering:	Periodic cleaning is required based on visual inspection or reduced flow. Oil and grease disposal must be by licensed waste disposal company. Install, operate, and maintain pressurized filtration systems by following manufacturer recommendations. Sediment must be frequently removed from devices and properly disposed of to maintain effectiveness.
Maintenance:	Install, operate, and maintain pressurized filtration systems by following manufacturer recommendations. Sediment must be frequently removed from devices and properly disposed of to maintain effectiveness.

Record Keeping:	Maintain a field logbook to record any relevant information noted at the collection time or during site visits. Include notations about any activities or issues that could affect the sample quality (e.g. sample integrity, test site alterations, maintenance activities, and improperly functioning equipment). At a minimum, the field notebook should include the date and time, field staff names, weather conditions, number of samples collected, sample description and label information, field measurements, field QC sample identification, and sampling equipment condition.

ATTACHMENT J:
SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

The following is a schedule of interim and permanent soil stabilization practices:

Prior to site disturbance:	Install all temporary vegetation features.
During construction:	Maintain all temporary vegetation features and install soil stabilization matting on slopes greater than 3:1 as described in the Edwards Aquifer Technical Guidance Manual Section 1.3. Inspect all temporary features on a weekly basis and after all rain events.
After completion of construction:	Install all permanent vegetation and geotextile features within 14 days after final grading.
After completion of permanent erosion and sedimentation:	Remove all temporary vegetation and soil stabilization matting features.
If construction is temporarily stopped unexpectedly:	If disturbed area is not to be worked on for more than 21 days, disturbed area needs to be stabilized by re-vegetation, mulch, tarp, or re-vegetation matting. If construction is permanently stopped, install all permanent vegetation and geotextile features and remove all temporary vegetation and soil stabilization matting features

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.

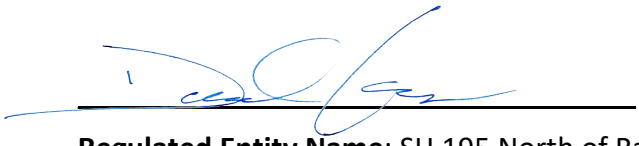
Signature

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: David Gerber, P.E.

Date: 9/12/23

Signature of Customer/Agent



Regulated Entity Name: SH 195 North of Rattlesnake Rd and South of Rattlesnake Rd

Permanent Best Management Practices (BMPs)

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

1. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

   ☐ N/A

2. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

   ☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

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

☐ N/A

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

   ☐ N/A

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

   ☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
   ☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
   ☒ The site will not be used for low density single-family residential development.

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

   ☐ **Attachment A - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
   ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
   ☒ The site will not be used for multi-family residential developments, schools, or small business sites.

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

☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.

☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

☒ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

7. ☒ **Attachment C - BMPs for On-site Stormwater**.

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

8. ☐ **Attachment D - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.

☒ N/A

9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

☒ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.

☐ **Attachment E - Request to Seal Features**. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

10. ☒ **Attachment F - Construction Plans**. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:

☒ Design calculations (TSS removal calculations)

☐ TCEQ construction notes

☐ All geologic features

☐ All proposed structural BMP(s) plans and specifications

☐ N/A

11. ☒ **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan**. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:

    ☒ Prepared and certified by the engineer designing the permanent BMPs and measures
    ☒ Signed by the owner or responsible party
    ☒ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    ☒ A discussion of record keeping procedures

    ☐ N/A

12. ☐ **Attachment H - Pilot-Scale Field Testing Plan**. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

    ☒ N/A

13. ☐ **Attachment I -Measures for Minimizing Surface Stream Contamination**. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.

    ☒ N/A

Responsibility for Maintenance of Permanent BMP(s)

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

14. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

    ☐ N/A

15. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

    ☐ N/A

ATTACHMENT A:
20% OR LESS IMPERVIOUS COVER WAIVER

This waiver is not applicable for this site.

ATTACHMENT B:
BMPS FOR UPGRADIENT STORMWATER

Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site. Upgradient areas draining through the site are undeveloped in existing conditions and will require their own onsite permanent BMPs.

ATTACHMENT C:
BMPS FOR ON-SITE STORMWATER

The proposed modification will encompass a total of 12.79-acres out of the original 424-acre project area in the previously approved report. Out of the total 424-acres, the proposed modification is located within the drainage area labeled as "2-Berry Creek" consisting of 351.32-acres from the approved WPAP. The proposed modification will replace the vegetated strip filters within the 12.79-acre limit with grassy swales as the permanent onsite BMP. As such, the area of the proposed modification was isolated from the 351.32-acre drainage area. The following Table provides a breakdown summary of the impervious cover calculations:

SH 195 OUTFALL TO BARRY CREEK WPAP CALCULATIONS

Existing Conditions (Approved WPAP)		
Total overall drainage basin/outfall area (Berry Creek)	351.32	acres
Initial Impervious Cover	60.65	acres
Added Impervious Cover (IC) - SH 195 (2012)*	58.49	acres
Added Impervious Cover - Shell Road decel lanes**	0.07	acres
Cumulative impervious cover	119.21	acres
Remaining pervious area	232.11	acres
Project Site (WPAP Modification)		
Total drainage basin	12.79	acres
Initial Impervious Cover	4.4	acres
Added impervious cover - decel lane & riprap	2.24	acres
Removed impervious cover - removed crossover	0.67	acres
Total impervious cover	5.97	acres
Remaining Area of Outfall area to Berry Creek		
Total drainage basin	338.53	acres
Total impervious cover	114.81	acres
Total Net IC increase from Approved WPAP & Exceptions	1.57	acres

**Approved WPAP Dated September 11, 2012*

***Approved Exception Dated October 25, 2019*

The drainage basin out-falling to Salado creek did not change from the approved WPAP. However, it was still included with the TSS calculations for consistency and to show the total overall TSS removal that was required. Detailed TSS calculations for each drainage area is included with this report.

ATTACHMENT D:
BMPS FOR SURFACE STREAMS

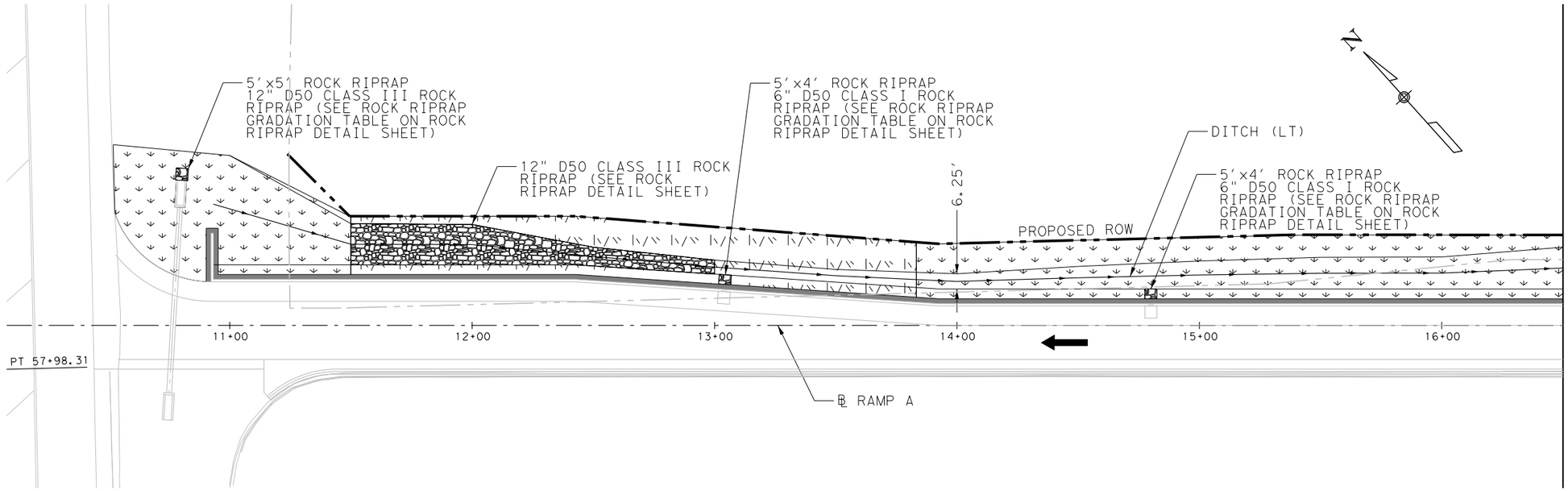
This attachment is not applicable. There are no surface streams on the regulated site.

ATTACHMENT E:
REQUEST TO SEAL FEATURES

This attachment is not applicable. There are no sensitive environmental features in the limits of the proposed modification.

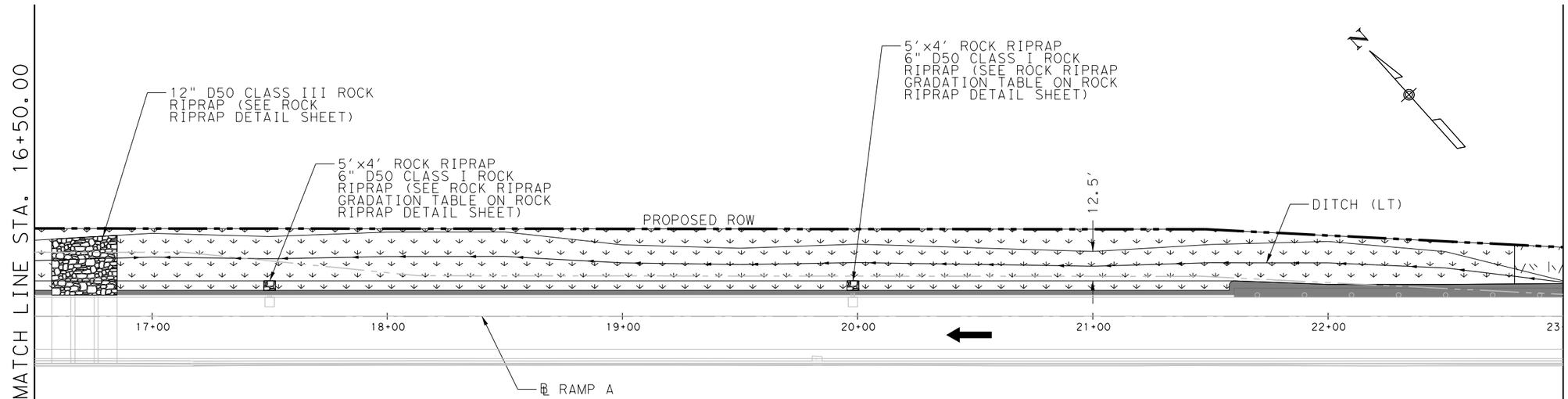
ATTACHMENT F:
CONSTRUCTION PLANS

Construction plans for this project have been prepared and submitted along with this WPAP application.



LEGEND

- GRASSED SWALE
- ROCK RIPRAP
- 4" CONC. RIPRAP
- SEEDING



0 25 50

SCALE IN FEET
HORIZ. 1"=50'

NOTES:

1. GRASSY SWALES AND AREAS OF PROPOSED RE-VEGETATION SHALL BE SEEDED WITH NATIVE GRASS MIXTURE: LITTLE BLUESTEM, BLUE GAMMA, OR OTHER SHORT AND LONG STEM MIDWEST GRASSES.
2. GEOMETRY OF GRASSY SWALE IS NOT CRITICAL AS LONG AS A BROAD, RELATIVELY FLAT, BOTTOM IS PROVIDED. SIDE SLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V).
3. GRASSY SWALES SHALL HAVE AT LEAST 80% VEGETATED COVER TO PROVIDED ADEQUATE TREATMENT OF RUNOFF.

512.669.5560 FIRM NO: F-15085
WGI
2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

STATE OF TEXAS
IRVING Y. AGUILAR
143754
LICENSED
PROFESSIONAL ENGINEER
9/12/23

SH 195 AT RONALD REAGAN

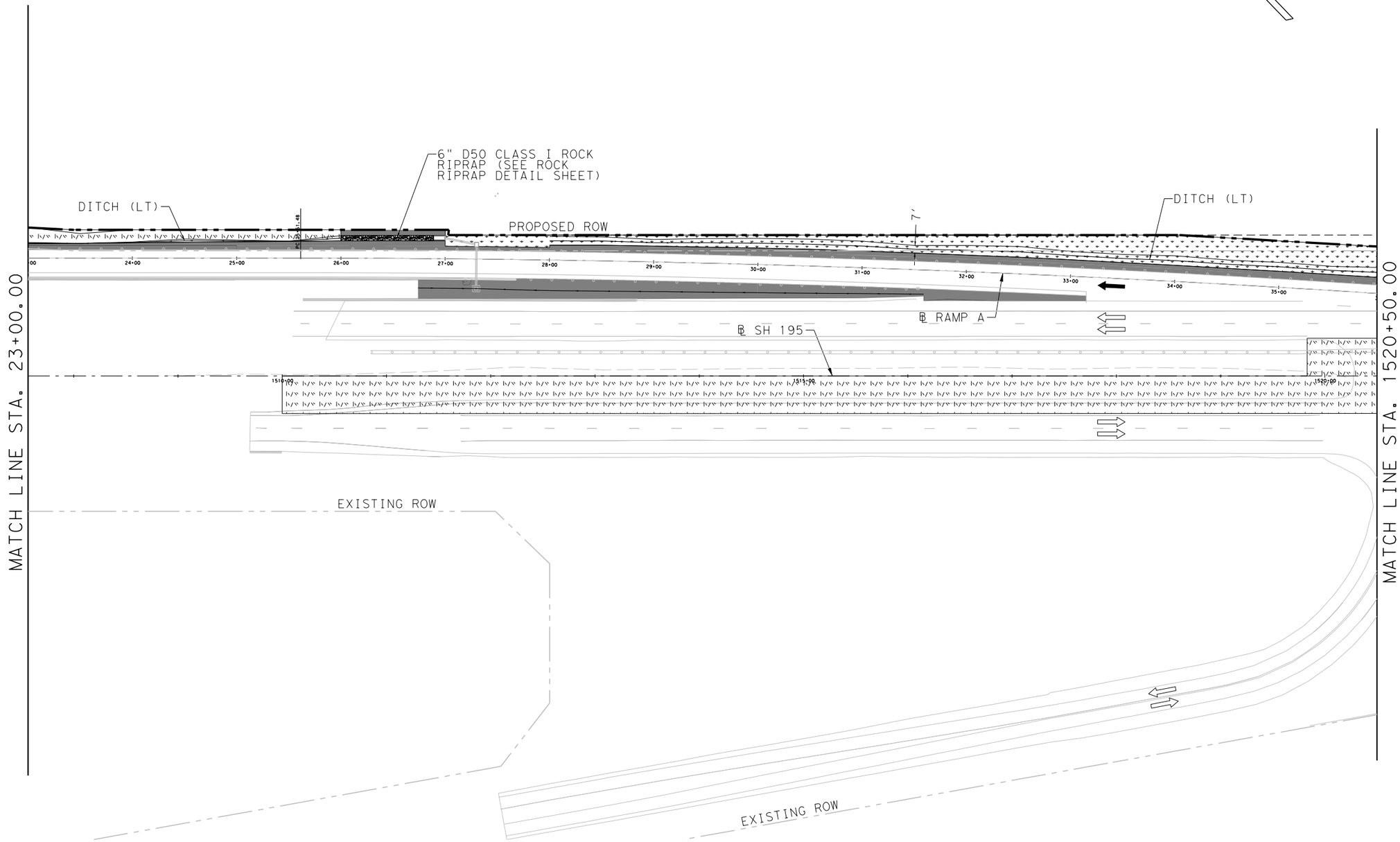
PERMANENT EROSION CONTROL

WILLIAMSON COUNTY
1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

DATE: $DATE$ $TIME$
FILE: $FILE$

CK1:
DN1:
CK1:
DN1:



NOTES:

1. GRASSY SWALES AND AREAS OF PROPOSED RE-VEGETATION SHALL BE SEEDED WITH NATIVE GRASS MIXTURE: LITTLE BLUESTEM, BLUE GAMMA, OR OTHER SHORT AND LONG STEM MIDWEST GRASSES.
2. GEOMETRY OF GRASSY SWALE IS NOT CRITICAL AS LONG AS A BROAD, RELATIVELY FLAT, BOTTOM IS PROVIDED. SIDE SLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V).
3. GRASSY SWALES SHALL HAVE AT LEAST 80% VEGETATED COVER TO PROVIDED ADEQUATE TREATMENT OF RUNOFF.

DATE: $DATE$ $TIME$
FILE: $FILE$

512.669.5560 FIRM NO: F-15085
WGI
2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

STATE OF TEXAS
IRVING Y. AGUILAR
143754
LICENSED PROFESSIONAL ENGINEER
9/12/23

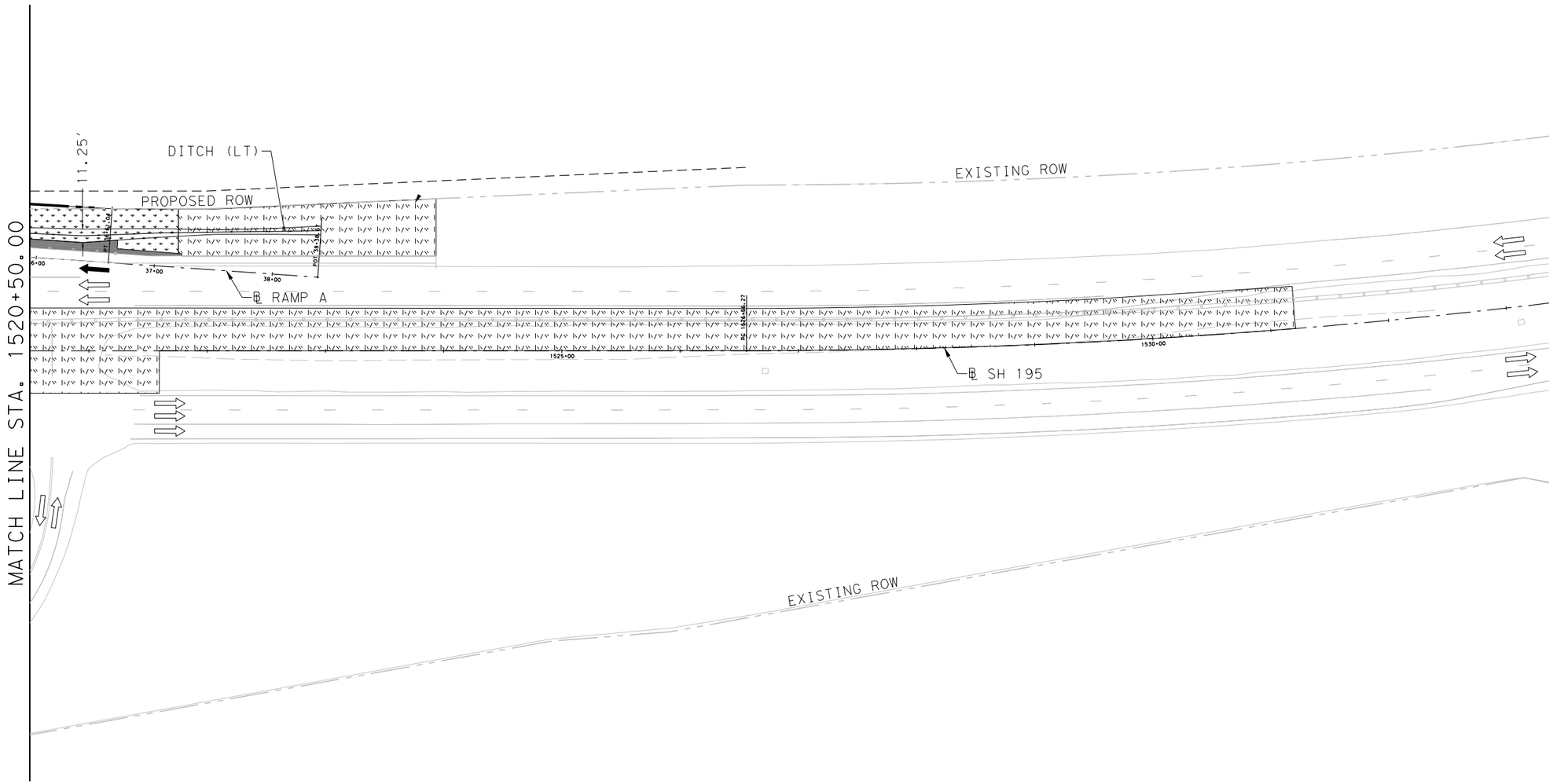
SH 195 AT RONALD REAGAN

PERMANENT EROSION CONTROL

WILLIAMSON COUNTY
1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

CK:
DN:
CK:
DN:



NOTES:

1. GRASSY SWALES AND AREAS OF PROPOSED RE-VEGETATION SHALL BE SEEDED WITH NATIVE GRASS MIXTURE: LITTLE BLUESTEM, BLUE GAMMA, OR OTHER SHORT AND LONG STEM MIDWEST GRASSES.
2. GEOMETRY OF GRASSY SWALE IS NOT CRITICAL AS LONG AS A BROAD, RELATIVELY FLAT, BOTTOM IS PROVIDED. SIDE SLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V).
3. GRASSY SWALES SHALL HAVE AT LEAST 80% VEGETATED COVER TO PROVIDED ADEQUATE TREATMENT OF RUNOFF.

DATE: $DATE$ $TIME$
FILE: $FILE$

512.669.5560 FIRM NO: F-15085
WGI
2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

STATE OF TEXAS
IRVING Y. AGUILAR
143754
LICENSED PROFESSIONAL ENGINEER
9/12/23

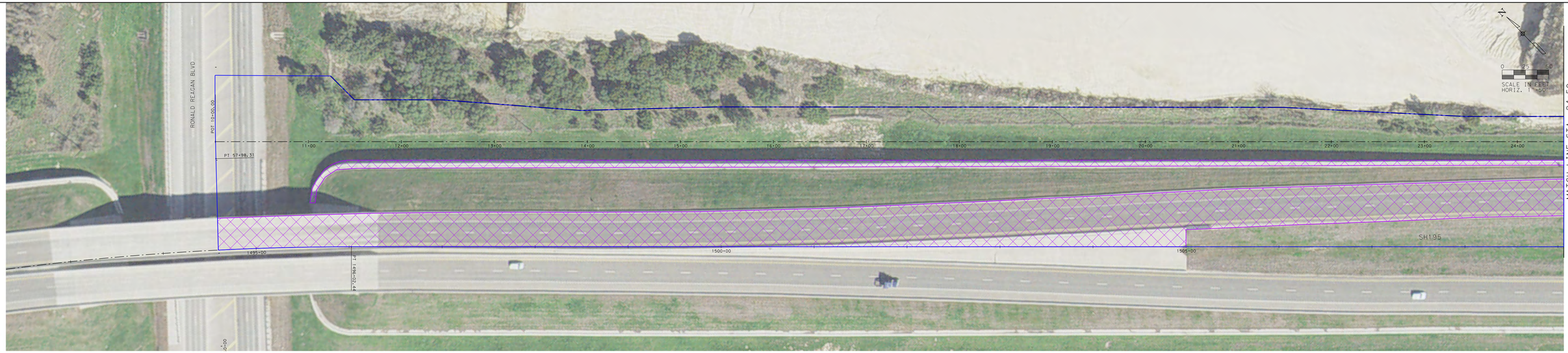
SH 195 AT RONALD REAGAN

PERMANENT EROSION CONTROL

WILLIAMSON COUNTY
1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

CK:
DW:
CK:
DN:



TOTAL PROJECT AREA ACREAGE: 12.7939 AC

EXISTING IMPERVIOUS INSIDE PROJECT LIMITS: 4.3987 AC

512.669.5560 FIRM NO: F-15085

WGI

2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

SH 195 RAMP TO RONALD REAGAN

IMPERVIOUS COVER EXHIBIT

EXISTING IMPERVIOUS

WILLIAMSON COUNTY
1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

DATE: 5/4/2023 5:07:18 PM
FILE: c:\pwworking\wgi\davidg\d2176396\WPAP Impervious Exhibit.dgn

CK:
DW:
CK:
DN:

TOTAL PROJECT AREA ACREAGE: 12.7939 AC

INCREASE IN IMPERVIOUS COVER (PAVEMENT AND CONC. RIP RAP): 2.2363

TOTAL AREA OF IMPERVIOUS TO BE REMOVED: 0.6707

512.669.5560 FIRM NO: F-15085

WGI

2021 East 5th St., Suite 200
Austin, Texas, 78702
www.WGInc.com

SH 195 RAMP TO RONALD REAGAN

IMPERVIOUS COVER EXHIBIT

PROPOSED IMPERVIOUS

WILLIAMSON COUNTY 1848

CONT	SECT	JOB	HIGHWAY
0440	09	002, ETC	SH 195
DIST	COUNTY		SHEET NO.
14-AUS	WILLIAMSON		

DATE: 5/4/2023 4:05:10 PM
FILE: c:\pwworking\wgi\davidg\d2176396\WPAP Impervious Exhibit.dgn

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: SH195 Ramp to Ronald Reagan Blvd.
Date Prepared: 5/1/2023

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

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 * =	424.00	acres
Predevelopment impervious area within the limits of the plan * =	67.37	acres
Total post-development impervious area within the limits of the plan * =	134.05	acres
Total post-development impervious cover fraction * =	0.32	
P =	32	inches

$L_{M\ TOTAL\ PROJECT}$ = **58038** lbs.

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	12.79	acres
Predevelopment impervious area within drainage basin/outfall area=	4.40	acres
Post-development impervious area within drainage basin/outfall area=	6.64	acres
Post-development impervious fraction within drainage basin/outfall area=	0.52	
$L_{M\ THIS\ BASIN}$ =	1950	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Grassy Swale
Removal efficiency = 70 percent

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

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

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

where:

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	12.79	acres
A_I =	6.64	acres
A_P =	6.15	acres
L_R =	5221	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 1950 lbs.

F = **0.37**

THE SIZING REQUIREMENTS FOR THE FOLLOWING BMPs / LOAD REMOVALS ARE BASED UPON FLOW RATES - NOT CALCULATED WATER QUALITY VOLUMES

15. Grassy Swales Designed as Required in RG-348 Pages 3-51 to 3-54

Design parameters for the swale:

Drainage Area to be Treated by the Swale = A =	12.79	acres
Impervious Cover in Drainage Area =	6.64	acres
Rainfall intensity = i =	1.1	in/hr
Swale Slope =	0.01	ft/ft
Side Slope (z) =	4	
Design Water Depth = y =	1.00	ft
Weighted Runoff Coefficient = C =	0.54	

A_{CS} = cross-sectional area of flow in Swale =	10.23	sf
P_W = Wetted Perimeter =	14.48	feet
R_H = hydraulic radius of flow cross-section = A_{CS}/P_W =	0.71	feet
n = Manning's roughness coefficient =	0.2	

15A. Using the Method Described in the RG-348

Manning's Equation: $Q = \frac{1.49}{n} A_{CS} R_H^{2/3} S^{0.5}$

$b = \frac{0.134 \times Q}{y^{1.67} S^{0.5}} - zy$ = 6.23 feet

Q = CiA = 7.64 cfs

To calculate the flow velocity in the swale:

V (Velocity of Flow in the swale) = Q/A_{CS} = 0.75 ft/sec

To calculate the resulting swale length:

L = Minimum Swale Length = V (ft/sec) * 300 (sec) = 223.88 feet

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters must be modified and the solver rerun.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: SH195 Ramp to Ronald Reagan Blvd.
Date Prepared: 5/1/2023

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

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 * =		424.00	acres
Predevelopment impervious area within the limits of the plan * =		67.37	acres
Total post-development impervious area within the limits of the plan * =		134.05	acres
Total post-development impervious cover fraction * =		0.32	
P =		32	inches
$L_{M\ TOTAL\ PROJECT}$ =		58038	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 2

Total drainage basin/outfall area =	338.53	acres
Predevelopment impervious area within drainage basin/outfall area =	59.85	acres
Post-development impervious area within drainage basin/outfall area =	114.81	acres
Post-development impervious fraction within drainage basin/outfall area =	0.34	
$L_{M\ THIS\ BASIN}$ =	47837	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: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	338.53	acres
A_I =	114.81	acres
A_P =	223.72	acres
L_R =	111336	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 47837 lbs.

F = 0.43

9/12/2023

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: SH195 Ramp to Ronald Reagan Blvd.
Date Prepared: 5/1/2023

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

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 * =		424.00	acres
Predevelopment impervious area within the limits of the plan * =		67.37	acres
Total post-development impervious area within the limits of the plan * =		134.05	acres
Total post-development impervious cover fraction * =		0.32	
P =		32	inches
$L_{M\ TOTAL\ PROJECT}$ =		58038	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 3

Total drainage basin/outfall area =	45.68	acres
Predevelopment impervious area within drainage basin/outfall area =	6.65	acres
Post-development impervious area within drainage basin/outfall area =	14.00	acres
Post-development impervious fraction within drainage basin/outfall area =	0.31	
$L_{M\ THIS\ BASIN}$ =	6397	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: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	44.07	acres
A_I =	14.00	acres
A_P =	30.07	acres
L_R =	13617	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 6397 lbs.

F = 0.47

9/12/2023

ATTACHMENT G:
INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

The recommended inspection and maintenance plan for the proposed BMPs is as follows:

Grassy Swales

Maintenance for grassy swales is minimal and is largely aimed at keeping the grass cover dense and vigorous. Maintenance practices and schedules should be developed and included as part of the original plans to alleviate maintenance problems in the future. Recommended practices include:

Pest Management:

Problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.

Seasonal Mowing and Lawn Care:

If the filter strip is made up of turf grass, it should be mowed as needed to limit vegetation height to 18 inches, using a mulching mower (or removal of clippings). 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 within the grassy swales. Regular mowing should also include weed control practices, however herbicide use should be kept to a minimum (Urbonas et al., 1992). Healthy grass can be maintained without using fertilizers because runoff usually contains sufficient nutrients.

Inspection:

Inspect swales at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is most desirable. The swales 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 long-term restorative maintenance needs. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Construction of a level spreader device may be necessary to reestablish shallow overland flow.

Debris and Litter Removal:

Trash tends to accumulate in vegetated areas. Any swale structures should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection but should be performed no less than 2 times per year.

Sediment Removal:
Sediment accumulating near culverts and in channels needs to be removed when they build up to 3 inches at any spot, or cover vegetation. Excess sediment should be removed by hand or with flat-bottomed shovels. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level with the bottom of the swale. Sediment removal should be performed periodically, as determined through inspection.

Grass Reseeding and Mulching:
A healthy dense grass should be maintained in the channel and side slopes. Grass damaged during the sediment removal process should be promptly replaced using the same seed mix used during swale establishment. If possible, flow should be diverted from the damaged areas until the grass is firmly established.

Record Keeping:
Maintain a field logbook to record any relevant information noted at the collection time or during site visits. Include notations about any activities or issues that could affect the sample quality (e.g. sample integrity, test site alterations, maintenance activities, and improperly functioning equipment). At a minimum, the field notebook should include the date and time, field staff names, weather conditions, number of samples collected, sample description and label information, field measurements, field QC sample identification, and sampling equipment condition.

Irving Aguilar, PE

WGI

Chris Rizzo

TxDOT Georgetown Maintenance Office

ATTACHMENT H:
PILOT-SCALE FIELD TESTING PLAN

This attachment does not apply to this submittal. The (TCEQ) Technical Guidance Manual (TGM) was used to design permanent BMPs and measures on site, and therefore a Pilot-Scale Field Testing Plan is not required.

ATTACHMENT I:
MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

This attachment does not apply to this submittal. There are no surface streams existing on site.

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

I Lorena Roque Martinez, GIT,
Print Name
Environmental Specialist, Austin District,
Title - Owner/President/Other

of TxDOT,
Corporation/Partnership/Entity Name

have authorized David Gerber, P.E.
Print Name of Agent/Engineer

of WGI
Print Name of Firm

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

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

7/13/2023
Date

THE STATE OF Texas §

County of Williamson §

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

GIVEN under my hand and seal of office on this ____ day of _____, 2021.

_____
NOTARY PUBLIC

_____
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: _____

ATTACHMENT A:
TXDOT SH 195 R.O.W. DEED

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

DEED

TxDOT ROW CSJ: 0440-09-002
Highway: SH 195
TxDOT Parcel ID: 1

Grantor(s), whether one or more:

Austin White Lime Company, Ltd., a Texas limited partnership

Grantor's Mailing Address (including county):

PO Box 9556
Austin, Travis County, Texas 78766

Grantee:

The State of Texas, acting by and through the Texas Transportation Commission

Grantee's Authority:

The Texas Transportation Commission is authorized under the Texas Transportation Code to purchase land and such other property rights (including requesting that counties and municipalities acquire highway right of way) deemed necessary or convenient to a state highway or turnpike project to be constructed, reconstructed, maintained, widened, straightened, or extended, or to accomplish any purpose related to the location, construction, improvement, maintenance, beautification, preservation, or operation of a state highway or turnpike project.

The Texas Transportation Commission is also authorized under the Texas Transportation Code, Chapter 203 to acquire or request to be acquired such other property rights deemed necessary or convenient for the purposes of operating a state highway or turnpike project, with control of access as necessary to facilitate the flow of traffic and promote the public safety and welfare on both non-controlled facilities and designated controlled access highways and turnpike projects.

Grantee's Mailing Address (including county):

Right of Way Division
118 E. Riverside Dr.
Austin, Travis County, Texas 78704

Consideration:

The sum of TWO HUNDRED ELEVEN THOUSAND THREE HUNDRED THIRTY and no/100 Dollars ($211,330.00) to Grantor in hand paid, receipt of which is hereby acknowledged, and for which no lien is retained, either expressed or implied.

Property:

All of that certain 1.0500 acre tract or parcel of land in Williamson County, Texas, situated in the Lemuel S. Walters Survey, Abstract No. 635, being more particularly described by metes and bounds in the attached **Exhibit A** (the "**Property**").

Reservations from and Exceptions to Conveyance and Warranty:

This conveyance is made by Grantor and accepted by Grantee subject to the following:

1. Visible and apparent easements not appearing of record.

2. Any discrepancies, conflicts, or shortages in area or boundary lines or any encroachments or any overlapping of improvements which a current survey would show.

3. Easements, restrictions, reservations, covenants, conditions, oil and gas leases, mineral severances, and encumbrances for taxes and assessments (other than liens and conveyances) presently of record in the Official Public Records of Williamson County, Texas, that affect the Property, but only to the extent that said items are still valid and in force and effect at this time.

Grantor reserves all of the oil, gas, and sulfur in and under the Property but waives all rights of ingress and egress to the surface thereof for the purpose of exploring, developing, mining or drilling for same; however, nothing in this reservation shall affect the title and rights of the Grantee, its successors and assigns, to take and use all other minerals and materials thereon, therein, and thereunder.

Grantor is retaining title to the following improvements ("**Retained Improvements**") located on the Property, to wit: NONE

Grantor covenants and agrees to remove the Retained Improvements from the Property by N/A day of N/A 2023, subject to such extensions of time as may be granted by Grantee in writing. In the event Grantor fails, for any reason, to remove the Retained Improvements within the time prescribed, then, without further consideration, title to all or part of such Retained Improvements not so removed shall pass to and vest in Grantee, its successors and assigns, forever.

Access on and off Grantor's remaining property to and from the State highway facility shall be permitted except to the extent that such access is expressly prohibited by the provisions set out in Exhibit "A". Grantor acknowledges that such access on and off the State highway facility is subject to regulation as may be determined by the Texas Department of Transportation to be necessary in the interest of public safety or by applicable local municipal or county zoning, platting, or permitting requirements.

GRANTEE HEREBY EXPRESSLY ACKNOWLEDGES THAT IT HAS THOROUGHLY INSPECTED AND EXAMINED THE PROPERTY, INCLUDING THE PHYSICAL AND ENVIRONMENTAL CONDITIONS THEREOF, TO THE EXTENT DEEMED NECESSARY BY GRANTEE IN ORDER TO ENABLE GRANTEE TO EVALUATE ITS PURCHASE OF THE PROPERTY. GRANTEE REPRESENTS THAT IT IS A KNOWLEDGEABLE PURCHASER OF ASSETS SUCH AS THE PROPERTY AND AGREES THAT IT IS RELYING SOLELY ON ITS OWN EXPERTISE AND THAT OF ITS CONSULTANTS, AND HEREBY ASSUMES THE RISK OF ANY

ADVERSE MATTERS, INCLUDING ADVERSE PHYSICAL AND ENVIRONMENTAL CONDITIONS, THAT MAY NOT HAVE BEEN REVEALED BY GRANTEE'S INSPECTIONS AND INVESTIGATIONS. GRANTEE FURTHER ACKNOWLEDGES AND AGREES THAT IT IS ACQUIRING THE PROPERTY ON AN **AS-IS, WHERE-IS AND WITH ALL FAULTS** BASIS, WITHOUT REPRESENTATIONS, WARRANTIES OR COVENANTS, EXPRESS OR IMPLIED, OF ANY KIND OR NATURE, EXCEPT THE SPECIAL WARRANTY OF TITLE CONTAINED IN THIS DEED. GRANTEE DISCLAIMS RELIANCE UPON, AND WAIVES AND RELINQUISHES ANY AND ALL RIGHTS AND PRIVILEGES ARISING OUT OF OR RELATING TO, ALL REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, ORAL OR WRITTEN, OF ANY KIND OR NATURE, EXCEPT THE SPECIAL WARRANTY OF TITLE CONTAINED IN THIS DEED. GRANTEE HEREBY AGREES THAT GRANTOR SHALL NOT BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL OR OTHER DAMAGES RESULTING OR ARISING FROM OR RELATING TO THE OWNERSHIP, USE, CONDITION, LOCATION, MAINTENANCE, REPAIR OR OPERATION OF THE PROPERTY.

GRANTOR, for the Consideration and subject to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty, grants, sells, and conveys to Grantee the Property, together with all and singular the rights and appurtenances thereto in any way belonging, to have and to hold it to Grantee and Grantee's successors and assigns forever. Grantor binds Grantor and Grantor's successors and assigns to Warrant and Forever Defend all and singular the Property to Grantee and Grantee's successors and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof, by, through or under Grantor, but not otherwise, except as to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty.

When the context requires, singular nouns and pronouns include the plural.

EXECUTED on the date(s) of acknowledgment indicated below.

GRANTOR:

AUSTIN WHITE LIME COMPANY, LTD., a Texas limited partnership

By: **ROBINSON FAMILY MANAGEMENT**, a Texas non-profit corporation, its General Partner

By: _____
Scott Bradley Robinson, President and Chief Executive Officer

[acknowledgment page follows]

Acknowledgment

STATE OF TEXAS §
§
COUNTY OF TRAVIS §

This instrument was acknowledged before me on the 28 day of August, 2023, by Scott Bradley Robinson, President and Chief Executive Officer of Robinson Family Management, a Texas non-profit corporation, general partner of Austin White Lime Company, Ltd., a Texas limited partnership, on behalf of said non-profit corporation and limited partnership.

(seal)

VANESSA MENCHACA
Notary Public, State of Texas
Comm. Expires 08-29-2026
Notary ID 129926222

Notary Public, State of Texas

AFTER RECORDING, RETURN TO:

EXHIBIT "A"

County: Williamson
Highway: SH195
Limits: From: Ronald Reagan Blvd., Southeasterly

July 18, 2023

DESCRIPTION OF PARCEL 1

BEING a 1.0500 of one acre (45,737 square feet) parcel of land situated in the Lemuel S. Walters Survey, Abstract No. 653 in Williamson County, Texas, said 1.0500 of one acre parcel of land being a portion of that certain remainder of a called 1441.49 acre tract described in a Special Warranty Deed to Austin White Lime Company, of record in Volume 771, Page 65, of the Deed Records of Williamson County, Texas; said 1.0500 of one acre parcel of land being more particularly described by metes and bounds as follows:

COMMENCING at a 1/2-inch iron rod with aluminum cap marked "TX Department of Transportation R.O.W. Monument" found in the northeasterly right-of-way line of SH195, said R.O.W. been described as a 46.573 acre tract in a Special Warranty Deed to State of Texas in Document No. 2011003279, Official Public Records of Williamson County, Texas (O.P.R.W.C.T.)

THENCE, along said northeasterly right-of-way line of said SH195, 289.34 feet along the arc of a curve to the right, having a radius of 2,984.79 feet, a central angle of 05° 33' 15" and whose chord bears South 48° 16' 56" East, a distance of 289.23 feet to a calculated point for the **POINT OF BEGINNING**, said point being the southwesterly corner of the remainder of said Austin White Lime Company tract, same also being at the intersection with the easterly right-of-way line of Ronald Reagan Boulevard (a variable width right-of-way), being the most westerly corner of the herein described parcel, having a surface coordinate of N=10,249,844.50 and E=3,117,835.40 and being 119.74 feet left of and at right angles to the surveyor's baseline station 1495+82.04; from which point a mag nail found bears: South 19° 32' 57" West, a distance of 0.42 feet;

(1) **THENCE,** with the northwesterly line of the tract described herein, along said easterly right-of-way line of Ronald Reagan Boulevard, 62.90 feet along the arc of a curve to the right, having a radius of 2,739.79 feet, a central angle of 01`° 18' 55" and whose chord bears North 44° 34' 21" East, a distance of 62.90 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set for the most northerly corner of the tract described herein and being 182.64 feet left of and at right angles to the surveyor's baseline station 1495+82.11;

(2) **THENCE,** with the northeasterly line of the tract described herein and the proposed northeasterly right-of-way line of SH 195, over and across said Austin White Lime Company remainder tract, South 00°03'02" East, a distance of 35.34 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set, and being 157.56 feet left of surveyor's baseline station 1496+05.79;

EXHIBIT "A"

(3) **THENCE,** continuing with the northeasterly line of the tract described herein and the proposed northeasterly right-of-way line of SH 195, continuing over and across said Austin White Lime Company remainder tract, South 45°05'05" East, a distance of 93.16 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set, and being 157.56 feet left of surveyor's baseline station 1496+98.94;

(4) **THENCE,** continuing with the northeasterly line of the tract described herein and the proposed northeasterly right-of-way line of SH 195, continuing over and across said Austin White Lime Company remainder tract, South 40°44'01" East, a distance of 150.45 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set, and being 146.14 feet left of surveyor's baseline station 1498+48.96;

(5) **THENCE,** continuing with the northeasterly line of the tract described herein and the proposed northeasterly right-of-way line of SH 195, continuing over and across said Austin White Lime Company remainder tract, South 46°34'02" East, a distance of 146.35 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set, and being 149.92 feet left of surveyor's baseline station 1499+95.26;

(6) **THENCE,** continuing with the northeasterly line of the tract described herein and the proposed northeasterly right-of-way line of SH 195, continuing over and across said Austin White Lime Company remainder tract, South 45°02'28" East, a distance of 608.85 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set, and being 149.44 feet left of surveyor's baseline station 1506+04.11;

(7) **THENCE,** continuing with the northeasterly line of the tract described herein and the proposed northeasterly right-of-way line of SH 195, continuing over and across said Austin White Lime Company remainder tract, South 42°13'19" East, a distance of 196.58 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set, and being 139.62 feet left of surveyor's baseline station 1508+00.45;

(8) **THENCE,** continuing with the northeasterly line of the tract described herein and the proposed northeasterly right-of-way line of SH 195, continuing over and across said Austin White Lime Company remainder tract, South 45°04'59" East, a distance of 359.65 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set, and being 139.60 feet left of surveyor's baseline station 1511+60.10;

EXHIBIT "A"

(9) **THENCE,** continuing with the northeasterly line of the tract described herein and the proposed northeasterly right-of-way line of SH 195, continuing over and across said Austin White Lime Company remainder tract, South 52°29'19" West, a distance of 5.03 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set, and being 134.62 feet left of surveyor's baseline station 1511+59.43;

(10) **THENCE,** continuing with the northeasterly line of the tract described herein and the proposed northeasterly right-of-way line of SH 195, continuing over and across said Austin White Lime Company remainder tract, South 45°05'10" East, a distance of 701.43 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set, and being 134.62 feet left of surveyor's baseline station 1518+60.86;

(11) **THENCE,** continuing with the northeasterly line of the tract described herein and the proposed northeasterly right-of-way line of SH 195, continuing over and across said Austin White Lime Company remainder tract, South 41°45'25" East, a distance of 259.52 feet to a 5/8-inch iron rod with plastic cap stamped "WGI 10194509" set in the existing northeasterly right-of-way of said SH 195, and being 119.55 feet left of surveyor's baseline station 1521+19.94; from which point a TxDOT Type II monument found bears, South 45°04'59" East, a distance of 79.93 feet;

(12) **THENCE,** along said existing northeasterly right-of-way line of said SH195, with the southwesterly line of the remainder of said Austin White Lime Company tract, North 45°04'59" West (CALLED South 45°05'10" East), a distance of 1,320.00 feet to a calculated point; and being 119.62 feet left of surveyor's baseline station 1507+99.95;

(13) **THENCE,** continuing along said existing northeasterly right-of-way line of said SH195, with the southwesterly line of the remainder of said Austin White Lime Company tract, North 42°16'39" West, a distance of 200.52 feet (CALLED South 42°13'26" East, a distance of 200.25 feet) to a TxDOT Type II monument found; and being 129.44 feet left of surveyor's baseline station 1505+99.67;

(14) **THENCE,** continuing along said existing northeasterly right-of-way line of said SH195, with the southwesterly line of the remainder of said Austin White Lime Company tract, North 45°02'28" West, a distance of 329.90 feet (CALLED South 45°05'10" East, a distance of 330.00 feet) to a TxDOT Type II monument found; and being 129.70 feet left of surveyor's baseline station 1502+69.77;

EXHIBIT "A"

(15) **THENCE,** continuing along said existing northeasterly right-of-way line of said SH195, with the southwesterly line of the remainder of said Austin White Lime Company tract, North 39°23'47" West, a distance of 100.28 feet (CALLED South 39°22'32" East, a distance of 100.50 feet) to a calculated point; from which point a ½-inch iron rod found bears, South 54°44'32" East, a distance of 0.80 feet; and being 139.65 feet left of surveyor's baseline station 1501+69.99;

(16) **THENCE,** continuing along said existing northeasterly right-of-way line of said SH195, with the southwesterly line of the remainder of said Austin White Lime Company tract, North 45°04'59" West, a distance of 85.00 feet (CALLED South 45°05'10" East, a distance of 85.00') to a TxDOT Type II monument found; and being 139.65 feet left of surveyor's baseline station 1500+84.99;

(17) **THENCE,** continuing along said existing northeasterly right-of-way line of said SH195, with the southwesterly line of the remainder of said Austin White Lime Company tract, North 50°47'18" West, a distance of 100.73 feet (CALLED South 50°47'48" East, a distance of 100.50') to a TxDOT Type II monument found; and being 129.64 feet left of surveyor's baseline station 1499+89.76;

(18) **THENCE,** continuing along said existing northeasterly right-of-way line of said SH195, with the southwesterly line of the remainder of said Austin White Lime Company tract, North 46°34'02" West, a distance of 382.56 feet (CALLED South 46°35'00" East, a distance of 382.75 feet) to a TxDOT Type II monument found at the beginning of a curve to the left; and being 119.75 feet left of surveyor's baseline station 1496+02.33;

(19) **THENCE,** continuing along said existing northeasterly right-of-way line of said SH195, with the southwesterly line of the remainder of said Austin White Lime Company tract, 21.14 feet along the arc of a curve to the left, having a radius of 2,984.79 feet, a central angle of 00° 24' 21" and whose chord bears North 45° 19' 12" West, a distance of 21.14 feet to the **POINT OF BEGINNING**, and containing 1.0500 of one acre (45,737 square feet) of land.

EXHIBIT "A"

County: Williamson
Highway: SH195
Limits: From: Ronald Reagan Blvd., Southeasterly

July 18, 2023

NOTES:
The basis of bearing is the Texas State Plane Coordinate System, North American Datum of 1983 (NAD83), 2011 adjustment, EPOCH 2010. Central Zone (4203). All distances and coordinates shown are surface values, unless otherwise noted, and may be converted to grid by dividing the TXDOT combined scale factor of 1.00012. Unit of measurement is U.S. Survey Feet

A drawing of even date herewith accompanies this description.

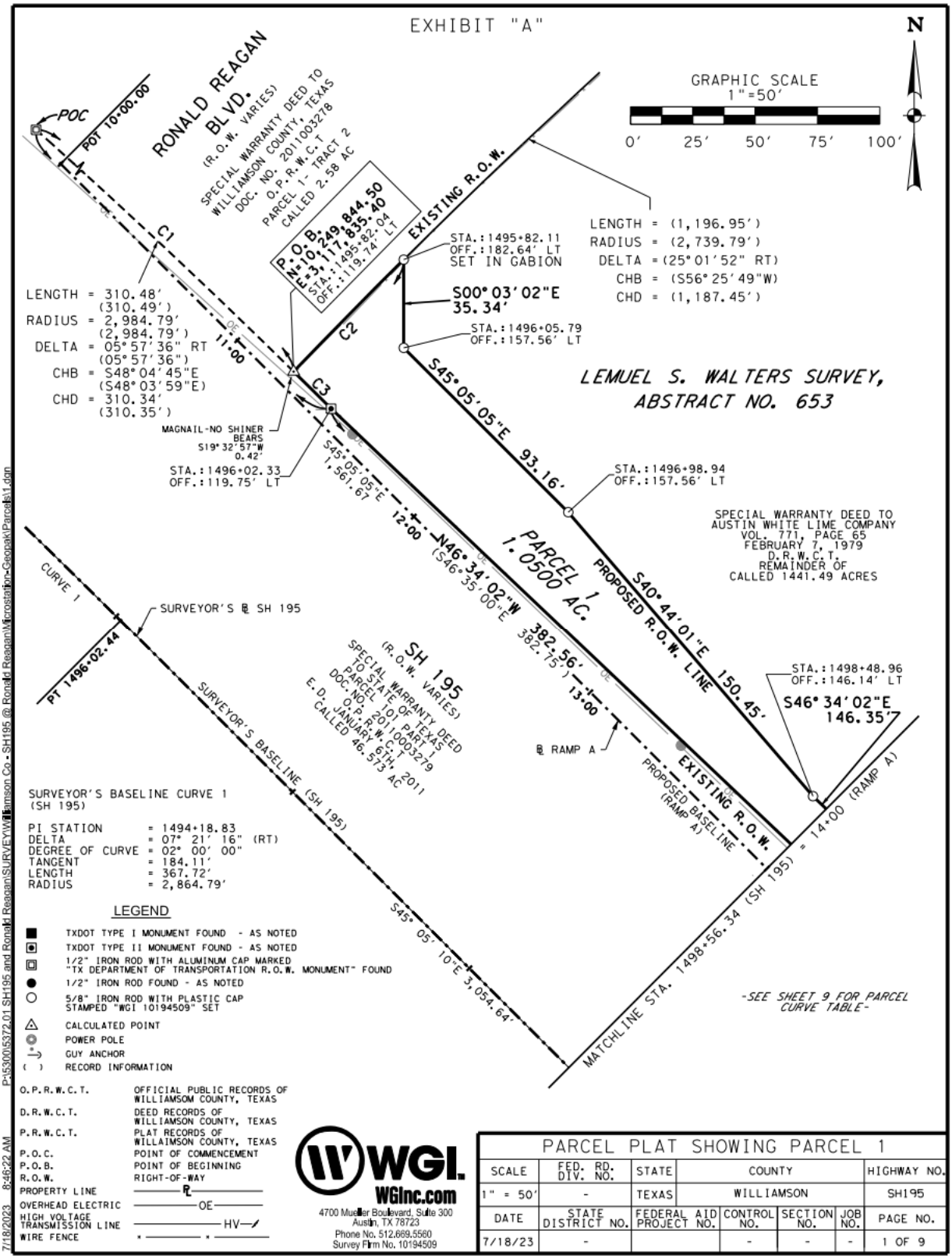
This survey was performed with the benefit of a title commitment as referenced on the accompanying drawing of even date herewith.

All stations and offsets shown are calculated relative to the project baseline as surveyed (SH195 centerline)

I, Coleen M. Johnson, a Registered Professional Land Surveyor, do hereby certify that this description and accompanying drawing is true and correct to the best of my knowledge and belief and was prepared from an actual on-the-ground survey under my direction and supervision.

July 18, 2023

Coleen M. Johnson, RPLS — Date
Registered Professional Land Surveyor
Texas Registration No. 4871
WGI, Inc.
4700 Mueller Blvd., Suite 300
Austin, Texas 78723
TBPELS Survey Firm No. 10194509



PARCEL PLAT SHOWING PARCEL 1						
SCALE	FED. RD. DIV. NO.	STATE	COUNTY			HIGHWAY NO.
1" = 50'	-	TEXAS	WILLIAMSON			SH195
DATE	STATE DISTRICT NO.	FEDERAL AID PROJECT NO.	CONTROL NO.	SECTION NO.	JOB NO.	PAGE NO.
7/18/23	-		-	-	-	1 OF 9

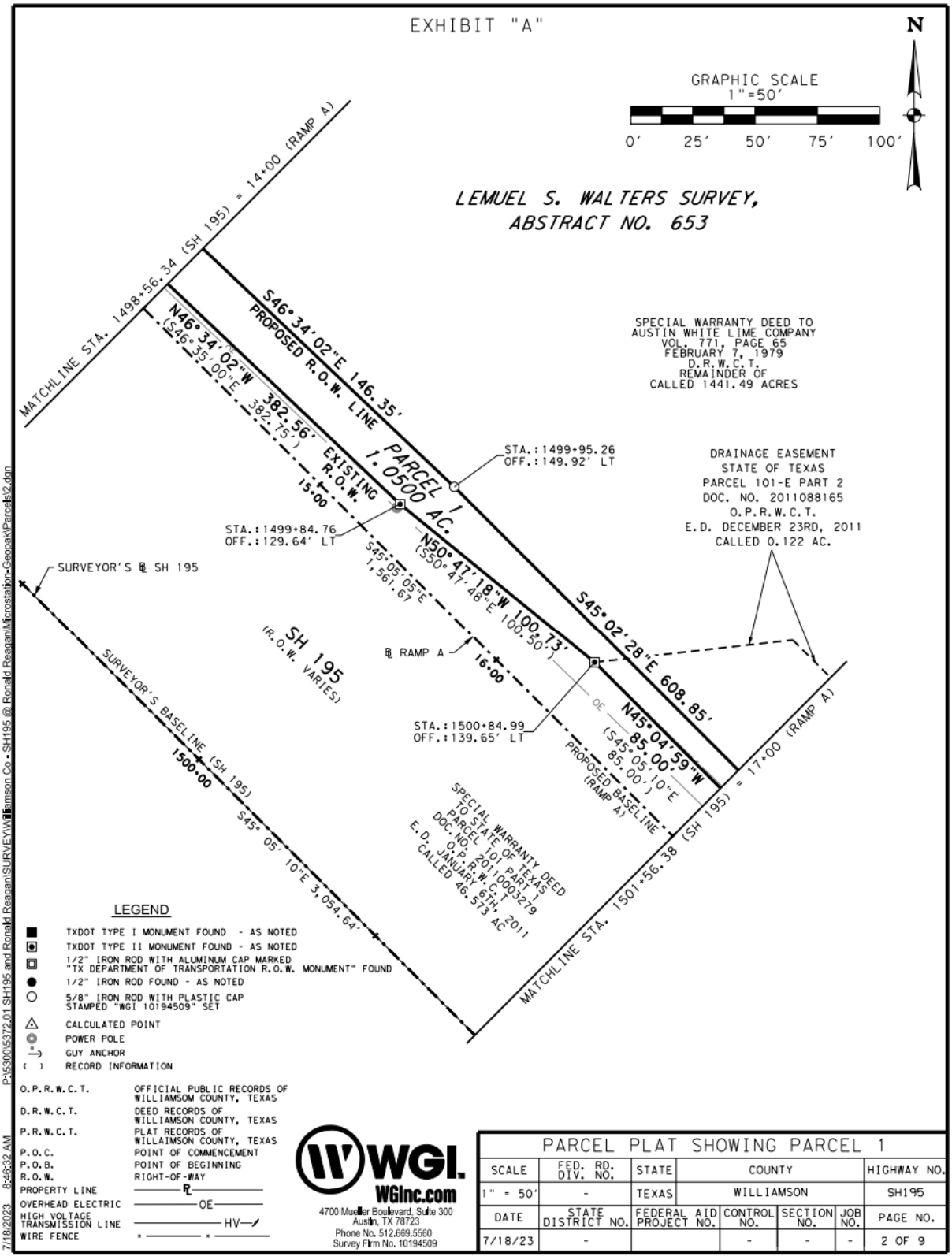
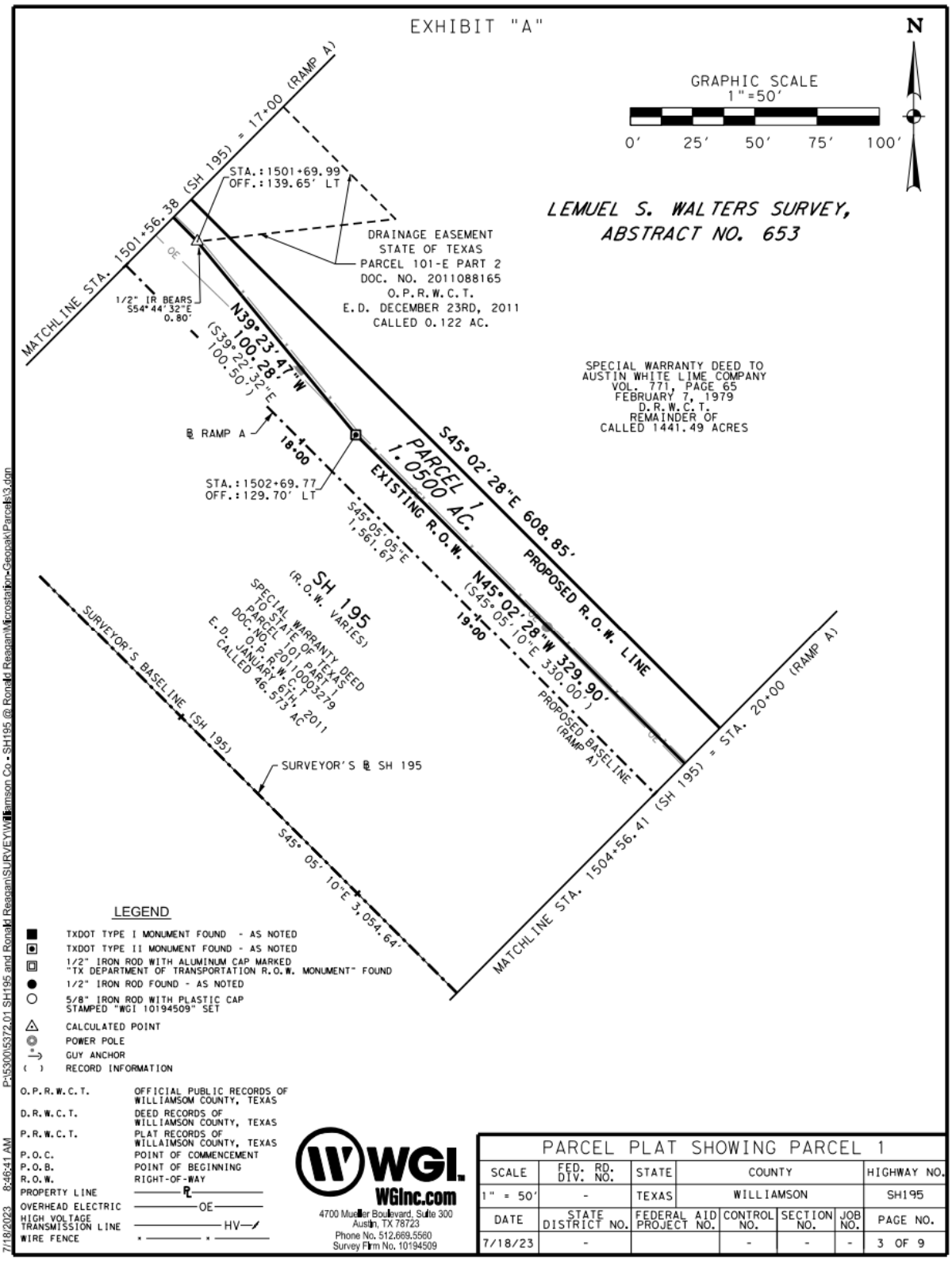


EXHIBIT "A"
N
GRAPHIC SCALE
1"=50'
0' 25' 50' 75' 100'
LEMUEL S. WALTERS SURVEY,
ABSTRACT NO. 653
MATCHLINE STA. 1498+56.34 (SH 195) = 14+00 (RAMP A)
S46°34'02"E 146.35'
PROPOSED R.O.W. LINE
PARCEL 1
1.0500 AC.
N46°34'02"W 382.56'
(S46°35'00"E 382.75')
EXISTING R.O.W.
15.00
SPECIAL WARRANTY DEED TO
AUSTIN WHITE LIME COMPANY
VOL. 771, PAGE 65
FEBRUARY 7, 1979
D.R.W.C.T.
REMAINDER OF
CALLED 1441.49 ACRES
STA.: 1499+95.26
OFF.: 149.92' LT
DRAINAGE EASEMENT
STATE OF TEXAS
PARCEL 101-E PART 2
DOC. NO. 2011088165
O.P.R.W.C.T.
E.D. DECEMBER 23RD, 2011
CALLED 0.122 AC.
STA.: 1499+84.76
OFF.: 129.64' LT
S45°05'05"E 1,561.67
N50°47'18"W 100.73'
(S50°47'48"E 100.50')
SURVEYOR'S ℄ SH 195
SH 195
(R.O.W. VARIES)
℄ RAMP A
16.00
S45°02'28"E 608.85'
N45°04'59"W 85.00'
(S45°05'10"E 85.00')
OE
PROPOSED BASELINE (RAMP A)
STA.: 1500+84.99
OFF.: 139.65' LT
SURVEYOR'S BASELINE (SH 195)
1500.00
S45°05'10"E 3,054.64'
SPECIAL WARRANTY DEED
TO STATE OF TEXAS
PARCEL 101 PART 1
DOC. NO. 2011003279
O.P.R.W.C.T.
E.D. JANUARY 6TH, 2011
CALLED 46.573 AC.
MATCHLINE STA. 1501+56.38 (SH 195) = 17+00 (RAMP A)
LEGEND
TXDOT TYPE I MONUMENT FOUND - AS NOTED
TXDOT TYPE II MONUMENT FOUND - AS NOTED
1/2" IRON ROD WITH ALUMINUM CAP MARKED "TX DEPARTMENT OF TRANSPORTATION R.O.W. MONUMENT" FOUND
1/2" IRON ROD FOUND - AS NOTED
5/8" IRON ROD WITH PLASTIC CAP STAMPED "WGI 10194509" SET
CALCULATED POINT
POWER POLE
GUY ANCHOR
( ) RECORD INFORMATION
O.P.R.W.C.T. OFFICIAL PUBLIC RECORDS OF WILLIAMSOM COUNTY, TEXAS
D.R.W.C.T. DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
P.R.W.C.T. PLAT RECORDS OF WILLAIMSON COUNTY, TEXAS
P.O.C. POINT OF COMMENCEMENT
P.O.B. POINT OF BEGINNING
R.O.W. RIGHT-OF-WAY
PROPERTY LINE ℄
OVERHEAD ELECTRIC OE
HIGH VOLTAGE TRANSMISSION LINE HV
WIRE FENCE
WGI
WGInc.com
4700 Mueller Boulevard, Suite 300
Austin, TX 78723
Phone No. 512.669.5560
Survey Firm No. 10194509
PARCEL PLAT SHOWING PARCEL 1
SCALE 1" = 50'
FED. RD. DIV. NO. -
STATE TEXAS
COUNTY WILLIAMSON
HIGHWAY NO. SH195
DATE 7/18/23
STATE DISTRICT NO. -
FEDERAL AID PROJECT NO.
CONTROL NO. -
SECTION NO. -
JOB NO. -
PAGE NO. 2 OF 9
P:\530005372.01 SH195 and Ronald Reagan\SURVEY\WGI Williamson Co - SH195 @ Ronald Reagan\Microstation-Geopak\Parcels\2.dgn
7/18/2023 8:46:32 AM



LEGEND

- TXDOT TYPE I MONUMENT FOUND - AS NOTED
- TXDOT TYPE II MONUMENT FOUND - AS NOTED
- 1/2" IRON ROD WITH ALUMINUM CAP MARKED "TX DEPARTMENT OF TRANSPORTATION R.O.W. MONUMENT" FOUND
- 1/2" IRON ROD FOUND - AS NOTED
- 5/8" IRON ROD WITH PLASTIC CAP STAMPED "WGI 10194509" SET
- CALCULATED POINT
- POWER POLE
- GUY ANCHOR
- ( ) RECORD INFORMATION

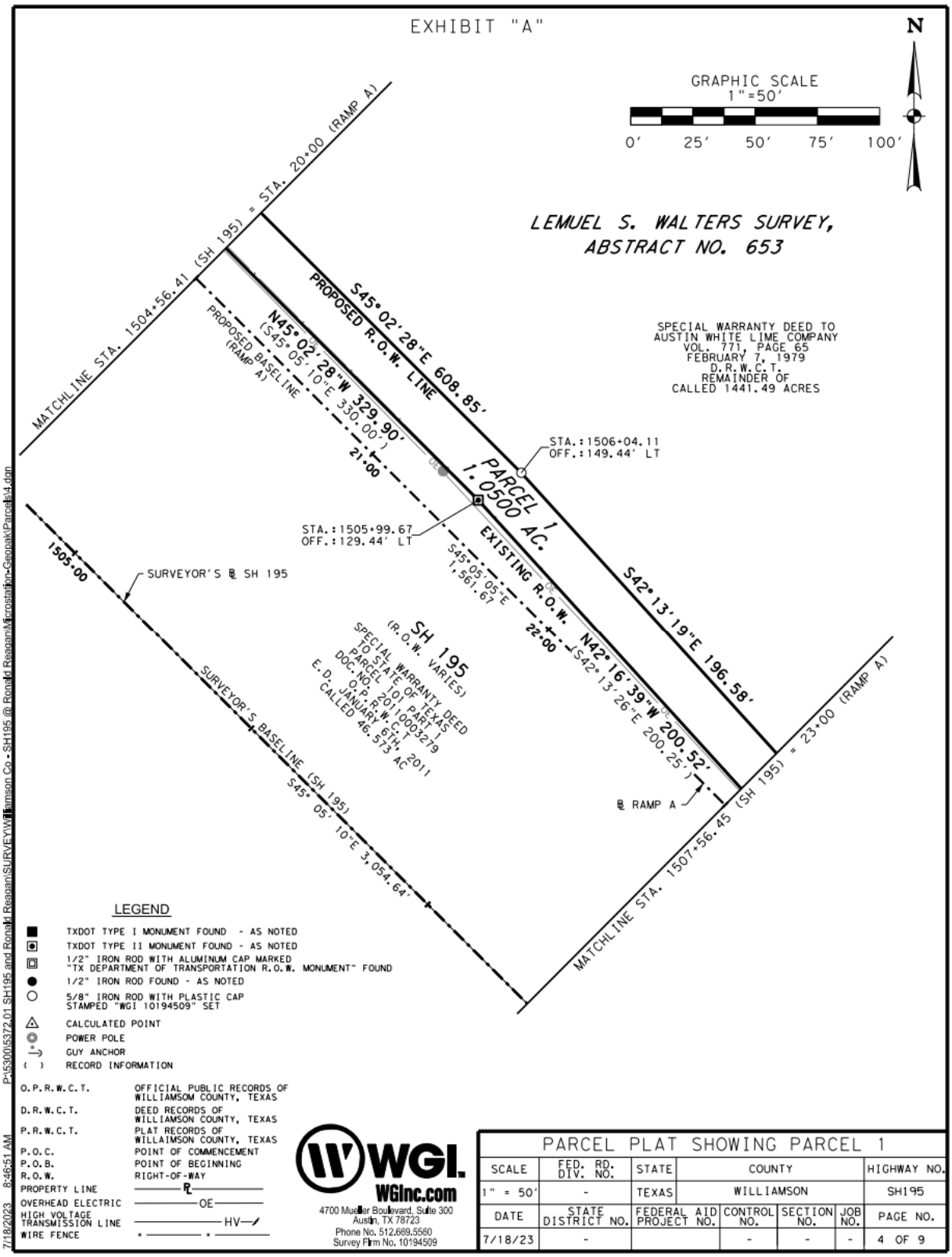
O.P.R.W.C.T.	OFFICIAL PUBLIC RECORDS OF WILLIAMSOM COUNTY, TEXAS
D.R.W.C.T.	DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
P.R.W.C.T.	PLAT RECORDS OF WILLAIMSON COUNTY, TEXAS
P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
R.O.W.	RIGHT-OF-WAY
PROPERTY LINE	——PL——
OVERHEAD ELECTRIC	——OE——
HIGH VOLTAGE TRANSMISSION LINE	——HV——
WIRE FENCE	x——x——

WGI
WGInc.com
4700 Mueller Boulevard, Suite 300
Austin, TX 78723
Phone No. 512.669.5560
Survey Firm No. 10194509

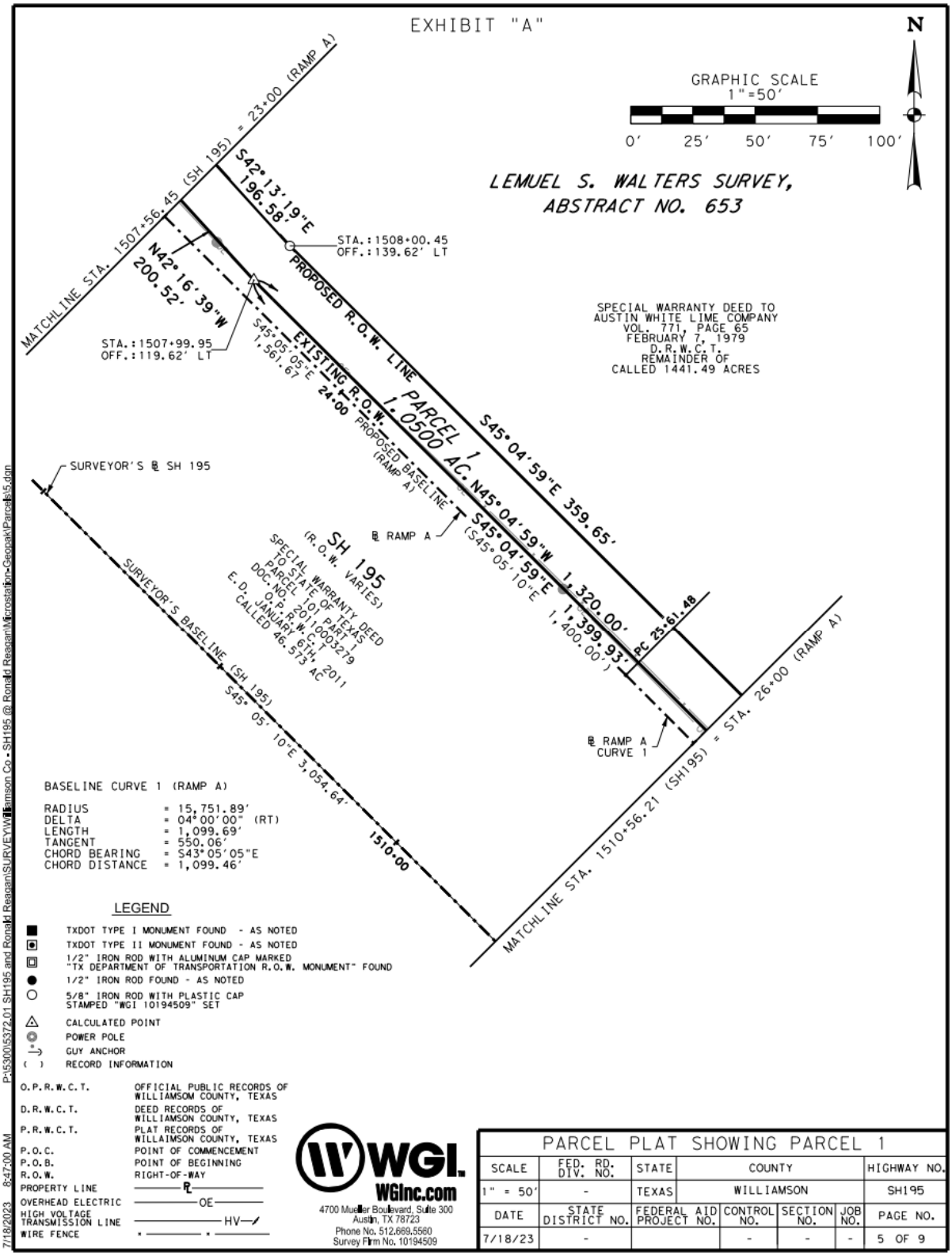
PARCEL PLAT SHOWING PARCEL 1

SCALE	FED. RD. DIV. NO.	STATE	COUNTY			HIGHWAY NO.
1" = 50'	-	TEXAS	WILLIAMSON			SH195
DATE	STATE DISTRICT NO.	FEDERAL AID PROJECT NO.	CONTROL NO.	SECTION NO.	JOB NO.	PAGE NO.
7/18/23	-		-	-	-	3 OF 9

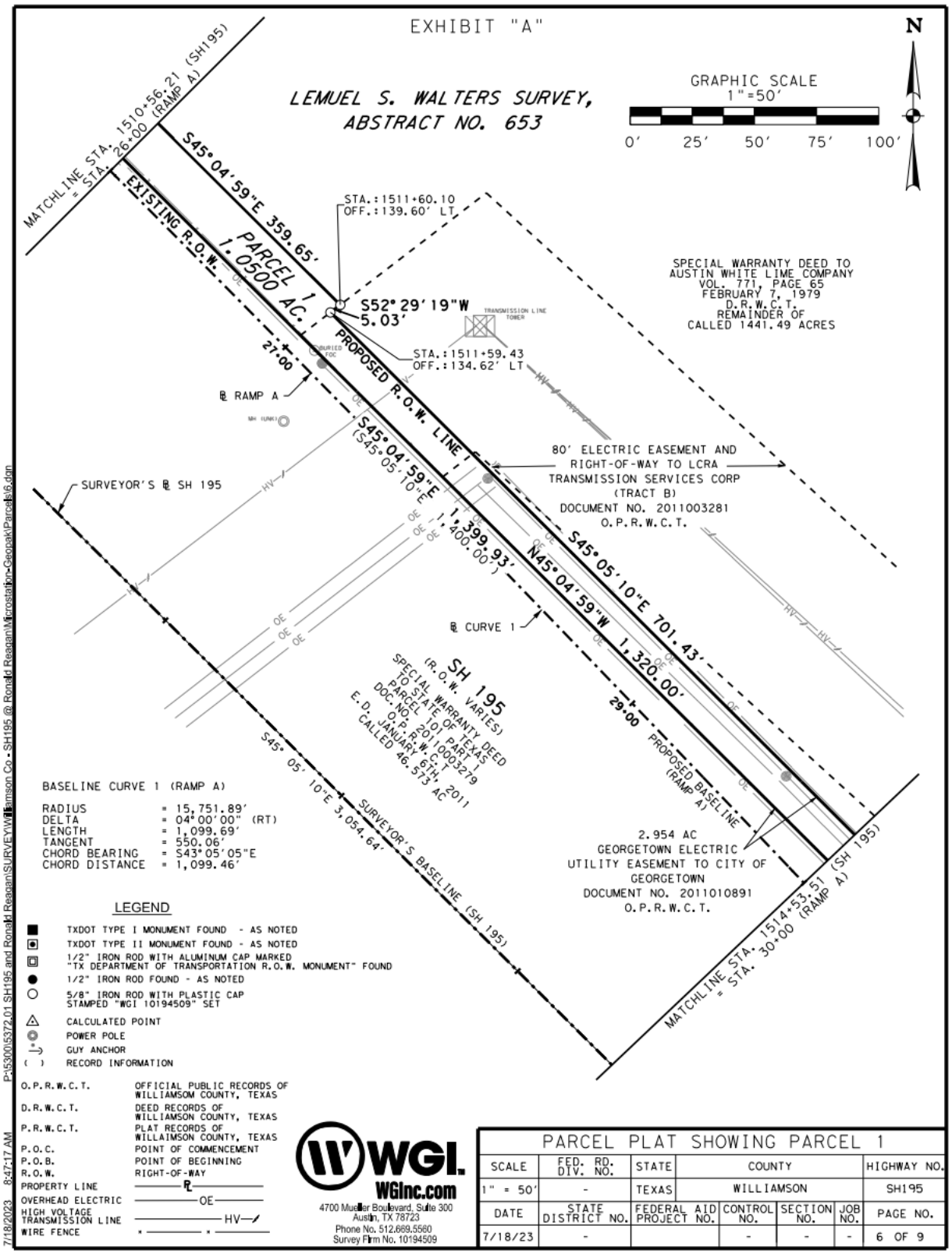
P:\530056372.01 SH195 and Ronald Reagan\SURVEY\WGI\Williamson Co - SH195 @ Ronald Reagan\Microstation-Geopak\Parcels\3.dgn
7/18/2023 8:46:41 AM



PARCEL PLAT SHOWING PARCEL 1						
SCALE	FED. RD. DIV. NO.	STATE	COUNTY			HIGHWAY NO.
1" = 50'	-	TEXAS	WILLIAMSON			SH195
DATE	STATE DISTRICT NO.	FEDERAL AID PROJECT NO.	CONTROL NO.	SECTION NO.	JOB NO.	PAGE NO.
7/18/23	-		-	-	-	4 OF 9



PARCEL PLAT SHOWING PARCEL 1						
SCALE	FED. RD. DIV. NO.	STATE	COUNTY			HIGHWAY NO.
1" = 50'	-	TEXAS	WILLIAMSON			SH195
DATE	STATE DISTRICT NO.	FEDERAL AID PROJECT NO.	CONTROL NO.	SECTION NO.	JOB NO.	PAGE NO.
7/18/23	-		-	-	-	5 OF 9



PARCEL PLAT SHOWING PARCEL 1						
SCALE	FED. RD. DIV. NO.	STATE	COUNTY			HIGHWAY NO.
1" = 50'	-	TEXAS	WILLIAMSON			SH195
DATE	STATE DISTRICT NO.	FEDERAL AID PROJECT NO.	CONTROL NO.	SECTION NO.	JOB NO.	PAGE NO.
7/18/23	-		-	-	-	6 OF 9

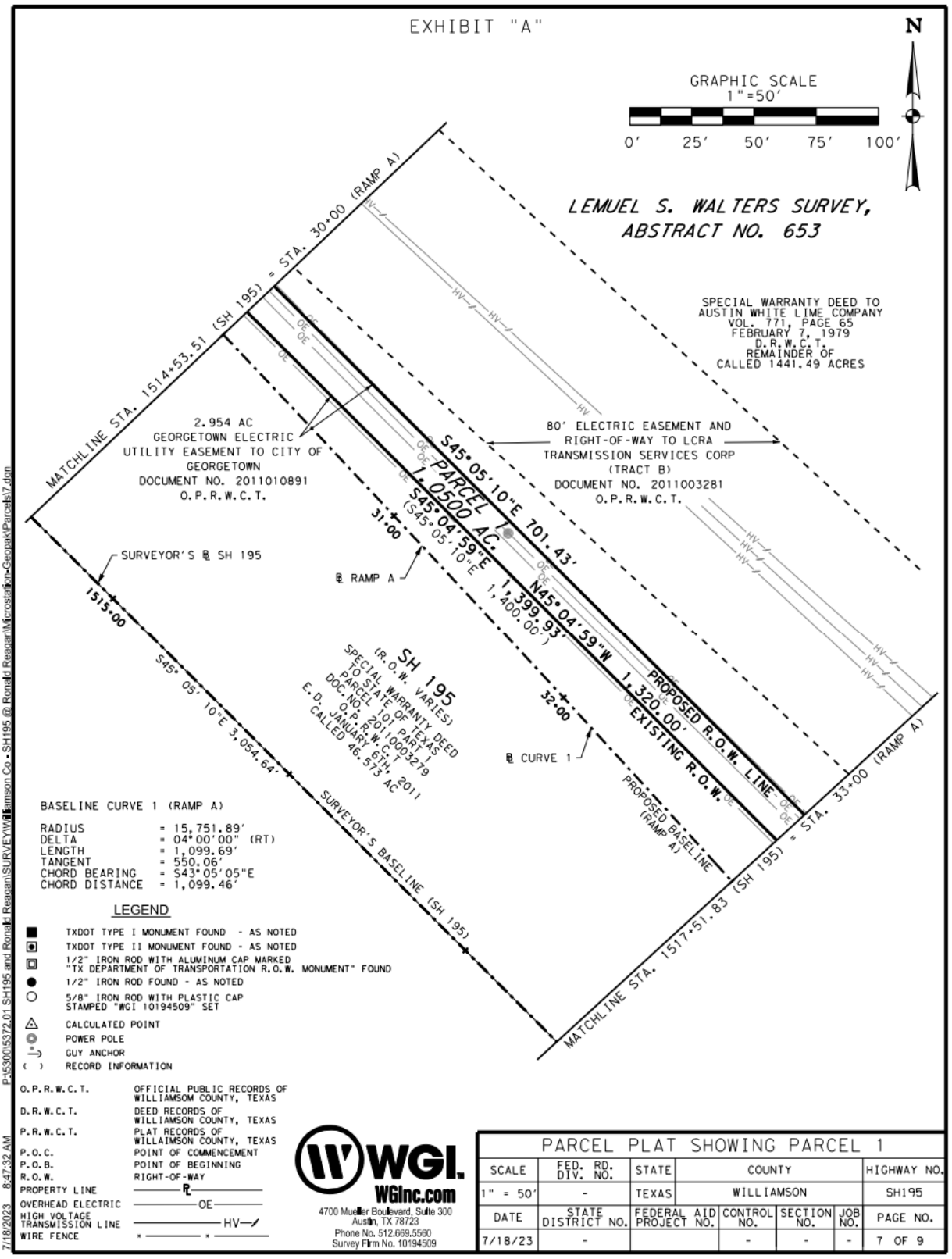


EXHIBIT "A"
N
GRAPHIC SCALE
1"=50'
0' 25' 50' 75' 100'
LEMUEL S. WALTERS SURVEY,
ABSTRACT NO. 653
SPECIAL WARRANTY DEED TO
AUSTIN WHITE LIME COMPANY
VOL. 771, PAGE 65
FEBRUARY 7, 1979
D.R.W.C.T.
REMAINDER OF
CALLED 1441.49 ACRES
MATCHLINE STA. 1514+53.51 (SH 195) = STA. 30+00 (RAMP A)
2.954 AC
GEORGETOWN ELECTRIC
UTILITY EASEMENT TO CITY OF
GEORGETOWN
DOCUMENT NO. 2011010891
O.P.R.W.C.T.
80' ELECTRIC EASEMENT AND
RIGHT-OF-WAY TO LCRA
TRANSMISSION SERVICES CORP
(TRACT B)
DOCUMENT NO. 2011003281
O.P.R.W.C.T.
PARCEL 1
1.0500 AC.
S45°05'10"E 701.43'
S45°04'59"E 1,399.93'
(S45°05'10"E 1,400.00')
N45°04'59"W 1,320.00'
PROPOSED R.O.W. LINE
EXISTING R.O.W.
SURVEYOR'S ℄ SH 195
℄ RAMP A
31+00
32+00
1515+00
℄ CURVE 1
S45° 05' 10"E 3,054.64'
SURVEYOR'S BASELINE (SH 195)
SH 195
(R.O.W. VARIES)
SPECIAL WARRANTY DEED
TO STATE OF TEXAS
PARCEL 101 PART 1
DOC. NO. 2010003279
O.P.R.W.C.T.
E.D. JANUARY 6TH, 2011
CALLED 46.573 AC.
PROPOSED BASELINE
(RAMP A)
MATCHLINE STA. 1517+51.83 (SH 195) = STA. 33+00 (RAMP A)
BASELINE CURVE 1 (RAMP A)
RADIUS = 15,751.89'
DELTA = 04°00'00" (RT)
LENGTH = 1,099.69'
TANGENT = 550.06'
CHORD BEARING = S43°05'05"E
CHORD DISTANCE = 1,099.46'
LEGEND
TXDOT TYPE I MONUMENT FOUND - AS NOTED
TXDOT TYPE II MONUMENT FOUND - AS NOTED
1/2" IRON ROD WITH ALUMINUM CAP MARKED "TX DEPARTMENT OF TRANSPORTATION R.O.W. MONUMENT" FOUND
1/2" IRON ROD FOUND - AS NOTED
5/8" IRON ROD WITH PLASTIC CAP STAMPED "WGI 10194509" SET
CALCULATED POINT
POWER POLE
GUY ANCHOR
( ) RECORD INFORMATION
O.P.R.W.C.T. OFFICIAL PUBLIC RECORDS OF WILLIAMSOM COUNTY, TEXAS
D.R.W.C.T. DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
P.R.W.C.T. PLAT RECORDS OF WILLAIMSON COUNTY, TEXAS
P.O.C. POINT OF COMMENCEMENT
P.O.B. POINT OF BEGINNING
R.O.W. RIGHT-OF-WAY
PROPERTY LINE
OVERHEAD ELECTRIC
HIGH VOLTAGE TRANSMISSION LINE
WIRE FENCE
WGI
WGInc.com
4700 Mueller Boulevard, Suite 300
Austin, TX 78723
Phone No. 512.669.5560
Survey Firm No. 10194509
PARCEL PLAT SHOWING PARCEL 1
SCALE: 1" = 50'
FED. RD. DIV. NO.: -
STATE: TEXAS
COUNTY: WILLIAMSON
HIGHWAY NO.: SH195
DATE: 7/18/23
STATE DISTRICT NO.: -
FEDERAL AID PROJECT NO.:
CONTROL NO.: -
SECTION NO.: -
JOB NO.: -
PAGE NO.: 7 OF 9
P:\530105372.01 SH195 and Ronald Reagan\SURVEY\WILLIamson Co - SH195 @ Ronald Reagan\Microstation-Geopak\Parcels\7.dgn
7/18/2023 8:47:32 AM

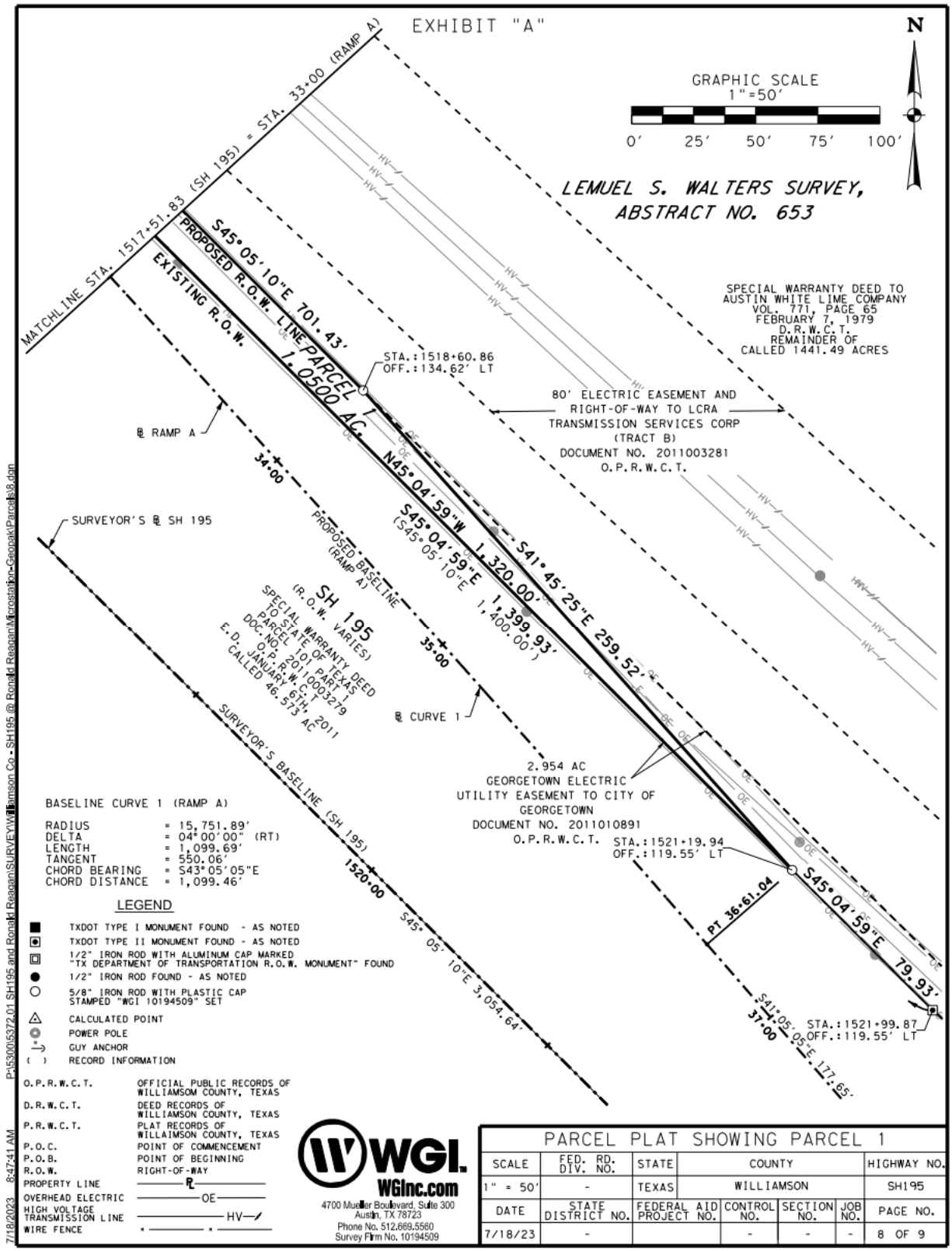
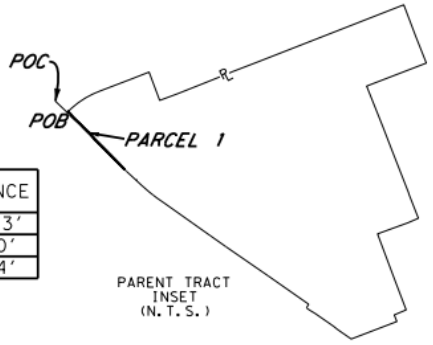


EXHIBIT "A"
N
GRAPHIC SCALE
1"=50'
0' 25' 50' 75' 100'
LEMUEL S. WALTERS SURVEY,
ABSTRACT NO. 653
MATCHLINE STA. 1517+51.83 (SH 195) = STA. 33+00 (RAMP A)
PROPOSED R.O.W. LINE
EXISTING R.O.W.
PARCEL 1
1.0500 AC.
S45°05'10"E 701.43'
STA.: 1518+60.86
OFF.: 134.62' LT
SPECIAL WARRANTY DEED TO
AUSTIN WHITE LIME COMPANY
VOL. 771, PAGE 65
FEBRUARY 7, 1979
D.R.W.C.T.
REMAINDER OF
CALLED 1441.49 ACRES
80' ELECTRIC EASEMENT AND
RIGHT-OF-WAY TO LCRA
TRANSMISSION SERVICES CORP
(TRACT B)
DOCUMENT NO. 2011003281
O.P.R.W.C.T.
℄ RAMP A
SURVEYOR'S ℄ SH 195
34+00
PROPOSED BASELINE
(RAMP A)
35+00
SH 195
(R.O.W. VARIES)
SPECIAL WARRANTY DEED
TO STATE OF TEXAS
PARCEL 101 PARTS
DOC. NO. 2011003279
O.P.R.W.C.T.
JANUARY 6TH, 2011
E.D.
CALLED 46.573 AC
S45°04'59"W 1,320.00'
(S45°05'10"E 1,400.00')
1,399.93'
S41°45'25"E 259.52'
℄ CURVE 1
2.954 AC
GEORGETOWN ELECTRIC
UTILITY EASEMENT TO CITY OF
GEORGETOWN
DOCUMENT NO. 2011010891
O.P.R.W.C.T.
STA.: 1521+19.94
OFF.: 119.55' LT
PT 36+61.04
S45°04'59"E 79.93'
STA.: 1521+99.87
OFF.: 119.55' LT
S41°45'25"E 177.65'
37+00
SURVEYOR'S BASELINE (SH 195)
1520+00
S45°05'10"E 3,054.64'
BASELINE CURVE 1 (RAMP A)
RADIUS = 15,751.89'
DELTA = 04°00'00" (RT)
LENGTH = 1,099.69'
TANGENT = 550.06'
CHORD BEARING = S43°05'05"E
CHORD DISTANCE = 1,099.46'
LEGEND
TXDOT TYPE I MONUMENT FOUND - AS NOTED
TXDOT TYPE II MONUMENT FOUND - AS NOTED
1/2" IRON ROD WITH ALUMINUM CAP MARKED "TX DEPARTMENT OF TRANSPORTATION R.O.W. MONUMENT" FOUND
1/2" IRON ROD FOUND - AS NOTED
5/8" IRON ROD WITH PLASTIC CAP STAMPED "WGI 10194509" SET
CALCULATED POINT
POWER POLE
GUY ANCHOR
( ) RECORD INFORMATION
O.P.R.W.C.T. OFFICIAL PUBLIC RECORDS OF WILLIAMSOM COUNTY, TEXAS
D.R.W.C.T. DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
P.R.W.C.T. PLAT RECORDS OF WILLAIMSON COUNTY, TEXAS
P.O.C. POINT OF COMMENCEMENT
P.O.B. POINT OF BEGINNING
R.O.W. RIGHT-OF-WAY
PROPERTY LINE
OVERHEAD ELECTRIC
HIGH VOLTAGE TRANSMISSION LINE
WIRE FENCE
WGI
WGInc.com
4700 Mueller Boulevard, Suite 300
Austin, TX 78723
Phone No. 512.669.5560
Survey Firm No. 10194509
PARCEL PLAT SHOWING PARCEL 1
SCALE 1" = 50'
FED. RD. DIV. NO. -
STATE TEXAS
COUNTY WILLIAMSON
HIGHWAY NO. SH195
DATE 7/18/23
STATE DISTRICT NO. -
FEDERAL AID PROJECT NO.
CONTROL NO. -
SECTION NO. -
JOB NO. -
PAGE NO. 8 OF 9
P:\530105372.01 SH195 and Ronald Reagan\SURVEY\WGI\Williamson Co - SH195 @ Ronald Reagan\Microstation-Geopak\Parcels\8.dgn
7/18/2023 8:47:41 AM

EXHIBIT "A"

PARENT TRACT ACREAGE	ACQUISITION	REMAINDER
REMAINDER OF CALLED 1,441.49 AC	FROM 1495+82.04 TO 1521+19.94 1.0500 AC. LT 45,737 SQ.FT.	--- AC. LT ---- SQ.FT.



PARENT TRACT INSET
(N.T.S.)

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	CHORD BEARING	DISTANCE
C1	05°33'15" RT	2,984.79'	289.34'	S48°16'56"E	289.23'
C2	01°18'55" RT	2,739.79'	62.90'	N44°34'21"E	62.90'
C3	00°24'21" LT	2,984.79'	21.14'	N45°19'12"W	21.14'

NOTES

1. BASIS OF BEARINGS IS THE TEXAS STATE PLANE COORDINATE SYSTEM OF 1983, CENTRAL ZONE 4203 (NAD83/2011) EPOCH 2010. ALL COORDINATES AND DISTANCES SHOWN HEREON ARE SURFACE AND MAY BE CONVERTED TO GRID BY DIVIDING BY THE SURFACE ADJUSTMENT FACTOR OF 1.00012.
UNITS: U.S. SURVEY FEET.

2. A PROPERTY DESCRIPTION OF EVEN DATE WAS PREPARED IN CONJUNCTION WITH THIS PARCEL PLAT.

Heritage Title Company of Austin, Inc.
GF No. 202203983
SCHEDULE B - ITEM 10

10a. The terms, conditions and stipulations of that certain Oil, Gas and/or Mineral Lease dated May 3, 1967, recorded in Volume 499, Page 242 of the Deed Records of Williamson County, Texas, executed by and between 4 T Ranches, Inc., as Lessor, and John E. Floyd, as Lessee. NOT A SURVEY MATTER.

10b. An undivided 1/16 interest in all oil, gas and other minerals, together with all rights relating thereto, express or implied, reserved in instrument recorded in Volume 721, Page 418 of the Deed Records of Williamson County, Texas. Said mineral estate not traced further herein. NOT A SURVEY MATTER.

10c. Waterline easement granted to Chisholm Trail Water Supply Corporation, by instrument dated February 25, 1980, recorded in Volume 790, Page 574 of the Deed Records of Williamson County, Texas. THIS EASEMENT MAY OR MAY NOT AFFECT PARCEL 1. THIS IS A BLANKET TYPE WATER LINE EASEMENT. EASEMENT IS LIMITED TO A STRIP 15 FEET IN WIDTH CENTERED AS INSTALLED.

10d. Potable water pipeline easement granted to Chisholm Trail Water Supply Corporation, by instrument dated August 13, 1984, recorded in Volume 1064, Page 510 of the Deed Records of Williamson County, Texas, as affected by Document No. 2014076202 of the Official Public Records of Williamson County, Texas. THIS EASEMENT MAY OR MAY NOT AFFECT PARCEL 1. THIS BLANKET TYPE WATER PIPELINE EASEMENT.

10e. Waterline easement granted to Chisholm Trail Water Supply Corporation, by instrument dated November 11, 1986, recorded in Volume 1503, Page 148 of the Deed Records of Williamson County, Texas. THIS EASEMENT MAY OR MAY NOT AFFECT PARCEL 1. THE EASEMENT ROUTE DESCRIPTION IS MISSING FROM DOCUMENT.

10f. Right of way and down guy easement granted to GTE Southwest, Inc., by instrument dated March 18, 1996, recorded under Document No. 9625801 of the Official Public Records of Williamson County, Texas. THIS EASEMENT DOES NOT AFFECT PARCEL 1

10g. Right of way and easement granted to Lower Colorado River Authority, by instrument dated January 27, 1998, recorded under Document No. 9804458, as affected by Document No. 9805364 of the Official Public Records of Williamson County, Texas. THIS EASEMENT DOES NOT AFFECT PARCEL 1

10h. Right of Entry Related to Glasscock to Andice Transmission Line Project easement granted to LCRA Transmission Services Corporation, by instrument dated October 4, 2005, recorded under Document No. 2005088455 of the Official Public Records of Williamson County, Texas. THIS EASEMENT MAY OR MAY NOT AFFECT PARCEL 1. THIS DOCUMENT CONTAINS INSUFICIENT DATA TO LOCATE ADJUSTED ROUTE OF THE TRANSMISSION LINE.

10i. Electric transmission line(s) and/or distribution line(s) and communications line(s) and any appurtenances easement granted to LCRA Transmission Services Corporation, by instrument dated December 5, 2005, recorded under Document No. 2006003115 of the Official Public Records of Williamson County, Texas. THIS EASEMENT DOES NOT AFFECT PARCEL 1

10j. Utility easement granted to Pedernales Electric Cooperative, Inc., by instrument dated December 17, 2008, recorded under Document No. 2009021221 of the Official Public Records of Williamson County, Texas. THIS EASEMENT DOES NOT AFFECT PARCEL 1

10k. Right of way and easement granted to LCRA Transmission Services Corporation, by instrument dated January 6, 2011, recorded under Document No. 2011003281 of the Official Public Records of Williamson County, Texas. THIS EASEMENT AFFECTS PARCEL 1 AS SHOWN HEREON.

10l. Electric Utility easement granted to Pedernales Electric Cooperative, Inc., by instrument dated January 6, 2011, recorded under Document No. 2011003618 of the Official Public Records of Williamson County, Texas. THIS EASEMENT DOES NOT AFFECT PARCEL 1

10m. Georgetown Electric Utility easement granted to the City of Georgetown, by instrument dated January 10, 2011, recorded under Document No. 2011010891 of the Official Public Records of Williamson County, Texas. THIS EASEMENT AFFECTS PARCEL 1 AS SHOWN HEREON.

10n. Drainage easement granted to the State of Texas, by instrument dated December 23, 2011, recorded under Document No. 2011088165 of the Official Public Records of Williamson County, Texas. THIS EASEMENT AFFECTS PARCEL 1 AS SHOWN HEREON.

10o. Utility easement granted to Pedernales Electric Cooperative, Inc., by instrument dated March 27, 2012, recorded under Document No. 2012098372 of the Official Public Records of Williamson County, Texas. THIS EASEMENT MAY OR MAY NOT AFFECT PARCEL 1. THIS DOCUMENT CONTAINS INSUFICIENT DATA TO LOCATE.

I, COLEEN M. JOHNSON, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THIS PLAT AND THE ACCOMPANYING DESCRIPTION OF EVEN DATE HEREWITH, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION.

July 18, 2023

COLEEN M. JOHNSON DATE
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 4871

STATE OF TEXAS
REGISTERED
COLEEN MARIE JOHNSON
4871
PROFESSIONAL
LAND SURVEYOR

WGI
WGInc.com
4700 Mueller Boulevard, Suite 300
Austin, TX 78723
Phone No. 512.669.5560
Survey Firm No. 10194509

PARCEL PLAT SHOWING PARCEL 1

SCALE	FED. RD. DIV. NO.	STATE	COUNTY			HIGHWAY NO.
1" = 50'	-	TEXAS	WILLIAMSON			SH195
DATE	STATE DISTRICT NO.	FEDERAL AID PROJECT NO.	CONTROL NO.	SECTION NO.	JOB NO.	PAGE NO.
7/18/23	-		-	-	-	9 OF 9

P:\53005372.01 SH195 and Ronald Reagan\SURVEY\WilliamsonCo - SH195 @ Ronald Reagan\Microstation-Geopak\Parcels9.dgn
7/18/2023 8:47:58 AM