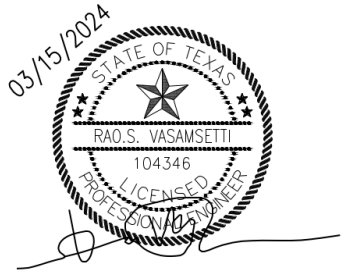
Water Pollution Abatement Plan

WONDER DRIVE SUBDIVISION

City of Round Rock, Texas

Submitted: March 2024



Prepared by:

RAO'S CONSULTING ENGINEERS

TBPE Registered Engineering Firm No. F-17655

210.549.7557 512.856.4595 www.raosengineering.com

P.O.BOX NO: 592991, SAN ANTONIO, TX 78258

Land Development | Water Resources | Environmental | Transportation

TABLE OF CONTENTS

Attachment B - BMPs for Upgradient Stormwater

Attachment C - BMPs for On-site Stormwater

Attachment D - BMPs for Surface Streams

Attachment E - Request to Seal Features (if sealing a feature)

Attachment F - Construction Plans

Attachment G - Inspection, Maintenance, Repair and Retrofit Plan

Attachment H - Pilot-Scale Field Testing Plan, if BMPs not based on Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs

Attachment I - Measures for Minimizing Surface Stream Contamination

Agent Authorization Form

Application Fee Form

Core Data Form

EDWARDS AQUIFER APPLICATION COVER PAGE

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: Wonder Drive Subdivision						**2. Regulated Entity No.:**			
3. Customer Name: Prasad Gurijila						**4. Customer No.:**			
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):**			0.92
9. Application Fee:	1,500.00		**10. Permanent BMP(s):**					Batch Detention Pond	
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**						
13. County:	Willamson		**14. Watershed:**					Brushy 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 ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville _x_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.
Rao's Consulting Engineers
Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent — Date: 03/24/24

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

GENERAL INFORMATION

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: Rao Vasamsetti, P.E.

Date: 03/24/24

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: Wonder Drive Subdivision
2. County: Williamson
3. Stream Basin: Brushy Creek
4. Groundwater Conservation District (If applicable): n/a
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

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

7. Customer (Applicant):

   Contact Person: Prasad Gurijala
   Entity: _____
   Mailing Address: 5501 Durango Pass
   City, State: Austin TX Zip: 78724
   Telephone: (775) 450-4691 FAX: _____
   Email Address: saipranavg@gmail.com

8. Agent/Representative (If any):

   Contact Person: Rao Vasamsetti, P.E.
   Entity: Rao's Consulting Engineers.
   Mailing Address: P.O.Box 592991
   City, State: San Antonio, Texas Zip: 78258
   Telephone: 210) 549-7557 FAX: (512)856-4595
   Email Address: rao@raosengineering.com

9. Project Location:

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

    southeast corner of Ledbetter street and Wonder Drive, From TCEQ Regional office 11, Drive approximately 10 miles north on IH-35 to Exit 253. Drive approximately 3 miles west on Sam bass Road to Wonder Drive . Site is located on Wonder Drive west , southeast of intersection of Ledbtter street and Wonder Drive

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: _____

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:

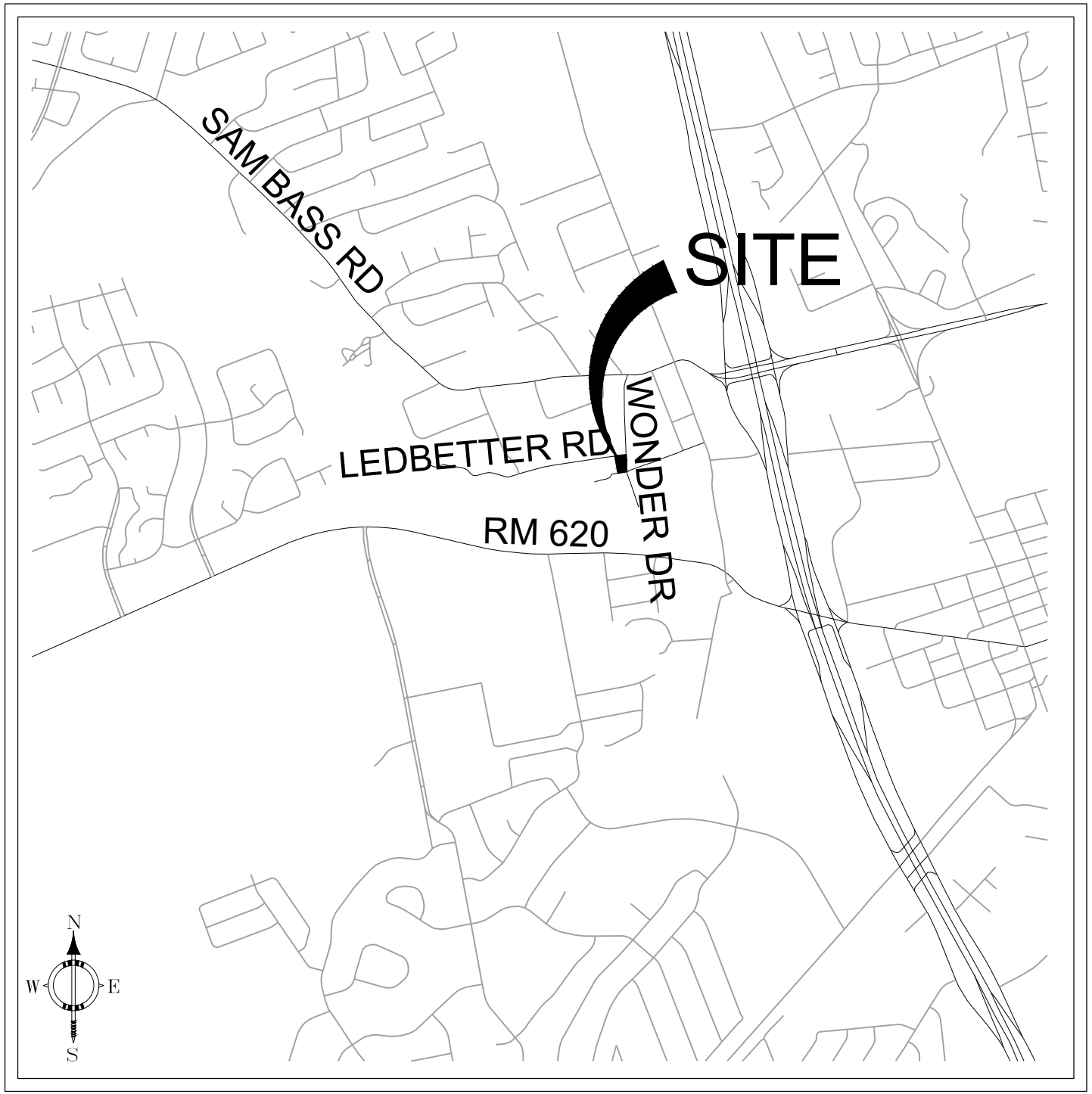
☒ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
☐ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
☐ For a UST Facility Plan or Modification or an AST Facility 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.



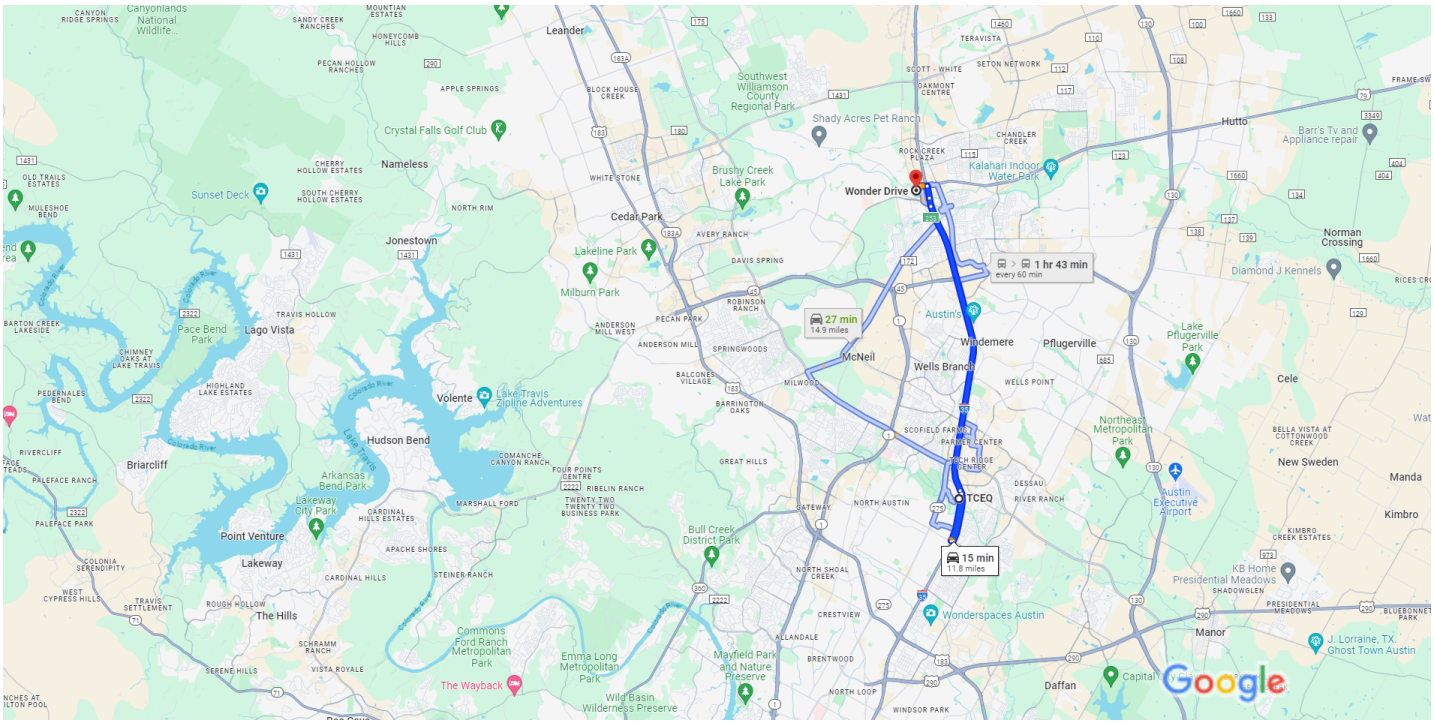
LOCATION MAP

NOT TO SCALE

Google Maps

TCEQ, 12100 Park 35 Cir, Austin, TX 78753 to Wonder Dr, Round Rock, TX 78681

Drive 11.8 miles, 15 min



Map data ©2024 Google 2 mi

TCEQ
12100 Park 35 Cir, Austin, TX 78753

Get on I-35 N from S I-35 Frontage Rd and N Interstate 35 Frontage Rd

6 min (2.8 mi)

1. Head west toward Park 35 Cir

144 ft

2. Turn left toward Park 35 Cir

210 ft

3. Sharp left onto Park 35 Cir

0.1 mi

4. Turn right onto S I-35 Frontage Rd

1.2 mi

5. Use the left lane to turn left onto E Braker Ln

292 ft

6. Turn left onto N Interstate 35 Frontage Rd

1.3 mi

7. Use the left lane to take the ramp onto I-35 N

0.1 mi

Follow I-35 N to I 35 N Frontage Rd in Round Rock. Take exit 253 from I-35 N

8 min (8.2 mi)

8. Merge onto I-35 N

8.0 mi

9. Take exit 253 toward Sam Bass Rd

0.2 mi

Continue on I 35 N Frontage Rd. Take Sam Bass Rd to Wonder Dr

3 min (0.8 mi)

10. Merge onto I 35 N Frontage Rd

0.3 mi

11. Use the left 2 lanes to turn left onto US-79/Sam Bass Rd

Continue to follow Sam Bass Rd

0.3 mi

12. Turn left onto Wonder Dr

0.1 mi

Wonder Dr
Round Rock, TX 78681

Wonder Drive Subdivision

ATTACHMENT "C"

Project Description

The proposed 0.92 acres development will have 6 single family lot with one main building with accessory building with associated driveways, expansion of streets, sidewalks and a batch detention pond water quality system. 0.92 Acres owned by Prasad Gurijala and the remaining is in Ledbetter Street and Wonder Drive right-of-way.

The proposed Wonder Drive Subdivision development covers the construction of 6 single family house buildings & accessory buildings, access driveways, expansion of streets, sidewalks, and one Batch Detention Pond Water Quality System. It will also involve clearing, excavation, fill placement, BMP construction, building pad construction, construction of roadways, utility and storm drainage installation, asphalt and concrete paving, as well as landscaping and irrigation installation. Approximately 1.05 acres will be disturbed during the construction of proposed development.

The proposed impervious cover for this 0.92-acre total drainage area is approximately 48% (0.447 acres). Due to the existing topographic conditions this project consists of one (1) drainage area: Drainage Area "A" (0.92 acres 48% impervious cover: 0.447 acres). Drainage Area "A" will be treated by proposed batch detention pond Water Quality system. The system has been designed in accordance with the TECQ Technical Guidance Manual RG-348 (2005) to remove 80% of the increased Total Suspended Solids (TSS) for the proposed improvements.

The project is located within the city limits of City of Round Rock in Williamson County, Texas. Portable water and wastewater disposal is provided by the City of Round Rock. Wastewater is disposed of by conveyance to the existing Brushy Creek Water Recycling Center operated by City of Round Rock.

GEOLOGICAL ASSESSMENT

Project Number: 0435-6241
April 25, 2024

Professional Service Industries, Inc.
3 Burwood Lane, San Antonio, TX 78216
Phone: (210) 342-9377
Fax: (512) 491-0221

April 25, 2024

Rao's Consulting Engineers
318 E. Nakoma, Suite 111
San Antonio, Texas 78216

Attn: Mr. Rao Vasamsetti, P.E., President

email: rao@raosengineering.com

Re: **TCEQ Geologic Assessment**
1101 Ledbetter St.
Round Rock, Texas 78681
PSI Project No. 0435-6241

Dear Mr. Vasamsetti:

Professional Service Industries, Inc. (PSI) has completed a TCEQ Geologic Assessment for the above referenced property. The Geologic Assessment was conducted in general accordance with the application requirements for the TCEQ water pollution abatement plans (WPAP) for regulated developments located on the Edwards Aquifer Recharge Zone. The purpose of this report is to describe surficial geologic units and identify the locations and extent of significant recharge features present in the development area.

AUTHORIZATION
Authorization to perform this assessment was given by a signed copy of PSI Proposal PSI Proposal No. 0435-423523.

PROJECT DESCRIPTION
The subject site is located at the 1101 Ledbetter St. in Round Rock, Texas and consists of approximately 0.82 acres of vacant property in a primarily residential area. The site is generally level and mostly covered in small to medium sized trees and native grasses and weeds. Although the property has a concrete curb on the eastern boundary, no storm sewer inlets were noted.

PHYSIOGRAPHY- GEOLOGY - HYDROGEOLOGY

Regional Physiography

From west to east, the two physiographic provinces in Williamson County are: the Edwards Plateau and the Blackland Prairie. The Edwards Plateau terrain is rugged and hilly, with elevations ranging from 750 feet to 1,400 feet above sea level. This area is underlain by beds of limestone that dip gently to the southeast. Southeast of the Edwards Plateau is the Balcones Fault Zone, which is also the northernmost limit of the Blackland Prairie. The Balcones Fault Zone extends north south across Williamson County and is composed of fault blocks of limestone, chalk, shale, and marl. The undulating, hilly topography of the Blackland Prairie ranges in elevation from about 400 feet to 800 feet above sea level. The faults are predominantly normal, down thrown-to-the Gulf Coast, with near vertical throws.

Site Geology and Soils

The subject property lies on the far eastern Edwards Plateau. According to maps published by the University of Texas at Austin Bureau of Economic Geology in cooperation with the United States Geological Survey (USGS), no faults are mapped in the immediate proximity to the subject site.

The surface geologic formation mapped at site is the Cretaceous Edwards Limestone. The Edwards Limestone consists of fine to coarse grained, medium gray to grayish brown, with solution zones, massive limestone. The subject site is wholly mapped as located within the Edwards Aquifer recharge zone. No exposed bedrock was observed within the site boundary; however, pieces of broken bedrock (likely from previous excavations) were observed on the east property line and the southwest corner. The site is wholly covered in soil residuum material.

Soils at the subject property are mapped as Crawford Clay (1 to 3 percent slopes). The Crawford series consists of moderately deep, well drained, very slowly permeable soils that are formed in clayey sediments that are underlain by indurated limestone bedrock. These soils are on broad nearly level or gently sloping uplands. The soil does not meet hydric criteria.

Edwards Aquifer Hydrogeology

The Edwards Aquifer Recharge Zone Map (Attachment D), provided by the TCEQ, along with various other references were reviewed for this assessment. These Edwards Aquifer maps are based on official maps containing regulatory boundaries based on previous geologic studies and interpretations of the Edwards Aquifer hydrogeology, including recharge, transition, contributing, artesian and saline zones, as defined in 30 TAC 213. The elevation of the property ranges from approximately 726 feet above mean sea level (AMSL) on the northwestern portion to approximately 722 feet above MSL on the southeast portion. The topographic contour lines for the property indicate a gentle slope to the south. Depths to usable groundwater in this area is approximately 180 - 240 feet below grade. Although groundwater zones exist at shallower depths in the alluvial deposits above the Edwards aquifer they are not currently used for public or private supply.

SITE INVESTIGATION

The site investigation was performed by inspecting the subject area, and identifying any drainage features, fractured or vuggy rock outcrops, closed depressions, sinkholes, caves, or indications of fault/fracture zones. The purpose of the site investigation was to delineate features with recharge potential that may warrant special protection or consideration.

The subject site is currently a vacant tract with the city limits of Round Rock and the surrounding area is comprised of residential lot developments. Surficial soils were noted on the surface and no outcrops of geologic formations were observed. There are no indications of fault/fracture zones and/or evidence of springs or related creeks, ponds, etc. on the primary site. One partially filled concrete lined hand dug well was noted in the central portion of the property. Due to the lack of any slope on the property this feature has a low potential to accept infiltration from the surrounding area, however, it is recommended this feature be property plugged and sealed upon site development. The results of the site investigation are included in the attached TCEQ 0585 report format and the associated Geologic Assessment Table (Attachment A).

SUMMARY

This geologic assessment did not identify any natural sensitive, or potential recharge features on the subject tract, however, one hand dug water well was noted on the property. The feature is identified on the site features map and discussed in the assessment table. Based on review of the geologic maps, other resources, and the site reconnaissance, there does not appear to be evidence of natural recharge features or other geologic structural features.

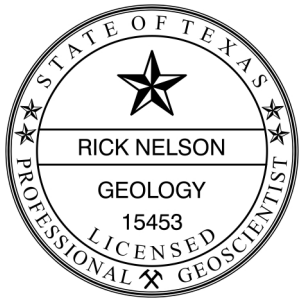
It is possible that future clearing/construction activities will reveal the presence of features currently hidden by thick vegetation and/or soil cover. If caves, sinkholes, or solution cavities are encountered during future clearing/construction activities, please contact our office for additional assistance.

We appreciate this opportunity to be of service to you. If you have any questions, please do not hesitate to contact our office.

Respectfully Submitted,
PROFESSIONAL SERVICE INDUSTRIES, INC.

Rick Nelson

Rick Nelson, P.G.
Senior Scientist, Environmental Services



WARRANTY

The field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for a general geological recharge assessment of this site. PSI warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted geologic methods, only for the site described in this report. These methods have been developed to provide the client with information regarding apparent indications of existing or potential conditions relating to the subject site and are necessarily limited to the conditions observed at the time of the site visit and research. This report is also limited to the information available at the time it was prepared. In the event additional information is provided to PSI following the report, it will be forwarded to the client in the form received for evaluation by the client. There is a possibility that conditions may exist which could not be identified within the scope of the assessment or which were not apparent during the site visit. PSI believes that the information obtained from others during the review of public information is reliable; however, PSI cannot warrant or guarantee that the information provided by others is complete or accurate.

This report has been prepared for the exclusive use of the client for the site discussed herein. Reproductions of this report cannot be made without the expressed approval the client. The general terms and conditions under which this assessment was prepared apply solely to the client for this site. No other warranties are implied or expressed.

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: Rick Nelson Telephone: 512-636-1647

Date: 04/25/24 Fax: 210-342-9401

Representing: PSI TBPG No. 50128 (Name of Company and TBPG or TBPE registration number)

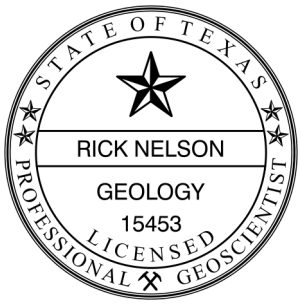
Signature of Geologist:

J Rick Nelson

Regulated Entity Name: Proposed Subdivision - 1101 Ledbetter St., Round Rock, Tx

Project Information

1. Date(s) Geologic Assessment was performed: 04/23/24
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☐ Transition Zone
   - ☐ Contributing Zone within the Transition Zone



4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

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

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Crawford clay (1-3 % slope)	D	0.5-2.5

** Soil Group Definitions (Abbreviated)*

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

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

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

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

   Applicant's Site Plan Scale: 1" = 60'
   Site Geologic Map Scale: 1" = 60'
   Site Soils Map Scale (if more than 1 soil type): 1" = NA'

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 1 (#) 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.

GEOLOGIC ASSESSMENT TABLE

PSI 0435-6241 **PROJECT NAME:** Proposed Subdivision - 1101 Ledbetter St., Round Rock,Tx

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	
Hand Dug Well	N30^0 30' 52.18"	W97^0 41' 34.08"	MB	30	Ked	4	4	unk					O	5		35	X		X		flat

* DATUM:_____

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 (Pump in well)

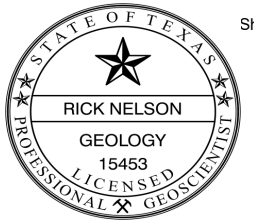
12 TOPOGRAPHY

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.

Rick Nelson _____

Date 4-23-24



Sheet 1 of 1

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

ATTACHMENT B

STRATIGRAPHIC COLUMN

Proposed Subdivision
1101 Ledbetter St.
Round Rock, TX 78681
PSI Project No. 0435-6241

FORMATION	THICKNESS	LITHOLOGIC DESCRIPTION
Edwards Limestone (Ked) *(outcropped onsite)*	225 -400 ft	Fine to coarse grained, medium gray to grayish brown, with solution zones, massive limestone.
Comanche Peak Formation (Kcp) *(not exposed onsite)*	20-25 ft	Comanche Peak Formation: white, chalky, fossiliferous limestone
Walnut Formation (Kw) *(not exposed onsite)*	30-150 ft	limestone, marl and marly limestone.

ATTACHMENT C

SITE GEOLOGIC NARRATIVE

Regional Physiography

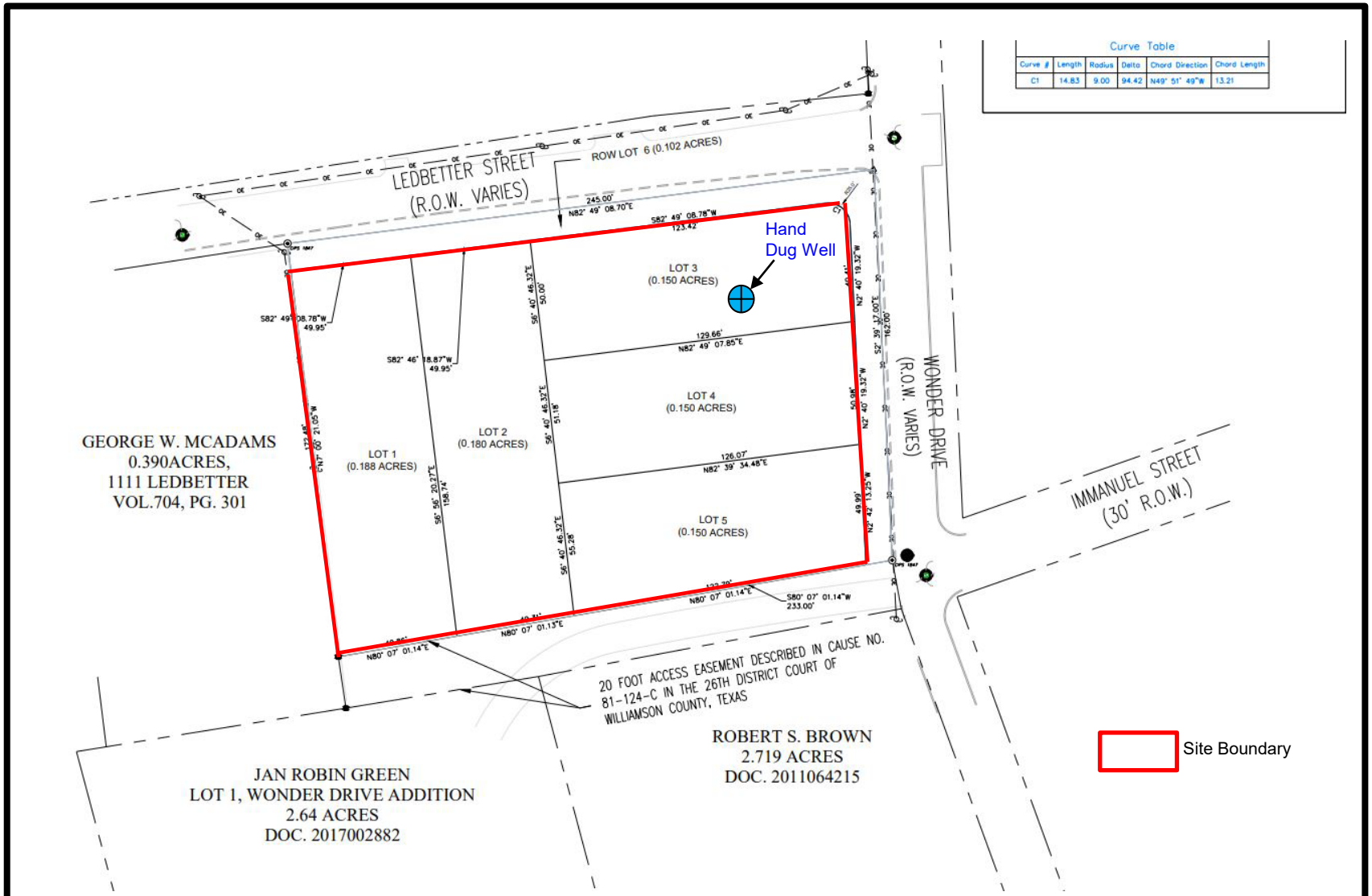
From west to east, the two physiographic provinces in Williamson County are: the Edwards Plateau and the Blackland Prairie. The Edwards Plateau terrain is rugged and hilly, with elevations ranging from 800 feet to 1,400 feet above sea level. This area is underlain by beds of limestone that dip gently to the southeast. Southeast of the Edwards Plateau is the Balcones Fault Zone, which is also the northernmost limit of the Blackland Prairie. The Balcones Fault Zone extends north south across Williamson County and is composed of fault blocks of limestone, chalk, shale and marl. The undulating, hilly topography of the Blackland Prairie ranges in elevation from about 400 feet to 800 feet above sea level. The faults are predominantly normal, down thrown-to-the Gulf Coast, with near vertical throws.

Site Geology and Soils

The subject property lies on the far eastern Edwards Plateau. According to maps published by the University of Texas at Austin Bureau of Economic Geology in cooperation with the United States Geological Survey (USGS), no faults are mapped in the immediate proximity to the subject site.

The surface geologic formation mapped at site is the Cretaceous Edwards Limestone. The Edwards Limestone consists of fine to coarse grained, medium gray to grayish brown, with solution zones, massive limestone. The subject site is wholly mapped as located within the Edwards Aquifer recharge zone. No exposed bedrock was observed within the site boundary; however, pieces of broken bedrock (likely from previous excavations) were observed on the east property line and the southwest corner. The site is wholly covered in soil residuum material.

Soils at the subject property are mapped as Crawford Clay (1 to 3 percent slopes). The Crawford series consists of moderately deep, well drained, very slowly permeable soils that are formed in clayey sediments that are underlain by indurated limestone bedrock. These soils are on broad nearly level or gently sloping uplands. The soil does not meet hydric criteria.



intertek psi
3 Burwood Lane
San Antonio, Texas 782156

Proposed Subdivision
1101 Ledbetter St.
Round Rock, TX 78681
PSI Project No. 0435-6241

ATTACHMENT D
Site Plan
1 inch = 60 feet

N

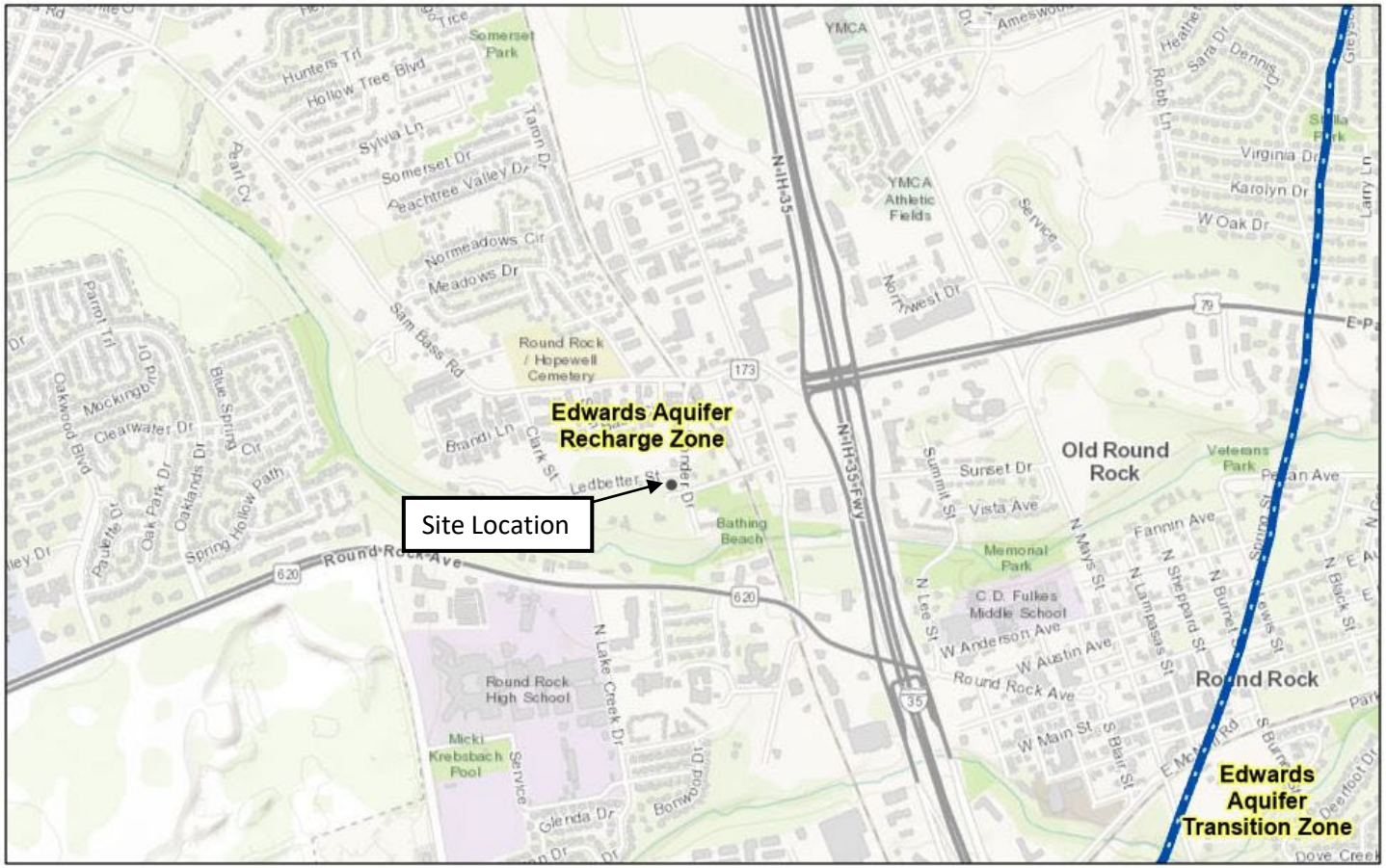
intertek psi

3 Burwood Lane
San Antonio, Texas 782156

Proposed Subdivision
1101 Ledbetter St.
Round Rock, TX 78681
PSI Project No. 0435-6241

ATTACHMENT D
Site Geologic Map
1 inch = 60 feet

N



4/19/2024, 8:35:03 AM

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0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Edwards Aquifer Label

Edwards Aquifer Boundary

Edwards Aquifer Boundary central line

TCEQ_EDWARDS_OFFICIAL_MAPS

Austin Community College, City of Austin, County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA,

Web AppBuilder for ArcGIS

Austin Community College, City of Austin, County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | TCEQ |

intertek psi

3 Burwood Lane
San Antonio, Texas 78216

Proposed Subdivision
1101 Ledbetter St.
Round Rock, TX 78681
PSI Project No. 0435-6241

ATTACHMENT D
Edwards Aquifer Recharge Zone Map

N

ATTACHMENT E

PHOTOGRAPHS

1. View of property to the southwest

2. View along Ledbetter Dr – view to the east

3. West property boundary - view to the south

4. Soil pile on property - view to the northeast

5. Remnant of hand dug well – view to the south

6. Internal wall of hand dug well

7. Rim of Hand dug well

8. Misc rock pile on southwest corner

WATER POLLUTION ABATEMENT PLAN

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

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

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

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

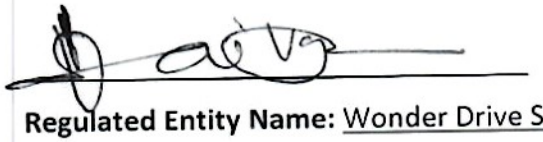
Signature

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

Print Name of Customer/Agent: Rao Vasamsetti,P.E.

Date: 03/24/24

Signature of Customer/Agent:



Regulated Entity Name: Wonder Drive Subdivision

Regulated Entity Information

1. The type of project is:

   ☒ Residential: Number of Lots:6
   ☐ Residential: Number of Living Unit Equivalents:_____
   ☐ Commercial
   ☐ Industrial
   ☐ Other:_____

2. Total site acreage (size of property):0.92

3. Estimated projected population:15

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

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	10,260	÷ 43,560 =	0.235
Parking		÷ 43,560 =	
Other paved surfaces	9,250	÷ 43,560 =	0.212
Total Impervious Cover	19,510	÷ 43,560 =	0.447

Total Impervious Cover 0.92 **÷ Total Acreage** 0.47 **X 100 =** 48**% Impervious Cover**

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

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

For Road Projects Only

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

7. Type of project:

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

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

   ☐ Concrete
   ☐ Asphaltic concrete pavement
   ☐ Other: _____

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

   Width of R.O.W.: _____ feet.
   L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.

    Width of pavement area: _____ feet.
    L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
    Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

11. ☐ A rest stop will be included in this project.

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

100% Domestic	3,600 Gallons/day
N/A% Industrial	_____ Gallons/day
N/A% Commingled	_____ Gallons/day
TOTAL gallons/day _____	

15. Wastewater will be disposed of by:

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

- ☐ **Attachment C - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.
- ☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☒ Sewage Collection System (Sewer Lines):

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

- ☐ The SCS was previously submitted on_____.
- ☐ The SCS was submitted with this application.
- ☒ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☒ The sewage collection system will convey the wastewater to the Brushy Creek WRC (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = 20'.

18. 100-year floodplain boundaries:

☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
☒ No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA Flood Insurance Rate Map for Williamson County, Texas and Incorporated Areas, Panel Number 48491C0489F, dated December 20, 2019.

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

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

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

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

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

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

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

☐ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
☒ No sensitive geologic or manmade features were identified in the Geologic Assessment.

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

22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.
23. ☒ Areas of soil disturbance and areas which will not be disturbed.
24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
25. ☒ Locations where soil stabilization practices are expected to occur.
26. ☐ Surface waters (including wetlands).

    ☒ N/A
27. ☐ Locations where stormwater discharges to surface water or sensitive features are to occur.

    ☒ There will be no discharges to surface water or sensitive features.
28. ☒ Legal boundaries of the site are shown.

Administrative Information

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

ATTACHMENT "A" – Factors affecting water quality

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

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

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

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

ATTACHMENT "B" – Volume and character of stormwater

The overall runoff coefficient prior to development is estimated to be 0.45 based on existing terrain and slopes. After construction is complete, the overall runoff coefficient is estimated to be 0.65. The stormwater runoff includes overland flow from undeveloped areas and sheet flow from the proposed pavement areas. The development will generate approximately 4.9 cfs of stormwater runoff during the 25-year storm event. Values are based on the rational method using runoff coefficients as per the City of Round Rock Unified Development Code.

TEMPORARY STORMWATER SECTION

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: Rao Vasamsetti,P.E.

Date: 03/24/24

Signature of Customer/Agent:

Regulated Entity Name: Wonder Drive Subdivision

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: Brushy 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.

FORM 0602 ATTACHMENTS

ATTACHMENT "A" - SPILL RESPONSE

The objective of this attachment is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by 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 storm water 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 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, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

(2) Store hazardous materials and wastes in covered containers and protect from vandalism.

(3) Place a stockpile of spill cleanup materials where it will be readily accessible.

(4) Train employees in spill prevention and cleanup.

(5) Designate responsible individuals to oversee and enforce control measures.

(6) Spills should be covered and protected from stormwater 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.

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 staffs have arrived at the job site.

(5) Other agencies which may need to be consulted includ e, 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: http://www.tnrcc.state.tx.us/enforcement/emergency_response.html

Vehicle and Equipment Maintenance

(1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.

(2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately

(3) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.

(4) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.

(5) Place drip pans or absorbent materials under paving equipment when not in use.

(6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.

(7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.

(8) Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.

(9) Store cracked batteries in a non- leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

(1) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.

(2) Discourage "topping off" of fuel tanks.

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

ATTACHMENT "B" – Potential Sources of Contamination

Other potential sources of contamination during construction include:

Potential Source

- ***Asphalt products used on this project.***

Preventative Measure

- ***After placement of asphalt, emulsion or coatings, the contractor will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt product curing time, the contractor will maintain standby personnel and equipment to contain any asphalt wash-off should an unexpected rain occur. The contractor will be instructed not to place asphalt products on the ground within 48 hours of a forecasted rain.***

Potential Source

- ***Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle dripping.***

Preventative Measure

- ***Vehicle maintenance when possible will be performed within the construction staging area.***
- ***Construction vehicles and equipment shall be checked regularly for leaks and repaired immediately.***

Potential Source

- ***Accidental leaks or spills of oil, petroleum products and substances listed under 40 CFR parts 110,117, and 302 used or stored temporarily onsite.***

Preventative Measure

- ***Contractor to incorporate into regular safety meetings, a discussion of spill prevention and appropriate disposal procedures.***
- ***Contractor's superintendent or representative overseer shall enforce proper spill prevention and control measures.***
- ***Hazardous materials and wastes shall be stored in covered containers and protected from vandalism.***

- ***A stockpile of spill cleanup materials shall be stored onsite where it will be readily accessible***

Potential Source • ***Miscellaneous trash and litter from construction workers and material wrappings.***

Preventive Measure ■ ***Trash containers will be placed throughout the site to encourage proper trash disposal.***

Potential Source • ***Construction debris.***

Preventive Measure ■ ***Construction debris will be monitored daily by contractor. Debris will be collected weekly and placed in disposal bins. Situations requiring immediate attention will be addressed on a case by case basis.***

Potential Source • ***Spills/Overflow of waste from portable toilets***

Preventative Measure ■ ***Portable toilets will be placed away from high traffic vehicular areas and storm drain inlets.***

■ ***Portable toilets will be placed on a level ground surface.***

■ ***Portable toilets will be inspected regularly for leaks and will be serviced and sanitized at time intervals that will maintain sanitary conditions.***

ATTACHMENT "C" – Sequence of Major Activities

The sequence of major activities which disturb soil during construction on this site will be divided into two stages. The first is site preparation that will include clearing and grubbing of vegetation, where applicable. This will disturb approximately 1.05 acres. The second is construction that will include installation of utilities, construction of the water quality system and the proposed buildings, parking lot, landscaping and site cleanup. This will disturb approximately 1.05 acres. The following are the sequence of major activities:

1. ***Install TBMP's as required by this plan 0.92 ac***
2. ***Clear the site 0.92 ac***

3. *Install Utilities storm drain system ±0.92 ac*
4. *Build structures ±0.35 ac*
5. *Lay pavement and concrete ±0.25 ac*
6. *Permanently stabilize the entire site with a TCEQ approved soil stabilization practice. 0.92 ac*
7. *Clean the site 0.92 ac*
8. *Remove the TBMPs 0.92 ac*

ATTACHMENT "D" – Temporary Best Management Practices and Measures

Site will not receive any upgradient runoff and not required any BMPs.

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

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

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

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

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

If any sensitive features are discovered during construction, all regulated activities near the sensitive feature shall be suspended. The TCEQ Regional office will be notified immediately and a plan will be submitted to TCEQ for

treatment of the feature. See note 3 of TCEQ WPAP General Construction Notes on Exhibit 1.

ATTACHMENT "F" – Structural Practices

The following measures will be installed as part of the site preparation activities:

- ***Erection of silt fences along the downgradient boundary of construction activities.***
- ***Rock berms will be placed where runoff may be concentrated before leaving the site.***
- ***Inlet protection will be installed.***
- ***Stabilized construction entrance/exit(s) will be installed.***
- ***A construction staging area will be designated.***
- ***Concrete truck washout pit(s) will be installed where required to facilitate controlled disposal of concrete truck washout.***

ATTACHMENT "I" – Inspection and Maintenance

All TBMP'S shall be inspected by the contractor on a weekly basis and after all rain events. The contractor shall keep records of all inspections that were made. Also, the contractor shall repair or replace any damaged or dysfunctional TBMP's. The contactor shall insure that all TBMP's are maintained and inspected according to TCEQ's Technical Guidance Manual. Reference Section 1.4 of the Technical Guidance Manual.

Inspection and Maintenance shall include but is not limited to:

Silt Fence

- The contractor shall inspect all silt fencing weekly, and after any rainfall for sediment accumulation, torn fabric and crushed or collapsed sections throughout the duration of construction.
- Sediment shall be removed when sediment buildup reaches 6 inches.
- Torn fabric shall be replaced by the contractor or a second line of fencing shall be erected parallel to the torn section if replacement is not feasible.
- Contractor shall replace or repair any fence sections crushed or collapsed during the course of construction.

Triangular Filter Dike

- The contractor shall inspect all filter dikes weekly, and after any rainfall for sediment accumulation, alignment, torn fabric, and crushed or collapsed sections throughout the duration of construction.
- Sediment shall be removed after any rain event.

Construction Entrance

- The contractor shall inspect the construction entrance weekly and after any rainfall to ensure that the entrance is preventing vehicular tracking of sediment or sediment flow off-site. The construction entrance shall be top coated with additional rock as conditions demand in order to retain effectiveness.
- All sediment spilled, dropped, washed or tracked off-site shall be removed immediately.

Concrete Washout Pit

- The contractor shall inspect all concrete washout pits weekly and after any rainfall.
- Contractor shall ensure that all excess concrete is being washed out into the designated washout pits only.
- The hardened concrete shall be disposed of when the pit is no longer required and when it becomes full.

General

- Records will be kept with the construction site superintendent of all inspections and maintenance actions. See the attached maintenance record chart.
- Litter, construction debris, and construction chemicals exposed to storm water shall be prevented from becoming a pollutant source for storm water discharges (e.g., screening outfalls, picked up daily).
- 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).

Temporary Stormwater Section Attachment "I" continued

ITEM #	DATE	DESCRIPTION OF ACTION(S) TAKEN	INITIALS

ATTACHMENT "J" – Schedule of Interim and Permanent Soil Stabilization Practices

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

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

The site shall be stabilized with sod and/or seed upon the completion of construction. If construction is to temporary cease and temporary stabilization is required as noted above, the exposed soil shall be stabilized by mulch until construction resumes.

PERMANENT STORMWATER SECTION

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: Rao Vasamsetti, P.E.

Date: 03/24/24

Signature of Customer/Agent

Regulated Entity Name: Wonder Drive Subdivision

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 G

ATTACHMENT "N" Maintenance Plan and Schedule for Batch Detention Pond

PROJECT NAME Wonder Drive Subdivision

ADDRESS Southeast corner of Ledbetter St & Wonder Drive

CITY, STATE ZIP Round Rock, TX 78681

Inspections: Basins should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the pond is meeting the target detention times. In particular, the extended detention control device should be regularly inspected for evidence of clogging, or conversely, for too rapid a release. If the design drawdown times are exceeded by more than 24 hours, then repairs should be scheduled immediately. The upper stage pilot channel, if any, and its flow path to the lower stage should be checked for erosion problems. During each inspection, erosion areas inside and downstream of the BMP should be identified and repaired or revegetated immediately.

Mowing The upper stage, side slopes, embankment, and emergency spillway of an extended detention basin must be mowed regularly to discourage woody growth and control weeds. Grass areas in and around basins should be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. When mowing grass is performed, a mulching mower should be used, or grass clippings should be caught and removed.

Debris and Litter Removal: Debris and litter will accumulate near the extended detention control device and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.

Erosion Control: The pond side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion, although this should not occur often if the soils are properly compacted during construction. Regarding and revegetation may be required to

correct the problems. Similarly, the channel connecting an upper stage with a lower stage may periodically need to be replaced or repaired.

Structural Repairs and Replacement: Any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. These repairs should include patching of cracked concrete, sealing of voids, and removal of vegetation from cracks and joints. The various inlet/outlet and riser works in a basin will eventually deteriorate and must be replaced. Public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yr, whereas reinforced concrete barrels and risers may last from 50 to 75 yr.

Nuisance Control: Standing water (not desired in a extended detention basin) or soggy conditions within the lower stage of the basin can create nuisance conditions for nearby residents. Odors, mosquitoes, weeds, and litter are all occasionally perceived to be problems. Most of these problems are generally a sign that regular inspections and maintenance are not being performed (e.g., mowing, debris removal, clearing the outlet control device).

Sediment Removal The accumulated sediment needs to be removed from the lower stage when sediment buildup fills 20% of the volume of the basin or at least every 10 years.

“Proper” disposal of accumulated silt shall be accomplished following Texas Commission on Environmental Quality specifications. BMP maintenance frequently requires the disposal of accumulated sediment and other material. These materials are normally classified as special wastes when disposed of in municipal landfills. A Type 1 Municipal Solid Waste (MSW) landfill can accept household waste; anything else is a special waste as defined in 30TAC 330.2 (137). Special waste is a waste that requires special handling at a Type 1 MSW landfill. Labeling a filter media or sediment as a waste is not a waste characterization. The process to obtain authorization to dispose of a special waste begins with a request for approval called the “Request for Authorization for Disposal Waste, TCEQ Form 0152.” The request is completed by the generator and submitted to the MSW permits section of the TCEQ for Executive Director review/approval. The MSW permits section performs the review described in 30 TAC 330.136.

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information.

After all inspections results shall be written and records maintained and made available on request by TCEQ officials.

Upon transfer of ownership or maintenance responsibility: The seller must inform the buyer of all requirements of the basin maintenance. TCEQ must be notified and receive the form “TCEQ -

10623 change in responsibility for maintenance on permanent Best Management Practices and Measures". In addition, TCEQ and City of Round Rock shall receive a signed, dated copy of this maintenance plan from the new owner.

[Signatures on following page]

Responsible Party for Maintenance: Prasad Gurijala

Address: 5501 Durango Pass

City, State Zip: Austin, TX 78724

Telephone Number: 775-450-4691

Signature of Responsible Party: 

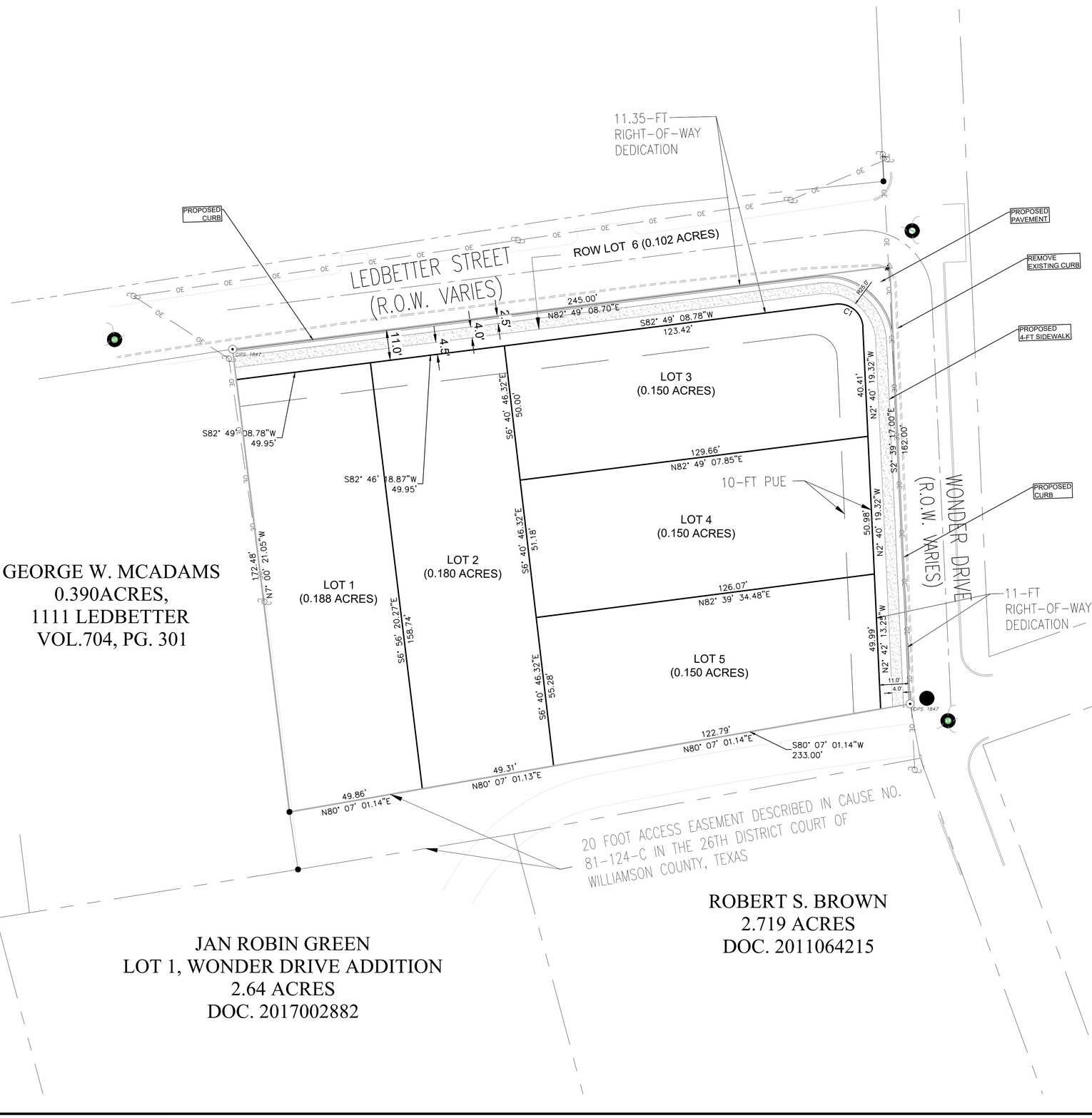
Print name of Responsible Party: Prasad Gurijala

Permanent Stormwater Section Attachment "N" continued

Sample Maintenance Table

ITEM #	DATE	DESCRIPTION OF ACTION(S) TAKEN	INITIALS

CONSTRUCTION PLANS



GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS BEFORE BEGINNING CONSTRUCTION.
2. ALL DIMENSIONS ARE TO FACE OF CURB TO CENTER OF PAINT STRIPING, OR PERPENDICULAR TO THE PROPERTY LINE. ALL RADII ARE TO FACE OF CURB.
3. ALL CURB RADII ARE 3', UNLESS OTHERWISE NOTED.
4. COORDINATE CONTROL FOR PARKING DRIVES, DRIVEWAYS, AND ISLANDS IS AS SHOWN. NO OFFSETS FROM FACE OF CURB OR BUILDINGS ARE GIVEN.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXITING UTILITIES, FENCES, PAVEMENT, CURBS, DRIVEWAYS, SIDEWALKS, OR SIGNS.
6. CONTRACTOR SHALL PRESERVE ALL PROPERTY CORNER PINS/RODS, CONTROL POINTS, AND BENCHMARKS. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
7. THE BOUNDARY/TOPO SURVEY SHALL BE CONSIDERED A PART OF THE CONTRACT DOCUMENTS.
8. ALL CURBS ARE 6" HIGH, UNLESS OTHERWISE NOTED.
9. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL CONFORM TO ALL APPLICABLE CITY OF ROUND ROCK SPECIFICATIONS.
10. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ANY UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING.
12. ALL CONCRETE SHALL BE 4,000 P.S.I. UNLESS OTHERWISE NOTED.
13. ALL PAVEMENT MARKINGS AND SIGNAGE OF ACCESSIBLE PARKING AREAS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT TAS AND ADA STANDARDS.

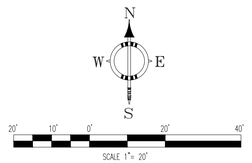
REV. NO.	DESCRIPTION	DATE

Notes:

LOCATION MAP
NOT TO SCALE

LEGEND

	PROPOSED CONCRETE CURB
	EXISTING CONCRETE CURB
	EXISTING CONCRETE AREAS
FIR	FOUND 1/2 " IRON ROD
SIRC	SET 1/2" IRON ROD WITH CAP
	1/2" IRON PIN FOUND (STEEL PIN)
CIPS 1847	CAPPED IRON PIN SET, "FOREST RPSL 1847"
CIPF 1847	CAPPED IRON PIN FOUND, "FOREST RPSL 1847"
	CAPPED IRON PIN FOUND
N1°0'0"E 100' (F)	MEASURED BEARING AND DISTANCE
N1°0'0"E 100' (D)	BEARING AND DISTANCE FROM DEED
678	EXISTING CONTOURS
N.C.B.	NEW CITY BLOCK
C.B.	COUNTY BLOCK
O.P.R.	OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF WILLIAMSON COUNTY, TEXAS
D.P.R.	DEED & PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS
E.G.T.CA	ELECTRIC, GAS, TELEPHONE, AND CABLE TELEVISION EASEMENT
B.S.L.	BUILDING SETBACK LINE
R.O.W.	RIGHT-OF-WAY
P.U.E.	PUBLIC UTILITY EASEMENT
P.O.B.	POINT OF BEGINNING
	EASEMENT
	EASEMENT
	EASEMENT
S	EXISTING SEWER MANHOLE
OE	EXISTING OVERHEAD ELECTRIC



SIGNATURE/SEAL

RCE RAO'S CONSULTING ENGINEERS
TXPE FIRM#17555
P.O. BOX. 592091 SAN ANTONIO TX 78258
PHONE: 210.549.7557. FAX:512.856.4895
ww.raosengineering.com

PROJECT DESCRIPTION:
WONDER DRIVE SUBDIVISION

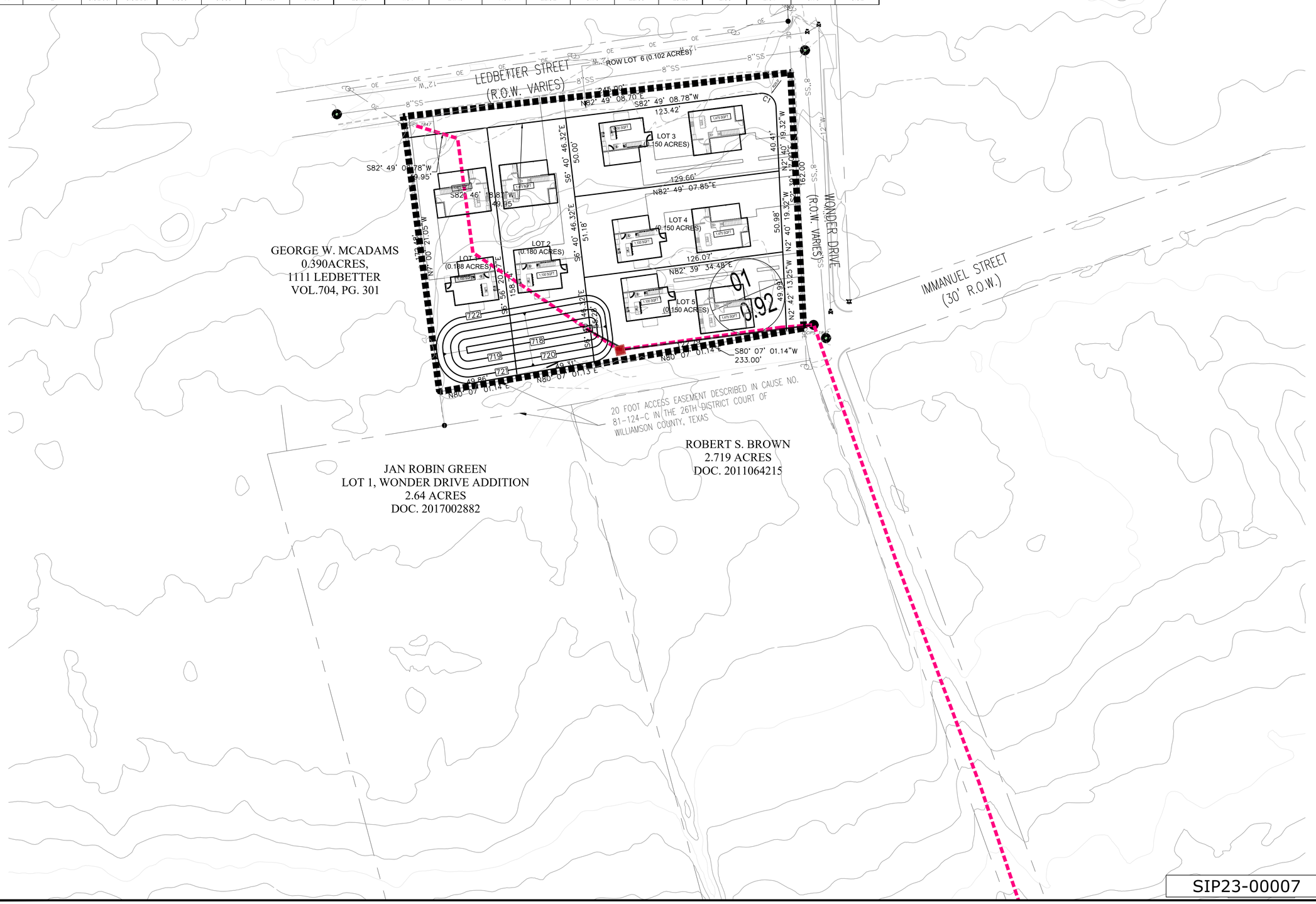
TITLE:
SITE PLAN

DATE : 07/27/23	JOB NO. 2021-1098
DESIGNED BY : RV	DRG NO
DRAWN BY : MO	4 OF 15
CHECKED BY : RV	

SIP23-00007

Existing Coditions (Table - 1)

Points	Contributiing Drainage Area	D.A. (acres)	Cumulative D.A. (acres)	Weighted C_2	Weighted C_{10}	Weighted C_{25}	Weighted C_{100}	2- Year T_c	2- Year I_2 inch/hr	10-year T_c	10-year I_{10} inch/hr	25-year T_c	25-year I_{25} inch/hr	100-year T_c	100-year I_{100} inch/hr	Q_2 cfs	Q_{10} cfs	Q_{25} cfs	Q_{100} cfs
A	1	0.92 ac.	0.92 ac.	0.330	0.380	0.420	0.490	18.28	4.54	14.49	7.54	12.91	9.70	11.00	13.13	1.38	2.64	3.75	5.92



SIP23-00007

REV. NO.	DESCRIPTION	DATE

Notes:

LOCATION MAP
NOT TO SCALE

LEGEND

- EXISTING TOP OF CURB AND GUTTER ELEVATIONS (59.50TC / 59.00GU)
- EXISTING SPOT ELEVATION (+59.00)
- PROPOSED CONTOUR (REPRESENT FINISHED TOP OF PAVEMENT OR TOPSOIL) (800)
- EXISTING CONTOUR (800)
- DEFINED SWALE
- FLOWPATH
- WATERSHED BOUNDARY
- WATERSHED AREA (B)

N

W E

S

30' 15' 0' 30' 60'

SCALE 1"= 30'

SIGNATURE/SEAL

03/15/2024

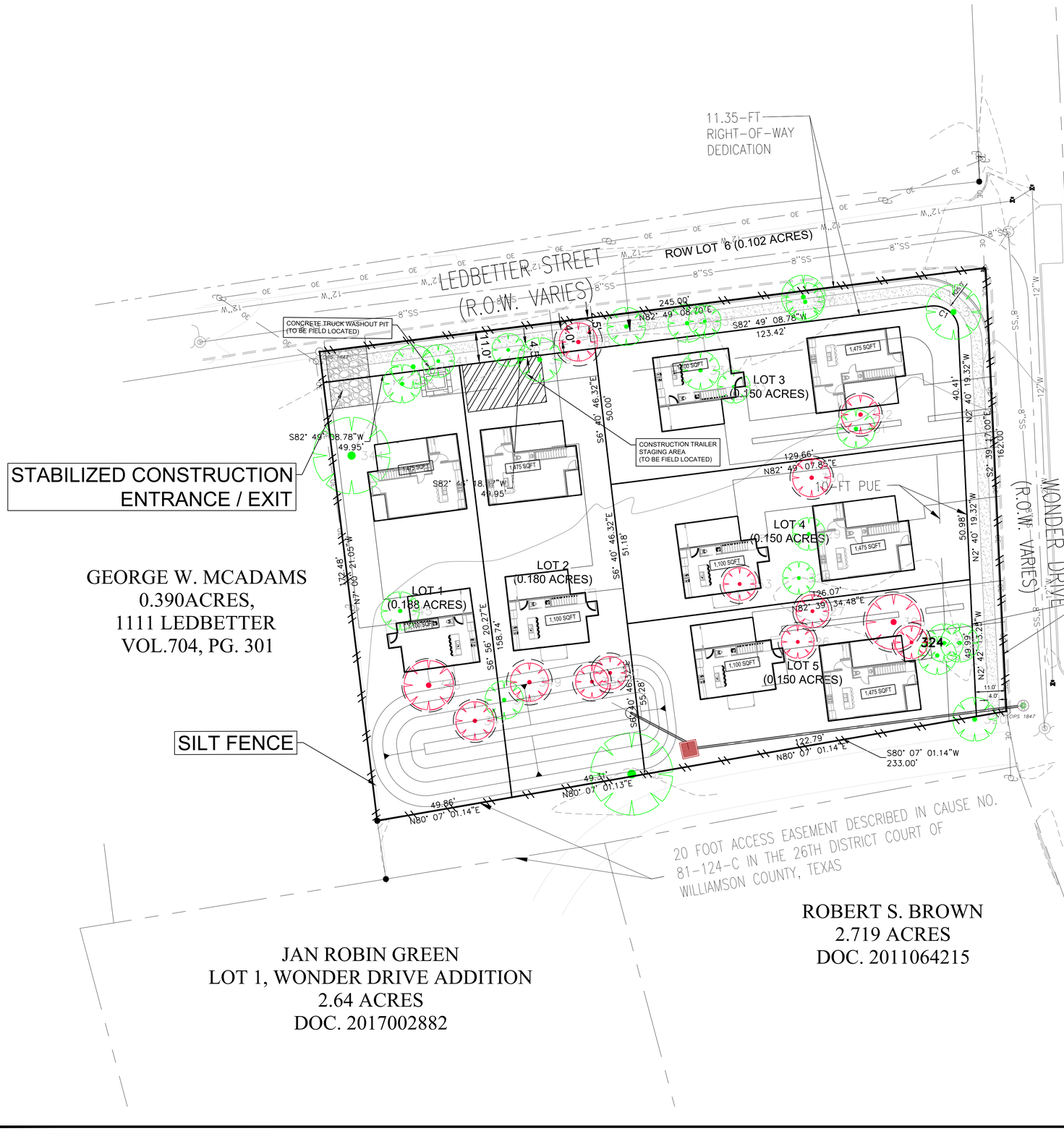
STATE OF TEXAS
RAO S. VASAMSETTI
104346
LICENSED
PROFESSIONAL ENGINEER

RCE RAO'S CONSULTING ENGINEERS
TXPE FIRM#17555
P.O. BOX: 592091 · SAN ANTONIO TX 78258
PHONE: 210.549.7557. FAX:512.856.4895
ww.raosengineering.com

PROJECT DESCRIPTION:
WONDER DRIVE SUBDIVISION

TITLE:
DRAINAGE PLAN

DATE : 07/27/23	JOB NO. 2021-1098
DESIGNED BY : RV	DRG NO 06 of 15
DRAWN BY : MO	
CHECKED BY : RV	



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES

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

A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;

B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;

C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

AUSTIN REGIONAL OFFICE
12100 PARK 35 CIRCLE, BUILDING A
AUSTIN, TEXAS 78753-1808
PHONE (512) 339-2929
FAX (512) 339-3795

SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

SWPPP GENERAL NOTES:

1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASHOUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.
7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS.
10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATER SHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.
11. UPON COMPLETION OF THE PROJECT AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT & EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.
12. GRADING SHOWN HEREON IS APPROXIMATE ONLY. REFER TO DETAILED GRADING PLANS INCLUDED IN THE CONSTRUCTION DOCUMENTS.

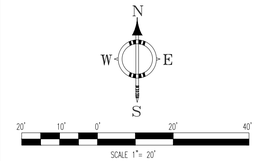
SIP23-00007

REV. NO.	DESCRIPTION	DATE

Notes:

LEGEND

- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE TRUCK WASHOUT PIT
- EXISTING INLET W/PROTECTION
- CURB INLET W/PROTECTION
- ROCK BERM
- 780 EXISTING CONTOUR
- 100 PROPOSED CONTOUR (REPRESENT FINISHED TOP OF PAVEMENT OR TOPSOIL)
- DEFINED SWALE
- GRAVEL FILTER BAGS
- TREE TO BE REMAIN
- TREE TO BE REMOVED



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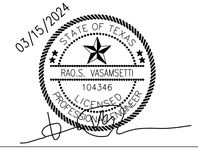


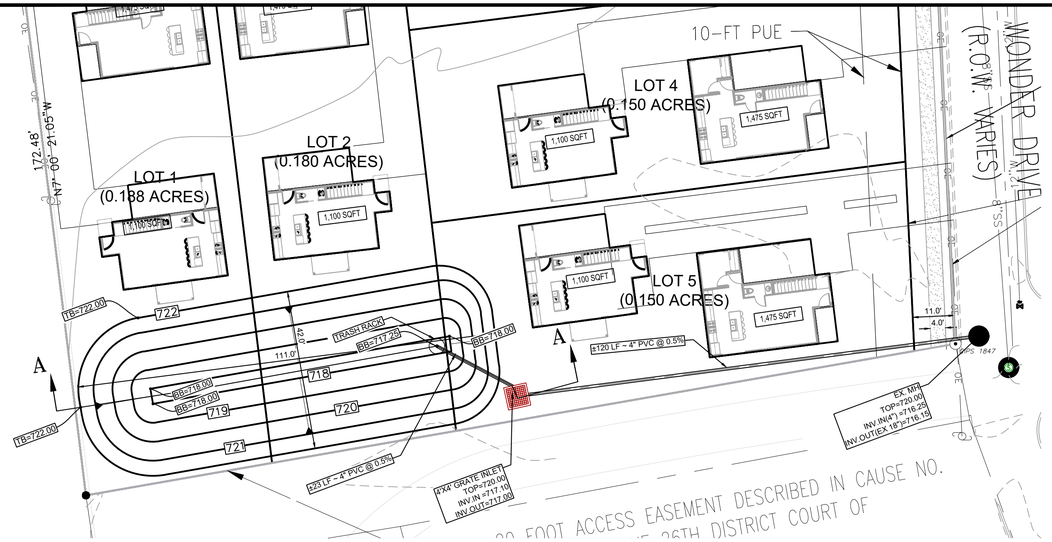
RCE RAO'S CONSULTING ENGINEERS
TXPE FIRM#17655
P.O. BOX. 592991 SAN ANTONIO TX 78258
PHONE: 210.549.7557 FAX:512.656.4886
ww.raoesengineering.com

PROJECT DESCRIPTION:
WONDER DRIVE SUBDIVISION

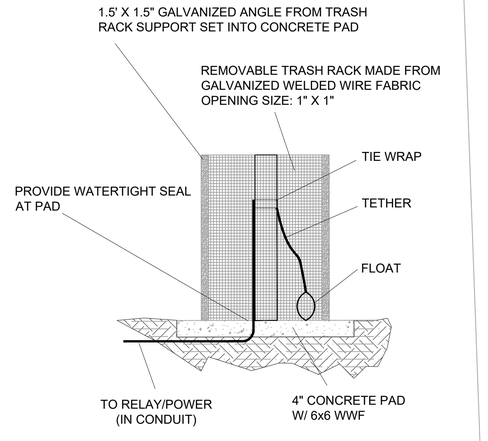
TITLE:
EROSION AND SEDIMENT CONTROL PLAN

DATE : 07/27/23	JOB NO. 2021-1098
DESIGNED BY : RV	DRG NO
DRAWN BY : MO	08 of 15
CHECKED BY : RV	

CADAMS
ES,
TTER
G. 301



PLAN VIEW
(SCALE: 1"=20')



*FLOAT SWITCH TO BE PIPE MOUNTED' ECO FLOAT, TYPE SI, NORMALLY OPEN, OR APPROVED EQUAL.

FLOAT SWITCH DETAIL
(NTS)

NOTES TO CONTRACTOR:

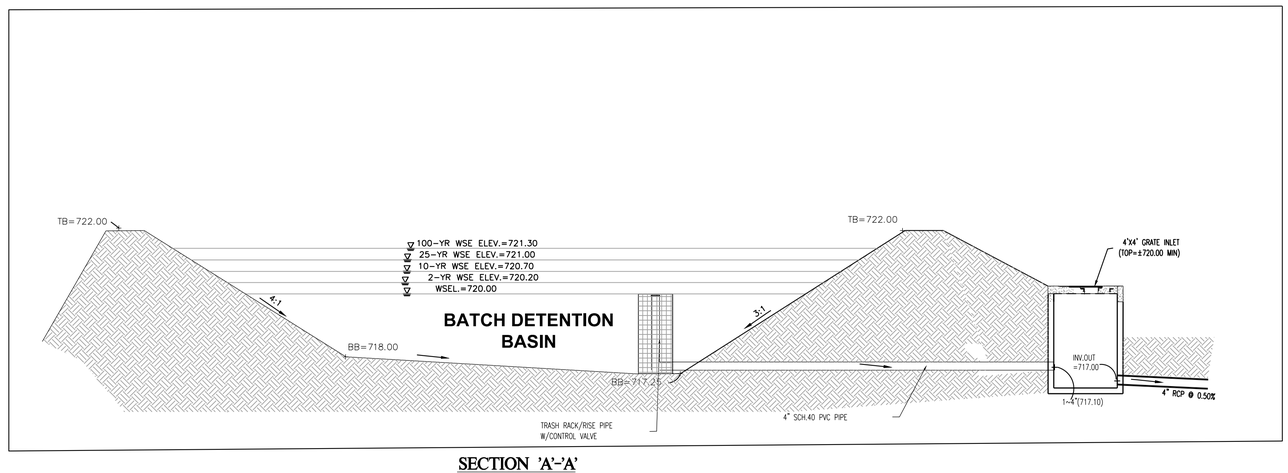
1. THIS SHEET HAS BEEN PREPARED FOR THE PURPOSES OF POLLUTION ABATEMENT ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS. CONTRACTOR IS ADVISED THAT TCEQ DOES NOT ALLOW CHANGES TO PERMANENT POLLUTION ABATEMENT MEASURES WITHOUT THEIR PRIOR APPROVAL.
2. BATCH DETENTION POND SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RG-348 MANUAL (ADDENDUM)
3. DETENTION AND WATER QUALITY PONDS ARE TO ACT AS TEMPORARY OUTLET STRUCTURES DURING CONSTRUCTION.
4. FLOAT SWITCH TO BE INSTALLED ON 4" CONCRETE PAD.
5. SYSTEM SHALL BE 12 VOLT WITH SOLAR CHARGED 12 VOLT BATTERY. ALTERNATE ELECTRICAL DESIGN MAY ALSO BE UTILIZED IN LIEU OF SOLAR POWER WITH ENGINEERS APPROVAL.

GENERAL NOTES :

1. THE STORM DRAIN SYSTEM MUST BE CLEAN OF ALL SEDIMENT FOR FINAL ACCEPTANCE AND PRIOR TO REQUEST FOR RETAINAGE.
2. BASIN TO BE FENCED AT ALL EXPOSED TOP OF WALLS W/GATES PROVIDED FOR ENTRANCE RAMPS AND MAINTENANCE.

BATCH DETENTION BASIN DESIGN DATA

WATERSHED AREA	=	0.92 AC
REQUIRED CAPTURE VOLUME	=	762 CF
WATER STORAGE DEPTH	=	2.0 FT
BASIN CAPTURE VOLUME	=	2,560 CF (DESIGNED)



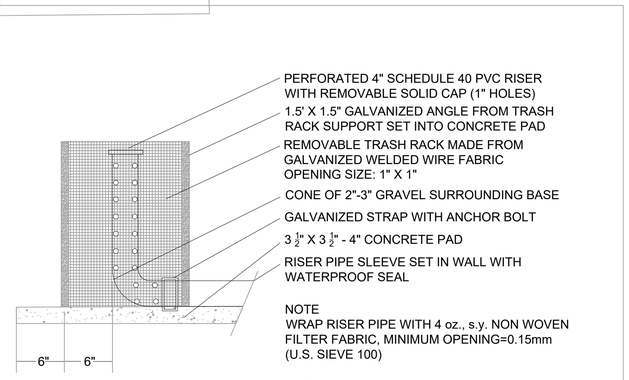
SECTION 'A'-'A'
(NOT-TO-SCALE)

Overall Drainage Summary at Outfall

Storm Event	Exsiting Cond. (CFS)	Developed Detained Cond. (CFS)
2 Yr	2.3	0.7
10 Yr	4.4	2.8
25 Yr	5.9	4.9
100 Yr	8.5	7.8

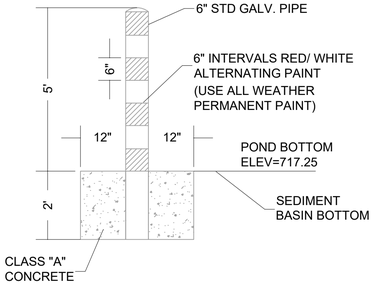
Detention Pond Summary

Storm Event	Inflow (CFS)	Outflow (CFS)	Ws Elev.
2 Yr	3.5	0.7	720.2
10 Yr	5.9	2.8	720.7
25 Yr	7.6	4.9	721
100 Yr	10.5	7.8	721.3



NOTE
WRAP RISER PIPE WITH 4 oz., s.y. NON WOVEN FILTER FABRIC, MINIMUM OPENING=0.15mm (U.S. SIEVE 100)

TRASH RACK/RISER PIPE DETAIL
(NTS)



CONCRETE FILLED FIXED SEDIMENT MARKER
FOR BATCH DETENTION POND
NTS

SIP23-00007

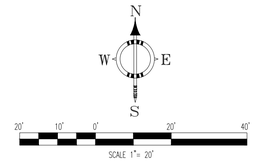
REV. NO.	DESCRIPTION	DATE

Notes:

LOCATION MAP
NOT TO SCALE

LEGEND

	PROPOSED CONCRETE CURB
	EXISTING CONCRETE CURB
	EXISTING CONCRETE AREAS
FIR	FOUND 1/2 " IRON ROD
SIRC	SET 1/2" IRON ROD WITH CAP
	1/2" IRON PIN FOUND (STEEL PIN)
CPS 1847	CAPPED IRON PIN SET, "FOREST RPSL 1847"
CAP "RPSL"	CAPPED IRON PIN FOUND, "FOREST RPSL 1847"
	CAPPED IRON PIN FOUND
N7°00'E 100' (F)	MEASURED BEARING AND DISTANCE
N7°00'E 100' (D)	BEARING AND DISTANCE FROM DEED
678	EXISTING CONTOURS
N.C.B.	NEW CITY BLOCK
C.B.	COUNTY BLOCK
O.P.R.	OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF WILLIAMSON COUNTY, TEXAS
D.P.R.	DEED & PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS
E.G.T.CA	ELECTRIC, GAS, TELEPHONE, AND CABLE TELEVISION EASEMENT
B.S.L.	BUILDING SETBACK LINE
R.O.W.	RIGHT-OF-WAY
P.U.E.	PUBLIC UTILITY EASEMENT
P.O.B.	POINT OF BEGINNING
	EASEMENT
	EASEMENT
	EASEMENT
S	EXISTING SEWER MANHOLE
OE	EXISTING OVERHEAD ELECTRIC



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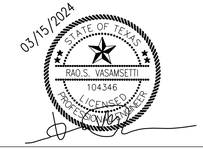
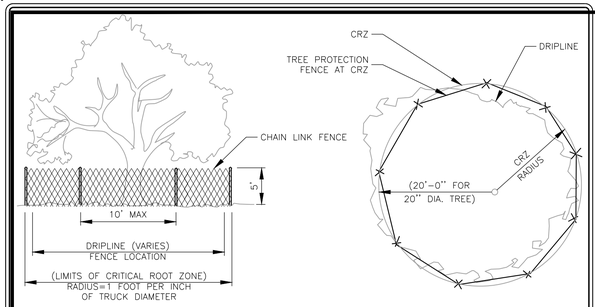


RCE RAO'S CONSULTING ENGINEERS
TXPE FIRM#17555
P.O. BOX. 592091 · SAN ANTONIO TX 78258
PHONE: 210.549.7557. FAX:512.856.4595
ww.raosengineering.com

PROJECT DESCRIPTION:
WONDER DRIVE SUBDIVISION

TITLE:
DETENTION PLAN

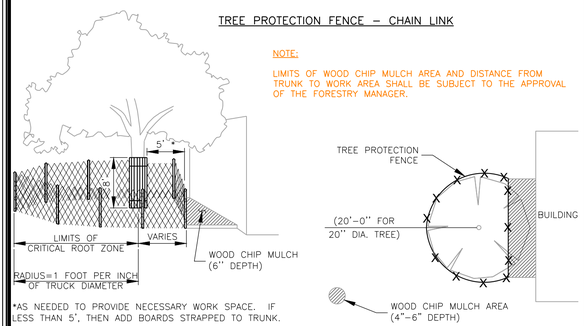
DATE : 07/27/23	JOB NO. 2021-1098
DESIGNED BY : RV	DRG NO
DRAWN BY : MO	10 OF 15
CHECKED BY : RV	



TREE PROTECTION FENCE – CHAIN LINK

NOTE:

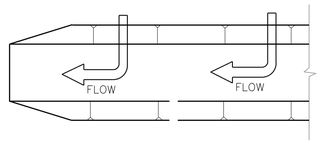
LIMITS OF WOOD CHIP MULCH AREA AND DISTANCE FROM TRUNK TO WORK AREA SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.



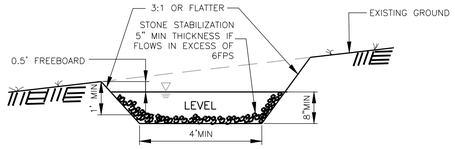
TREE PROTECTION FENCE (MODIFIED) – CHAIN LINK

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-04
APPROVED 03-25-11 DATE	TREE PROTECTION FENCE CHAIN LINK	ROUND ROCK, TEXAS PURPOSE, PASSION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



PLAN



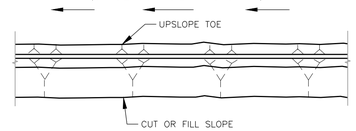
CROSS SECTION

NOTES:

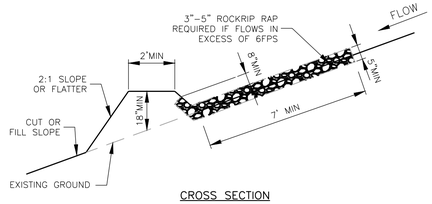
1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
2. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS-SECTION AS REQUIRED TO MEET CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROVED SPOILS SITE SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
4. INTERCEPTOR SWALES SHALL HAVE A MINIMUM GRADE OF 1 PERCENT AND THE BOTTOM SHALL BE LEVEL.
5. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED UPLAND AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE, SUCH AS A ROCK BERM, BRUSH BERM, STONE OUTLET STRUCTURE, SEDIMENT TRAP, OR SEDIMENT BASIN OR TO AN AREA PROTECTED BY ANY OF THESE PRACTICES.
6. DIVERTED RUNOFF FROM A PROTECTED OR STABILIZED UPLAND AREA SHALL OUTLET DIRECTLY ONTO AN UNDISTURBED STABILIZED AREA, LEVEL SPREADER, OR INTO A GRADE STABILIZATION STRUCTURE.
7. THE ON-SITE LOCATION MAY NEED TO BE ADJUSTED TO MEET FIELD CONDITION IN ORDER TO UTILIZE THE MOST SUITABLE OUTLET.
8. STABILIZATION, WHEN REQUIRED, SHALL BE OPEN GRADE ROCK 3-5 INCH DIAMETER PLACED IN A LAYER A MINIMUM OF 5 INCH THICKNESS AND SHALL EXTEND ACROSS THE BOTTOM AND UP BOTH SIDES OF THE CHANNEL TO A HEIGHT OF AT LEAST 8 INCHES.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-05
APPROVED 03-25-11 DATE	INTERCEPTOR SWALE DETAIL	ROUND ROCK, TEXAS PURPOSE, PASSION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		

POSITIVE DRAINAGE
(GRADE SUFFICIENT TO DRAIN)



PLAN

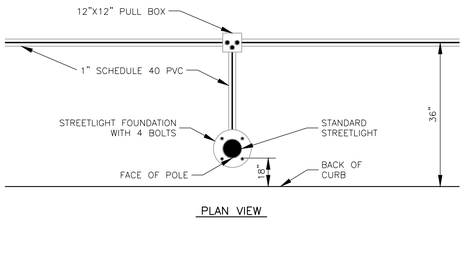


CROSS SECTION

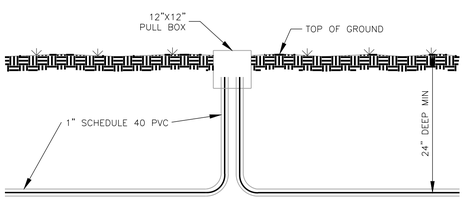
NOTES:

1. ALL DIKES SHALL BE MACHINE COMPACTED.
2. ALL DIVERSION DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
2A. DIVERTED RUNOFF FROM A PROTECTED OR STABILIZED AREA SHALL HAVE ITS OUTLET FLOW DIRECTED TO AN UNDISTURBED STABILIZED AREA OR INTO A LEVEL SPREADER OR GRADE STABILIZATION STRUCTURE.
2B. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE, SUCH AS A ROCK BERM, BRUSH BERM, STONE OUTLET STRUCTURE, SEDIMENT TRAP, OR SEDIMENT BASIN OR TO AN AREA PROTECTED BY ANY OF THESE PRACTICES.
3. UNLESS OTHERWISE SPECIFIED, EROSION STABILIZATION SHALL BE OPEN GRADED ROCK 3-5 INCHES IN DIAMETER PLACED IN A 5-INCH THICK LAYER AND EMBEDDED INTO THE SOIL.
4. INSPECTION SHALL BE CONDUCTED WEEKLY OR AFTER EACH RAINFALL EVENT.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-06
APPROVED 03-25-11 DATE	DIVERSION DIKE DETAIL	ROUND ROCK, TEXAS PURPOSE, PASSION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



PLAN VIEW

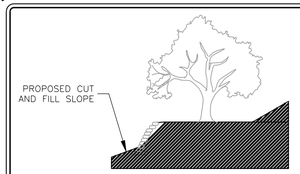


SECTION VIEW

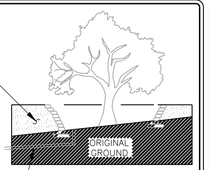
NOTES:

1. FOR ADDITIONAL GENERAL NOTES, SEE DETAIL DU-01.
2. SEE "UNPAVED AREA TRENCH (UAT) (DU-02) DETAIL".

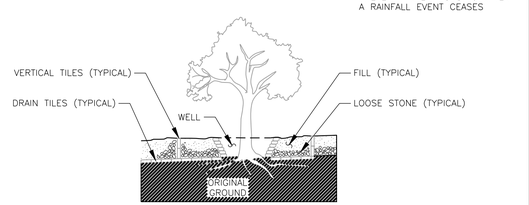
	CITY OF ROUND ROCK	DRAWING NO: DU-08
APPROVED 04-01-10 DATE	INSTALLATION OF STREET LIGHTING ON MAJOR URBAN PAVEMENT WITH 12"X 12" PULL BOX DETAIL	ROUND ROCK, TEXAS PURPOSE, PASSION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



PERMANENT PROTECTIVE WALL



OPEN TREE WELL



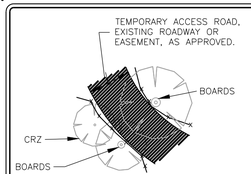
TREE WELL WITH RAISED GRADE

NOTE:

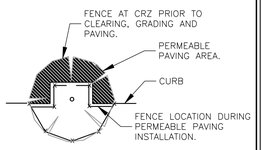
LOCATION, TYPE, DEPTHS AND CONSTRUCTION SPECIFICATIONS OF FILL, DRAINS AND WALLS SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

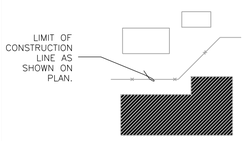
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-02
APPROVED 03-25-11 DATE	TREE PROTECTION TREE WELLS	ROUND ROCK, TEXAS PURPOSE, PASSION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



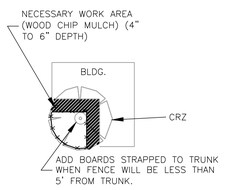
LINEAR CONSTRUCTION THROUGH TREES



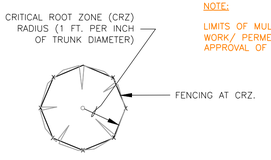
TREES IN PAVING AREA



NATURAL AREAS



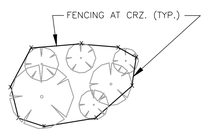
TREES NEAR CONSTRUCTION ACTIVITY



INDIVIDUAL TREE

NOTE:

LIMITS OF MULCH AREAS AND DISTANCE FROM TRUNKS TO WORK/ PERMEABLE PAVING AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.



GROUP OF TREES

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-03
APPROVED 03-25-11 DATE	TREE PROTECTION FENCE LOCATIONS	ROUND ROCK, TEXAS PURPOSE, PASSION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		

REV. NO.	DESCRIPTION	DATE

Notes:

LOCATION MAP
NOT TO SCALE

LEGEND

SIGNATURE/SEAL

03/15/2024
STATE OF TEXAS
RAO S. VASAMSETTI
104346
LICENSED PROFESSIONAL ENGINEER

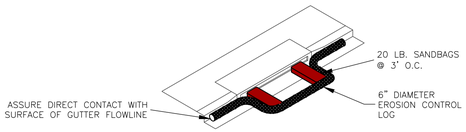
RCE RAO'S CONSULTING ENGINEERS
TBPE FIRM#17655
P.O. BOX. 592991 SAN ANTONIO TX 78258
PHONE: 210.548.7557, FAX.512.856.4595
ww.raosengineering.com

PROJECT DESCRIPTION:
WONDER DRIVE SUBDIVISION

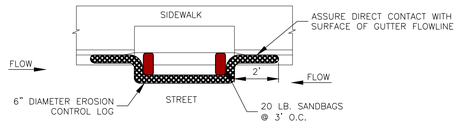
TITLE:
STANDARD DETAILS
(SHEET 2 OF 5)

DATE : 07/27/23	JOB NO. 2021-1098
DESIGNED BY : RV	DRG NO
DRAWN BY : MO	12 OF 15
CHECKED BY : RV	

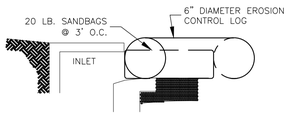
SIP23-00007



ISOMETRIC



PLAN

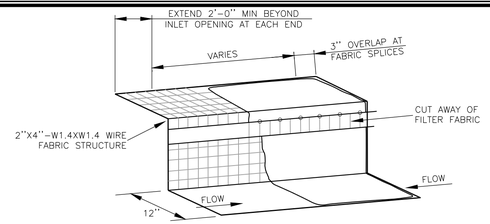


CROSS SECTION

NOTES:

1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM WATER BEGINS TO OVERTOP THE CURB.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-13
APPROVED 03-25-11 DATE	CURB INLET PROTECTION WITH EROSION CONTROL LOG DETAIL	ROUND ROCK, TEXAS FUTURE VISION, TRADITION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



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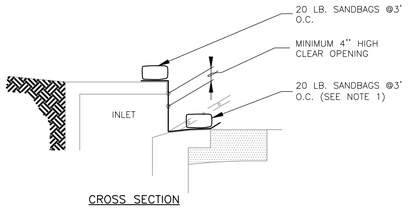
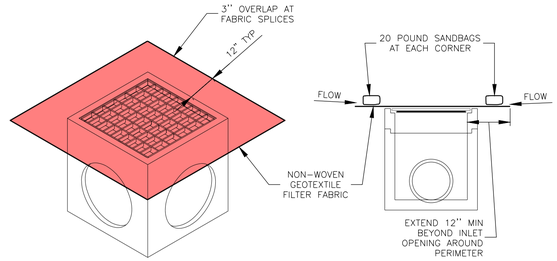


CROSS SECTION

NOTES:

1. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1" X 4" BOARD SECURED WITH CONCRETE NAILS 3' O.C. NAILED INTO THE GUTTER IN LIEU OF SANDBAGS TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, CLEAN ANY DIRT/DEBRIS FROM NAILING LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH SURFACE OF GUTTER.
2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVERTOP THE CURB.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-14
APPROVED 03-25-11 DATE	CURB INLET PROTECTION DETAIL	ROUND ROCK, TEXAS FUTURE VISION, TRADITION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



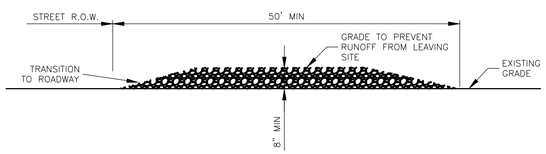
ISOMETRIC

CROSS SECTION

NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
3. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-15
APPROVED 03-25-11 DATE	AREA INLET PROTECTION DETAIL	ROUND ROCK, TEXAS FUTURE VISION, TRADITION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		

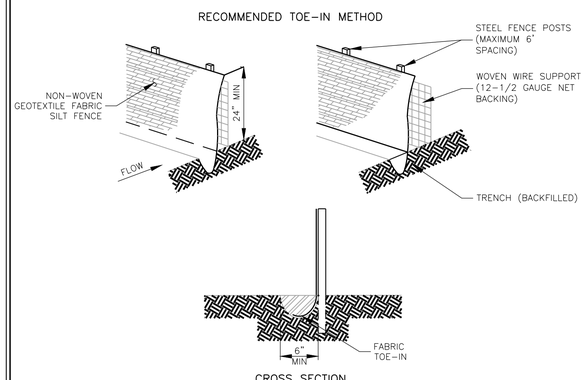


CROSS SECTION

NOTES:

1. STONE SIZE SHALL BE 3" – 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-09
APPROVED 03-25-11 DATE	STABILIZED CONSTRUCTION ENTRANCE DETAIL	ROUND ROCK, TEXAS FUTURE VISION, TRADITION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		

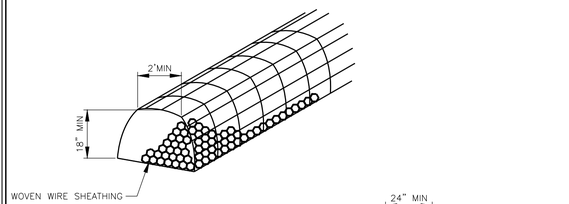


CROSS SECTION

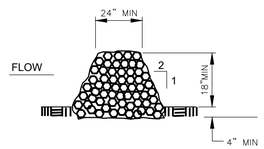
NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1') FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-10
APPROVED 03-25-11 DATE	SILT FENCE DETAIL	ROUND ROCK, TEXAS FUTURE VISION, TRADITION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



ISOMETRIC



CROSS SECTION

NOTES:

1. USE ONLY OPEN GRADED ROCK (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/ OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH OF 6". THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-12
APPROVED 03-25-11 DATE	ROCK BERM DETAIL	ROUND ROCK, TEXAS FUTURE VISION, TRADITION, PROSPERITY
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		

SIP23-00007

REV. NO.	DESCRIPTION	DATE

Notes:

LOCATION MAP
NOT TO SCALE

LEGEND

SIGNATURE/SEAL

RCE RAO'S CONSULTING ENGINEERS
TXPE FIRM#17655
P.O. BOX. 592991 SAN ANTONIO TX 78258
PHONE: 210.548.7507, FAX:512.556.4095
www.raosengineering.com

PROJECT DESCRIPTION:
WONDER DRIVE SUBDIVISION

TITLE:
STANDARD DETAILS
(SHEET 3 OF 5)

DATE : 07/27/23	JOB NO. 2021-1098
DESIGNED BY : RV	DRG NO
DRAWN BY : MO	13 OF 15
CHECKED BY : RV	

AGENT AUTHORIZATION FORM

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

I Prasad Gurijala,
Print Name

Owner,
Title - Owner/President/Other

of N/A,
Corporation/Partnership/Entity Name

have authorized Rao's Consulting Engineers
Print Name of Agent/Engineer

of Rao's Consulting Engineers
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

03/12/24
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Prasad Gurijala 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 12th day of March, 2024.

NOTARY PUBLIC

Veronica Bunton
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 04.19.2027

VERONICA BUNTON
Notary Public, State of Texas
Comm. Expires 04-19-2027
Notary ID 134313526

APPLICATION FEE FORM

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Wonder Drive Subdivision

Regulated Entity Location: southeast corner of Ledbetter St & Wonder Drive Round Rock TX

Name of Customer: Prasad Gurijala

Contact Person: Prasad Gurijala Phone: 775-450-4691

Customer Reference Number (if issued):CN _____

Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde

☐ Comal ☐ Kinney

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

☒ Austin Regional Office

☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office

☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	*Size*	*Fee Due*
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	0.92 Acres	$ 1,500
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	$
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____ Date: 03/24/24

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

CORE DATA FORM

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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		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:*

Prasad Gurijala

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:

201 Angus Drive

City	Cedar Park	State	TX	ZIP	78613	ZIP + 4	

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

18. Telephone Number	19. Extension or Code	20. Fax Number (*if applicable*)
(775) 450-4691		( ) -

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.*)

Namami Sai Subdivision

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

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	southeast corner of Ledbetter Street and Wonder Drive

26. Nearest City	State	Nearest ZIP Code
Round Rock	TX	78681

27. Latitude (N) In Decimal:	-97.693	28. Longitude (W) In Decimal:	30.514

Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
97	41	34.8	30	30	50

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)
1521		236115	

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

Single family Subdivision

34. Mailing Address:							
	City		State		ZIP		ZIP + 4	
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:	Rao Vasamsetti	41. Title:	President

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 549-7557		( ) -	rao@raosengineering.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:	Rao's Consulting Engineers	Job Title:	President
Name *(In Print)*:	Rao Vasamsetti	Phone:	(210) 549- 7557
Signature:		Date:	03/24/24

TSS CALCULATIONS

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Wonder Drive
Date Prepared: 4/8/2024

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: $L_M = 27.2(A_N \times P)$

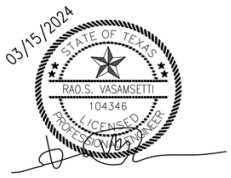
where:

$L_{M\ TOTAL\ PROJECT}$ = 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 * =	0.92	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	0.44	acres
Total post-development impervious cover fraction * =	0.48	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	383	lbs.

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



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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	0.92	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.44	acres
Post-development impervious fraction within drainage basin/outfall area =	0.48	
$L_{M\ THIS\ BASIN}$ =	383	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention Pond
Removal efficiency = 91 percent

Aqualogic Cartridge Filter
Bioretention
Batch Detention Pond
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 =	0.92	acres
A_I =	0.44	acres
A_P =	0.00	acres

L_R = **443** lbs

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

Desired $L_{M\ THIS\ BASIN}$ = **383** lbs.

F = **0.86**

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = **1.38** inches
Post Development Runoff Coefficient = **0.35**
On-site Water Quality Volume = **762** cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = **0.00** acres
Off-site Impervious cover draining to BMP = **0.00** acres
Impervious fraction of off-site area = **0**
Off-site Runoff Coefficient = **0.00**
Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **152**
Total Capture Volume (required water quality volume(s) x 1.20) = **915** cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **NA** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr **Enter determined permeability rate or assumed value of 0.1**
Irrigation area = **NA** square feet
NA acres

8. Extended Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = **NA** cubic feet

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin = **NA** cubic feet

Minimum filter basin area = **NA** square feet

Maximum sedimentation basin area = **NA** square feet **For minimum water depth of 2 feet**
Minimum sedimentation basin area = **NA** square feet **For maximum water depth of 8 feet**

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins = **NA** cubic feet

Minimum filter basin area = **NA** square feet

Maximum sedimentation basin area = **NA** square feet **For minimum water depth of 2 feet**
Minimum sedimentation basin area = **NA** square feet **For maximum water depth of 8 feet**