

WATER POLLUTION ABATEMENT PLAN MODIFICATION

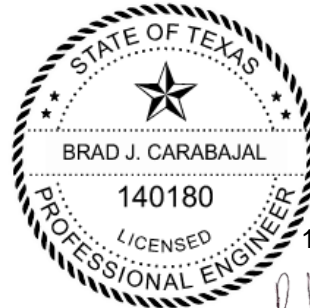
FOR

FREEHILL RR 620

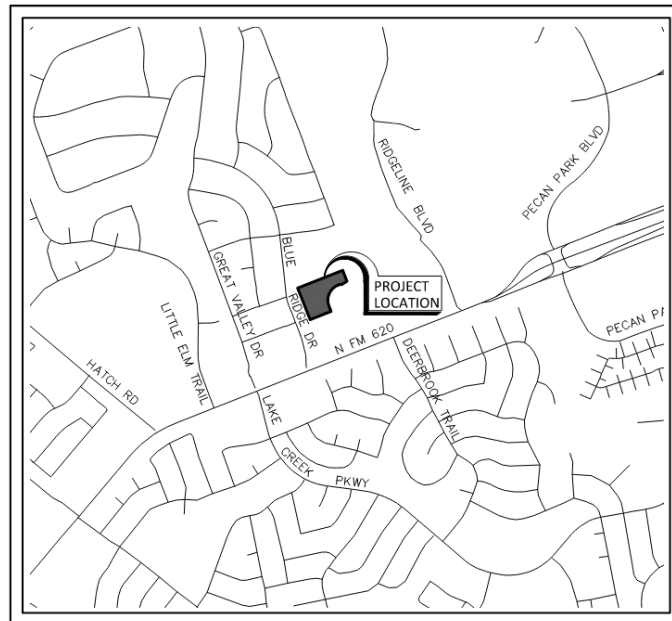
12332 RR 620

IN

CEDAR PARK, TEXAS



11/22/2024



912 S. Capital of Texas Highway, Suite 300
Austin, Texas 78746
Tel: 512.441.9493
Fax: 512.445.2286

NOVEMBER 2024



912 S. Capital of Texas Highway, Suite 300
Austin, Texas 78746
Tel: 512.441.9493
Fax: 512.445.2286
www.quiddity.com

November 19, 2024

Water Section Manager
Texas Commission on Environmental Quality
Region 11 Office
12100 Park 35 Circle, Bldg A, Rm 179
Austin, Texas 78753

RE: Water Pollution Abatement Plan Modification

Freehill RR 620
Cedar Park, Texas

To whom it may concern,

On behalf of our client, FED CEDAR PARK LP, Quiddity Engineering is pleased to submit this Water Pollution Abatement Plan Modification for your consideration. Please find enclosed the following items for your review:

1. Edwards Aquifer Application Page (TCEQ-20705)
2. General Information Form (TCEQ-0587)
3. Geologic Assessment Form (TCEQ-0585)
4. Modification of a Previously Approved Plan (TCEQ-0590)
5. Organized Sewage Collection System Application (TCEQ-0582)
6. Water Pollution Abatement Plan Application Form (TCEQ-0584)
7. Lift Station/ Force Main System Application (TCEQ-0624)
8. Temporary Stormwater Section (TCEQ-0602)
9. Permanent Stormwater Section (TCEQ-0600)
10. Agent Authorization Form (TCEQ-0599)
11. Application Fee Form (TCEQ-0574)
12. Application Fee Check
13. Core Data Form (TCEQ-10400)
14. Construction Plans (Attachment F of Permanent Stormwater Section)

If you have any questions or require additional information, please call me at (512) 685-5117.

Sincerely,

Brad J. Carabajal, P.E.
Project Manager

BJC/ecm

K:\28559\28559-0003-01 12332 RR 620\Project Management\Deliverables\TCEQ\WPAP MOD\Second Submittal\Working

Water Pollution Abatement Plan Modification

FOR

FREEHILL RR 620

TABLE OF CONTENTS

Edwards Aquifer Application Cover Page (TCEQ-20705)

General Information Form (TCEQ-0587)

Geologic Assessment Form (TCEQ-0585)

Modification of a Previously Approved Plan (TCEQ-0590)

Organized Sewage Collection System Application (TCEQ-0582)

Water Pollution Abatement Plan Application Form (TCEQ-0584)

Lift Station/ Force Main System Application (TCEQ-0624)

Temporary Stormwater Section (TCEQ-0602)

Permanent Stormwater Section (TCEQ-0600)

Agent Authorization Form (TCEQ-0599)

Application Fee Form (TCEQ-0574)

Application Fee Check

Core Data Form (TCEQ-10400)

Construction Plans (Attachment F of Permanent Stormwater Section)

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: Freehill RR 620					2. Regulated Entity No.: RN106926181				
3. Customer Name: FED CEDAR PARK LP					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):		3.96	
9. Application Fee:	\$4,650	10. Permanent BMP(s):				Sed/ Fill Pond			
11. SCS (Linear Ft.):	510	12. AST/UST (No. Tanks):				N/A			
13. County:	Williamson	14. Watershed:				Buttercup 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)	—	—	X
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input checked="" type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

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

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

Brad Carabajal P.E.

Print Name of Customer/Authorized Agent

11/22/2024

Signature of Customer/Authorized Agent

Date

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

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

General Information Form

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Brad J. Carabajal, P.E.

Date: 11/22/2024

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Freehill RR 620
2. County: Williamson
3. Stream Basin: Buttercup 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: William Paton
Entity: FED CEDAR PARK LP
Mailing Address: 901 S. Mopac Expressway
City, State: Austin, Texas Zip: 78746
Telephone: (512) 614-2151 FAX: _____
Email Address: will.paton@freehillco.com

8. Agent/Representative (If any):

Contact Person: Brad Carabajal P.E.
Entity: Quiddity Engineering, LLC
Mailing Address: 912 S. Capital of Texas Highway, Suite 300
City, State: Austin, Texas Zip: 78746
Telephone: (512) 685-5117 FAX: _____
Email Address: bcarabajal@quiddity.com

9. Project Location:

- ☒ The project site is located inside the city limits of Cedar Park
☐ 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.

12332 RR 620, Unit #4, Cedar Park, Texas 78613, 560 LF north of RR 620 and 130 LF northwest of Golfinity.

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: December 2025

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

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

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

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

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

Administrative Information

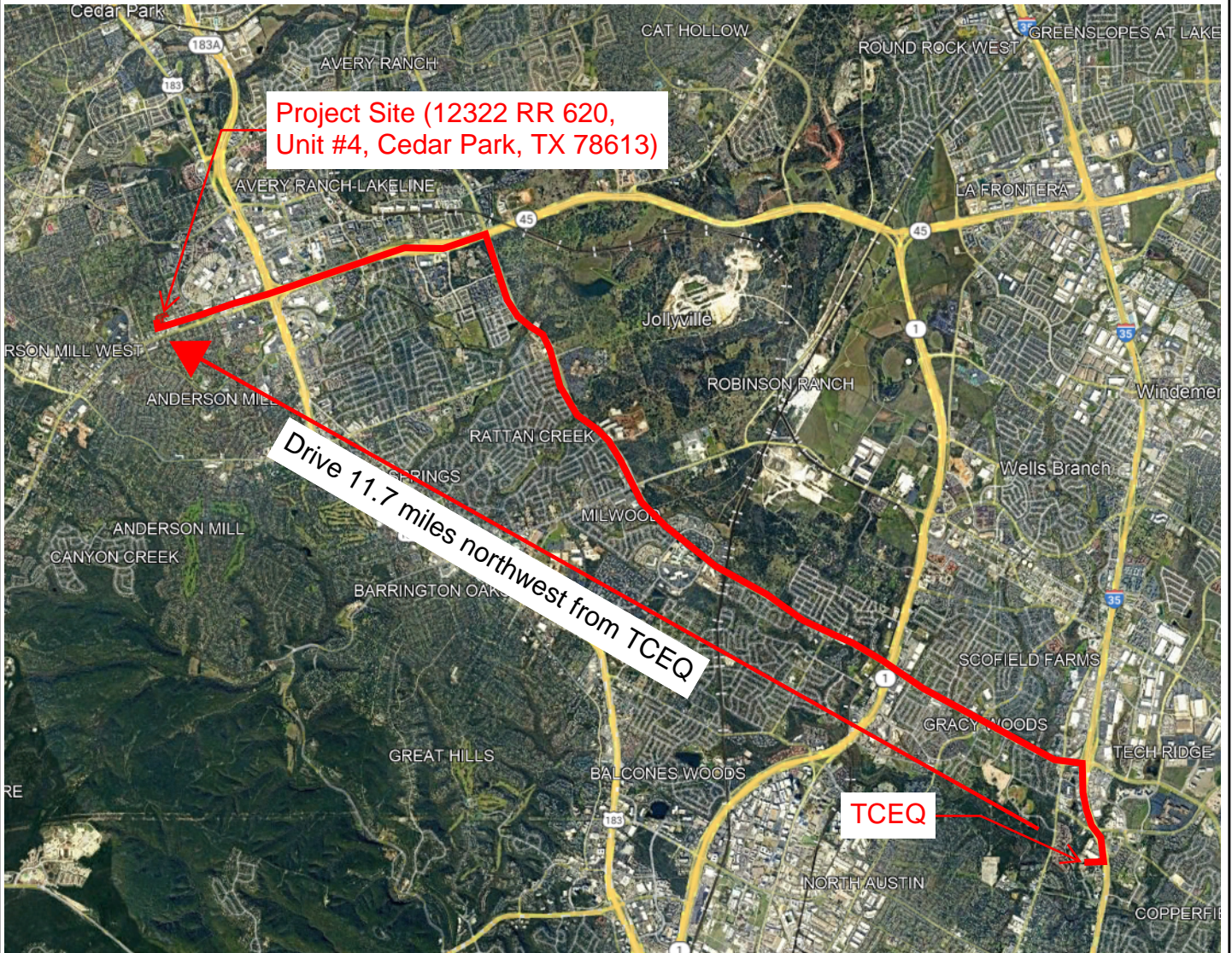
18. The fee for the plan(s) is based on:

- ☒ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
 - ☒ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
 - ☐ For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
 - ☐ A request for an exception to any substantive portion of the regulations related to the protection of water quality.
 - ☐ A request for an extension to a previously approved plan.
19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:
- ☐ TCEQ cashier
 - ☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
 - ☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)
20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
21. ☒ No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.


FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment A: Road Map

Attachment A: Road Map

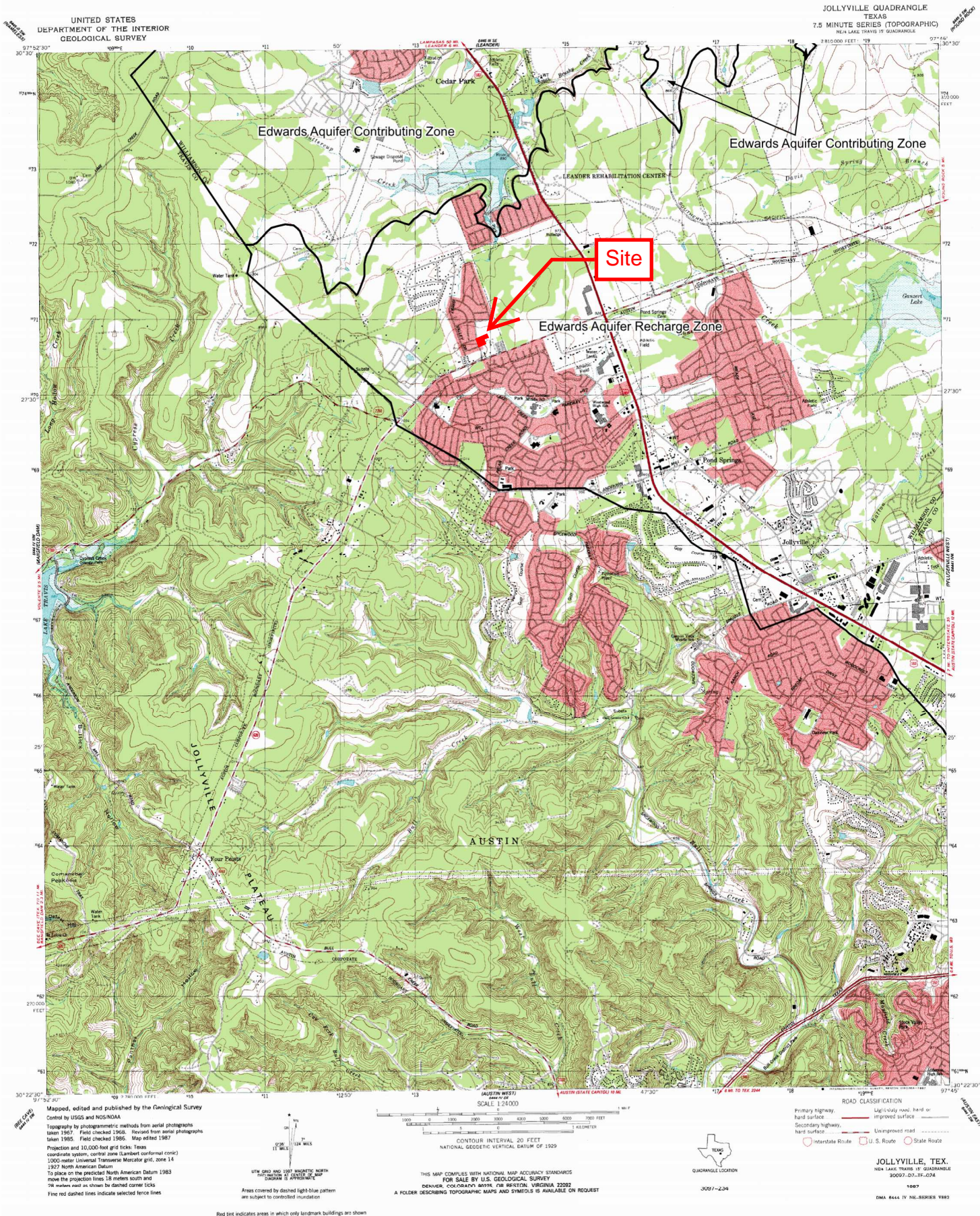


K:\28559\28559-0003-01 12332 RR 620\2 Design Phase\CAD\Exhibits\28559-0003-01 Road Map.dwg

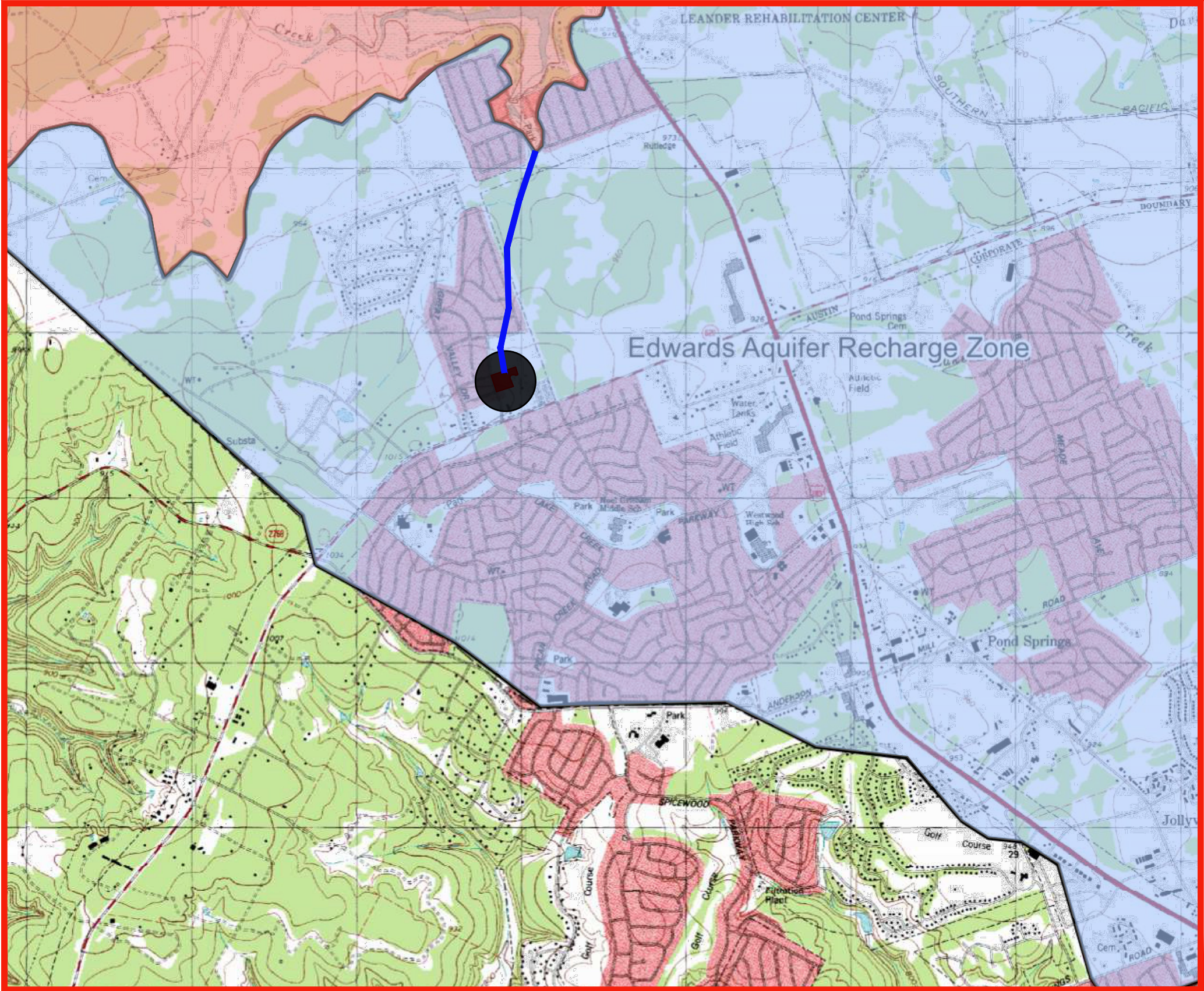
Freehill RR 620	
Road Map	
	QUIDDITY <small>Texas Board of Professional Engineers and Land Surveyors Registration Nos. F-23290 & 10048100 3100 Alvin Devane Boulevard, Suite 150 • Austin, Texas 78741 • 512.441.9493</small>
SCALE:	n/a
DATE:	09/17/2024
JOB NO:	28559-0003-01

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment B: USGS

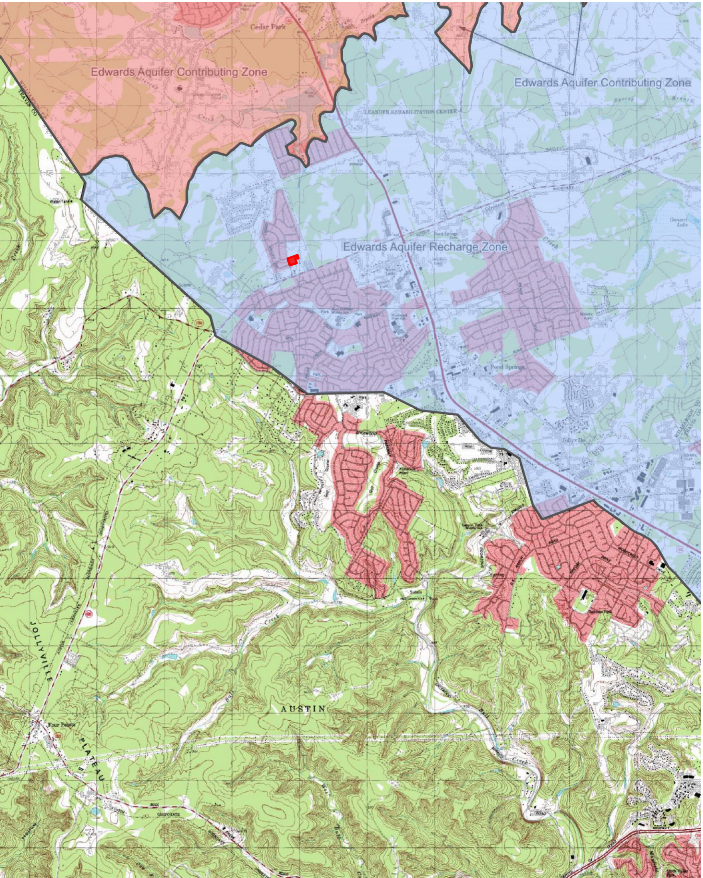


K:\28559\28559-0003-01 12332 RR 6202 Design Phase\CADD\Exhibits\WPAP\28559-0003-01 TCEQ Flow Map.dwg Oct 14, 2024 - 5:09pm emiller








ZONE MAP

N.T.S



VICINITY MAP

N.T.S

LEGEND	
	TRANSITION ZONE
	RECHARGE ZONE
	APPROX. LOCATION OF PROJECT SITE
	FLOWPATH TO TRANSITION ZONE
	ZONE BOUNDARY

**FED CEDAR PARK LP
WILLIAMSON COUNTY, TEXAS**

**FREEHILL RR 620
FLOW MAP**



QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
3100 Alvin Devane Boulevard, Suite 150 • Austin, TX 78741 • 512.441.9493

**ATTACHMENT
B**

DATE: 10/14/2024

JOB NO. 28559-0003-01

QUIDDITY

Attachment C: Project Description

Freehill RR 620 is located at 12332 RR 620, Unit #4, Cedar Park, Texas. Freehill RR 620 is to be constructed on Unit 4 of the Lakeline Ridge Condominiums (Doc. No. 2015036485), with a total site area of 3.96 acres. The property is currently undeveloped with a moderate amount of vegetation covering the site. The site is within the city limits of Cedar Park and the Recharge Zone of the Edwards Aquifer. Otherwise, there are no known critical environmental features within the site. This site is in the Buttercup Creek Watershed. No portion of the property is within the limits of the 100-year floodplain as shown on FIRM Panel No. 48491C0605F and 48491C0610F, dated December 20th, 2019. An Agent Authorization Form is required for Quiddity Engineering to submit the WPAP & SCS on behalf of FED CEDAR PARK LP. The scope of the proposed project consists of the construction of two industrial warehouses (~63,000 SF) along with associated water, wastewater, paving, drainage, and water quality/detention facilities.

The most recently approved WPAP Modification (EAPP ID No. 11001116) that contributed to the wet basin was approved on July 6, 2018, for Golfinity. The plan approved the construction of a 1.60-acre site which included the construction of a single-story building with associated parking, existing detention pond, and utility improvements. The entirety of the Golfinity site drains to the existing detention and water quality pond. This 1.60-acre portion of the overall approved 11.172-acre CWT & C Business Park (EAPP ID: 11-13101102) has an impervious cover of 1.03 acres (64.38%). This additional impervious cover increased the total impervious cover of the 7.60-acre water quality and detention pond to 4.87 acres (64.08%), still well below the originally calculated 80.00% limit.

The proposed modification to the previously approved WPAP is limited to the development of Unit 4 of the Lakeline Ridge Condominiums (Doc. No. 2015036485). Freehill RR 620 will consist of the construction of two (2) commercial buildings totaling 63,222 gross sqft with associated parking, grading, drainage, and utility improvements. Freehill RR 620 will continue to utilize the regional pond to satisfy water quality requirements. In the Golfinity TSS calculations, the impervious cover calculated by Golfinity assumed an overall drainage area leading to the pond that does not incorporate the entirety of the Freehill RR 620 site. Instead, only a portion of the Freehill RR 620 site was included in the pond calculations. This project will increase the area draining to the existing pond by 2.87 acres, to an overall drainage basin area of 10.47 acres. The additional impervious cover proposed by this site to the existing water quality and detention pond is 2.20 acres, which brings the overall impervious cover draining to the pond to 7.07 acres (67.55%).

The site to the south of the Freehill RR 620 (BC-00-01206-03M) has an existing water quality pond that outfalls onto the Freehill RR 620 site. These flows will be captured into the onsite storm drain system and directed into the existing water quality and detention pond to the northeast of the site. Since these flows have already been treated, the offsite impervious cover calculations used in the TSS calcs is 0 for the water quality requirements. The detention portion of the existing pond northeast of the site is able to contain the Atlas-14 100-year flows feeding into the pond without overtopping.

The offsite flows entering the site from the south and all of the runoff within the site will be captured and conveyed through a combination of sheet flow, grate inlets, roof drains, and landscape drains to an existing water quality and detention pond located on the northeastern portion of the site. The Freehill RR 620 site was originally designed to convey a portion of the flows via an existing grassy swale along the northern property line (EAPP ID No. 11-13101102). This grassy swale is no longer necessary to convey flows since all onsite flows will be routed to the existing water quality and detention pond. The onsite stormwater collection system will have three separate tie-ins to the existing pond's splitter box. This splitter box will be extended in order to fit the three additional inflow pipes.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

The impervious cover associated with the Freehill RR 620 project will be 2.93 acres. This additional impervious cover will result in a total impervious cover of 7.07 acres (74.7%) for the 10.47-acre wet pond drainage basin. In existing conditions, the water quality portion of the pond was surveyed on 05/20/2024 and was confirmed to have an overall volume of 47,442.3 cubic ft. After upsizing the splitter box in proposed conditions, the water quality portion of the pond decreases to 41,054.5 cubic ft, which is higher than the required 33,155 cubic ft from the overall TSS calculations. Since the water quality volume of the pond exceeds the required water quality volume of this development, and the detention portion of the pond can accept the additional volume of this development without overtopping, the existing water quality and detention pond is sized appropriately for the proposed modifications.

In addition to stormwater improvements, this site will utilize approximately 294 LF of 4" PVC gravity line that connects the two industrial warehouses to a proposed lift station. From this lift station, approximately 196 LF of 2-inch wastewater Force Main will be constructed on the west side of the site to an existing wastewater manhole (constructed in project SD-13-00032) located in the southwest corner of the site. This force main will eccentrically reduce to approximately 10 LF of 4" PVC gravity line prior to connecting to the existing manhole.

[illegible]



GEOLOGIC ASSESSMENT

For

**Proposed Freehill RR 620
12332 RR 620, Unit 4
Cedar Park, Texas**

Prepared for

**FED CEDAR PARK, LP
901 S. MOPAC BARTON OAKS PLAZA I,
SUITE 300
AUSTIN, TX 78746**

Prepared by

**Professional Service Industries, Inc.
3 Burwood Lane
San Antonio, Texas 78216
Telephone (210) 342-9377**

PSI PROJECT NO.: 0435- 6449

October 23, 2024



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

October 23, 2024

FED Cedar Park, LP

901 S. Mopac Barton Oaks Plaza I,
Suite 300
Austin, TX 78746

Attn: Mr. Pierce DeMarco, P.E., Principal
Email: pierce.demarco@freehillco.com

Re: **TCEQ Geologic Assessment**
Proposed Freehill RR 620 Development
12332 RR 620, Unit 4
Cedar Park, Texas
PSI Project Number: 0435-6449

Dear Mr. DeMarco:

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 or Contributing Zones. 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. 435852 dated September 30, 2024.

PROJECT DESCRIPTION

The subject site is located at 12332 RR 620, Cedar Park, Texas and consists of an approximately 3.5-acre tract of vacant property in a primarily commercial area on Ranch Road 620 in Cedar Park. The site gently slopes to the east and is currently vacant and undeveloped.

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 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 eastern portion of the 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 the site and exposed on the surface is the 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. Exposed bedrock was observed within the site boundary on the western portion of the site. Previously excavated piles of bedrock were observed on the western portion of the site. The remainder of the site is wholly covered in soil residuum material.

The elevation of the property ranges from approximately 998 feet above mean sea level (AMSL) on the southwestern portion to approximately 988 feet above MSL on the northeast portion. The topographic contour lines for the property indicate a gentle slope to the northeast.

Soils at the subject property are mapped as Georgetown stony clay loam, (1 to 3 percent slopes). The Georgetown series consists of moderately deep, well drained, very slowly permeable soils that have formed over indurated limestone of Cretaceous age. These soils occur on nearly level to very gently sloping dissected plateaus. The slope ranges from 0 to 3 percent. The soil does not meet hydric criteria.

Edwards Aquifer Hydrogeology

The property is mapped within the recharge zone of the Edwards Aquifer on the Edwards Limestone formation outcrop. The Edwards Aquifer 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. Depths to usable groundwater in this area is approximately 300 feet below grade and is extracted from the Trinity Aquifer in the upper Glen Rose Limestone formation which underlies and is hydraulically separate from the Edwards Aquifer.

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 commercial tract within Williamson County. The surrounding area is comprised of commercial properties. Surficial soils were observed on the surface on the eastern portion with bedrock outcrop on the western portion due to excavation in that area. There are no indications of sensitive recharge features such as fault/fracture zones and/or evidence of springs, ponds, etc. on the site. The site is covered by residual soil derived from the underlying bedrock in the areas outside of the excavated/razed area. 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. 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.

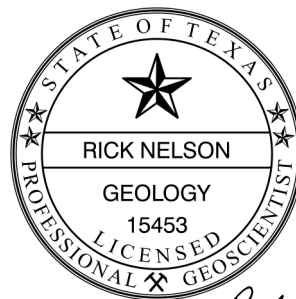
It is possible that future clearing/construction activities will reveal the presence of features currently hidden by thick vegetation and/or soil cover. If caves, sinkholes, or solution cavities are encountered during future clearing/construction activities, please contact our office for additional assistance.

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, P.G.
Senior Scientist, Environmental Services



RN

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: 10/21/2024

Fax: 210-342-9401

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

Signature of Geologist:

Rick Nelson

Regulated Entity Name: FED CEDAR PARK, LP, 901 S. MOPAC BARTON OAKS PLAZA I,
SUITE 300, AUSTIN, TX 78746

Project Information

1. Date(s) Geologic Assessment was performed: 10/14/24

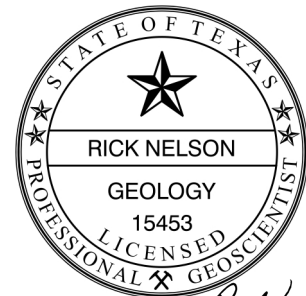
2. Type of Project:

☒ 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)
Georgetown stony clay loam, 1 to 3 percent slopes	D	1 -2

Soil Name	Group*	Thickness(feet)

** Soil Group Definitions (Abbreviated)*

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

6. ☒ **Attachment B – Stratigraphic Column.** A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.
7. ☒ **Attachment C – Site Geology.** A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
8. ☒ **Attachment D – Site Geologic Map(s).** The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'
Applicant's Site Plan Scale: 1" = 100'
Site Geologic Map Scale: 1" = 100'
Site Soils Map Scale (if more than 1 soil type): 1" = 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 0 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
- ☐ The wells are not in use and have been properly abandoned.
- ☐ The wells are not in use and will be properly abandoned.
- ☐ The wells are in use and comply with 16 TAC Chapter 76.
- ☒ There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

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

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

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

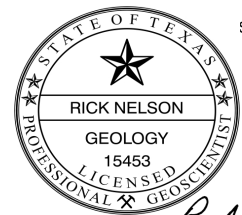
I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

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

Rick Nelson _____

Date 10/14/2024

Sheet 1 of 1



RN

ATTACHMENT B
STRATIGRAPHIC COLUMN

Proposed Freehill RR 620
12332 RR 620, Unit 4 Cedar Park, Texas
PSI Project No. 0435-6449

FORMATION	THICKNESS	LITHOLOGIC DESCRIPTION
Edwards Limestone (Ked) <i>(outcropped onsite)</i>	225 -400 ft	Fine to coarse grained, medium gray to grayish brown, with solution zones, massive limestone.
Comanche Peak Formation (Kc) <i>(not exposed onsite)</i>	80 ft	Comanche Peak Formation: white, chalky, fossiliferous 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.

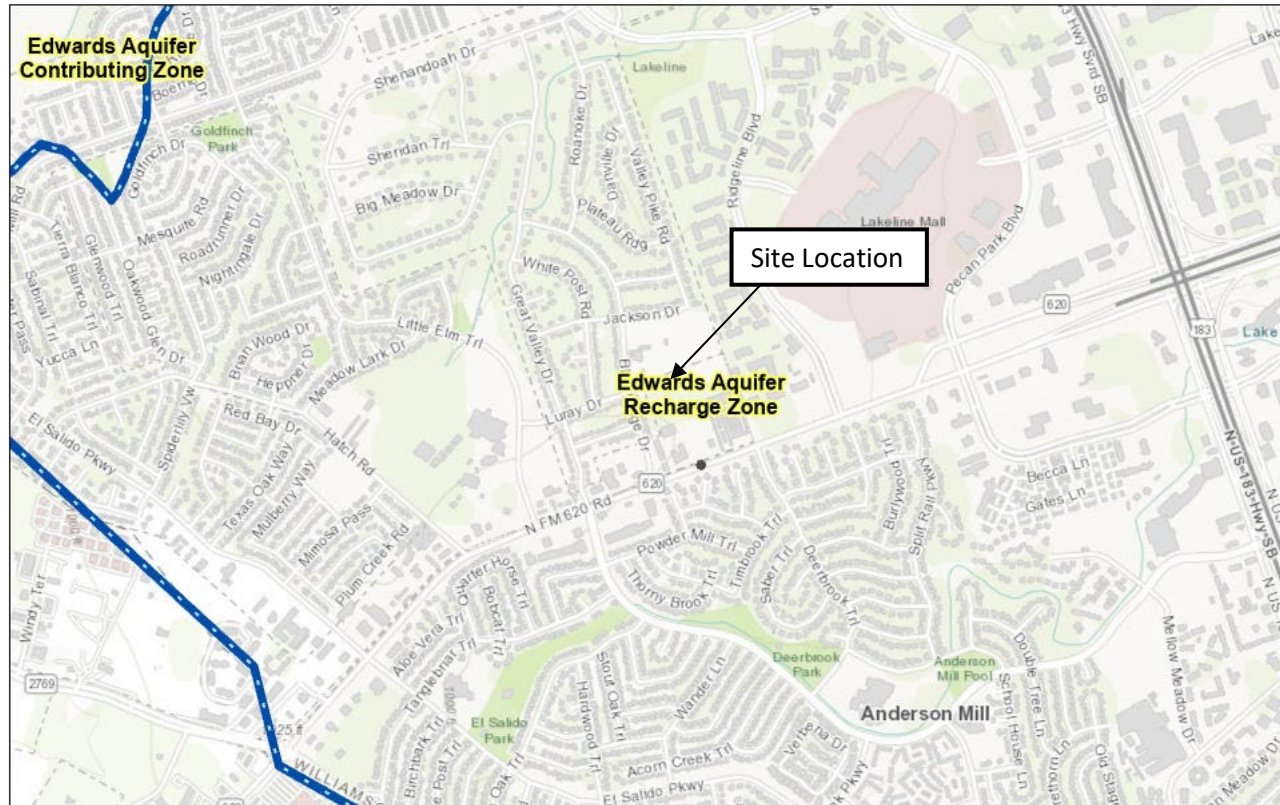
Site Geology and Soils

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 formations mapped at the site exposed on the surface are the 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. Exposed bedrock was observed within the site boundary on the western portion of the site. Previously excavated piles of bedrock were observed on the western portion of the site. The remainder of the site is wholly covered in soil residuum material.

Soils at the subject property are mapped as **Georgetown stony clay loam, (1 to 3 percent slopes)**. The Georgetown series consists of moderately deep, well drained, very slowly permeable soils that have formed over indurated limestone of Cretaceous age. These soils occur on nearly level to very gently sloping dissected plateaus. Slope ranges from 0 to 3 percent. The soil does not meet hydric criteria.

Proposed Freehill RR 620



10/22/2024, 8:49:56 AM

Edwards Aquifer Boundary TCEQ_EDWARDS_OFFICIAL_MAPS
Edwards Aquifer Label Edwards Aquifer Boundary central line

1:18,056
0 0.13 0.25 0.5 mi
0 0.2 0.4 0.8 km
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

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



3 Burwood Lane
San Antonio, Texas 78216

Proposed Freehill RR 620
12332 RR 620, Unit 4 Cedar Park, Texas
PSI Project No. 0435-6449

ATTACHMENT D
Edwards Aquifer
Map





3 Burwood Lane
San Antonio, Texas 782156

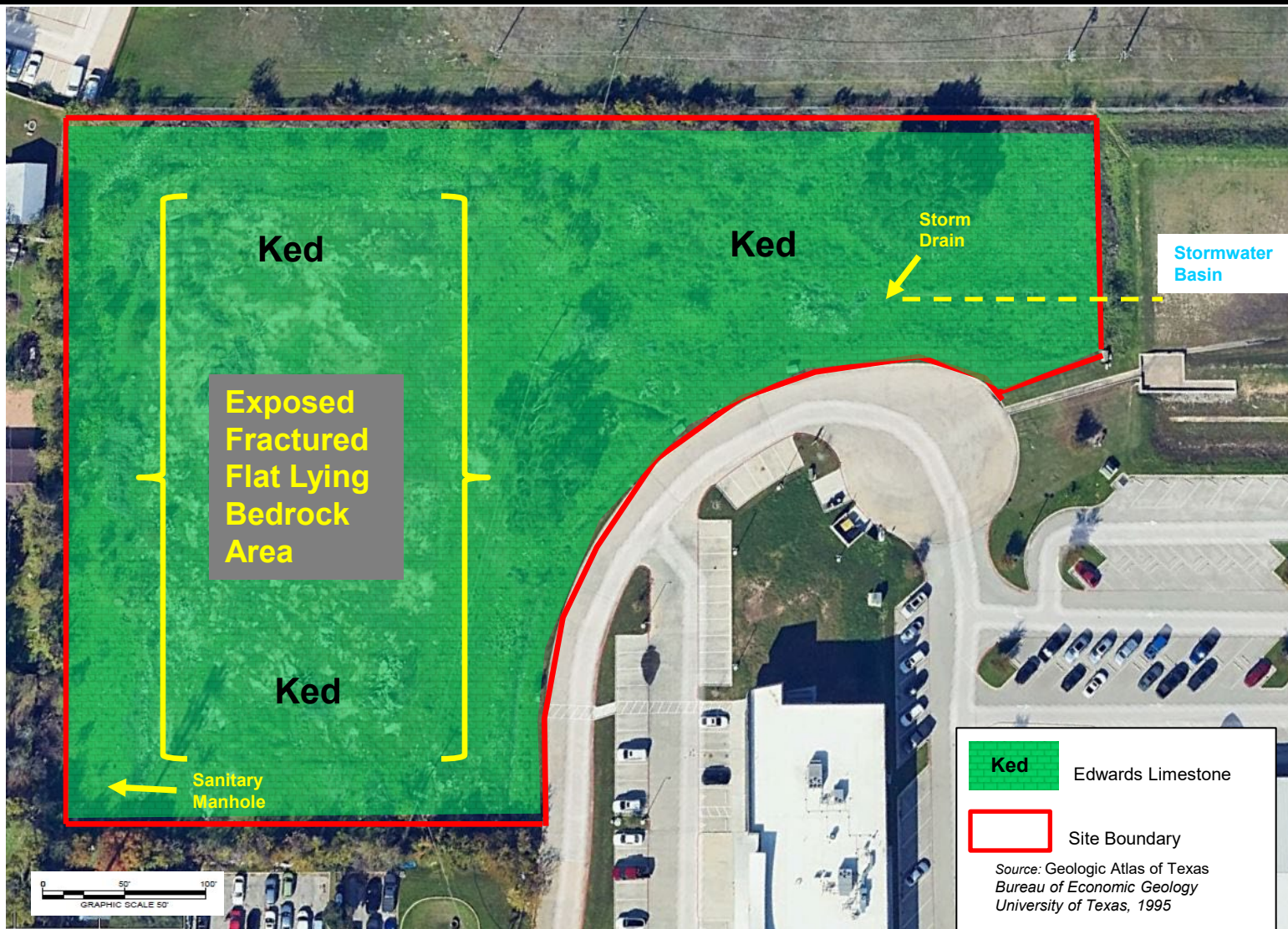
Proposed Freehill RR 620

12332 RR 620, Unit 4 Cedar Park, Texas

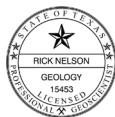
PSI Project No. 0435-6449

ATTACHMENT D Site Plan





3 Burwood Lane
San Antonio, Texas
782156



Proposed Freehill RR 620

12332 RR 620, Unit 4 Cedar Park, Texas

PSI Project No. 0435-6449

ATTACHMENT D Site Geologic Map



ATTACHMENT E

PHOTOGRAPHS



1. View of west central portion of property (exposed bedrock area)



2. View of eastern property boundary showing vegetative cover



3. View of surface fractures on exposed bedrock area



4. Excavated bedrock piles on southwest portion of site



5. Storm drain inlet on east central portion of site



6. Existing sanitary sewer manhole on SW corner

Modification of a Previously Approved Plan

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Brad Carabajal P.E.

Date: 11/19/2024

Signature of Customer/Agent:



Project Information

1. Current Regulated Entity Name: Freehill RR 620
Original Regulated Entity Name: Golfinity (in the CW T&C Business Park)
Regulated Entity Number(s) (RN): RN106926181
Edwards Aquifer Protection Program ID Number(s): _____
☐ The applicant has not changed and the Customer Number (CN) is: _____
☒ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.
2. ☒ **Attachment A: Original Approval Letter and Approved Modification Letters.** A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):
- ☒ Physical or operational modification of any water pollution abatement structure(s) including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
 - ☐ Change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
 - ☒ Development of land previously identified as undeveloped in the original water pollution abatement plan;
 - ☒ Physical modification of the approved organized sewage collection system;
 - ☐ Physical modification of the approved underground storage tank system;
 - ☐ Physical modification of the approved aboveground storage tank system.
4. ☒ Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

WPAP Modification

Summary

Acres	<u>11.172</u>
Type of Development	<u>Commercial</u>
Number of Residential Lots	<u>0</u>
Impervious Cover (acres)	<u>8.94</u>
Impervious Cover (%)	<u>80</u>
Permanent BMPs	<u>Sed/ Fill Pond</u>
Other	<u>Grassy Swale</u>

Approved Project²

EAPP 11001116 - Golfinity

Proposed Modification³ Existing BMP³

Site Area - 3.96 Acres (included in 11.172-acre from previously approved project)

New Drainage Basin Area - 10.47 acres

Industrial Warehouse & Office (new)

0

7.07 ac. total to exist sed/ fill pond¹

67.55% total proposed IC to existing sed/fill pond

Sed/ Fill Pond

7.60

4.87 Ac. ⁴

64.08%

SCS Modification

Summary

Linear Feet	<u>800 LF</u>
Pipe Diameter	<u>2"</u>
Other	<u></u>

Approved Project

EAPP 11-13101103 - Golfinity

Proposed Modification

294 LF	196 LF	20 LF
4" PVC (SDR-26)	2" 150 PSI Pressure Class PVC SDR-26	4" 150 PSI Pressure Class PVC SDR-26

1.) The approved project in EAPP 11001116 (most recently approved WPAP modification) listed an overall impervious cover of 8.94 acres for the overall approved 11.172-acre CWT & C Business Park (EAPP ID: 11-13101102). A portion of the overall 11.172-acre development does not drain to the existing sed/ fill pond analyzed in this WPAP mod. After development of Golfinity (EAPP 11001116), the drainage basin area for the sed/ fill pond was 7.60 acres. The Freehill RR 620 project site has an overall impervious cover of 2.93-acres proposed to drain to the existing sed/ fill pond. After the development of the proposed Freehill RR 620 project, the existing sed/ fill pond will have an overall drainage basin of 10.47-acres with an overall impervious cover of 7.07-acres draining to it.

2.) These numbers were taken directly from previous WPAP. They include two different BMPs. The proposed site is only proposing to modify one of the BMPs. The existing and proposed are included for just the BMP this site is modifying as well.

3.) These numbers are just for the project proposed with this application and the BMP it is tying into.

2 of 3

TCEQ-0590 (Rev. 02-11-15)

4.) See Attachment B in Form TCEQ-0590 of EAPP 11001116 for this value. The 4.87 acres of total impervious cover draining to the sed/ fill pond comes from the P1 (1.58 acres) and P3 (3.29 acres) impervious cover values on the last sheet of Attachment B.

AST Modification	Approved Project	Proposed Modification
Summary		
Number of ASTs	<u>0</u>	<u>0</u>
Volume of ASTs	<u>N/A</u>	<u>N/A</u>
Other	<u> </u>	<u> </u>

UST Modification	Approved Project	Proposed Modification
Summary		
Number of USTs	<u>0</u>	<u>0</u>
Volume of USTs	<u>N/A</u>	<u>N/A</u>
Other	<u> </u>	<u> </u>

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

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

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

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

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

***Attachment A: Original Approval Letter and Approved
Modification Letters Cover***

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



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 27, 2014

Mr. James Hammock
President
620 Chicken, LLC
201 South Lakeline Blvd., Ste. 401
Austin, Texas 78613

Re: Edwards Aquifer, Williamson County
Bush's Chicken Cedar Park; FM 620 N, Cedar Park, Texas
Request for Approval of a Water Pollution Abatement Plan (WPAP)
30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program ID No. 11-13101101
Investigation No.: 1123622; Regulated Entity No.: RN106926157

Dear Mr. Hammock:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Application for the above-referenced project submitted to the Austin Regional Office by Baker-Aicklen & Associates, Inc. on behalf of 620 Chicken, LLC on October 11, 2013. Final review of the application was completed after additional materials were received on January 14 and 23, 2014. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas licensed professional engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas licensed professional engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The property is mostly undisturbed land and undeveloped brush areas with 8,059 sq. ft. of gravel parking area comprising the existing impervious cover. Aerial photography indicates that the gravel parking area existed in 1984, which is prior to the 30 TAC 213 requirements adopted in 1996.

PROJECT DESCRIPTION

Bush's Chicken Cedar Park is a proposed restaurant located at 12336 FM 620 N in the City of Cedar Park in a General Retail (GR) zoned lot. The property consists of 1.3 acres being entirely within the Edwards Aquifer Recharge Zone, and is not within the 100-yr flood plain.

Construction of the facility is proposed to be a single phase on 1.30 acres with 0.71 acres (55 %) impervious cover. In addition, the adjacent proposed CWT&C Business Park will discharge to the permanent BMPs consisting of vegetative buffer strips and an extended detention pond, located at the Bush's Chicken property. The additional treatment area is 0.89 acre, with 0.70 acre (79 %) impervious cover.

The proposed impervious cover will consist of approximately 1.18 acres of parking/drives, and 0.23 acres of structures/rooftops. Temporary Best Management Practices (BMP's) will be maintained to minimize sedimentation and erosion until construction is completed. Areas not included in the impervious cover will be stabilized with sod or landscaping.

There will not be any storage of regulated quantities of hazardous materials. Potable water and wastewater treatment will be provided by the City of Cedar Park.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site and from the adjoining site, a vegetative filter strip (VFS) on the northern end of the site, and an extended detention pond at the southern end of the site, using the TCEQ Technical Guidance Manual (TGM), will be constructed to treat storm water runoff. The required total suspended solids (TSS) treatment for this project is 1,071 pounds of TSS generated from the 1.41 acres of impervious cover. The required water quality volume is 6,351 cu. ft. The provided basin volume is 6,395 cu ft. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project. Treatment design calculations were sealed by David Urban, P.E. on January 23, 2014 to demonstrate the total treatment load removal to exceed the required additional total suspended solids (TSS) loading. The final outfall from the WQP is to the ditch along FM 620 N in the Brushy Creek watershed.

GEOLOGY

According to the geologic assessment included with the application, the superficial geologic unit present at the site is lowermost part of the Edwards Formation (Ked) (80-95 ft. thick), composed thin to medium bedded, dense, dolomite, dolomitic limestone, and limestone. The Edwards overlies the Comanche Peak Formation (Kep) (20 ft. thick) composed of fine-grained, nodular limestone, marly limestone, and marl. The Comanche Peak overlies the Walnut Formation (Kwa) (150 ft. thick), composed of several thinly bedded limestone and marl subunits.

The site is located entirely within the Edwards Aquifer recharge zone boundary. Recharge to the aquifer in this area is by infiltration and surface runoff into joints, faults and dissolution features, where there is land surface exposure. Groundwater is confined and perched on the Comanche Peak Formation, and the water is expected to flow toward the southeast. The site is about five miles northwest of the main part of the Balcones fault zone. The site is mantled by Eckrant and Georgetown soil (1-1.5 ft. thick), composed of a stony clay loam with a very slow infiltration rate.

During the geologic assessment, six potential recharge features were identified, which were determined to be closed depressions and not sensitive. Water wells were not observed on the site. Wells drilled near the site are mostly completed in the Upper and Middle Trinity aquifers that underlie the Walnut Formation. The TCEQ Austin Region Office conducted a site assessment on December 5, 2013, and it was determined that the site generally appeared as described in the geologic assessment.

SPECIAL CONDITIONS

- I. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition 5 below.
- II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.
- III. If water wells are found during construction, they shall be plugged following the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

3. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

8. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas licensed professional engineer.
10. One well exists on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
12. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
13. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
14. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

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

Mr. James Hammock
Page 5
January 27, 2014

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

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

Sincerely,



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

CDR/btg

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

cc: Mr. David Urban, P.E., Baker-Aicklen & Associates, Inc..
Mr. Joe M. England, P.E., County Engineer, Williamson County
Mr. Sam Roberts, P.E., Director of Public Works, City of Cedar Park
TCEQ Central Records, Building F, MC 212

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



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 25, 2014

Mr. Jim Cotton
Partner
CWT & C, LTD.
201 Barton Springs Rd.
Austin, Texas 78750

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: CWT & C Business Park; Located 12332 FM 620 N; Cedar Park, Texas

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

Edwards Aquifer Protection Program ID No. 11-13101102; Investigation No. 1123823; Regulated Entity No. RN106926181

Dear Mr. Cotton:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Application for the above-referenced project submitted to the Austin Regional Office by Baker-Aicklen & Assoc., Inc. on behalf of CWT & C, LTD. on October 11, 2013. Final review of the WPAP was completed after additional material was received on February 12, 20 and 24, 2014. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The CWT&C property is mostly undisturbed land and undeveloped brush areas with no existing impervious cover. Proposed vegetated filter strips and an extended detention pond on the adjacent property, Bush's Chicken Cedar Park was approved on January 27, 2014 (EAPP ID No.:

Mr. Jim Cotton
Page 2
February 25, 2014

11-13101101), and will serve to treat storm water for the southern basin of the proposed project site.

The SCS application for CWT & C Business Park (EAPP ID No. 11-13101103) was submitted as a combined application with the WPAP on October 11, 2013. The SCS application was approved separately from WPAP on February 12, 2014 (CCEDS Investigation No. 1150186).

PROJECT DESCRIPTION

The proposed development is for future general retail located along F.M. 620 one mile west of the 183A Toll Rd. and the 45 Toll Rd. intersection in the City of Cedar Park, Williamson County, Texas. The development is on 11.172 acres with a proposed impervious cover of 8.94 acres (80%) for the ultimate build out. The impervious cover for the ultimate build out will consist of approximately 2.11 acres of structures/rooftops, and 6.83 acres of other paved surfaces. This WPAP application is for proposed construction of 0.57 acres of impervious cover consisting of a private drive with a cul-de-sac. Future construction on the CWT & C Business Park will require modification applications for the individual projects.

The water quality controls designed for the 80% in the ultimate build out are in two basins. The larger northern basin (10.47 acres with 8.38 acres of impervious cover) drains to a sedimentation and filtration water quality pond, and grassy swale. The second smaller southern basin (0.89 acres with 0.70 acres of impervious cover) discharges to vegetative buffer strips and an extended detention pond, which are approved by the Bush's Chicken WPAP on January 27, 2014 (EAPP ID No. 11-13101101).

Temporary Best Management Practices (BMP's) will be maintained to minimize sedimentation and erosion until construction is completed. Areas not included in the impervious cover will be stabilized with sod or landscaping.

PERMANENT POLLUTION ABATEMENT MEASURES

A partial sedimentation and filtration pond (WQP), and a grassy swale designed using the TCEQ Technical Guidance Manual (TGM) will be constructed to treat storm water runoff for the northern basin to remove a minimum of 7,290 lbs of TSS. The drainage basin to the WQP (7.60 acres with 6.08 acres of impervious cover) is proposed to remove 5,504 lbs of TSS with a minimum water quality volume of 41,311 cu. ft., and a minimum filter basin area of 3,443 sq. ft. The provided water quality volume is 41,516 cu. ft. with a filter basin area of 3,871 sq. ft. The drainage basin to the grassy swale (2.87 acres with 2.30 acres of impervious cover) is proposed to remove 1,786 lbs of TSS with a minimum length of 75.83 ft. The provided length is 390 ft.

Up-gradient storm water flows from the off-site extended detention pond at the mechanic shop are proposed to be diverted off site by a diversion dike. Future build out is expected to route said up-gradient storm water flows around the site to not interfere with the business park's permanent BMPs. The grassy swale's proposed design includes a berm which is to only allow storm water flows from the 2.86 acres area identified as P2 on the drainage area map.

The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project. Treatment design calculations were sealed by David Urban, P.E. on February 20, 2014 to demonstrate the total treatment load removal to exceed the required

additional total suspended solids (TSS) loading. The final outfall from the WQP and the grassy swale is to the ditch along FM 620 N in the Brushy Creek watershed.

GEOLOGY

According to the geologic assessment included with the application, the superficial geologic unit present at the site is lowermost part of the Edwards Formation (Ked) (80-95 ft. thick), composed thin to medium bedded, dense, dolomite, dolomitic limestone, and limestone. The Edwards overlies the Comanche Peak Formation (Kep) (20 ft. thick) composed of fine-grained, nodular limestone, marly limestone, and marl. The Comanche Peak overlies the Walnut Formation (Kwa) (150 ft. thick), composed of several thinly bedded limestone and marl subunits.

The site is located entirely within the Edwards Aquifer recharge zone boundary. Recharge to the aquifer in this area is by infiltration and surface runoff into joints, faults and dissolution features, where there is land surface exposure. Groundwater is confined and perched on the Comanche Peak Formation, and the water is expected to flow toward the southeast. The site is about five miles northwest of the main part of the Balcones fault zone. The site is mantled by Eckrant and Georgetown soil (1-1.5 ft. thick), composed of a stony clay loam with a very slow infiltration rate.

During the geologic assessment, six potential recharge features were identified, which were determined to be closed depressions and not sensitive. Water wells were not observed on the site. Wells drilled near the site are mostly completed in the Upper and Middle Trinity aquifers that underlie the Walnut Formation. The TCEQ Austin Region Office conducted a site assessment on December 5, 2013, and it was determined that the site generally appeared as described in the geologic assessment.

SPECIAL CONDITIONS

- I. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.
- II. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition 6 below.
- III. If water wells are found during construction, they shall be plugged following the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

STANDARD CONDITIONS

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

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

Prior to Commencement of Construction:

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

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The

applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. No wells exist on the site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

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

Mr. Jim Cotton
Page 6
February 25, 2014

transferred. A copy of the transfer of responsibility must be filed with the executive director through Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

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

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

Sincerely,



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

CDR/btg

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

cc: Mr. David Urban, P.E., Baker-Aicklen & Associates, Inc..
Mr. Joe M. England, P.E., County Engineer, Williamson County
Mr. Sam Roberts, P.E., Director of Public Works, City of Cedar Park
TCEQ Central Records, Building F, MC 212

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



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 19, 2015

Mr. Jim Cotton
Partner
CWT & C, LTD
201 Barton Springs Rd.
Austin, Texas 78704

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: CWT & C Business Park; Located at 12332 FM 620 N; Cedar Park, Texas

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

Edwards Aquifer Protection Program ID No. 11-14111404; Investigation No. 1209551; Regulated Entity No. RN106926181

Dear Mr. Cotton:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Modification for the above-referenced project submitted to the Austin Regional Office by Catalyst Engineering Group on behalf of CWT & C, LTD on November 14, 2014. Final review of the WPAP Modification was completed after additional material was received on February 16, 17 and 18, 2014. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

CWT & C, LTD development includes the previously approved CWT & C Business Park WPAP and Sewage Collection System (SCS) plans: (EAPP ID No.: 11-13101102) and (EAPP ID No. 11-13101103); Bush's Chicken WPAP (EAPP ID No. 11-13101101), and the CWT & C Restaurant WPAP (EAPP ID No. 11-14090401).

The Bush's Chicken, and CWT & C Restaurant located at the southern most portion of the development receive water quality treatment via permanent Best Management Practices (BMPs) (vegetated filter strips and an extended detention pond) designed according to the Bush's Chicken WPAP approval.

The proposed project is within the area of the approved CWT & C Business Park at the northern most portion of the development, which consists of 11.172 acres with 8.94 acres (80%) impervious cover. The drainage basin to the BMPs (a sedimentation and filtration pond, and grassy swale) is 10.47 acres with 8.38 acres of impervious cover. Future construction within the CWT & C Business Park requires WPAP Modification application submittal for the individual projects.

PROJECT DESCRIPTION

The proposed Waterloo Swim Center is an indoor swimming athletic facility located within the CWT & C Business Park development. The proposed project is located along F.M. 620 one mile west of the 183A Toll Rd. and the 45 Toll Rd. intersection in the City of Cedar Park, Williamson County, Texas.

Construction of the proposed project is on a 3.01 acre site with 2.56 acres (85.05%) of impervious cover. The proposed impervious cover will consist of approximately 0.67 acres of structures/rooftops, 1.78 acres of parking, and 0.11 acres of other paved surfaces. Temporary Best Management Practices (BMP's) and a Stormwater Pollution Prevention Plan (SWP3) will be maintained to minimize sedimentation and erosion until construction is completed. The proposed project will receive permanent stormwater runoff treatment from the partial sedimentation and filtration pond designed according to the CWT & C Business Park WPAP approval. Wastewater treatment will be provided by the City of Cedar Park.

PERMANENT POLLUTION ABATEMENT MEASURES

The partial sedimentation and filtration pond was designed using the TCEQ Technical Guidance Manual (TGM) constructed to treat storm water runoff for the northern basin. The drainage basin to the partial sedimentation and filtration pond is 7.60 acres with 6.08 acres (80.0 %) impervious cover. The minimum required total suspended solids (TSS) treatment is 5,504 lbs. The minimum water quality volume is 41,311 cu. ft. with a minimum filter basin area is 3,443 sq. ft. The provided water quality volume is 41,516 cu. ft. with a filter basin area of 3,871 sq. ft.

The table below is a summary of impervious cover and TSS removal.

Proposed Use	Site Area (ac.)	Impervious Cover (ac.)	TSS Removal (lbs.)
Overall Drainage	7.60	6.08	5,504
Private Road	0.55	0.55	479
Waterloo Swim Center	3.01	2.56	2,228
Available Development	4.04	2.97	2,797

The required TSS removal for the Waterloo Swim Center, and the private road having a combined impervious cover of 3.11 acres is 2,707 lbs. The approved measures meet the required 80 percent removal of the increased TSS load caused by the proposed project. The final outfall

from the partial sedimentation and filtration pond is to the ditch along FM 620 N in the Brushy Creek watershed.

GEOLOGY

According to the geologic assessment included with the application, the superficial geologic unit present at the site is the lowermost part of the Edwards Formation (Ked) (80-95 ft. thick), composed of thin to medium bedded, dense, dolomite, dolomitic limestone, and limestone. The Edwards overlies the Comanche Peak Formation (Kep) (20 ft. thick), which is composed of fine-grained, nodular limestone, marly limestone, and marl. The Comanche Peak overlies the Walnut Formation (Kwa) (150 ft. thick), which is composed of several thinly bedded limestone and marl subunits.

The site is located entirely within the Edwards Aquifer recharge zone boundary. Recharge to the aquifer in this area is by infiltration and surface runoff into joints, faults and dissolution features, where there is land surface exposure. Groundwater is confined and perched on the Comanche Peak Formation, and the water is expected to flow toward the southeast. The site is about five miles northwest of the main part of the Balcones fault zone. The site is mantled by Eckrant and Georgetown soil (1-1.5 ft. thick), composed of a stony clay loam with a very slow infiltration rate.

During the geologic assessment, six potential recharge features were identified, which were determined to be closed depressions and not sensitive. Water wells were not observed on the site. Wells drilled near the site are mostly completed in the Upper and Middle Trinity aquifers that underlie the Walnut Formation. The TCEQ Austin Region Office conducted a site assessment on December 5, 2013, and it was determined that the site generally appeared as described in the geologic assessment.

SPECIAL CONDITIONS

- I. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.
- II. If water wells are found during construction, they shall be plugged following the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
- III. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

STANDARD CONDITIONS

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

3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

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

During Construction:

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

11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. No wells exist on the site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

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

Mr. Jim Cotton
Page 6
February 19, 2015

through Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

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

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

Sincerely,



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

CDR/btg

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

cc: Mr. Timothy J. Moltz, P.E., Catalyst Engineering Group
Mr. Sam Roberts, P.E., Director of Public Works, City of Cedar Park
The Honorable Dan A. Gattis, County Judge, Williamson County
TCEQ Central Records, Building F, MC 212

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



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 15, 2017

Mr. Jim Cotton
CWT&C, LTD.
201 Barton Springs Rd.
Austin, TX 78704

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Maxout; Located at 12332 FM 620, one mile west of the 183A and 45 Toll Rd. Intersection; Cedar Park, Texas

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

Edwards Aquifer Protection Program ID No. 11000883; Regulated Entity No. RN106926181

Dear Mr. Cotton:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Modification for the above-referenced project submitted to the Austin Regional Office by Mr. Patrick Towne of E3D, Inc. on behalf of CWT&C, LTD. on October 18, 2017. Final review of the WPAP was completed after additional material was received on December 11 and December 14, 2017. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

EAPP Permit No. 11-13101102 was approved on February 25, 2014 to provide Best Management Practices (BMP) for water quality for the entire property. A partial sedimentation/filtration basin was designed to treat approximately 6,015 lbs of TSS from approximately 6.08 acres of impervious cover. A grassy swale was designed to treat approximately 1,780 lbs of TSS from approximately 2.30 acres of impervious cover. The BMPs were certified on August 8, 2016.

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 3.96 acres. It will include one building and associated parking and drives. The impervious cover will be 2.91 acres (73.4 percent). Project wastewater will be disposed of by conveyance to the existing Cedar Park Wastewater Reclamation Plant owned by the City of Cedar Park.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, an existing vegetative swale, and a partial sedimentation/filtration basin, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 2,593 pounds of TSS generated from the 2.91 acres of impervious cover. The existing partial sedimentation/filtration basin was approved (EAPP No. 11-13101102) and designed to treat approximately 6,015 lbs of TSS from approximately 6.08 acres of impervious cover. The grassy swale was designed to treat approximately 1,780 lbs of TSS from approximately 2.30 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

GEOLOGY

According to the geologic assessment included with the application, no sensitive features were observed. The Austin Regional Office site assessment conducted on December 6, 2017 revealed the site to be as described in the Geologic Assessment.

SPECIAL CONDITIONS

- I. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letter dated February 25, 2014.
- II. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.
- III. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

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

Prior to Commencement of Construction:

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

During Construction:

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

12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
14. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
15. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
16. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

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

COPY

Mr. Cotton
Page 5
December 15, 2017

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

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

Sincerely,



Robert Sadlier, Water Section Team Leader
Austin Region Office
Texas Commission on Environmental Quality

RCS/kmv

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

cc: Mr Patrick Towne; E3D, Inc
908 E. 5th St., Suite 113; Austin, TX 78702

The Honorable Dan A. Gattis, Williamson County Judge
Mr. Sam Roberts, P.E., City of Cedar Park Assistant City Manager
Mr. Terron Evertson, P.E. Williamson County Engineer

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Stephanie Bergeron Perdue, *Interim Executive Director*



2-11

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 6, 2018

Mr. Tom Howells
TH Development, LLC
6902 Smokey Hill Road
Austin, TX 78736

Re: Edwards Aquifer, Williamson County
NAME OF PROJECT: Golfinity; 12332 FM 620 N; Cedar Park, Texas
TYPE OF PLAN: Request for Modification of an Approved Water Pollution Abatement Plan (WPAP-MOD); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program ID No. 11001116; RN106926181

Dear Mr. Howells:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP-MOD for the above-referenced project submitted to the Austin Regional Office by Noble Surveying & Engineering Works, L.L.C. on behalf of TH Development, LLC on May 16, 2018. Final review of the WPAP-MOD was completed after additional materials were received on June 29, and July 6, 2018. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The proposed project is within the area of the approved CWT & C Business Park (EAPP ID: 11-13101102) at the northernmost portion of the development, which consists of 11.72 acres with 8.94 acres (80% at full buildout) impervious cover. This project site is 1.60-acre site located on the north side of the cul-de-sac drive way.

PROJECT DESCRIPTION

The proposed modification is to add a 11,676 sf (0.27 ac) building for an indoor golf recreation and restaurant use, 28,848 sf (0.66 ac) of asphalt pavement for drive isles and parking spaces, and 4,214 sf of other paved surfaces (0.097 ac) for a total of 1.027 acres of impervious cover (64.32%) on a 1.6-acre site. Stormwater from this proposed impervious will convey to the existing partial sedimentation filtration system approved by letter dated February 25, 2014 (EAPP ID:11- 13101102). Since the BMP is in place, the project will have minimal impact on the Chandler Creek watershed. Wastewater treatment will be provided by the City of Cedar Park. Future construction within the CWT & C Business Park requires WPAP Modification application submittal for the individual projects.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, an existing partial sedimentation filtration system designed and constructed using the TCEQ technical guidance document, "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005)", will be used to treat stormwater runoff. The drainage basin to the partial sedimentation filtration pond is 7.60 acres with 4.87 acres of impervious cover. The required total suspended solids (TSS) treatment is 4,235 pounds of TSS generated from the 4.87 acres of impervious cover and 4,841 pounds of TSS removal is provided. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project. Treatment design calculations were sealed by Mr. F.P. Howland III, P.E. on May 14, 2018 to demonstrate that the proposed treatment load removal meets the TCEQ required treatment load removal.

GEOLOGY

According to the geologic assessment included with the application no sensitive features were identified at the site. The Austin Regional Office site assessment conducted on July 3, 2018 revealed the site to be as described in the Geologic Assessment.

STANDARD CONDITIONS

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

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed

Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

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

During Construction:

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

aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

13. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

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

Mr. Tom Howells

Page 5

July 6, 2018

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

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

Sincerely,



Robert Sadlier
Water Section Team Leader
Austin Region Office
Texas Commission on Environmental Quality

RCS/aki

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

cc: Mr. Sam Roberts, P.E. Assistant City Manager, City of Cedar Park
Mr. Terron Evertson, P.E., County Engineer, Williamson County

Attachment B: Narrative of Proposed Modification

Freehill RR 620 is located at 12332 RR 620, Unit #4, Cedar Park, Texas. Freehill RR 620 is to be constructed on Unit 4 of the Lakeline Ridge Condominiums (Doc. No. 2015036485), with a total site area of 3.96 acres. The property is currently undeveloped with a moderate amount of vegetation covering the site. The site is within the city limits of Cedar Park and the Recharge Zone of the Edwards Aquifer. Otherwise, there are no known critical environmental features within the site. This site is in the Buttercup Creek Watershed. No portion of the property is within the limits of the 100-year floodplain as shown on FIRM Panel No. 48491C0605F and 48491C0610F, dated December 20th, 2019. An Agent Authorization Form is required for Quiddity Engineering to submit the WPAP & SCS on behalf of FED CEDAR PARK LP. The scope of the proposed project consists of the construction of two industrial warehouses (~63,000 SF) along with associated water, wastewater, paving, drainage, and water quality/detention facilities.

The most recently approved WPAP Modification (EAPP ID No. 11001116) that contributed to the wet basin was approved on July 6, 2018, for Golfinity. The plan approved the construction of a 1.60-acre site which included the construction of a single-story building with associated parking, existing detention pond, and utility improvements. The entirety of the Golfinity site drains to the existing detention and water quality pond. This 1.60-acre portion of the overall approved 11.172-acre CWT & C Business Park (EAPP ID: 11-13101102) has an impervious cover of 1.03 acres (64.38%). This additional impervious cover increased the total impervious cover of the 7.60-acre water quality and detention pond to 4.87 acres (64.08%), still well below the originally calculated 80.00% limit.

The proposed modification to the previously approved WPAP is limited to the development of Unit 4 of the Lakeline Ridge Condominiums (Doc. No. 2015036485). Freehill RR 620 will consist of the construction of two (2) commercial buildings totaling 63,222 gross sqft with associated parking, grading, drainage, and utility improvements. Freehill RR 620 will continue to utilize the regional pond to satisfy water quality requirements. In the Golfinity TSS calculations, the impervious cover calculated by Golfinity assumed an overall drainage area leading to the pond that does not incorporate the entirety of the Freehill RR 620 site. Instead, only a portion of the Freehill RR 620 site was included in the pond calculations. This project will increase the area draining to the existing pond by 2.87 acres, to an overall drainage basin area of 10.47 acres. The additional impervious cover proposed by this site to the existing water quality and detention pond is 2.20 acres, which brings the overall impervious cover draining to the pond to 7.07 acres (67.55%).

The site to the south of the Freehill RR 620 (BC-00-01206-03M) has an existing water quality pond that outfalls onto the Freehill RR 620 site. These flows will be captured into the onsite storm drain system and directed into the existing water quality and detention pond to the northeast of the site. Since these flows have already been treated, the offsite impervious cover calculations used in the TSS calcs is 0 for the water quality requirements. The detention portion of the existing pond northeast of the site is able to contain the Atlas-14 100-year flows feeding into the pond without overtopping.

The offsite flows entering the site from the south and all of the runoff within the site will be captured and conveyed through a combination of sheet flow, grate inlets, roof drains, and landscape drains to an existing water quality and detention pond located on the northeastern portion of the site. The Freehill RR 620 site was originally designed to convey a portion of the flows via an existing grassy swale along the northern property line (EAPP ID No. 11-13101102). This grassy swale is no longer necessary to convey flows since all onsite flows will be routed to the existing water quality and detention pond. The onsite stormwater collection system will have three separate tie-ins to the existing pond's splitter box. This splitter box will be extended in order to fit the three additional inflow pipes.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

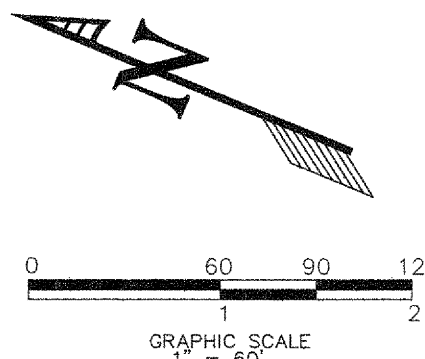
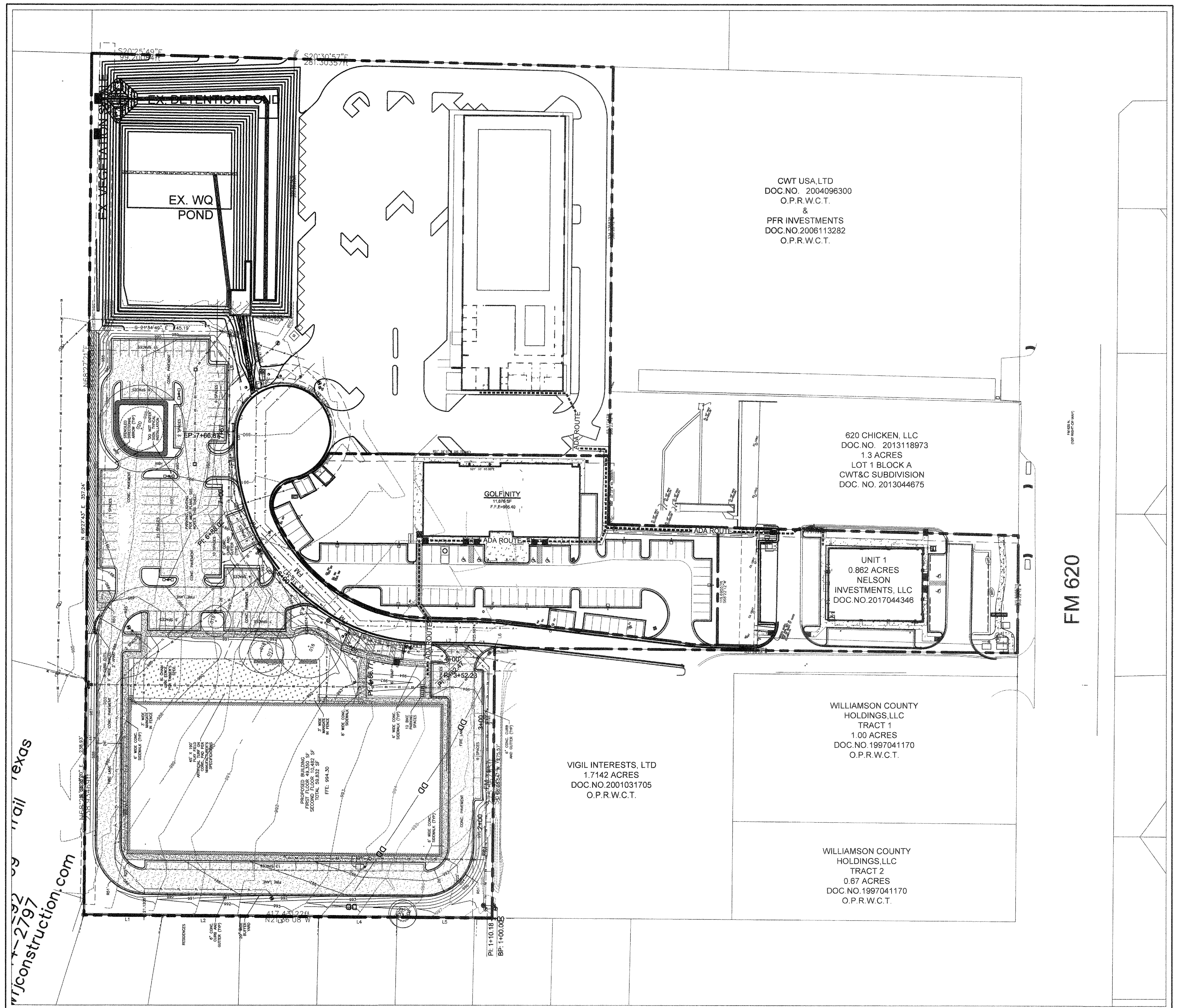
The impervious cover associated with the Freehill RR 620 project will be 2.93 acres. This additional impervious cover will result in a total impervious cover of 7.07 acres (74.7%) for the 10.47-acre wet pond drainage basin. In existing conditions, the water quality portion of the pond was surveyed on 05/20/2024 and was confirmed to have an overall volume of 47,442.3 cubic ft. After upsizing the splitter box in proposed conditions, the water quality portion of the pond decreases to 41,054.5 cubic ft, which is higher than the required 33,155 cubic ft from the overall TSS calculations. Since the water quality volume of the pond exceeds the required water quality volume of this development, and the detention portion of the pond can accept the additional volume of this development without overtopping, the existing water quality and detention pond is sized appropriately for the proposed modifications.

In addition to stormwater improvements, this site will utilize approximately 294 LF of 4" PVC gravity line that connects the two industrial warehouses to a proposed lift station. From this lift station, approximately 196 LF of 2-inch wastewater Force Main will be constructed on the west side of the site to an existing wastewater manhole (constructed in project SD-13-00032) located in the southwest corner of the site. This force main will eccentrically reduce to approximately 10 LF of 4" PVC gravity line prior to connecting to the existing manhole.

[illegible]

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment C: Current Site Plan of the Approved Project



EXISTING	PROPOSED	DESCRIPTION
		PROPERTY (R.O.W.) LINE
		CURB & GUTTER
		LIP OF GUTTER
		FIRELANE/TOW AWAY ZONE
		CONCRETE SIDEWALKS
		GRATE INLET
		CURB INLET (SIZE VARIES)
		TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		RETAINING WALL
		SITE LIGHTING
		ADA SIGN
		WHEEL STOP
		RAMP
		DUMPSTER
		BIKE RACK
		TREE TO BE SAVED
		STORMSEWER LINE
		WATER LINE
		WASTEWATER LINE
		TELECOMMUNICATIONS LINE
		UNDERGROUND ELECTRIC GAS LINE
		LIMITS OF CONSTRUCTION
		GAS METER
		GAS VALVE
		WATER VALVE
		WATER METER BOX
		WASTEWATER MANHOLE (SIZE VARIES)
		WASTEWATER CLEANOUT
		STORMSEWER MANHOLE (SIZE VARIES)
		ACCESSIBLE ROUTE
		POWER POLE
		LIGHT POLE

BENCHMARK:
MAG NAIL SET IN
TOP OF BACK OF CURB
EL=997.40

APPROVED
NOV 08 2018
PLANNING DEPT.
CITY OF CEDAR PARK

NOBLE
SURVEYING &
ENGINEERING
WORKS, L.L.C.
TBPE: F#9852
7614-A HWY 71 WEST
AUSTIN, TX 78735
(512) 535-1820
www.noble-tx.com

STATE OF TEXAS
F.P. HOWLAND III
90451
REGISTERED
PROFESSIONAL ENGINEER
10/22/2018

**OVERALL
SITE PLAN**

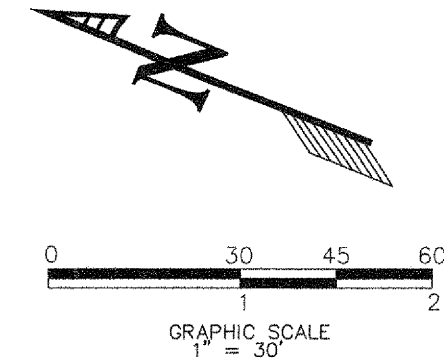
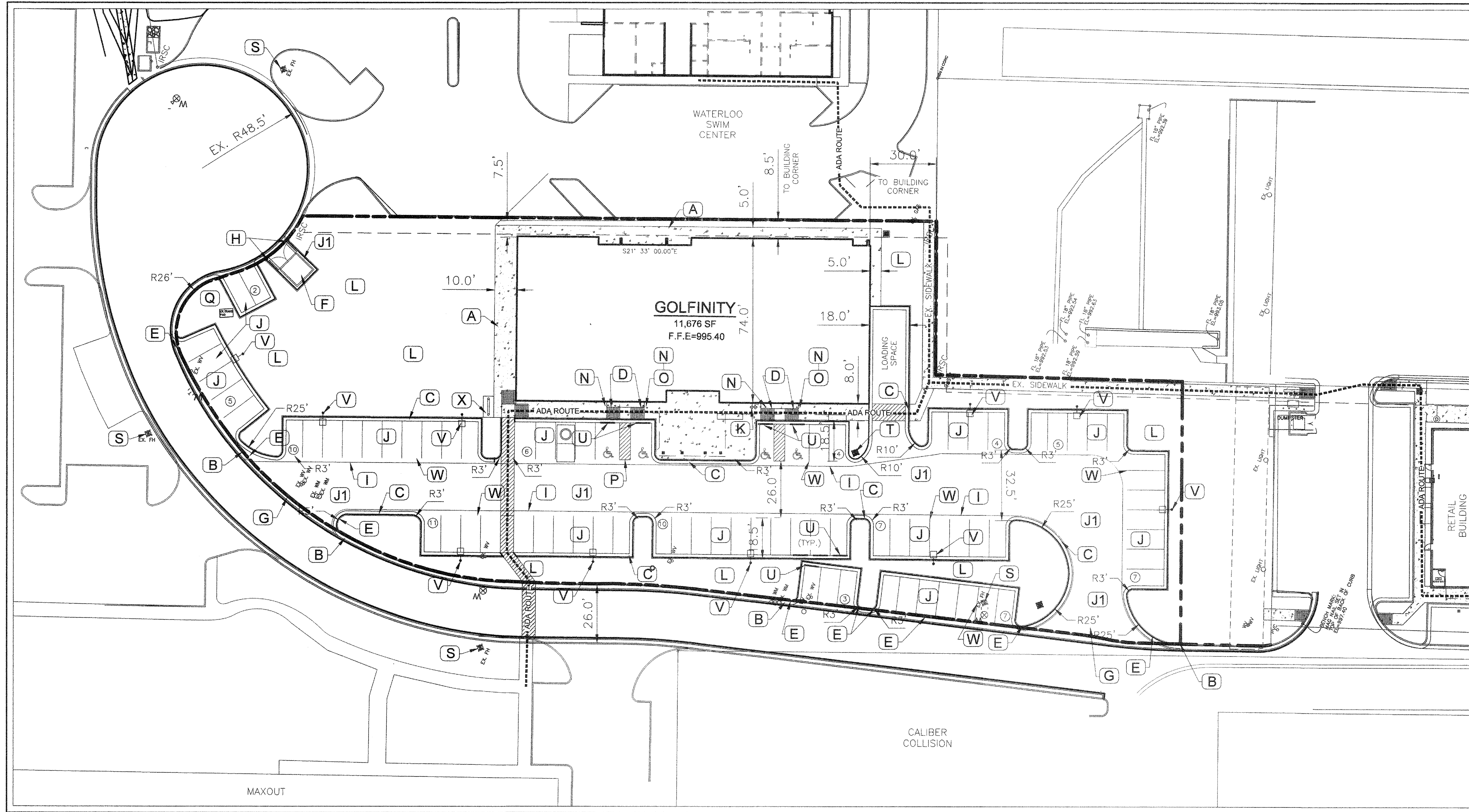
GOLFINITY
12332 FM 620 N
AUSTIN, TEXAS 78750

NO.	DESCRIPTION	DATE

Scale:
Design Team: **R.L./B.O.**
SHEET
5
OF **28**
NSEW Project No:
0316-0006
City Project No:
SD-18-00023
Date:
0000

SITE PLAN

GOLFINITY
12332 FM 620 N
AUSTIN, TEXAS 78750



EXISTING	PROPOSED	DESCRIPTION
---	---	PROPERTY (R.O.W.) LINE
---	---	CURB & GUTTER
---	---	LIP OF GUTTER
---	---	FIRELANE/TOW AWAY ZONE
---	---	CONCRETE SIDEWALKS
---	---	GRATE INLET
---	---	CURB INLET (SIZE VARIES)
---	---	TRANSFORMER (SIZE VARIES)
---	---	FIRE HYDRANT
---	---	RETAINING WALL
---	---	SITE LIGHTING
---	---	ADA SIGN
---	---	WHEEL STOP
---	---	RAMP
---	---	DUMPSTER
---	---	BIKE RACK
---	---	TREE TO BE SAVED
---	---	STORMSEWER LINE
---	---	WATER LINE
---	---	WASTEWATER LINE
---	---	TELECOMMUNICATIONS LINE
---	---	UNDERGROUND ELECTRIC
---	---	GAS LINE
---	---	LIMITS OF CONSTRUCTION
---	---	GAS METER
---	---	GAS VALVE
---	---	WATER VALVE
---	---	WATER METER BOX
---	---	WASTEWATER MANHOLE (SIZE VARIES)
---	---	WASTEWATER CLEANOUT
---	---	STORMSEWER MANHOLE (SIZE VARIES)
---	---	ACCESSIBLE ROUTE
---	---	POWER POLE
---	---	LIGHT POLE

BENCHMARK:

MAG NAIL SET IN
TOP OF BACK OF CURB
EL=597.40

SITE NOTE LEGEND:

- | | |
|--|---|
| (A) CONCRETE SIDEWALK VARIES. SEE DETAIL SHEET. | (M) OMIT |
| (B) EXISTING CONCRETE/ASPHALT PAVEMENT/CURB & GUTTER AND SIDEWALK TO REMAIN. | (N) ACCESSIBLE PARKING SIGN. SEE DETAIL SHEET. |
| (C) INTEGRAL CURB & GUTTER. SEE DETAIL SHEET. | (O) ACCESSIBLE VAN PARKING SIGN. SEE DETAIL SHEET. |
| (D) ACCESSIBLE RAMP. SEE DETAIL SHEET. | (P) ACCESSIBLE PAVEMENT STRIPING. SEE DETAIL SHEET. |
| (E) SAW CUT & REMOVE EXIST PAVEMENT &/OR CURB & GUTTER TIE NEW CONCRETE TO EXISTING PAVEMENT. BEGIN CURB AND GUTTER. | (Q) EXISTING TRANSFORMER PAD. |
| (F) DUMPSTER LOCATION. SEE DETAIL SHEET. | (R) OMIT |
| (G) DRIVEWAY | (S) EXISTING FIRE HYDRANT. |
| (H) PIPE BOLLARDS | (T) PROPOSED FIRE HYDRANT. |
| (I) FIRE LANE STRIPING. SEE DETAIL ON FIRE PROTECTION PLAN. | (U) WHEEL STOP. SEE DETAIL SHEET. |
| (J) 6" STANDARD DUTY CONCRETE PAVEMENT. SEE GRADING SHEET FOR PAVEMENT SECTIONS. | (V) PROPOSED SITE LIGHTING. SEE PHOTOMETRIC PLAN. |
| (J1) 7" HEAVY DUTY CONCRETE PAVEMENT AT DUMPSTER FIRE LANE AREAS. SEE GRADING SHEET FOR PAVEMENT SECTIONS. | (W) 4" WHITE PAVEMENT STRIPING. SEE DETAIL SHEET. |
| (K) FDC LOCATION | (X) BIKE RACK FOR 3 BIKES. SEE DETAIL SHEET. |
| (L) LANDSCAPE AREA | (Y) OMIT |
| | (Z) OMIT |

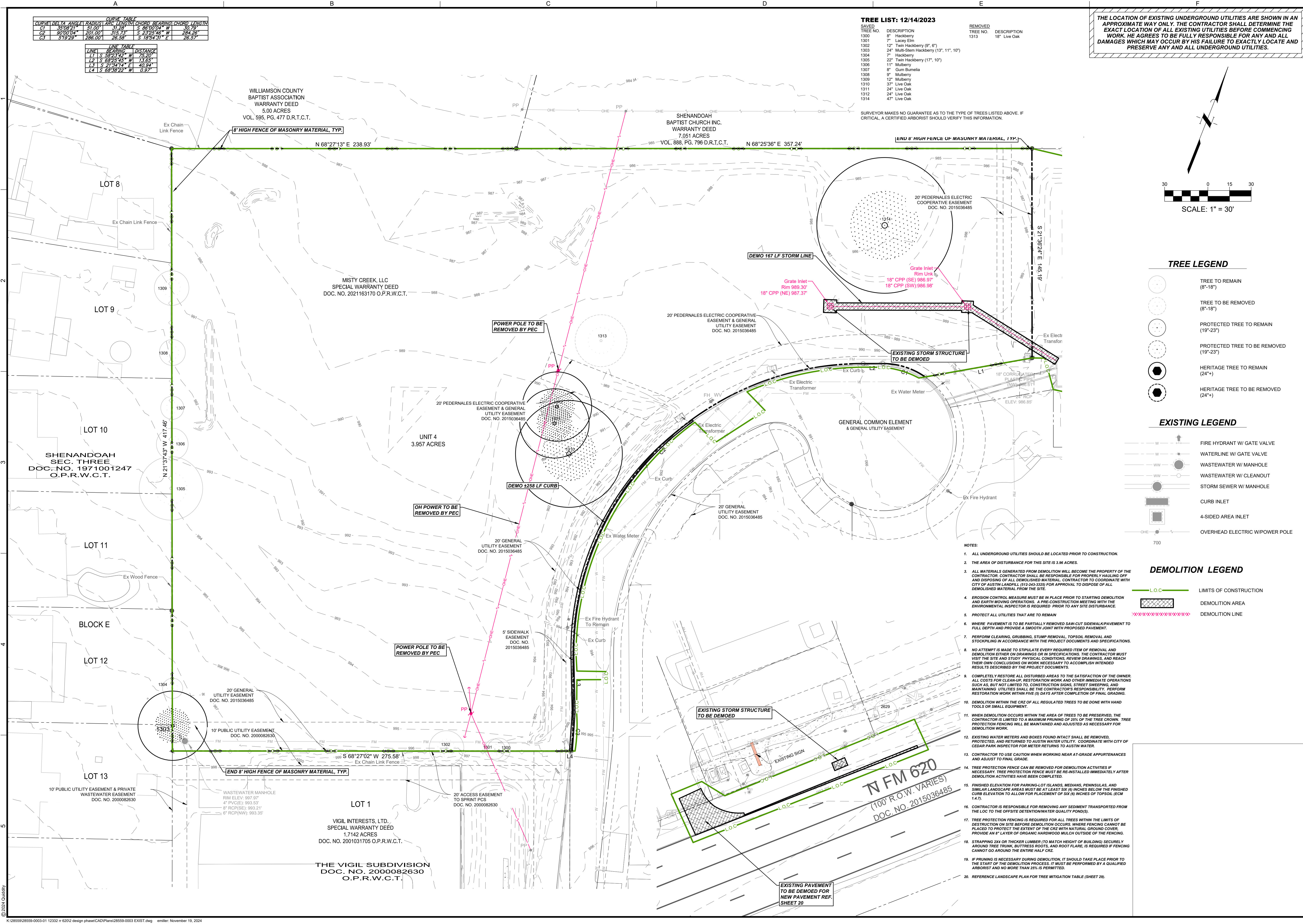
SITE NOTES:

- ALL DIMENSIONS ARE TO FACE OF CURB, CENTER OF STRIPE EXCEPT RADIUS.
- REFERENCE ARCHITECTURAL/MEP PLANS FOR SITE LIGHTING & ELECTRICAL PLAN.
- REFERENCE ARCHITECTURAL PLANS FOR ALL BUILDING APPURTENANCES, BUILDING DIMENSIONS, DOOR LOCATIONS, AND EXITS.
- "ELECTRIC PVC CONDUIT PIPE FOR FUTURE USE OF ELECTRICAL SHALL BE MARKED AND STUBBED UP TO 4" ABOVE FINISH GRADE AND CAPPED. ALL ELECTRICAL PVC SLEEVES SHALL HAVE PULL WIRES INSTALLED.
- IRRIGATION SLEEVES SHALL BE SET 14" BELOW GRADE AT PAVED DRIVEWAYS OR SIDEWALK AREAS.
- WATER SERVICE WILL BE PROVIDED BY CITY OF CEDAR PARK, TEXAS.
- WASTEWATER SERVICE WILL BE PROVIDED BY CITY OF CEDAR PARK, TEXAS.
- THE OWNER IS RESPONSIBLE FOR ALL COSTS FOR RELOCATION OF, OR DAMAGES TO UTILITIES.
- THE PROPOSED USE OF THIS SITE IS INDOOR COMMERCIAL AMUSEMENT.
- LIGHT SOURCES SHALL BE COMPLETELY CONCEALED WITHIN OPAQUE HOUSINGS AND SHALL NOT BE VISIBLE FROM ADJACENT STREETS OR PROPERTIES. ALL EXTERIOR LIGHTING FIXTURES SHALL BE FULL CUT-OFF TYPE FIXTURES. LIGHTING FIXTURES SHALL BE NO MORE THAN TWENTY-FIVE (25) FEET IN HEIGHT AS MEASURED FROM ADJACENT FINISHED GRADE. LIGHTING FIXTURES LOCATED WITHIN FIFTY (50) FEET OF ANY RESIDENTIAL USE SHALL NOT EXCEED (15) FEET IN HEIGHT.
- SIGN LOCATION BY SEPARATE PERMIT



Golfinity-Leander, Texas			
Existing Site Data Table			
Item	SF	AC	%
Total Site	64,606	1.483	100.00
Building Area	0	0.000	0.00
Pavement Area	0	0.000	0.00
Sidewalk Area	0	0.000	0.00
Total Impervious Cover	0	0.000	0.00
Allowable Imperv Cover	51684.8	1.187	80.00
Landscape Area	64,606	1.483	100.00
Proposed Site Data Table			
Item	SF	AC	%
Total Site	64,606	1.483	100.00
Building Area	11,676	0.268	18.07
Pavement Area	27,807	0.638	43.04
Sidewalk Area	5,163	0.119	7.99
Total Impervious Cover	44,646	1.025	69.11
Allowable Imperv Cover	51684.8	1.187	80.00
Landscape Area	19,960	0.458	30.89

Proposed Parking Summary					
Land Use	Building Area	Parking Ratio	# Of Golf Greens	Parking Req'd	ADA Req'd/Prop
Indoor Com Amusement	10,426	4 per green	17	68	3/3
Restaurant	1,250	1 per 100 sf	-	13	1/1
Total	11,676		17	81	3/4



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

TREE LIST: 12/14/2023		
SAVED		REMOVED
TREE NO.	DESCRIPTION	TREE NO.
1300	8" Hackberry	1313
1301	7" Lacey Elm	
1302	12" Twin Hackberry (9", 6")	
1303	24" Multi-Stem Hackberry (13", 11", 10")	
1304	7" Hackberry	
1305	22" Twin Hackberry (17", 10")	
1306	11" Mulberry	
1307	8" Gum Bumelia	
1308	9" Mulberry	
1309	12" Mulberry	
1310	37" Live Oak	
1311	24" Live Oak	
1312	24" Live Oak	
1314	47" Live Oak	

SURVEYOR MAKES NO GUARANTEE AS TO THE TYPE OF TREES LISTED. CRITICAL, A CERTIFIED ARBORIST SHOULD VERIFY THIS INFORMATION.

TREE LEGEND

- TREE TO REMAIN (8"-18")
- TREE TO BE REMOVED (8"-18")
- PROTECTED TREE TO REMAIN (19"-23")
- PROTECTED TREE TO BE REMOVED (19"-23")
- HERITAGE TREE TO REMAIN (24"+)
- HERITAGE TREE TO BE REMOVED (24"+)

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC WIPOWER POLE

DEMOLITION LEGEND

- LO.C LIMITS OF CONSTRUCTION
- DEMOLITION AREA
- DEMOLITION LINE

- NOTES:
- ALL UNDERGROUND UTILITIES SHOULD BE LOCATED PRIOR TO CONSTRUCTION.
 - THE AREA OF DISTURBANCE FOR THIS SITE IS 3.86 ACRES.
 - ALL MATERIALS GENERATED FROM DEMOLITION WILL BECOME THE PROPERTY OF THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY HAULING OFF AND DISPOSING OF ALL DEMOLISHED MATERIAL. CONTRACTOR TO COORDINATE WITH CITY OF AUSTIN LANDFILL (817-243-3333) FOR APPROVAL TO DISPOSE OF ALL DEMOLISHED MATERIAL FROM THE SITE.
 - EROSION CONTROL MEASURE MUST BE IN PLACE PRIOR TO STARTING DEMOLITION AND EARTH MOVING OPERATIONS. A PRE-CONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
 - PROTECT ALL UTILITIES THAT ARE TO REMAIN
 - WHERE PAVEMENT IS TO BE PARTIALLY REMOVED SAW-CUT SIDEWALK/PAVEMENT TO FULL DEPTH AND PROVIDE A SMOOTH JOINT WITH PROPOSED PAVEMENT.
 - PERFORM CLEANING, GRUBBING, STUMP REMOVAL, TOPSOIL REMOVAL AND STOCKPILING IN ACCORDANCE WITH THE PROJECT DOCUMENTS AND SPECIFICATIONS.
 - NO ATTEMPT IS MADE TO STIPULATE EVERY REQUIRED ITEM OF REMOVAL AND DEMOLITION EITHER ON DRAWINGS OR IN SPECIFICATIONS. THE CONTRACTOR MUST VISIT THE SITE AND STUDY PHYSICAL CONDITIONS, REVIEW DRAWINGS, AND REACH THEIR OWN CONCLUSIONS ON WORK NECESSARY TO ACCOMPLISH INTENDED RESULTS DESCRIBED BY THE PROJECT DOCUMENTS.
 - COMPLETELY RESTORE ALL DISTURBED AREAS TO THE SATISFACTION OF THE OWNER. ALL COSTS FOR CLEAN-UP, RESTORATION WORK AND OTHER IMMEDIATE OPERATIONS SUCH AS, BUT NOT LIMITED TO, CONSTRUCTION SIGNS, STREET SWEEPING, AND MAINTAINING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. PERFORM RESTORATION WORK WITHIN FIVE (5) DAYS AFTER COMPLETION OF FINAL GRADING.
 - DEMOLITION WITHIN THE CRZ OF ALL REGULATED TREES TO BE DONE WITH HAND TOOLS OR SMALL EQUIPMENT.
 - WHEN DEMOLITION OCCURS WITHIN THE AREA OF TREES TO BE PRESERVED, THE CONTRACTOR IS LIMITED TO A MAXIMUM PRUNING OF 25% OF THE TREE CROWN. TREE PROTECTION FENCING WILL BE MAINTAINED AND ADJUSTED AS NECESSARY FOR DEMOLITION WORK.
 - EXISTING WATER METERS AND BOXES FOUND INTACT SHALL BE REMOVED, PROTECTED, AND RETURNED TO AUSTIN WATER UTILITY. COORDINATE WITH CITY OF CEDAR PARK INSPECTOR FOR METER RETURNS TO AUSTIN WATER.
 - CONTRACTOR TO USE CAUTION WHEN WORKING NEAR AT-GRADE APPURTENANCES AND ADJUST TO FINAL GRADE.
 - TREE PROTECTION FENCING IS REQUIRED FOR ALL TREES WITHIN THE LIMITS OF DEMOLITION ON SITE BEFORE DEMOLITION OCCURS. WHERE FENCING CANNOT BE PLACED TO PROTECT THE EXTENT OF THE CRZ WITH NATURAL GROUND COVER, PROVIDE AN 8" LAYER OF ORGANIC HARDWOOD MULCH OUTSIDE OF THE FENCING.
 - FINISHED ELEVATION FOR PARKING-LOT ISLANDS, MEDIANS, PENINSULAS, AND SIMILAR LANDSCAPE AREAS MUST BE AT LEAST SIX (6) INCHES BELOW THE FINISHED CURB ELEVATION TO ALLOW FOR PLACEMENT OF SIX (6) INCHES OF TOPSOIL (EOM 1.4.7).
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION/WATER QUALITY POND(S).
 - TREE PROTECTION FENCING IS REQUIRED FOR ALL TREES WITHIN THE LIMITS OF DEMOLITION ON SITE BEFORE DEMOLITION OCCURS. WHERE FENCING CANNOT BE PLACED TO PROTECT THE EXTENT OF THE CRZ WITH NATURAL GROUND COVER, PROVIDE AN 8" LAYER OF ORGANIC HARDWOOD MULCH OUTSIDE OF THE FENCING.
 - STRAPPING 2X4 OR THICKER LUMBER (TO MATCH HEIGHT OF BUILDING SECURELY AROUND TREE TRUNK, BUTTRESS ROOTS, AND ROOT FLARE, IS REQUIRED IF FENCING CANNOT GO AROUND THE ENTIRE HALF CRZ.
 - IF PRUNING IS NECESSARY DURING DEMOLITION, IT SHOULD TAKE PLACE PRIOR TO THE START OF THE DEMOLITION PROCESS. IT MUST BE PERFORMED BY A QUALIFIED ARBORIST AND NO MORE THAN 25% IS PERMITTED.
 - REFERENCE LANDSCAPE PLAN FOR TREE MITIGATION TABLE (SHEET 20).

App: _____

REVISIONS

No. _____ Date _____

QUIDDITY

3105 North Corporate Boulevard, Suite 100 Austin, Texas 78741 • 512.471.5955

DESIGNED BY: EOM
CHECKED BY: BJC
DRAWN BY: CM

SCALE: AS SHOWN
DATE: ISS - NOV 2024
JOB NO.: 2859-0003-01

STATE OF TEXAS
BRAD J. CARABAJAL
140180
LICENSED PROFESSIONAL ENGINEER

11/19/2024

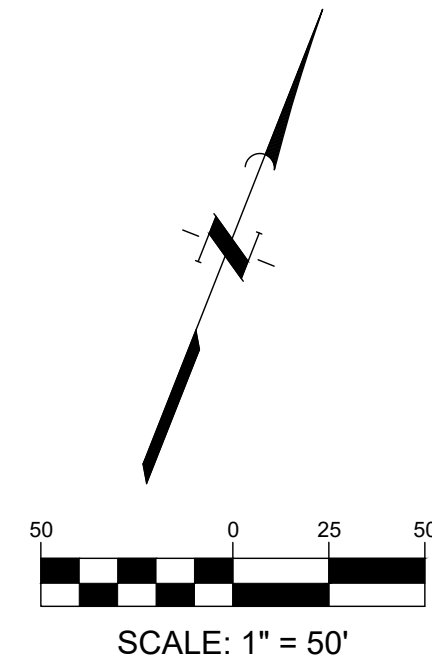
FREEHILL DEVELOPMENT COMPANY
FREEHILL RR 620
12332 RR 620, UNIT #4

EXISTING CONDITIONS
& DEMO PLAN

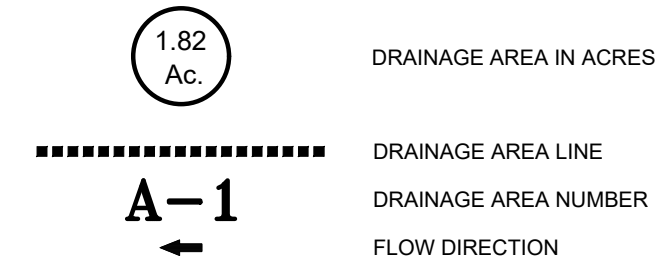
SHEET NO. 5

OF 36

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



DAMAP LEGEND



NOTE

1. See Sheet 24 for existing pond calculations, Per DCM 1.2.2H, the peak water surface elevation of the existing pond generated from the 100-year Atlas 14 flows does not overtop the top of berm.
2. Per DCM 1.2.2.H, the development will not be required to match peak flow rates to pre-development conditions using the current rainfall criteria as long as the peak water surface of the pond does not overtop the top of berm.

Offsite Flows	
Storm Event	Peak Flow (cfs)
2-YR	3.5
10-YR	6.7
25-YR	9.0
100-YR	12.9

Proposed Hydrology								
	Area (Acres)	CN	%Impervious	Lag Time (Min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
OFFSITE	1.37	80.00	0	8.05	3.5	6.7	9.0	12.9

Tc (Pre Development)

Note
*Minimum Time of Concentration is 5 min per Austin Design Manual.

DA	IC %	Area (ac.)	L (ft)	n	Slope (ft/ft)	P	Lsheet	Lsc	Tsheet	Tsc	Tc
E1	80.20	2.27	686	0.040	0.012	3.96	100.00	586.06	3.73	4.33	8.06
E2	0.00	2.86	549	0.150	0.023	3.96	100.00	449.23	8.28	2.41	10.70
E3	79.90	5.33	345	0.041	0.013	3.96	100.00	245.46	3.72	1.80	5.52
OFF	80.30	1.37	287	0.040	0.003	3.96	100.00	187.20	6.57	2.82	9.39

Organized Sewage Collection System Application

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(c), 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.

Regulated Entity Name: Freehill RR 620

1. ☒ **Attachment A – SCS Engineering Design Report.** This Engineering Design Report is provided to fulfill the requirements of 30 TAC Chapter 217, including 217.10 of Subchapter A, §§217.51 – 217.70 of Subchapter C, and Subchapter D as applicable, and is required to be submitted with this SCS Application Form.

Customer Information

2. The entity and contact person responsible for providing the required engineering certification of testing for this sewage collection system upon completion (including private service connections) and every five years thereafter to the appropriate TCEQ region office pursuant to 30 TAC §213.5(c) is:

Contact Person: Brad J. Carabajal, P.E.

Entity: Quiddity Engineering, LLC

Mailing Address: 912 S. Capital of Texas Highway, Suite 300

City, State: Austin, Texas

Zip: 78746

Telephone: (512) 685-5117

Fax:

Email Address: bcarabajal@quiddity.com

The appropriate regional office must be informed of any changes in this information within 30 days of the change.

3. The engineer responsible for the design of this sewage collection system is:

Contact Person: Brad J. Carabajal, P.E.

Texas Licensed Professional Engineer's Number: 140180

Entity: Quiddity Engineering, LLC

Mailing Address: 912 S. Capital of Texas Highway, Suite 300

City, State: Austin, Texas

Zip: 78746

Telephone: (512) 685-5117

Fax:

Email Address: bcarabajal@quiddity.com

Project Information

4. Anticipated type of development to be served (estimated future population to be served, plus adequate allowance for institutional and commercial flows):

- ☐ Residential: Number of single-family lots: _____
☐ Multi-family: Number of residential units: _____
☐ Commercial
☒ Industrial
☐ Off-site system (not associated with any development)
☐ Other: _____

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

_____ % Domestic _____ gallons/day
100 % Industrial 14 gallons/day
_____ % Commingled _____ gallons/day
Total gallons/day: 14

6. Existing and anticipated infiltration/inflow is 2,970 gallons/day. This will be addressed by: specifying pipe that meets all TCEQ & City specifications and ensuring all new construction passes the required testing.

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

- ☐ The WPAP application for this development was approved by letter dated _____. A copy of the approval letter is attached.
☒ The WPAP application for this development was submitted to the TCEQ on 10/30/2024, but has not been approved.
☐ A WPAP application is required for an associated project, but it has not been submitted.
☐ There is no associated project requiring a WPAP application.

8. Pipe description:

Table 1 - Pipe Description

Pipe Diameter(Inches)	Linear Feet (1)	Pipe Material (2)	Specifications (3)
4"	294 LF	PVC (SDR-26)	ASTM D3034
4"	20 LF	150 PSI Pressure Class PVC SDR-26	ASTM D2241
2"	196 LF	150 PSI Pressure Class PVC SDR-26	ASTM D2241

Total Linear Feet: 510 LF

- (1) Linear feet - Include stub-outs and double service connections. Do not include private service laterals.
(2) Pipe Material - If PVC, state SDR value.
(3) Specifications - ASTM / ANSI / AWWA specification and class numbers should be included.

9. The sewage collection system will convey the wastewater to the Cedar Park (name) Treatment Plant. The treatment facility is:

- ☒ Existing
☐ Proposed

10. All components of this sewage collection system will comply with:

- ☒ The City of Cedar Park standard specifications.
☐ Other. Specifications are attached.

11. ☐ No force main(s) and/or lift station(s) are associated with this sewage collection system.
☒ A force main(s) and/or lift station(s) is associated with this sewage collection system and the **Lift Station/Force Main System Application** form (TCEQ-0624) is included with this application.

Alignment

12. ☒ There are no deviations from uniform grade in this sewage collection system without manholes and with open cut construction.
13. ☒ There are no deviations from straight alignment in this sewage collection system without manholes.
- ☐ **Attachment B - Justification and Calculations for Deviation in Straight Alignment without Manholes.** A justification for deviations from straight alignment in this sewage collection system without manholes with documentation from pipe manufacturer allowing pipe curvature is attached.
- ☐ For curved sewer lines, all curved sewer line notes (TCEQ-0596) are included on the construction plans for the wastewater collection system.

Manholes and Cleanouts

14. ☒ Manholes or clean-outs exist at the end of each sewer line(s). These locations are listed below: (Please attach additional sheet if necessary)

Table 2 - Manholes and Cleanouts

<i>Line</i>	<i>Shown on Sheet</i>	<i>Station</i>	<i>Manhole or Clean-out?</i>
WW Gravity 1	17 Of 36	1+24.54	Manhole
WW Gravity 1	17 Of 36	1+84.17	Inspection Portal
WW Gravity 1	17 Of 36	1+88.64	Cleanout
WW Gravity 2	17 Of 36	2+48.99	Inspection Portal
WW Gravity 2	17 Of 36	2+53.79	Cleanout
	Of		
	Of		

<i>Line</i>	<i>Shown on Sheet</i>	<i>Station</i>	<i>Manhole or Clean-out?</i>
	Of		
	Of		
	Of		

15. ☒ Manholes are installed at all Points of Curvature and Points of Termination of a sewer line.
16. ☒ The maximum spacing between manholes on this project for each pipe diameter is no greater than:

Pipe Diameter (inches)	Max. Manhole Spacing (feet)
6 - 15	500
16 - 30	800
36 - 48	1000
≥54	2000

- ☐ **Attachment C – Justification for Variance from Maximum Manhole Spacing.** The maximum spacing between manholes on this project (for each pipe diameter used) is greater than listed in the table above. A justification for any variance from the maximum spacing is attached, and must include a letter from the entity which will operate and maintain the system stating that it has the capability to maintain lines with manhole spacing greater than the allowed spacing.
17. ☐ All manholes will be monolithic, cast-in-place concrete.
- ☒ The use of pre-cast manholes is requested for this project. The manufacturer's specifications and construction drawings, showing the method of sealing the joints, are attached.

Site Plan Requirements

Items 18 - 25 must be included on the Site Plan.

18. ☒ The Site Plan must have a minimum scale of 1" = 400'.
- Site Plan Scale: 1" = 30'.
19. ☒ The Site Plan must include the sewage collection system general layout, including manholes with station numbers, and sewer pipe stub outs (if any). Site plan must be overlain by topographic contour lines, using a contour interval of not greater than ten feet and showing the area within both the five-year floodplain and the 100-year floodplain of any drainage way.
20. Lateral stub-outs:
- ☒ The location of all lateral stub-outs are shown and labeled.
- ☐ No lateral stub-outs will be installed during the construction of this sewer collection system.

21. Location of existing and proposed water lines:

- ☒ The entire water distribution system for this project is shown and labeled.
- ☐ If not shown on the Site Plan, a Utility Plan is provided showing the entire water and sewer systems.
- ☐ There will be no water lines associated with this project.

22. 100-year floodplain:

- ☒ After construction is complete, no part of this project will be in or cross a 100-year floodplain, either naturally occurring or manmade. (Do not include streets or concrete-lined channels constructed above of sewer lines.)
- ☐ After construction is complete, all sections located within the 100-year floodplain will have water-tight manholes. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 3 - 100-Year Floodplain

<i>Line</i>	<i>Sheet</i>	<i>Station</i>
	of	to
	of	to
	of	to
	of	to

23. 5-year floodplain:

- ☒ After construction is complete, no part of this project will be in or cross a 5-year floodplain, either naturally occurring or man-made. (Do not include streets or concrete-lined channels constructed above sewer lines.)
- ☐ After construction is complete, all sections located within the 5-year floodplain will be encased in concrete or capped with concrete. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 4 - 5-Year Floodplain

<i>Line</i>	<i>Sheet</i>	<i>Station</i>
	of	to
	of	to
	of	to
	of	to

24. ☒ Legal boundaries of the site are shown.

25. ☒ The ***final plans and technical specifications*** are submitted for the TCEQ's review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.

Items 26 - 33 must be included on the Plan and Profile sheets.

26. ☐ All existing or proposed water line crossings and any parallel water lines within 9 feet of sewer lines are listed in the table below. These lines must have the type of pressure rated pipe to be installed shown on the plan and profile sheets. Any request for a variance from the required pressure rated piping at crossings must include a variance approval from 30 TAC Chapter 290.

☒ There will be no water line crossings.

☒ There will be no water lines within 9 feet of proposed sewer lines.

Table 5 - Water Line Crossings

<i>Line</i>	<i>Station or Closest Point</i>	<i>Crossing or Parallel</i>	<i>Horizontal Separation Distance</i>	<i>Vertical Separation Distance</i>

27. Vented Manholes:

☒ **No part** of this sewer line is within the 100-year floodplain and vented manholes are not required by 30 TAC Chapter 217.

☐ **A portion** of this sewer line is within the 100-year floodplain and vented manholes will be provided at less than 1500 foot intervals. These water-tight manholes are listed in the table below and labeled on the appropriate profile sheets.

☐ **A portion** of this sewer line is within the 100-year floodplain and an alternative means of venting shall be provided at less than 1500 feet intervals. A description of the alternative means is described on the following page.

☐ **A portion** of this sewer line is within the 100-year floodplain; however, there is no interval longer than 1500 feet located within. No vented manholes will be used.

Table 6 - Vented Manholes

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

28. Drop manholes:

- ☐ There are no drop manholes associated with this project.
- ☒ Sewer lines which enter new or existing manholes or "manhole structures" higher than 24 inches above the manhole invert are listed in the table below and labeled on the appropriate profile sheets. These lines meet the requirements of 30 TAC §217.55(l)(2)(H).

Table 7 - Drop Manholes

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>
WW Gravity 1	1	1+24.54	17 of 36

29. Sewer line stub-outs (For proposed extensions):

- ☐ The placement and markings of all sewer line stub-outs are shown and labeled.
- ☒ No sewer line stub-outs are to be installed during the construction of this sewage collection system.

30. Lateral stub-outs (For proposed private service connections):

- ☒ The placement and markings of all lateral stub-outs are shown and labeled.
- ☐ No lateral stub-outs are to be installed during the construction of this sewage collection system.

31. Minimum flow velocity (From Appendix A)

- ☒ Assuming pipes are flowing full; all slopes are designed to produce flows equal to or greater than 2.0 feet per second for this system/line.

32. Maximum flow velocity/slopes (From Appendix A)

- ☒ Assuming pipes are flowing full, all slopes are designed to produce maximum flows of less than or equal to 10 feet per second for this system/line.
- ☐ **Attachment D – Calculations for Slopes for Flows Greater Than 10.0 Feet per Second.** Assuming pipes are flowing full, some slopes produce flows which are greater than 10 feet per second. These locations are listed in the table below. Calculations are attached.

Table 8 - Flows Greater Than 10 Feet per Second

<i>Line</i>	<i>Profile Sheet</i>	<i>Station to Station</i>	<i>FPS</i>	<i>% Slope</i>	<i>Erosion/Shock Protection</i>
N/A					

33. Assuming pipes are flowing full, where flows are ≥ 10 feet per second, the provisions noted below have been made to protect against pipe displacement by erosion and/or shock under 30 TAC §217.53(l)(2)(B).

- ☐ Concrete encasement shown on appropriate Plan and Profile sheets for the locations listed in the table above.
- ☐ Steel-reinforced, anchored concrete baffles/retards placed every 50 feet shown on appropriate Plan and Profile sheets for the locations listed in the table above.
- ☒ N/A

Administrative Information

34. ☒ The final plans and technical specifications are submitted for TCEQ review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.
35. ☒ Standard details are shown on the detail sheets, which are dated, signed, and sealed by the Texas Licensed Professional Engineer, as listed in the table below:

Table 9 - Standard Details

<i>Standard Details</i>	<i>Shown on Sheet</i>
Lateral stub-out marking [Required]	28 of 36
Manhole, showing inverts comply with 30 TAC §217.55(l)(2) [Required]	28 of 36
Alternate method of joining lateral to existing SCS line for potential future connections [Required]	N/A of
Typical trench cross-sections [Required]	28 of 36
Bolted manholes [Required]	25 of 36
Sewer Service lateral standard details [Required]	26 of 36
Clean-out at end of line [Required, if used]	N/A of
Baffles or concrete encasement for shock/erosion protection [Required, if flow velocity of any section of pipe >10 fps]	N/A of
Detail showing Wastewater Line/Water Line Crossing [Required, if crossings are proposed]	N/A of
Mandrel detail or specifications showing compliance with 30 TAC §217.57(b) and (c) [Required, if Flexible Pipe is used]	N/A of

Standard Details	Shown on Sheet
Drop manholes [Required, if a pipe entering a manhole is more than 24 inches above manhole invert]	N/A of

36. ☒ All organized sewage collection system general construction notes (TCEQ-0596) are included on the construction plans for this sewage collection system.
37. ☒ All proposed sewer lines will be sufficiently surveyed/staked to allow an assessment prior to TCEQ executive director approval. If the alignments of the proposed sewer lines are not walkable on that date, the application will be deemed incomplete and returned.
- ☐ Survey staking was completed on this date: _____
38. ☒ 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.
39. ☒ Any modification of this SCS application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

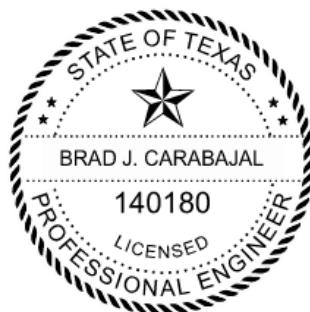
Signature

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 **Organized Sewage Collection System Application** is hereby submitted for TCEQ review and executive director approval. The system was designed in accordance with the requirements of 30 TAC §213.5(c) and 30 TAC §217 and prepared by:

Print Name of Licensed Professional Engineer: Brad J. Carabajal, P.E.

Date: 11/22/2024

Place engineer's seal here:



Signature of Licensed Professional Engineer:

A handwritten signature in black ink, appearing to read "Brad J. Carabajal".

Appendix A-Flow Velocity Table

Flow Velocity (Flowing Full) All gravity sewer lines on the Edwards Aquifer Recharge Zone shall be designed and constructed with hydraulic slopes sufficient to give a velocity when flowing full of not less than 2.0 feet per second, and not greater than 10 feet per second. The grades shown in the following table are based on Manning's formula and an n factor of 0.013 and shall be the minimum and maximum acceptable slopes unless provisions are made otherwise.

Table 10 - Slope Velocity

<i>Pipe Diameter(Inches)</i>	<i>% Slope required for minimum flow velocity of 2.0 fps</i>	<i>% Slope which produces flow velocity of 10.0 fps</i>
6	0.50	12.35
8	0.33	8.40
10	0.25	6.23
12	0.20	4.88
15	0.15	3.62
18	0.11	2.83
21	0.09	2.30
24	0.08	1.93
27	0.06	1.65
30	0.055	1.43
33	0.05	1.26
36	0.045	1.12
39	0.04	1.01
>39	*	*

**For lines larger than 39 inches in diameter, the slope may be determined by Manning's formula (as shown below) to maintain a minimum velocity greater than 2.0 feet per second when flowing full and a maximum velocity less than 10 feet per second when flowing full.*

$$v = \frac{1.49}{n} \times R_h^{0.67} \times \sqrt{S}$$

Figure 1 - Manning's Formula

Where:

v = velocity (ft/sec)
 n = Manning's roughness coefficient (0.013)
 R_h = hydraulic radius (ft)
 S = slope (ft/ft)

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment A: SCS Engineering Design Report

SUMMARY DESIGN REPORT
FOR
FREEHILL RANCH ROAD 620 DEVELOPMENT LIFT STATION
FOR
FREEHILL DEVELOPMENT COMPANY
IN
CITY OF CEDAR PARK, TEXAS

NOVEMBER 2024
Quiddity Job No. 28559-0003-01

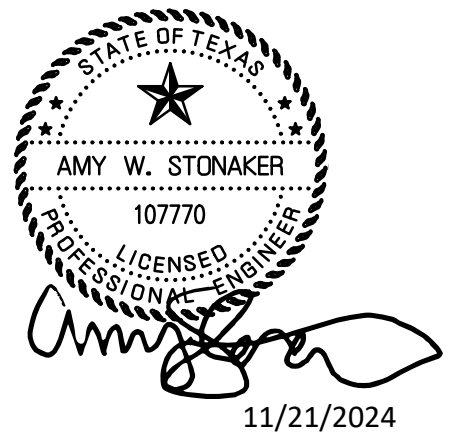


TABLE OF CONTENTS

I.	SCOPE	3
II.	DESCRIPTION OF SURROUNDING LAND AREA.....	3
III.	FLOODPLAIN COMPLIANCE.....	3
IV.	DESIGN PARAMETERS.....	3
A.	Design Flow	3
B.	Wet Well Analysis.....	4
C.	Pump Static Head	5
D.	Piping Analysis.....	6
E.	Pump Operation Conditions	7
F.	Pumps.....	7
G.	Wet Well Ventilation Calculations.....	7
H.	Force Main Surge Calculations	8
I.	Emergency Provisions.....	9
V.	EXHIBITS	
A.	Utility Plan with Service Area	
B.	Floodplain Map	
C.	System Curves with Proposed Pumps	
D.	Proposed Pump Selection	
E.	Safety Considerations	

I. SCOPE

The following is a design report for the Freehill Ranch Road (RR) 620 Development Lift Station to serve the Freehill RR 620 Development. The proposed facility is in the City of Cedar Park, and Williamson County, Texas. The project includes the construction of a submersible pump lift station to serve two (2) industrial/light commercial buildings.

The lift station will pump through approximately two hundred eleven linear feet (211') of one and a half-inch (1.5") diameter PVC force main and discharge into the City of Cedar Park existing gravity sanitary sewer system. The sanitary sewer system flows to the City of Cedar Park Water Reclamation Facility which is permitted to discharge treated wastewater under Texas Pollutant Discharge Elimination System Permit No. WQ0012308001.

The project includes a four-foot (4') diameter fiberglass or pre-cast wet well complete with two (2) submersible pumps and one and a half-inch (1.5") diameter riser piping and valves, coatings, one and a half-inch (1.5") diameter force main, six-inch (6") diameter influent sanitary sewer piping, one (1) 25 kW diesel generator, generator concrete foundation, automatic transfer switch, lift station control panel and automatic telephone dialer. The electrical for the lift station will include a local control panel be wired to the main electrical room within the building

II. DESCRIPTION OF SURROUNDING LAND AREA

Farm-to-Market Road 620 is to the south of site with the surrounding land commercial to the south and residential to the west and east. The tract to the north of the site includes a private school and church.

III. FLOODPLAIN COMPLIANCE

The site is located outside of any jurisdictional floodplain, as depicted by the Flood Insurance Rate Map Number 48491C0605F dated December 20, 2019. All existing and proposed structures are protected from or located outside of the FEMA 1% Annual Chance Flood Plain.

IV. DESIGN PARAMETERS

Unless otherwise noted, the design of this facility conforms to the current Texas Commission on Environmental Quality design criteria promulgated under 30 TAC Chapter 217- *Design Criteria for Domestic Wastewater*.

A. Design Flow

21 ESFCs @ 350 gpd/connection:	=	7,350 gpd
Average Daily Flow (ADF) (Q): 7,350 gpd	=	5 gpm
Two (2) Hour Peak Flow (4Q): ((7,350 x 4) ÷ 1440)	=	20 gpm

B. Wet Well Analysis

The proposed wet well will be sized to accommodate this phase only as no future expansion is required.

i. Effective Volume Calculation:

Where:

$$V = \frac{Q * t}{4n}$$

V	=	Effective wet well volume (gal)
t	=	Minimum cycle time (min)
Q	=	Pumping rate of one (1) pump (gpm)
n	=	Number of pumps with largest out of service

$V = \frac{(20 \text{ gpm})(6 \text{ min})}{4(1)}$	Q	=	20 gpm (1 pump running)
	t	=	6 min (0 – 49 Horsepower)
	n	=	1 (pump alternation credit not included)

$$V = 30 \text{ gallons}$$

ii. Effective Depth Calculation:

The proposed four-foot (4') diameter wet well has an effective area of 4.01 ft². The required effective depth is calculated as:

$$d_{\text{eff}} = \frac{(30 \text{ gal})}{(7.48 \frac{\text{gal}}{\text{ft}^3})(12.57 \text{ ft}^2)} \quad d_{\text{eff}} = \text{effective depth}$$
$$d_{\text{eff}} = 0.32 \text{ ft}$$

iii. Wet Well Finished Floor:

Proposed top slab elevation	=	993.80 ft
Incoming sanitary sewer elevation	=	985.08 ft
Calculated effective depth	=	0.32 ft
Minimum water depth to prevent vortexing and overheating	=	3.00 ft
Additional depth	=	0 ft
Calculated bottom elevation	=	981.76 ft
Proposed bottom elevation	=	981.00 ft

The proposed wet well has adequate volume to accommodate the firm capacity of 20 gpm. The level controls will be set with a minimum effective depth to provide an adequate cycle time for the pumps.

C. Pump Static Head

i.	Lead Pump On (Firm Capacity/Highest Elevation Pumped)		
	Water Surface Elevation at Discharge	=	993.50 ft
	Calculated "Lead Pump On" Elevation (981.00 + 3.00 + 0.32)	=	984.32 ft
	Design "Lead Pump On" Elevation (981.00 + 3.00 + 0.50)	=	<u>984.50 ft</u>
	Design Static Head	=	9.00 ft
ii.	Lag Pump On		
	Highest Elevation Pumped (at Discharge)	=	993.50 ft
	Calculated "Lag Pump On" Elevation (984.32 + 0.16)	=	984.48 ft
	Design "Lag Pump On" Elevation (984.50 + 0.25)	=	<u>984.75 ft</u>
	Design Static Head	=	8.75 ft
iii.	All Pumps Off		
	Water Surface Elevation at Discharge	=	993.50 ft
	Calculated "All Pumps Off" Elevation (984.00 + 3.00)	=	987.00 ft
	Design "All Pumps Off" Elevation	=	<u>984.00 ft</u>
	Design Static Head	=	9.50 ft
iv.	Flooded Wet Well		
	Water Surface Elevation at Discharge	=	993.50 ft
	Wet Well Ceiling Elevation	=	<u>992.30 ft</u>
	Design Static Head	=	1.20 ft

D. Piping Analysis

The proposed piping system will consist of one and a half-inch (1.5") diameter stainless steel riser piping and a one and a half-inch (1.5") diameter PVC force main.

i. Riser Piping

The proposed lift station will pump through approximately six linear feet (6') of one and a half-inch (1.5") diameter stainless steel pipe. The riser losses are calculated using the Hazen-Williams formula for friction losses and K factors for minor losses. To simulate pipe conditions, Hazen-Williams friction constants $C=100$ and $C=140$ will be used for design, to represent old and new ductile iron pipe conditions, respectively.

One and a Half-Inch (1.5") Diameter Riser Pipe K Factors:

Fitting	Quantity	K-factor	Total K
Entrance	1	0.50	0.50
90° Bend	2	0.42	0.84
Check Valve	1	1.05	1.05
Plug or Ball Valve	1	0.38	<u>0.38</u>
		Total	2.77

One and Half-Inch (1.5") Diameter Riser Losses:

Flow (Q)	Riser Pipe Velocity (V)	Minor Loss KV ² /2g	Major Loss C = 120	Major Loss C = 140	Total System Head C = 120	Total System Head C = 140
GPM	fps	ft	ft	ft	ft	ft
20	3.63	0.57	0.32	0.24	0.89	0.81

ii. Force Main Piping

The proposed lift station will pump through approximately two hundred eleven linear feet (211') of one and a half-inch (1.5") diameter PVC force main. Calculations for the force main analysis use the Hazen-Williams formula for friction losses and K factors for minor losses. To simulate pipe conditions, Hazen-Williams friction constants $C = 120$ and $C = 140$ will be used for design to represent old and new PVC pipe conditions, respectively.

One and a Half-Inch (1.5") Force Main K Factors:

Fitting	Quantity	K-factor	Total K
45° Bend	3	0.31	0.93
Tee, Run	2	0.42	0.84
Tee, Branch	1	1.26	1.02
Plug or Ball Valve	1	0.38	0.38
Exit	1	1.00	<u>1.00</u>
		Total	4.62

One and a Half-Inch (1.5") Force Main Losses:

Flow (Q)	FM Pipe Velocity (V)	Minor Loss KV2/2g	Major Loss C = 120	Major Loss C = 140	Total System Head C = 120	Total System Head C = 140	Start Up Head C = 120	Start Up Head C = 140
GPM	fps	ft	ft	ft	ft	ft	ft	ft
20	3.63	0.95	11.30	8.50	22.13	19.25	22.13	19.25

E. Pump Operation Conditions

All Pumps Off:

Water Surface Elevation at Discharge	=	993.50 ft
All Pumps Off Elevation	=	<u>984.00 ft</u>
Calculated Static Head for "All Pumps Off"	=	9.50 ft

Lead Pump On:

Design "Lead Pump On" Static Head	=	9.00 ft
Calculated Losses ($Q_{total} = 20$ gpm)	=	<u>13.13 ft</u>
Calculated TDH for "Lead Pump On"	=	22.13 ft

F. Pumps

Two (2) Barnes 2SEV-L with 6-inch diameter impeller submersible pumps designed to meet the duty condition are proposed. These pumps will utilize three-phase power, carry a maximum 1-HP rating, and operate at 1,750 rpm (max). The manufacturer's performance curve is plotted along with system curves for C=120 and C=140. The "Lead Pump On" (firm pumping capacity) design static head of 9.00 feet is calculated from the maximum water surface elevation at the discharge manhole and the "Lead Pump On" elevation of 984.50. Pump capacity is determined from the system and pump curves as 20 gpm for C=120 with largest pump out of service. The system curve with the pump manufacturer's selection is attached to this report as Exhibit C.

G. Wet Well Ventilation Calculations

Typical max velocity through vent pipe not to exceed 600 fpm. TCEQ minimum diameter for vent pipe is four-inches (4").

$$\text{Velocity} = \frac{4Q}{\pi(D)^2}$$

Proposed Four-Inch (4") Ventilation Pipe:

Ultimate Flow Rate	=	20 gpm
	=	2.67 cfm

$$\text{Velocity} = \frac{4 \cdot (2.67 \text{ cfm})}{\pi \cdot (4/12)^2}$$

$$\text{Velocity} = 30.60 \text{ fpm}$$

H. Force Main Surge Calculations

Force main surges occur during intermittent on/off pump operation and during power failure. At firm capacity, the station operates at approximately 9.57 psi (~22.1 ft TDH). Calculations to determine the pressure wave velocity, time period and associated surge pressure are as follows:

i. Pressure Wave Velocity

$$a = [1 / [(w/g) * [(1/K) + (D/e) * (C/E)]]]^{1/2}$$

Where:

a	=	Pressure wave velocity (ft/s)
w/g	=	Mass density of water (slugs/cf)
K	=	Bulk modulus of water (lb/sf)
D/e	=	Dimensionless ratio of pipeline diameter to its wall thickness
C	=	Coefficient of pipe support condition (dependent on Poisson's ratio)
E	=	Young's Modulus of Elasticity for pipe material (lb/sf)

$$a = [1 \div [(1.938) \times [(1 \div 43,200,000) + (1.5 \div 0.12) \cdot (0.85 \div 70,560,000)]]]^{1/2}$$

$$a = 1,723 \text{ ft/s}$$

ii. Surge Pressure – Sudden Flow Stoppage

Where:

$h = \frac{av}{g}$	h	=	surge pressure (psi)
	v	=	flow velocity (ft/s)
	g	=	gravity (ft/s ²)
	h	=	$\frac{1,723 \text{ ft/s} \times 3.63 \text{ ft/s}}{32.2 \text{ ft/s}^2 \times 2.31 \text{ ft/psi}}$
	h	=	84.09 psi

iii. Pressure Wave Critical Period

Where:

$t = \frac{2L}{a}$	t	=	time for pressure wave to cycle entire force main (s)
	L	=	length of force main (ft)
	a	=	pressure wave velocity (ft/s)
	t	=	$\frac{2 \times 211 \text{ ft}}{1,723 \text{ ft/s}}$

$$t = 0.24 \text{ s}$$

iv. Change in Pressure Wave Velocity (each run of force main)

Where:

$$\Delta v = \frac{Gh}{a}$$

h = surge pressure (ft)
G = gravity (ft/s²)
a = pressure wave velocity (ft/s)

$$\Delta v = \frac{32.2 \text{ ft/s}^2 \times 84.09 \text{ psi}}{1,723 \text{ ft/s}}$$

$$\Delta v = 1.57 \text{ ft/s}$$

1.	Is "Critical Period" greater than 1.5 seconds	N
2.	Is the maximum flow velocity in the force main greater than 4.0 ft/sec?	N
3.	Will any check valve in the force main close in less than the "Critical Period" (2L/a)?	N
4.	Will the pump or motor be damaged if allowed to run backwards, up to full speed?	N
5.	Is the factor of safety for the force main less than 3.5 under normal operating conditions?	N
6.	Are there any automatic quick closing valves in the force main set to open/close in less than 5 seconds?	N
7.	Are there any automatic valves within the pumping system that become inoperative due to loss of pumping system pressure?	N
8.	Will the pump(s) be tripped off prior to full closure of the discharge valve?	N
9.	Will the pump(s) be started with the discharge valve open?	N

I. Emergency Provisions

To comply with the rules and regulations of 30 TAC Chapter 217- *Design Criteria for Wastewater Systems*, the lift station will be equipped with an autodialer with battery backup to alert the operator to conditions affecting various pieces of equipment critical to the function of the lift station.

An up to 25 kW diesel emergency generator with an automatic transfer switch capable of operating all critical lift station equipment will be constructed in this project. (Critical equipment includes one (1) 1 HP (max) pump and all lighting panel loads.)

[illegible]

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING
DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTPS://MSC.FEMA.GOV](https://MSC.FEMA.GOV)**

NOTES TO USERS

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

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

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

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

Base map information shown on this FIRM was derived from digital data obtained from Texas Natural Resource Information Systems (TNRIS), dated 2000; United States Census Bureau, dated 2015; United States Geological Survey, dated 2005; and the Williamson County Geographic Information Systems (GIS) Department, dated 2014 and 2017.

Base map information shown on this FIRM was derived from digital data obtained from Texas Natural Resource Information Systems (TNRIS), dated 2000; United States Census Bureau, dated 2015; United States Geological Survey, dated 2005; and the Williamson County Geographic Information Systems (GIS) Department, dated 2014 and 2017.

SCALE

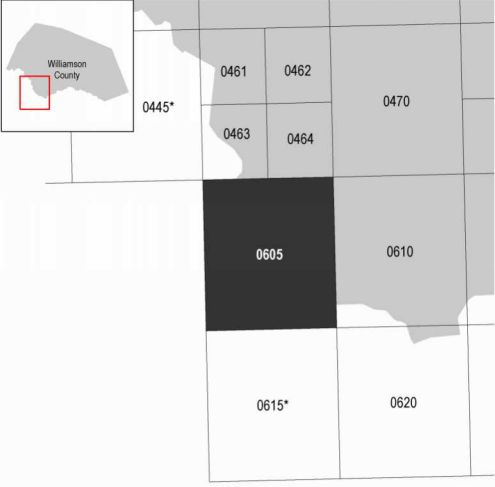
Map Projection:
Texas State Plane Central (FIPS Zone 4203); North American Datum 1983;
Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 1,000 feet **1:12,000**

0 1,000 2,000 4,000 feet

0 250 500 1,000 meters

PANEL LOCATOR



*PANEL NOT PRINTED

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

WILLIAMSON COUNTY,
TEXAS
and Incorporated Areas
PANEL 605 OF 750



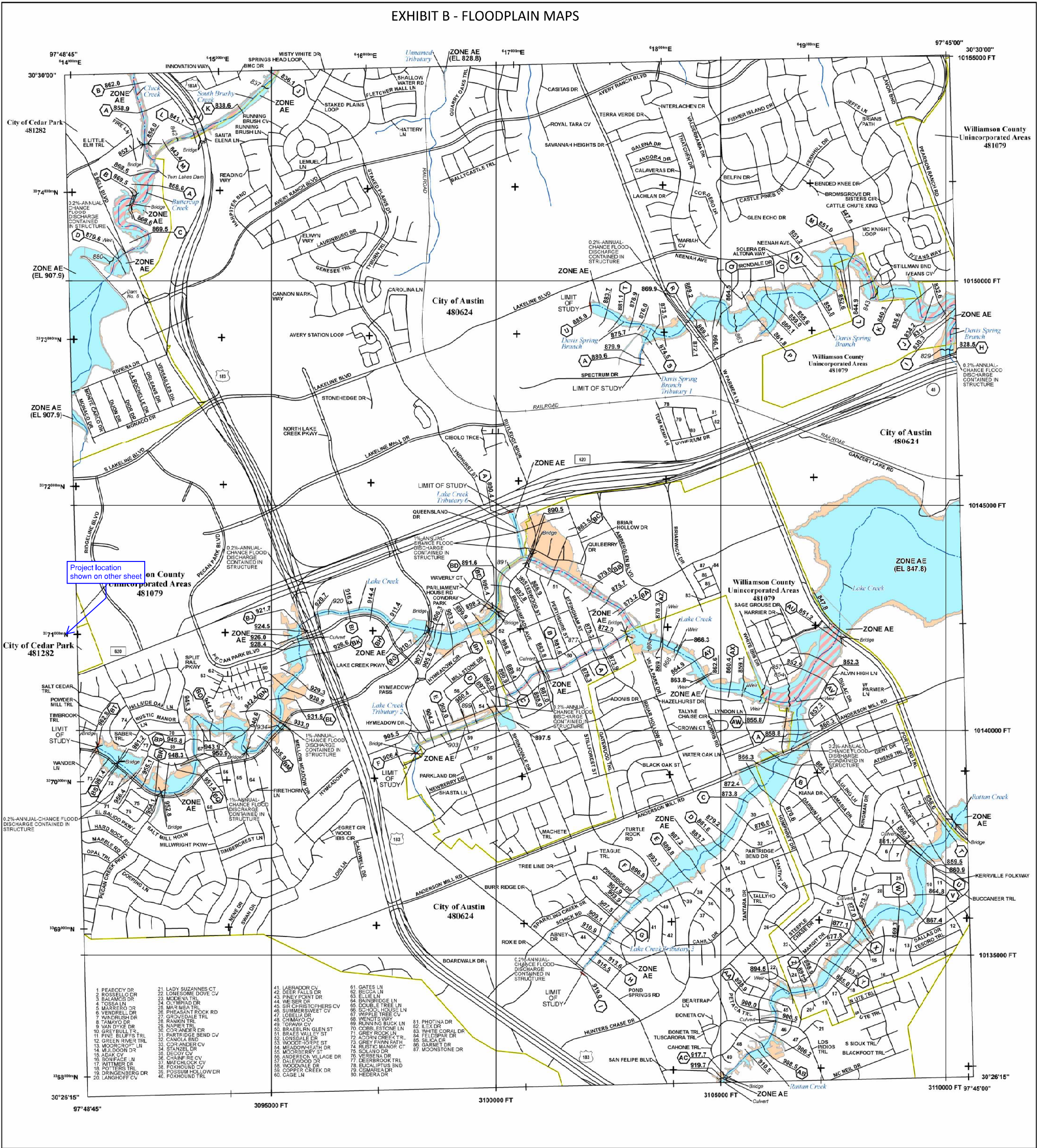
COMMUNITY	NUMBER	PANEL	SUFFIX
AUSTIN, CITY OF	480624	0605	F
CEDAR PARK, CITY OF	481282	0605	F
WILLIAMSON COUNTY	481079	0605	F

2.3.3.3

MAP NUMBER
48491C0605F

MAP REVISED
JANUARY 20, 2019

EXHIBIT B - FLOODPLAIN MAPS



FLOOD HAZARD INFORMATION

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
OTHER AREAS		Area with Reduced Flood Risk due to Levee See Notes Zone X
		Areas of Minimal Flood Hazard Zone X
GENERAL STRUCTURES		Channel, Culvert or Storm Sewer
		Levee, Dike or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
		Coastal Transect
		Profile Baseline
		Hydrographic Feature
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary

NOTES TO USERS

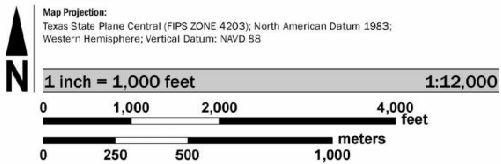
For information and questions about this Flood Insurance Rate Map (FIRM) available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information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

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

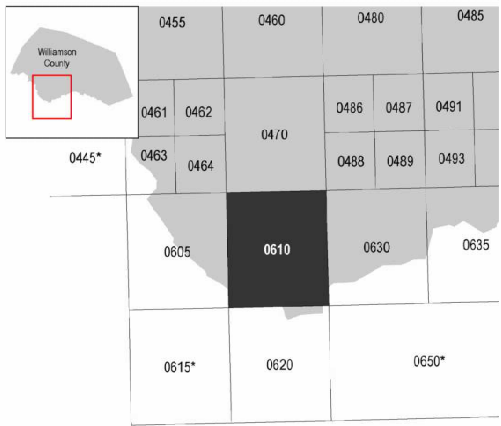
For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

Base map information shown on this FIRM was derived from digital data obtained from Texas Natural Resources Information Systems (TNRIS), dated 2000; United States Census Bureau dated 2015; United States Geological Survey, dated 2005; and the Williamson County Geographic Information Systems (GIS) Department, dated 2014 and 2017.

SCALE



PANEL LOCATOR



*PANEL NOT PRINTED

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
WILLIAMSON COUNTY, TEXAS
and Incorporated Areas
PANEL 610 OF 750

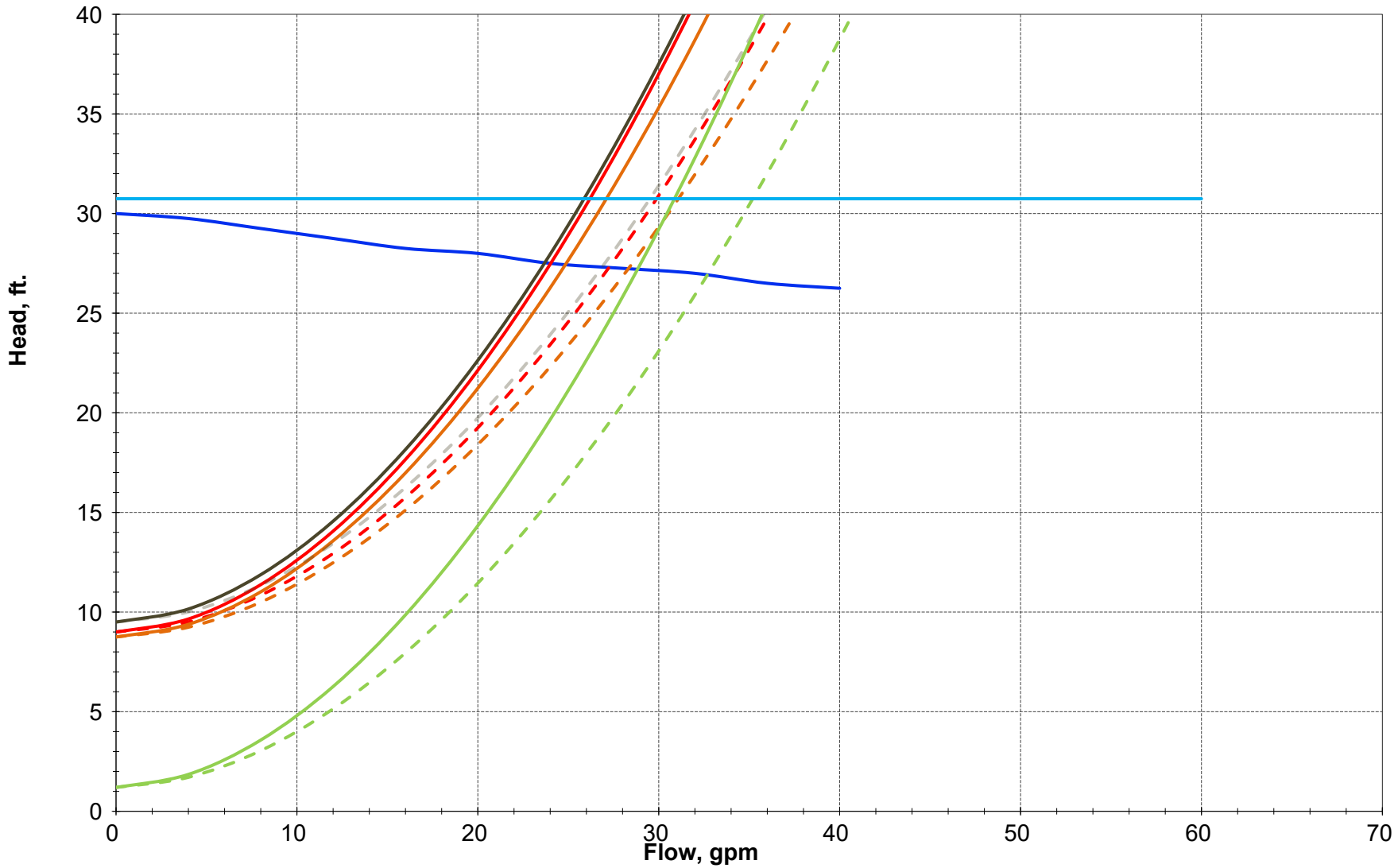
Panel Contains:
COMMUNITY
AUSTIN, CITY OF
CEDAR PARK, CITY OF
WILLIAMSON COUNTY

NUMBER	PANEL	SUFFIX
480624	0610	F
481282	0610	F
481079	0610	F

VERSION NUMBER
2.3.3.3
MAP NUMBER
48491C0610F
MAP REVISED
DECEMBER 20, 2019

EXHIBIT C - SYSTEM CURVES WITH PROPOSED PUMPS

FREEHILL 620 DEVELOPMENT
FREEHILL RR 620 LIFT STATION
NOVEMBER 2024

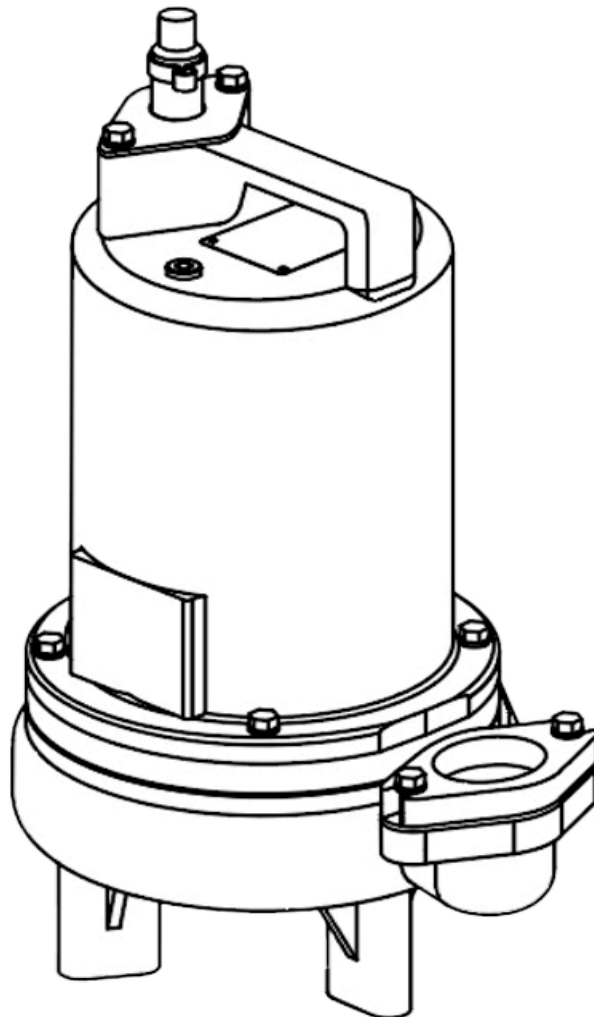




BARNES®

2SEV-L – 1HP

2" Spherical Solids Handling - Vortex, Single Seal

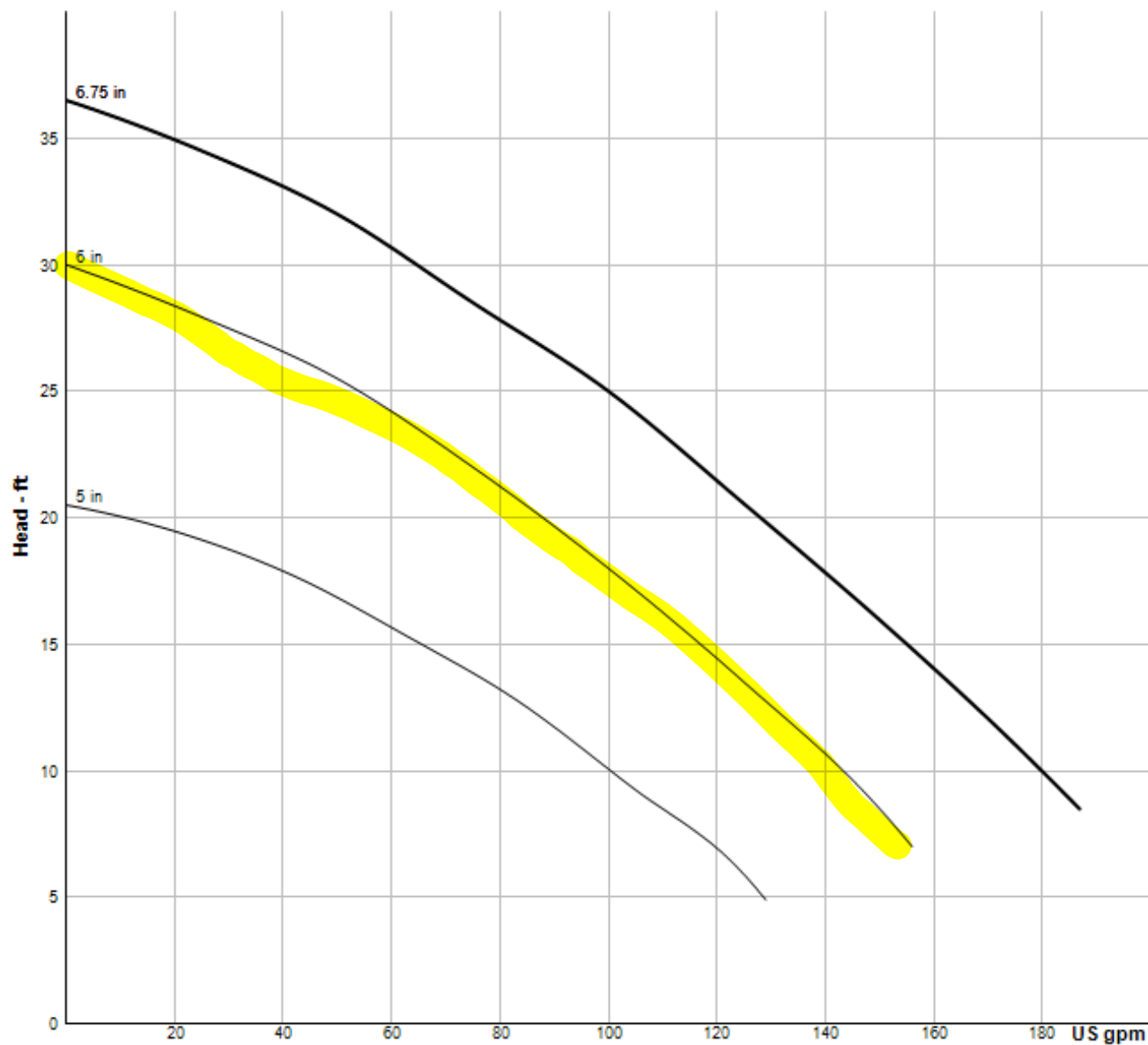


Specifications

DISCHARGE:	2" NPT, Female, vertical, bolt-on-flange
SPEED:	1750 & 3450 RPM (Nominal)
LIQUID TEMPERATURE:	104°F (40°C) Continuous
MOTOR HOUSING:	Cast iron ASTM A-48, class 30
PUMP BODY:	Cast iron ASTM A-48, class 30
IMPELLER:	<ul style="list-style-type: none"> • Design: Vortex, open, with pump out vanes on back side. Dynamically balanced, ISO G6.3 • Material: Cast iron ASTM A-48, class 30
CORD ENTRY:	20 ft. (6m) Cord. Quick connect custom molded for sealing and strain relief. Plug supplied on 120V, 0.50HP, units.
SINGLE PHASE:	Permanent split capacitor (PSC) includes overload protection in motor
THREE PHASE:	200-240/480 is Tri-Voltage. 600V. Requires Overload Protection to be included in control panel
MOTOR:	<ul style="list-style-type: none"> • Design: NEMA L -single phase, NEMA B -three phase torque curve, oil filled, squirrel cage induction • Insulation: Class B & class F on selected models
UPPER BEARING:	<ul style="list-style-type: none"> • Design: Single row, ball • Lubrication: Oil • Load: Radial
LOWER BEARING:	<ul style="list-style-type: none"> • Design: Single row, ball • Lubrication: Oil • Load: Radial & Thrust
VOLUTE:	Cast iron ASTM A-48, class 30
SHAFT:	416 Stainless steel
SQUARE RINGS:	Buna-N
HARDWARE:	300 Series stainless steel
PAINT:	Air dry enamel
SEAL PLATE	Cast iron ASTM A-48, class 30
SEAL:	<ul style="list-style-type: none"> • Design: Single mechanical • Material: Carbon/Ceramic/Buna-N • Hardware: 300 Series stainless steel
SEAL KIT P/N:	130180
SERVICE KIT P/N:	130207

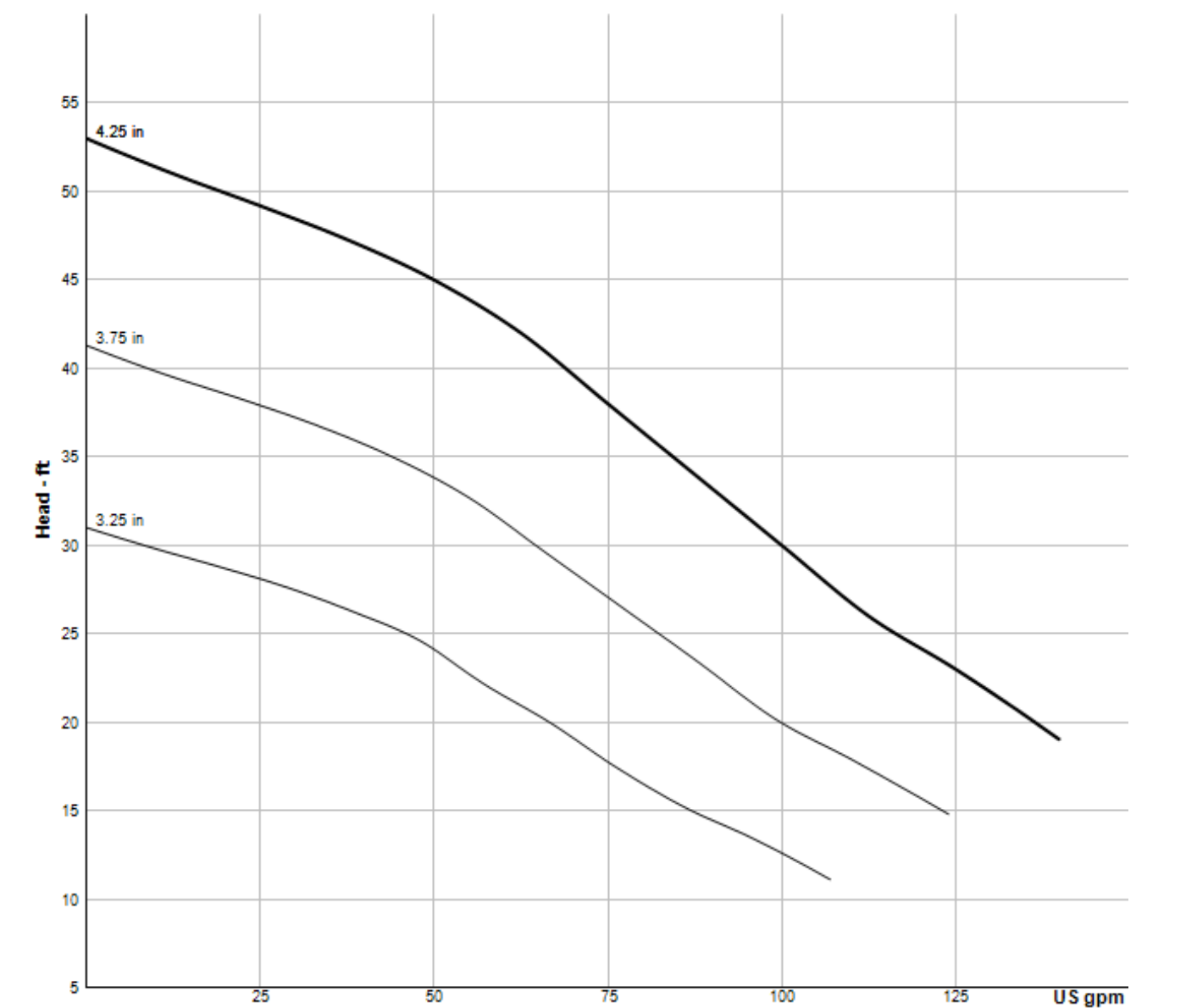
Curves

1750 RPM



Pump HP	Impeller Dia mm (in.)
0.75	152 (6.00)
1	172 (6.75)

3450 RPM 3 Phase



Pump HP	Impeller Dia mm (in.)
1	108 (4.25)
0.50	89 (3.50)

Model Information

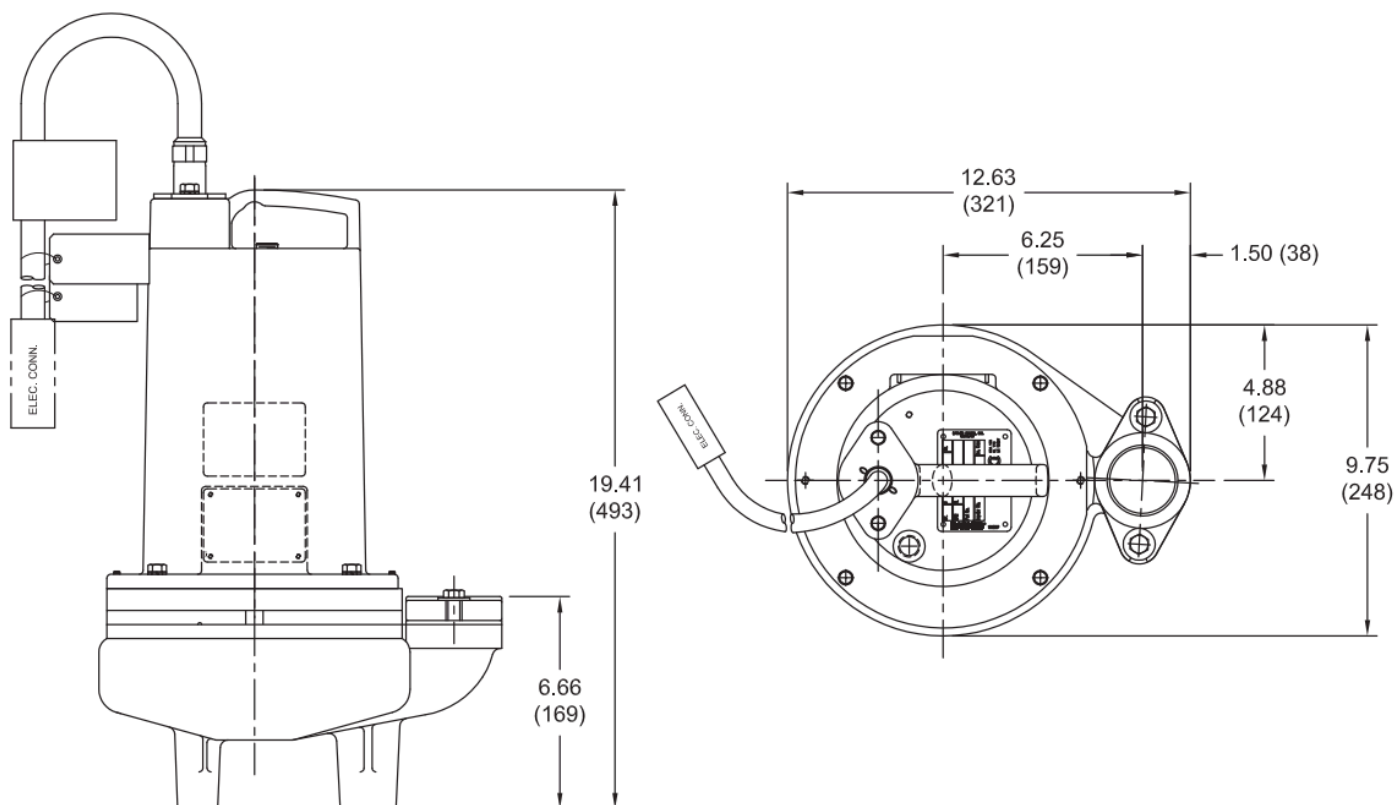
PUMP MODEL NUMBER	2SEV1024L	2SEV1094L	2SEV1044L	2SEV1054L	2SEV1022L	2SEV1092L	2SEV1042L	2SEV1052L
PART NUMBER	104936	104937	104938	104939	104982	104983	104985	104986
HP	1	1	1	1	1	1	1	1
VOLTAGE/PHASE	240/1	200-240/3	480/3	600/3	240/1	200-240/3	480/3	600/3
HZ	60	60	60	60	60	60	60	60
RPM (NOMINAL)	1750	1750	1750	1750	3450	3450	3450	3450
NEMA START CODE	G	E/H	H	J	F	H/J	J	L
INSULATION CLASS	F	B	B	B	B	B	B	B
FULL LOAD AMPS	8.5	5.3/5.1	2.5	2.2	10.7	7.9/7.5	3.7	2.9
LOCKED ROTOR AMPS	25.8	13.7/15.4	7.7	7.2	21.8	19.9/18.4	9.1	8.7
CORD SIZE	14/3	14/4	14/4	14/4	14/3	14/4	14/4	14/4
CORD TYPE	SOW	SOW	SOW	SOW	SOW	SOW	SOW	SOW
CORD O.D INCH (MM)	0.530 (13.5)	0.570 (14.5)	0.570 (14.5)	0.570 (14.5)	0.530 (13.5)	0.570 (14.5)	0.570 (14.5)	0.570 (14.5)
WEIGHT (LBS)	85	85	85	85	90	90	90	90



IMPORTANT

- 1.) PUMP MAY BE OPERATED "DRY" FOR EXTENDED PERIODS WITHOUT DAMAGE TO MOTOR AND/OR SEALS.
- 2.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.

Drawings



All dimensions are in inches (mm)

Product Resources

Engineering Specification

I&O Manual

Vertical Break Away Fittings	Control Float 240V
Pre-Packaged Basin Assemblies	Direct Control Floats
Cast Iron Ball Check Valve	Control Panel, Single Phase
PVC Ball Check Valve	Control Panel, Three Phase, Simplex
Lifting Rope	Control Panel, Three Phase, Duplex
Swing Check Valve	Control Panel, Simplex, 600 VAC
Fiberglass Basin	Control Panel, Duplex, Alternating, 600 VAC
Flexible Discharge Couplings	

EXHIBIT E

SAFETY CONSIDERATIONS

1. Provide a design resistant to a 1% annual chance flood.
2. Provide an auto-dialer phone system in case of emergencies.
3. Provide manual ventilation in the wet well to ensure fresh air always provided and stable pressure conditions.
4. Provide safety grating under access hatches at areas where open access is needed for pump removal.
5. Provide explosion proof motors on all equipment.
6. Provide warning signs on fence and electrical control panels.
7. Provide grounded front electrical control panels.
8. Color code piping to provide identification.

Attachment B: Justification and Calculations for Deviation in Straight Alignment Without Manholes

Attachment B is not applicable to this project.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment C: Justification for Variance From Maximum Manhole Spacing

Attachment C is not applicable to this project.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment D: Calculations for Slopes for Flows Greater Than 10.0 Feet Per Second

Attachment D is not applicable to this project.

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: Brad J. Carabajal P.E. (Agent)

Date: 11/22/2024

Signature of Customer/Agent:



Regulated Entity Name: Freehill RR 620

Regulated Entity Information

1. The type of project is:

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

2. Total site acreage (size of property): 3.96 Ac.

3. Estimated projected population: 45

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	52,173	÷ 43,560 =	1.20
Parking	19,213	÷ 43,560 =	0.44
Other paved surfaces	56,323	÷ 43,560 =	1.29
Total Impervious Cover	128,237	÷ 43,560 =	2.93

Total Impervious Cover 2.93 ÷ **Total Acreage** 3.96 X 100 = 74.1 % 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 = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.

10. Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

L x W = _____ Ft² ÷ 43,560 Ft²/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:

_____ % Domestic	_____ Gallons/day
<u>100</u> % Industrial	<u>14</u> Gallons/day
_____ % Commingled	_____ Gallons/day
TOTAL gallons/day <u>14</u>	

15. Wastewater will be disposed of by:

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

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

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

☒ Sewage Collection System (Sewer Lines):

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

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

☐ The SCS was previously submitted on_____.

☐ The SCS was submitted with this application.

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

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

☒ Existing.

☐ Proposed.

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = 30 '.

18. 100-year floodplain boundaries:

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

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

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): 48491C0605F & 48491C0610F eff. 12/20/2019

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

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

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

☐ There are _____ (#) 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 Surface Water Quality

Factors that may affect surface water quality are as follows:

Site Development Criteria

- The site will be used to create two industrial buildings totaling 63,222 gross sqft
- The proposed development will increase the impervious cover of the project area to 74.1%, which will increase the levels of TSS in the storm runoff.
- When necessary, rock rip-rap or concrete outfall aprons will be designed to reduce runoff velocities resulting in settlement of suspended solids and minimizing scouring conditions.

Construction Stage

- Clearing will disturb areas and create the potential for pollutants to runoff from rainfall.
- Temporary BMP's will be maintained throughout construction and will include measures such as a stabilized construction entrance/exit, silt fencing, inlet protection, rock berms, and other measures which will reduce TSS in runoff leaving the site.

Vehicular Traffic

- Mud or fine particles may be dropped from vehicular traffic.
- Fluids may be dropped from vehicular traffic.

Landscape and Property Maintenance

- Pesticides or herbicides used for landscape maintenance may not be applied at a proper rate and may leak into groundwater or runoff into surface drains.
- Fine particles may be washed from driveway surfaces into roadways and drains.
- A water quality and detention pond will be utilized to treat TSS coming from the site, which will minimize the impact of TSS from impervious areas.
- A maintenance plan will be implemented for all temporary BMP's in accordance with Attachment C of TCEQ-0600.

Attachment B: Volume and Character of Stormwater

The stormwater runoff calculations included in this section were based on the SCS Method using HEC-HMS modeling in conjunction with drainage criteria established by the City of Austin, as described in their Drainage Criteria Manual. Curve numbers were based on Table 2-2a of Technical Release 55: Urban Hydrology for Small Watersheds (revised June 1986) published by the United States Department of Agriculture (USDA). Curve numbers are based on the hydrologic soil group of the study area as well as the impervious cover of the site. The National Resources Conservation Service (NRCS) web soil survey shows the site to be a hydrologic soil group "D", which has a very slow infiltration rate. The existing site was assumed to have a curve number of 80 with 0% impervious cover. For the purpose of quantifying the total volume of stormwater going to the basin, the proposed site has a curve number of 80 with 74.1% impervious cover for the entire site.

The Existing and Proposed Drainage Area Maps for the proposed site are included in this section and show the drainage areas and flow patterns within the project. The drainage area map sheets also show the pre and post-construction runoff rates at the analysis point including the offsite runoff flow paths, as well as a table summarizing the components of the HEC-HMS model for both the existing and proposed conditions.

On-site impervious cover areas include paving for local streets, sidewalks, buildings, drive aisles, and parking lots within the project area. These areas are intermixed between pervious landscaped areas and natural drainage ways. The runoff generated from this project is typical in quality to that generated from grass areas, roadways, and typical building rooftops.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment C: Suitability Letter from Authorized Agent

Attachment C is not applicable to this project.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment D: Exception to the Required Geologic Assessment

Attachment D is not applicable to this project.

Lift Station/Force Main System Application

Texas Commission on Environmental Quality

for Regulated Activities On the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(c)(3)(B)and(c), 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.

Regulated Entity Name: Freehill RR 620

Customer Information

(If different than customer information provided on core data form)

1. The person(s) responsible for providing the engineering certification to the TCEQ pursuant to 30 TAC §213.5(f)(2)(C) during construction and 30 TAC §213.5 (c)(3)(D) upon completion of construction is:

Contact Person: William Paton
Entity: FED CEDAR PARK LP
Mailing Address: 901 S. Mopac Expressway
City, State: Austin, Texas Zip: 78746
Telephone: (512) 614-2151 Fax: _____
Email Address: will.paton@freehillco.com

2. The engineer responsible for the design of this lift station and force main:

Contact Person: Brad J. Carabajal, P.E.
Entity: Quiddity Engineering, LLC
Mailing Address: 912 S. Capital of Texas Highway, Suite 300
City, State: Austin, Texas Zip: 78746
Telephone: (512) 685-5117 Fax: _____
Email Address: bcarabajal@quiddity.com
Texas Licensed Professional Engineer's Serial Number: 140180

Project Information

3. This project is for the construction or replacement of:

☐ Lift Station only.

- ☐ Lift Station and Force Main system.
☒ Lift Station, Force Main, and Gravity system.

4. The sewage collection system will convey the wastewater to the Cedar Park (name) Treatment Plant. The treatment facility is:

- ☒ Existing
☐ Proposed

5. All components of this lift station/force main system will comply with:

- ☒ The City of Cedar Park standard specifications.
☐ Other. Specifications are attached.

Site Plan Requirements

Items 6-14 must be included on the Site Plan.

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

Site Plan Scale: 1" = 30 '.

7. ☒ Lift station/force main system layout meets all requirements of 30 TAC Chapter 217.

8. Geologic or Manmade Features:

- ☒ No geologic or manmade features were identified in the Geologic Assessment.
☐ All geologic or manmade features identified in the Geologic Assessment (caves, solution openings, sinkholes, fractures, joints, porous zones, etc.) which exist at the site of the proposed lift station and along the path(s) or within **50 feet of each side** of a proposed force main line are shown on the Site Plan and are listed in the table below. Designs used to protect the integrity of the sewer line crossing each feature are described and labeled on the attached page. A detailed design drawing for each feature is shown on Plan Sheet _____ of _____.
☐ No Geologic Assessment is required for this project.

Table 1 - Geologic or Manmade Features

<i>Line</i>	<i>Station to Station</i>	<i>Type of Feature</i>
	to	
	to	
	to	
	to	
	to	
	to	
	to	
	to	

9. ☒ Existing topographic contours are shown and labeled. The contour interval is 1 feet. (Contour interval must not be greater than 5 feet).
10. ☒ Finished topographic contours are shown and labeled. The contour interval is 1 feet. (Contour interval must not be greater than 5 feet).
- ☐ Finished topographic contours will not differ from the existing topographic configuration and are not shown.

11. 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): 48491C0605F & 48491C0610F eff. 12/20/2019

12. 5-year floodplain:

- ☒ After construction is complete, no part of this project will be in or cross a 5-year floodplain, either naturally occurring or manmade. (Do not include streets or concrete-lined channels constructed above sewer lines.)
- ☐ After construction is complete, all sections of the force main located within the 5-year floodplain will be encased in concrete or capped with concrete. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 2 - 5-Year Floodplain

<i>Line</i>	<i>Sheet</i>	<i>Station to Station</i>
	of	to
	of	to
	of	to
	of	to

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

If applicable, this must agree with Item No. 15 on the Geologic Assessment Form.

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

14. ☒ Legal boundaries of the site are shown.

Plan and Profile Sheets

The construction drawings and technical specifications will not be considered for review unless they are the **final plans and technical specifications** which will be used by the contractor for bidding and construction.

Items 15 – 18 must be included on the Plan and Profile sheets.

15. ☒ The equipment installation construction plans must have a minimum scale of 1" = 10'.
Plan sheet scale: 1" = _____ '.
16. ☒ Locations, descriptions and elevations of all required equipment and piping for the lift station and force main are shown and labeled.
17. ☐ Air Release/Vacuum Valves will be provided at all peaks in elevation of the proposed N/A force main. These locations are listed in the table below and labeled on the appropriate plan and profile sheets.

Table 3 - Air Release/Vacuum Valves

<i>Line</i>	<i>Station</i>	<i>Sheet</i>
N/A		of
		of
		of
		of
		of
		of

18. ☒ The **final plans and technical specifications** are submitted for the TCEQ's review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.
19. ☒ **Attachment A - Engineering Design Report.** An engineering design report with the following required items is attached: ***This report has been included in TCEQ-0582, Attachment A.***
- ☒ The report is dated, signed, and sealed by a Texas Licensed Professional Engineer.
 - ☒ Calculations for sizing system.
 - ☒ Pump head calculations, including, but not limited to, system head and pump capacity curves, head loss calculations, and minimum and maximum static head C values for normal and peak operational conditions.
 - ☒ 100-year and 25-year flood considerations.
 - ☒ Total lift station pumping capacity with the largest pump out of service.
 - ☒ Type of pumps, including standby units.
 - ☒ Type of pump controllers, including standby air supply for bubbler controllers, as applicable.

- ☒ Pump cycle time.
- ☒ Type of wet well ventilation; include number of air changes for mechanical ventilation.
- ☒ Minimum and maximum flow velocities for the force main.
- ☒ Lift station security.
- ☒ Lift station emergency provisions and reliability.

Administrative Information

- 20. ☒ Upon completion of the wet well excavation, a geologist must certify that the excavation was inspected for the presence of sensitive features and submit the signed, sealed, and dated certification to the appropriate regional office.
- 21. ☒ The TCEQ Lift Stations and Force Mains General Construction Notes (TCEQ-0591) are included on the General Notes Sheet of the Final Construction Plans for this lift station and/or force main system.
- 22. ☒ 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.
- 23. ☒ Any modification of this lift station/force main system application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

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 **Lift Station/Force Main System Application** is hereby submitted for TCEQ review and executive director approval. The system was designed in accordance with the requirements of 30 TAC §213.5(c)(3)(C) and 30 TAC Chapter 217, and prepared by:

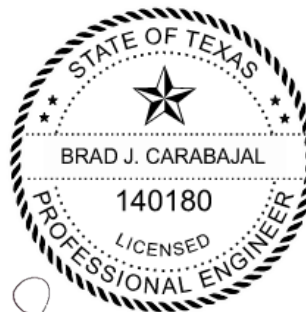
Print Name of Licensed Professional Engineer: Brad J. Carabajal, P.E.

Place engineer's seal here:

Date: 11/22/2024

Signature of Licensed Professional Engineer:

Brad J. Carabajal



FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment A: Engineering Design Report

This report has been included in TCEQ-0582 Attachment A.

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: Brad J. Carabajal P.E. (Agent)

Date: 11/22/2024

Signature of Customer/Agent:



Regulated Entity Name: Freehill RR 620

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: Buttercup Creek

Temporary Best Management Practices (TBMPs)

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

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

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

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

Soil Stabilization Practices

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

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

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

Administrative Information

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

Attachment A: Temporary Stormwater Section

Spills of toxic or hazardous material shall be reported to the Owner and to the appropriate State or local government agency, regardless of the size. The following practices shall be followed for spill prevention and cleanup:

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 shall be contained and cleaned up immediately. The spill area shall be kept well-ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
2. The spill prevention plan shall be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures shall also be included.
3. Hazardous materials and wastes shall be stored in covered containers and protected from vandalism.
4. 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 shall be located in an open, conspicuous, and accessible location. Manufacturers' recommended methods for spill cleanup shall be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
5. Materials and equipment necessary for spill cleanup shall be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
6. The site superintendent responsible for the day-to-day site operations shall be the spill prevention and cleanup coordinator. He/She shall designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel shall be posted in the material storage area and in the office trailer onsite.
7. Spills shall be covered and protected from stormwater run-on during rainfall to the extent that it doesn't compromise cleanup activities. Spills shall not be buried or washed with water.
8. Used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose shall be stored and disposed of properly.
9. Water used for cleaning and decontamination shall not be allowed to enter storm drains or watercourses. Contaminated water shall be collected and disposed of in accordance with applicable regulations.
10. Water overflow or minor water spillage shall be contained, and not be allowed to discharge into drainage facilities or watercourses.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

11. Waste storage areas shall be kept clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.

Cleanup

1. Leaks and spills shall be cleaned up 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 shall be disposed of as hazardous waste.
3. Dry material spills shall never be hosed down or buried. The material shall be cleaned up as quickly as possible and disposed of properly.

Minor Spills

1. Minor spills typically involve small quantities of oil, gasoline, paint, etc. which shall be controlled by the first responder at the discovery of the spill.
2. Absorbent materials shall be used on small spills rather than hosing down or burying the spill, and shall be promptly removed and disposed of properly.
3. The practice below shall immediately be followed for a minor spill:
 - a. Contain the spread of the spill.
 - b. Recover spilled materials.
 - c. Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

1. Semi-significant spills still shall be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response shall require the cessation of all other activities.
2. The practice below shall immediately be followed for a semi-significant spill:
 - a. Contain spread of the spill.
 - b. Notify the project foreman immediately.
 - c. 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.
 - d. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
 - e. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Significant/Hazardous Spills

1. The contractor shall 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, the contractor shall contact the Environmental Release Hotline at 1-800-832-8224. It shall be 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 shall 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 Hazardous-Material team shall be obtained immediately. Construction personnel shall 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 include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

Vehicle and Equipment Fueling/Maintenance

1. If maintenance must take place onsite, the contractor shall use a designated area and a secondary containment, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.
2. The contractor shall regularly inspect onsite vehicles and equipment for leaks and repair immediately.
3. The contractor shall check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids, and shall not allow leaking vehicles or equipment onsite.
4. The contractor shall always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
5. The contractor shall place drip pans or absorbent materials under paving equipment when not in use.
6. The contractor shall use absorbent materials on small spills rather than hosing down or burying the spill, and will then remove the absorbent materials promptly and dispose of properly.
7. The contractor shall promptly transfer used fluids to the proper waste or recycling drums, and shall not 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. The contractor shall place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal.
9. The contractor shall store cracked batteries in a non-leaking secondary container.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

10. If fueling must occur on site, the contractor shall use designated areas, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.

The contractor shall discourage "topping off" of fuel tanks, and always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

Attachment B: Potential Sources of Contamination

Once grading activities begin, erosion of bare soil during rainfall events is the most common source of contamination. Silt fences and mulch socks will be installed at the beginning of the grading operation to minimize the potential for transport of the soil offsite. Inlet protection will be installed at existing and proposed inlets to minimize sediment buildup in the storm system.

During construction activities, potential sources of contamination would include petroleum products leaking from construction equipment. The contractor will be advised to keep the equipment in working order and report any spills per the spill response plan.

Attachment C: Sequence of Major Activities

This project shall be fully completed within 180 days from the date of the Notice to Proceed. The sequence of major activities will be as follows:

- i. Install all temporary erosion, sedimentation controls and tree protection fencing (3.96 total acres disturbed).
- ii. Maintain and inspect erosion controls (3.96 total acres disturbed).
- iii. Demolish on site (3.96 acres).
- iv. Clear and grub limits of construction (3.96 total acres disturbed).
- v. Install underground utilities, including storm sewers, water and wastewater lines with all related appurtenances, and any related site work (0.32 total acres disturbed).
- vi. Regrade streets to subgrade (1.59 total acres disturbed)
- vii. Install curb and gutter and lay base material and asphalt for paving (1.59 total acres disturbed).
- viii. Complete existing pond improvements (1.21 total acres disturbed)
- ix. Complete permanent erosion control and stabilize all disturbed areas through the restoration of site vegetation (3.96 total acres).
- x. Perform final site cleanup (3.96 total acres).
- xi. Remove all temporary erosion controls (3.96 total acres).

Attachment D: Temporary Best Management Practices and Measures

General Requirements:

Sediment will be retained on-site to the maximum extent practicable.

Control measures will be properly selected, installed, and maintained in accordance with manufacturer's specifications and good engineering practice. If damaged or rendered ineffective during site development, erosion and sediment controls will be repaired or replaced immediately.

Controls will minimize the offsite transport of litter, construction debris, and construction materials.

Erosion Control and Stabilization Practices:

- (1) Erosion Control and Stabilization Practices
 - (A) Filter fabric fencing or rock berms will be placed around the perimeter of the site and proposed interceptor structures upon their construction and shall remain until the owner accepts the project or as is deemed necessary to prevent discharge to the receiving water. The locations of these SWPPP measures are shown on Sheets 5 and 6 of the site development plans or as directed by the Engineer.
 - (B) Sedimentation Basins and Diversion Dams may be used to direct and control site runoff where drainage areas exceed 10 acres. Since there are no drainage areas that exceed 10 acres, Sedimentation Basins and Diversion Dams are not proposed with this project.
 - (C) Filter fabric fencing or approved other will be maintained on either side of existing inlets where runoff from this construction site might enter the storm sewer system. The location of these fences is shown on Sheets 5 and 6 of the site development plans.
 - (D) Upon their construction, the lower stage of inlets will be covered with a timber grate and filter fabric.
 - (E) After paving is constructed, provide an approved inlet protection measure as provided in the plans.
 - (F) Hydro-mulch or seeding will be applied to disturbed areas after completion of construction of the facilities.
 - (G) Seeding may be applied, in lieu of hydro-mulch, to portions of the site after final grading.
- (2) Record of Erosion Control and Stabilization Practices

The Operator will maintain record of: dates of major grading activities, dates when construction temporarily or permanently ceases on a portion of the site, and the dates when stabilization measures

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

are initiated.

- (3) If the interim period between construction of utilities and paved areas will be more than 21 days, the paved area location will be mulched or otherwise stabilized within 14 days.
- (4) After paving completion, newly graded areas and all exposed soils will be completely stabilized.
- (5) Final stabilization will be achieved prior to termination of permit coverage.

Sediment Control Practices:

- (1) Silt fences, vegetative buffer strips, or equivalent sediment controls are provided where deemed appropriate as shown on Sheets 5 and 6 of the site development plans or as directed by the Engineer.
- (2) Where the disturbed area is larger than 10 acres a sedimentation basin is required.
 - (3) Filter fabric fence or rock berms will be set up prior to the commencement of excavation and temporary stockpiling operations. All surplus excavated material will be hauled off-site and disposed of in a suitable manner.
 - (4) All disturbed soils will be hydro-mulch or seeded. When all construction activity is complete and the site is stabilized, temporary structural controls will be removed, and soils disturbed by their removal will be re-seeded.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment E: Request to Temporarily Seal a Feature

Attachment E is not applicable to this project.

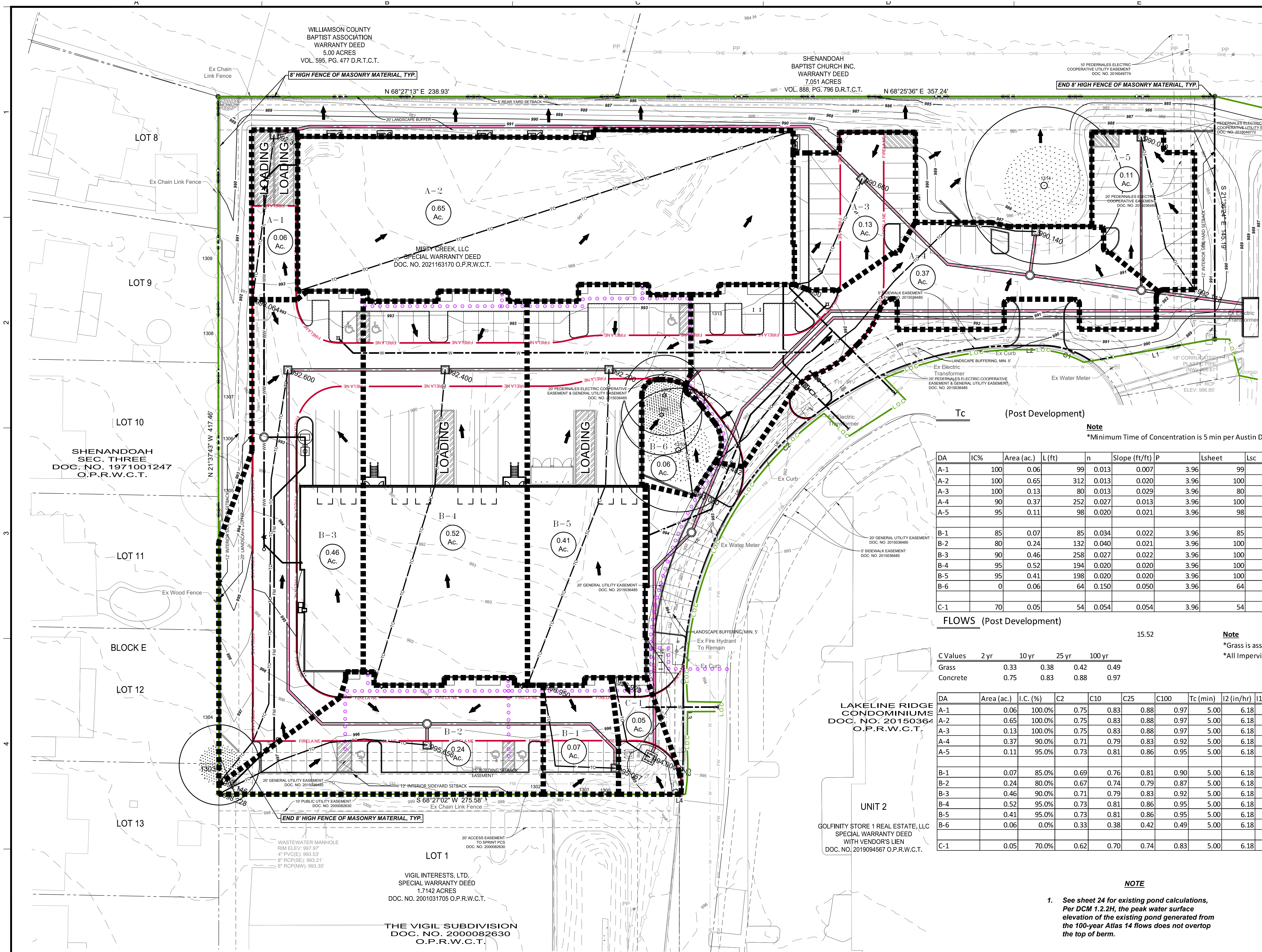
Attachment F: Structural Practices

Once construction is complete on the commercial site, the developed areas will be covered with vegetation or concrete pavement. These areas will surface drain directly to the existing water quality pond.

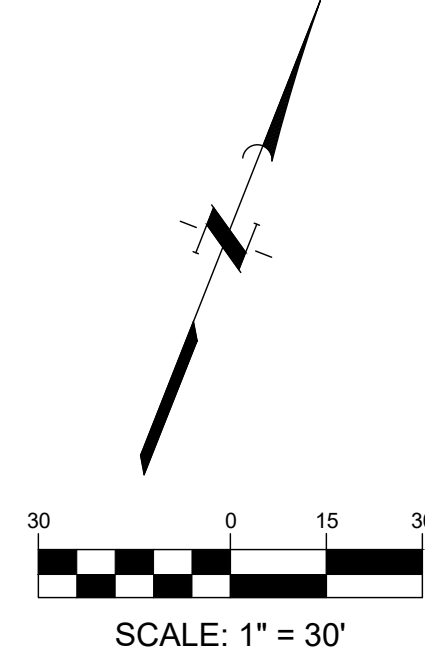
Downstream of the water quality and detention pond released runoff will sheet flow off the property and eventually will drain to South Brushy Creek.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

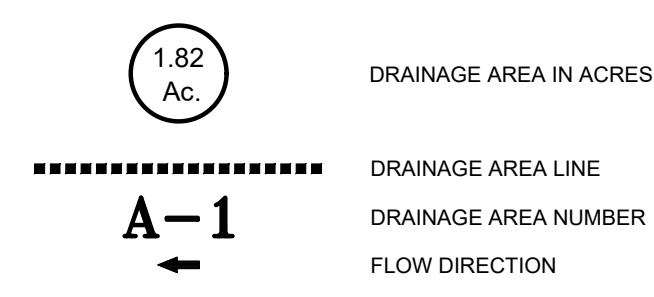
Attachment G: Drainage Area Map



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



DAMAP LEGEND



DA	IC%	Area (ac.)	L (ft)	n	Slope (ft/ft)	P	Lsheet	Lsc	Tsheet	Tsc	Tc
A-1	100	0.06	99	0.013	0.007	3.96	99	0	1.89	0.00	5.00
A-2	100	0.65	312	0.013	0.020	3.96	100	212	1.24	1.23	5.00
A-3	100	0.13	80	0.013	0.029	3.96	80	0	0.90	0.00	5.00
A-4	90	0.37	252	0.027	0.013	3.96	100	152	2.61	1.08	5.00
A-5	95	0.11	98	0.020	0.021	3.96	98	0	1.68	0.00	5.00
B-1	85	0.07	85	0.034	0.022	3.96	85	0	2.23	0.00	5.00
B-2	80	0.24	132	0.040	0.021	3.96	100	32	3.02	0.18	5.00
B-3	90	0.46	258	0.027	0.022	3.96	100	158	2.15	0.88	5.00
B-4	95	0.52	194	0.020	0.020	3.96	100	94	1.75	0.55	5.00
B-5	95	0.41	198	0.020	0.020	3.96	100	98	1.75	0.57	5.00
B-6	0	0.06	64	0.150	0.050	3.96	64	0	4.27	0.00	5.00
C-1	70	0.05	54	0.054	0.054	3.96	54	0	1.60	0.00	5.00

Flows (Post Development)

C Values	2 yr	10 yr	25 yr	100 yr
Grass	0.33	0.38	0.42	0.49
Concrete	0.75	0.83	0.88	0.97

DA	Area (ac.)	I.C. (%)	C2	C10	C25	C100	Tc (min)	I2 (in/hr)	I10 (in/hr)	I25 (in/hr)	I100 (in/hr)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
A-1	0.06	100.0%	0.75	0.83	0.88	0.97	5.00	6.18	9.29	11.45	15.24	0.30	0.50	0.65	0.95
A-2	0.65	100.0%	0.75	0.83	0.88	0.97	5.00	6.18	9.29	11.45	15.24	2.99	4.98	6.50	9.54
A-3	0.13	100.0%	0.75	0.83	0.88	0.97	5.00	6.18	9.29	11.45	15.24	0.62	1.02	1.34	1.96
A-4	0.37	90.0%	0.71	0.79	0.83	0.92	5.00	6.18	9.29	11.45	15.24	1.60	2.67	3.50	5.15
A-5	0.11	95.0%	0.73	0.81	0.86	0.95	5.00	6.18	9.29	11.45	15.24	0.51	0.85	1.11	1.63
B-1	0.07	85.0%	0.69	0.76	0.81	0.90	5.00	6.18	9.29	11.45	15.24	0.29	0.48	0.63	0.92
B-2	0.24	80.0%	0.67	0.74	0.79	0.87	5.00	6.18	9.29	11.45	15.24	1.00	1.67	2.19	3.23
B-3	0.46	90.0%	0.71	0.79	0.83	0.92	5.00	6.18	9.29	11.45	15.24	2.02	3.37	4.42	6.50
B-4	0.52	95.0%	0.73	0.81	0.86	0.95	5.00	6.18	9.29	11.45	15.24	2.33	3.89	5.09	7.47
B-5	0.41	95.0%	0.73	0.81	0.86	0.95	5.00	6.18	9.29	11.45	15.24	1.84	3.06	4.01	5.89
B-6	0.06	0.0%	0.33	0.38	0.42	0.49	5.00	6.18	9.29	11.45	15.24	0.12	0.21	0.28	0.44
C-1	0.05	70.0%	0.62	0.70	0.74	0.83	5.00	6.18	9.29	11.45	15.24	0.18	0.31	0.41	0.60

NOTE

- See sheet 24 for existing pond calculations, Per DCM 1.2.2H, the peak water surface elevation of the existing pond generated from the 100-year Atlas 14 flows does not overtop the top of berm.

App: _____
No. _____
Date _____

REVISIONS

DESIGNED BY: ECM
CHECKED BY: BJC
DRAWN BY: CM

ISS: NOV 2024
JOB NO.: 28559-0003-01

QUIDDITY

140180
PROFESSIONAL ENGINEER
11/19/2024

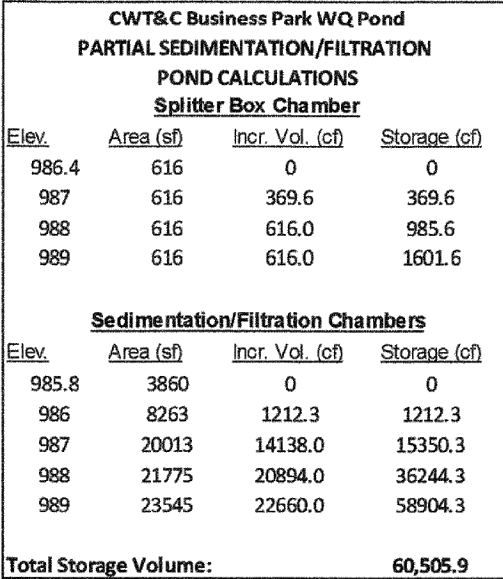
FREEHILL DEVELOPMENT COMPANY
FREEHILL RR 620
12332 RR 620, UNIT #4
INLET DRAINAGE AREA
MAP

SHEET NO. 12
OF 36

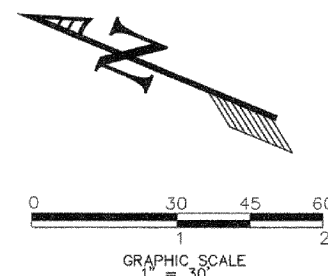
[illegible]

--	--

2024-32-SD



- ## DRAINAGE LEGEND



Run-Off Curve Numbers (RCN)				
Area #		Area (Ac.)		RCN
Existing Conditions				
ET	11.84	(C) =		80.00
"GsB Soil Hydrologic Group "D" Pasture, Grassland, Range - Good				

Run-Off Curve Numbers (RCN)				
Area #		Area (Ac.)		RCN
Proposed Conditions				
OFF	1.37	(B) =		80.00
P1	2.27	$0.70(86) + 0.10(74) + 0.20(80) =$		92.00
P2	2.86	$0.74(86) + 0.10(74) + 0.16(80) =$		92.72
P4	5.33	$0.82(86) + 0.13(74) + 0.25(80) =$		90.38
"GsB Soil Hydrologic Group "D" Pasture, Grassland, Range - Good. "P3 Drains to the west				

APPROVED

NOV 08 2018

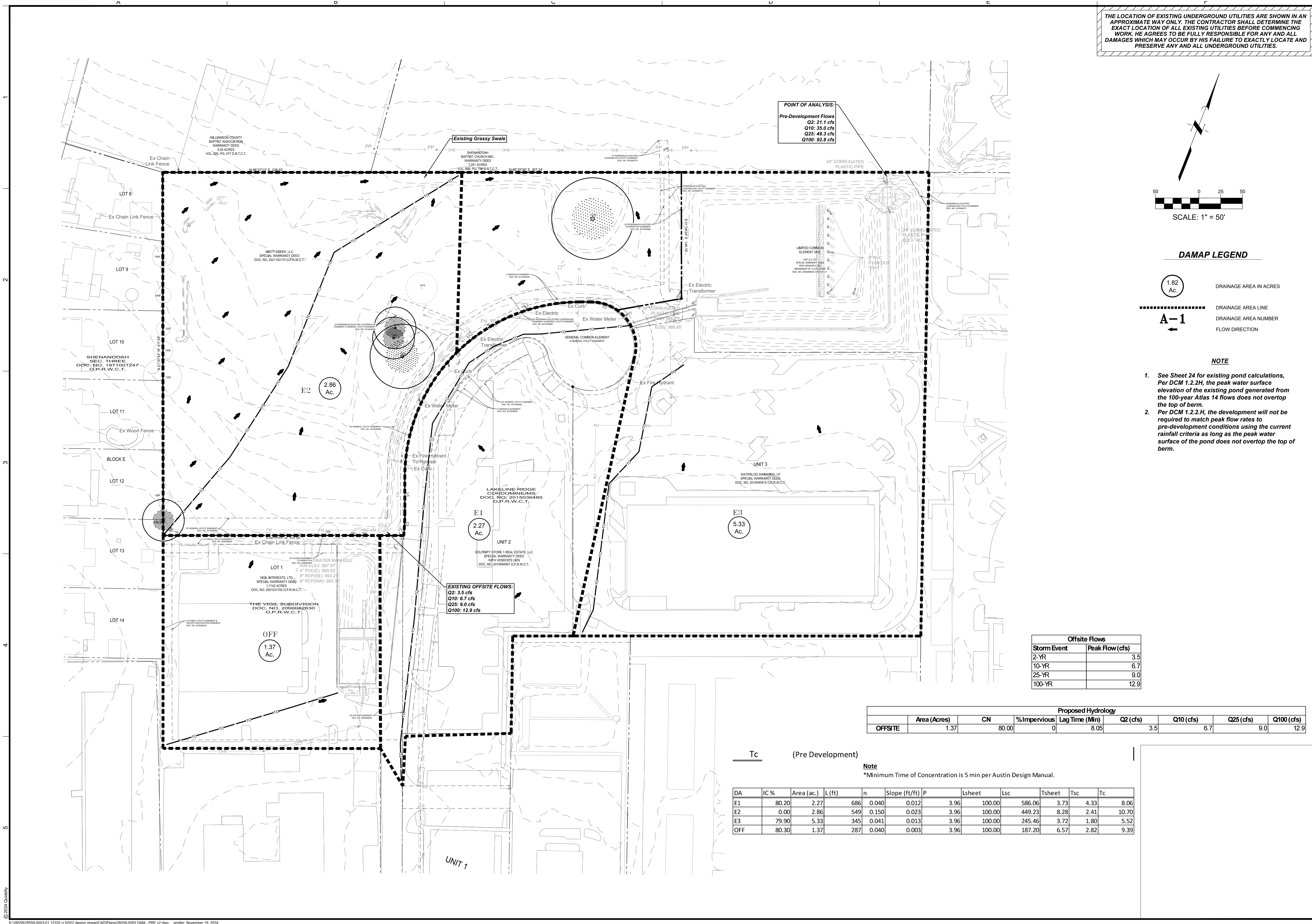
**PLANNING DEPT.
CITY OF CEDAR PARK**

SUMMARY STORM DATA FOR CWT&B BUSINESS PARK, CEDAR PARK, TX POND						
Storm Event	Existing Q	Uncontrolled Q W/Out Pond	Proposed Released Q After Pond	Stage Storage Elevation Pond	Storage Volume (C.F.) Pond	
2 year	15.0	28.3	WQ	WQ	WQ	WQ
10 year	36.8	56.2	36.8		986.3	19,684
25 year	49.9	72.2	44.5		987.1	29,466
100 year	71.8	98.5	68.0		987.9	40,786

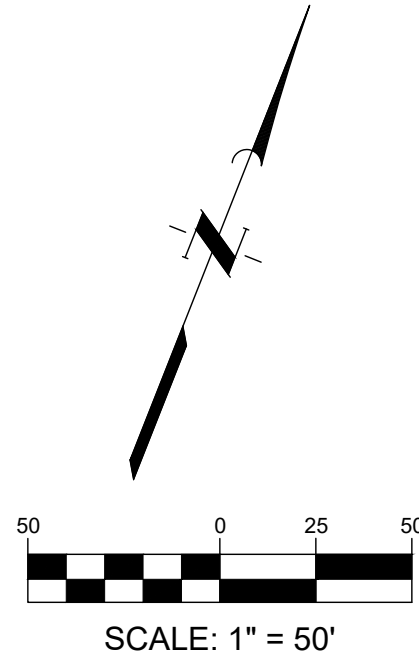
GOLFINITY
12332 FM 620 N
AUSTIN, TEXAS 78750

FREEHILL DEVELOPMENT COMPANY
FREEHILL / RR 620

**PERMITTED DRAINAGE
AREA MAP (SD-18-00023)**



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



DAMAP LEGEND

- 1.82 Ac. DRAINAGE AREA IN ACRES
- A-1 DRAINAGE AREA LINE
- ← FLOW DIRECTION

NOTE

- See Sheet 24 for existing pond calculations. Per DCM 1.2.2H, the peak water surface elevation of the existing pond generated from the 100-year Atlas 14 flows does not overtop the top of berm.
- Per DCM 1.2.2.H, the development will not be required to match peak flow rates to pre-development conditions using the current rainfall criteria as long as the peak water surface of the pond does not overtop the top of berm.

Offsite Flows	
Storm Event	Peak Flow (cfs)
2-YR	3.5
10-YR	6.7
25-YR	9.0
100-YR	12.9

Proposed Hydrology								
	Area (Acres)	CN	%Impervious	Lag Time (Min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
OFFSITE	1.37	80.00	0	8.05	3.5	6.7	9.0	12.9

Tc (Pre Development)

Note
*Minimum Time of Concentration is 5 min per Austin Design Manual.

DA	IC %	Area (ac.)	L (ft)	n	Slope (ft/ft)	P	Lsheet	Lsc	Tsheet	Tsc	Tc
E1	80.20	2.27	686	0.040	0.012	3.96	100.00	586.06	3.73	4.33	8.06
E2	0.00	2.86	549	0.150	0.023	3.96	100.00	449.23	8.28	2.41	10.70
E3	79.90	5.33	345	0.041	0.013	3.96	100.00	245.46	3.72	1.80	5.52
OFF	80.30	1.37	287	0.040	0.003	3.96	100.00	187.20	6.57	2.82	9.39

App: _____
Revisions: _____
No. _____ Date _____

QUIDDITY

111001247
111001247
3100 Davis Boulevard, Suite 101 • Austin, Texas 78741 • 512.441.9483

SCALE: AS SHOWN
DATE: ISS - NOV 2024
JOB NO.: 28559-0003-01

DESIGNED BY: ECM
CHECKED BY: BJC
DRAWN BY: CM

STATE OF TEXAS
BRAD J. CARABAJAL
140180
PROFESSIONAL ENGINEER
11/19/2024

FREEHILL DEVELOPMENT COMPANY
FREEHILL RR 620
12332 RR 620, UNIT #4

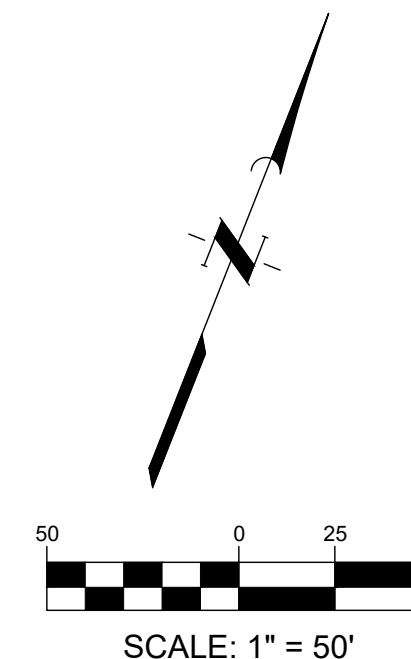
OVERALL DAM - PRE

SHEET NO.
OF 36

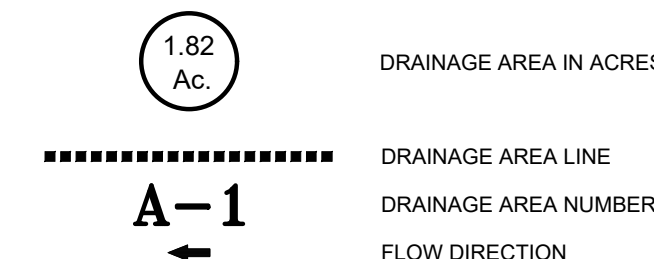
14

2024-32-SD

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



DAMAP LEGEND



NOTE

1. See Sheet 24 for existing pond calculations, Per DCM 1.2.2.H, the peak water surface elevation of the existing pond generated from the 100-year Atlas 14 flows does not overtop the top of berm.
2. Per DCM 1.2.2.H, the development will not be required to match peak flow rates to pre-development conditions using the current rainfall criteria as long as the peak water surface of the pond does not overtop the top of berm.

Offsite Flows	
Storm Event	Peak Flow (cfs)
2-YR	3.5
10-YR	6.7
25-YR	9.0
100-YR	12.9

Proposed Hydrology								
	Area (Acres)	CN	%Impervious	Lag Time (Min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
OFFSITE	1.37	80.00	0	8.05	3.5	6.7	9.0	12.5

[illegible]

QUIBDDITY

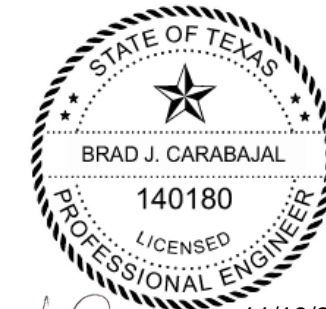
CM

DESIGNED BY:--

AS SHOWN

iii

8



11/19/2024

FREEHILL DEVELOPMENT COMPANY
FREEHILL RR 620

OVERALL DAM - POST

SHEET NO

OF 36

15

2024-32-SD

Attachment H: Temporary Sediment Pond Plans and Calculations

Attachment H is not applicable to this project.

Attachment I: Inspection and Maintenance for Temporary BMP's

The following guidelines will be followed for inspection and maintenance of temporary BMP's:

Stabilized Construction Entrance/Exit

1. The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.
2. All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
3. When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.
4. When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
5. All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Concrete Washout Area

1. A 24" x 36" minimum sign with the text, "Concrete Washout Area" shall face toward the nearest street or access point and indicate the location of the concrete washout.
2. Concrete washout shall be located behind curb and 50 feet minimum from drainage inlets or watercourses.

Silt Fence

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

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Inlet Protection

1. Inspection should be made weekly and after each rainfall. Repair or replacement should be made promptly as needed by the contractor.
2. Remove sediment when buildup reaches a depth of 3 inches. Removed sediment should be deposited in a suitable area and in such a manner that it will not erode.
3. Check placement of device to prevent gaps between device and curb.
4. Inspect filter fabric and patch or replace if torn or missing.
5. Structures should be removed and the area stabilized only after the remaining drainage area has been properly stabilized.

Sediment Trap

1. Inspection should be made weekly and after each rainfall. Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement. Repair should be made promptly as needed by the contractor.
2. Trash and other debris should be removed after each rainfall to prevent clogging of the outlet structure.
3. Sediment should be removed and the trap restored to its original dimensions when the sediment has accumulated to half of the design depth of the trap. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
4. Sediment removed from the trap should be deposited in an approved spoils area and in such a manner that it will not cause additional siltation.

Attachment J: Schedule of Interim and Permanent Soil Stabilization Practices

For the Freehill RR 620 site plans, the Schedule of Interim and Permanent Soil Stabilization Practices is provided in Table 1. Soil will be stabilized using seeding. 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.

Table 1 – Schedule of Soil Stabilization Practices

Soil Stabilization Practice	Duration
Temporary erosion and sedimentation controls are to be installed as indicated on the approved site plan or subdivision construction plan and in accordance with the stormwater pollution prevention plan (SWPPP) that is required to be posted on the site. Install tree protection and initiate tree mitigation measures	120 days
The environmental project manager, and/or site supervisor, and/or designated responsible party, and the general contractor will follow the storm water pollution prevention plan (SWPPP) posted on the site. Temporary erosion and sedimentation controls will be revised, if needed, to comply with city inspectors' directives, and revised construction schedule relative to the water quality plan requirements and the erosion plan.	180 days
Complete construction and start revegetation of the site and installation of landscaping.	30 days
Upon completion of the site construction and revegetation of a project site, the design engineer shall submit an engineer's letter of concurrence to the appropriate City department indicating that construction, including revegetation, is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the appropriate city inspector.	10 days
Upon completion of landscape installation of a project site, the landscape architect shall submit a letter of concurrence to the appropriate City department indicating that the required landscaping is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the appropriate city inspector.	5 days
After a final inspection has been conducted by the city inspector and with approval from the city inspector, remove the temporary erosion and sedimentation controls and complete any necessary final revegetation resulting from removal of the controls. Conduct any maintenance and rehabilitation of the water quality ponds or controls.	5 days

Permanent Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Brad J. Carabajal P.E. (Agent)

Date: 11/22/2024

Signature of Customer/Agent



Regulated Entity Name: Freehill RR 620

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 **Note: This is only for BMPs within this project's property lines. Offsite BMPs, including the existing detention pond, are to be maintained by condo regime.**
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

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment A: 20% or Less Impervious Cover Declaration

Attachment A is not applicable to this project.

Attachment B: BMPs for Upgradient Stormwater

There is an existing water quality pond (BC-00-01206-03M) to the south of the site that outfalls into the site. In existing conditions, flows from this pond traveled through the site via a weathered earthen channel and are routed through an existing grassy swale on the north side of the site. Because the upgradient offsite flows are treated by the existing water quality pond to the south, there are no additional permanent BMP measures required to prevent pollution.

The flows generated from the existing water quality pond to the south of the site will be captured into the onsite storm drain system and directed into the existing water quality and detention pond to the northeast of the site. Since these flows have already been treated, the offsite impervious cover calculations used in the TSS calcs is 0 for the water quality requirements. The detention portion of the existing pond northeast of the site is able to contain the Atlas-14 100-year flows feeding into the pond without overtopping.

Attachment C: BMPs For On-Site Stormwater

The existing water quality and detention pond servicing the development was designed and constructed in 2014, prior to the adoption of the Atlas 14 rainfall data. As such, the drainage analysis for this project was based on the requirements of the City of Austin Drainage Criteria Manual for projects that are part of a phased development where prior phases were permitted or constructed using rainfall data pre-dating Atlas 14 (COA DCM 1.2.2.H). More specifically, the drainage analysis was focused on analyzing the existing regional detention pond to confirm that the proposed development of the subject lot would not cause the pond to overtop the embankment during the 100-year storm event using Atlas 14 rainfall data.

The impervious cover associated with the Freehill RR 620 project will be 2.93 acres. This additional impervious cover will result in a total impervious cover of 7.07 acres (67.55%) for the 10.47-acre wet pond drainage basin. In existing conditions, the water quality portion of the pond was surveyed on 05/20/2024 and was confirmed to have an overall volume of 47,442.3 cubic ft. After upsizing the splitter box in proposed conditions, the water quality portion of the pond decreases to 41,054.5 cubic ft, which is higher than the required 33,155 cubic ft from the overall TSS calculations (see below). Since the water quality volume of the pond exceeds the required water quality volume of this development, and the detention portion of the pond can accept the additional volume of this development without overtopping, the existing water quality and detention pond is sized appropriately for the proposed modifications.

Below is the table for all TSS calculations for the Existing Wet basin, and on the following pages are the calculations for the TSS.

TCEQ TSS Summary- Existing Water Quality and Detention Pond							
Project Name	TCEQ EAPP ID No.	Total Area (Ac.)	Total Basin Area (Ac.)	Cumulative IC area (Ac.)	IC %	Associated DA Per EAPP ID No. 11001116	Total Suspended Solids (TSS, lbs)
Body-Tek Collision Repair ⁽¹⁾		1.370		0 ⁽¹⁾	0.00%	Offsite	0
Private Road	11-13101102	0.550	0.550	0.550	100.00%	24.2% P1	479
Golfinity	11001116	1.600	1.600	1.030	64.38%	70.5% P1	897
Waterloo Swim Center	11-13101102	3.010	3.010	2.560	85.05%	5.3% P1 + 54.1% P4	2228
Freehill RR 620 (WQ Pond)	Pending	3.960	3.960	2.932	74.04%	100% P2 + 20.6% P4	2550
Existing Water Quality and Detention Pond ⁽²⁾	11001116	1.350	1.350	N/A	N/A	25.3% P4	
Total			10.47	7.07	67.55%		6154
Total Allowed for Wet Basin ⁽³⁾				8.17			7108
(1)	Flows generated from Body-Tek Collision Repair (BC-00-01206-03M) are treated offsite flows which enter the Freehill RR 620 site and are conveyed to the existing water quality and detention pond. Since these flows are pre-treated, there is no associated impervious cover that must be accounted for in the TSS calculations.						
(2)	The existing water quality and detention pond was included in drainage area P4 in the Golfinity WPAP (EAPP ID No. 11001116). There are no TSS values that need to be treated by the area of the pond. It has been included in this table to demonstrate consistency with previous plans.						
(3)	The maximum impervious cover and TSS that can be treated by the water quality portion of the pond is based on the water quality volume of the pond that will exist after proposed improvements to the pond are completed with this project. The water quality volume of the pond is 41,054.5 CF. The stage-storage table for the WQ pond can be found on Sheet 24 of the planset.						

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Freehill RR 620 - Overall**

Date Prepared: **10/1/2024**

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 * = **10.46** acres

Predevelopment impervious area within the limits of the plan* = **0.00** acres

Total post-development impervious area within the limits of the plan* = **7.07** acres

Total post-development impervious cover fraction * = **0.68**

P = **32** inches

L_M TOTAL PROJECT = **6154** 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= **10.46** acres

Predevelopment impervious area within drainage basin/outfall area= **0.00** acres

Post-development impervious area within drainage basin/outfall area= **7.07** acres

Post-development impervious fraction within drainage basin/outfall area= **0.68**

L_M THIS BASIN = **6154** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Sand Filter**
Removal efficiency = **89** percent

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

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

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

where:

A_C = Total On-Site drainage area in the BMP catchment area

A_i = Impervious area proposed in the BMP catchment area

A_p = Pervious area remaining in the BMP catchment area

L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **10.46** acres

A_i = **7.07** acres

A_p = **3.39** acres

L_R = **7019** lbs

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

Desired L_M THIS BASIN = **6154** lbs.

F = **0.88**

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 = **1.50** inches
Post Development Runoff Coefficient = **0.48**
On-site Water Quality Volume = **27480** cubic feet

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

Off-site area draining to BMP = **1.37** acres
Off-site Impervious cover draining to BMP = **0.00** acres
Impervious fraction of off-site area = **0.00**
Off-site Runoff Coefficient = **0.02**
Off-site Water Quality Volume = **149** cubic feet

Storage for Sediment = **5526**

Total Capture Volume (required water quality volume(s) x 1.20) = **33155** 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.

9. Filter area for Sand Filters

Designed as Required in RG-348

Pages 3-58 to 3-63

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins = **33155** cubic feet

Minimum filter basin area = **2748** square feet

Maximum sedimentation basin area = **10992** square feet

Minimum sedimentation basin area = **687** square feet

For minimum water depth of 2 feet

For maximum water depth of 8 feet



A handwritten signature in black ink, appearing to read "BRAD J. CARABAJAL", written over the date.

10/15/2024

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment D: BMPs for Surface Streams

Attachment D is not applicable to this project.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment E: Request to Seal Features

Attachment E is not applicable to this project.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment F: Construction plans

TCEQ EAPP #:

TABS/ TDLR REGISTRATION #:
TABS2025003039

OWNER:
FED CEDAR PARK LP
901 S. MOPAC EXPRESSWAY
AUSTIN, TEXAS 78746
512.614.2151
ATTN: WILLIAM PATON

ARCHITECT:
RUNA WORKSHOP, LLC
305 CAMP CRAFT ROAD #500
WEST LAKE HILLS, TEXAS 78746
512.531.9532
ATTN: AARON VOLLMER

LEGAL DOCUMENTS:

1. SHARED PARKING AGREEMENT DOC NO. 2024068630
2. CONDO REGIME DOC NO. 2015036485

ZONING: GENERAL BUSINESS (GB)

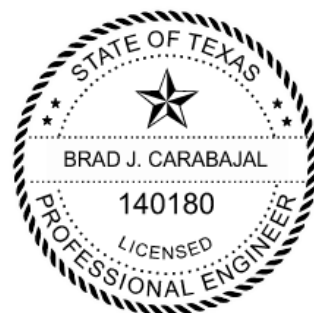
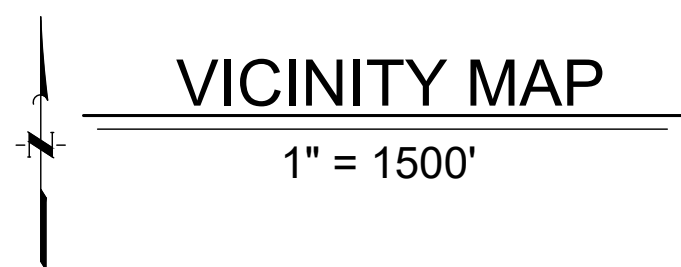
TOTAL IMPERVIOUS COVER: 127,709 SF (2.93 AC.)

PROJECT DESCRIPTION :

SITE DEVELOPMENT PLANS
FOR
FREEHILL RR 620
12332 RR 620, UNIT #4
CEDAR PARK, TEXAS 78613
FOR
FREEHILL DEVELOPMENT COMPANY

Sheet Num.	Sheet Title
1	COVER SHEET AND INDEX
2	GENERAL NOTES
3	TCEQ GENERAL CONSTRUCTION NOTES
4	FINAL PLAT
5	EXISTING CONDITIONS & DEMO PLAN
6	PRE CONSTRUCTION EROSION PLAN
7	EROSION SEDIMENTATION CONTROL PLAN
8	EROSION CONTROL DETAILS
9	SITE PLAN
10	STORM DRAINAGE PLANS
11	DRAINAGE CALCULATIONS
12	INLET DRAINAGE AREA MAP
13	PERMITTED DRAINAGE AREA MAP (SD-18-00023)
14	OVERALL DAM - PRE
15	OVERALL DAM - POST
16	UTILITY PLAN
17	WW GRAVITY PROFILE
18	FORCE MAIN PROFILE
19	GRADING PLAN
20	RIGHT TURN LANE
21	PAVING PLAN
22	FIRE PROTECTION PLAN
23	EXISTING POND PROFILE
24	EXISTING POND PLAN & CALCULATIONS (POST-DEV)
25	EXISTING POND CALCS (PRE-DEV)
26	SITE DETAILS
27	STORM DRAIN DETAILS
28	WATER & WASTEWATER DETAILS
29	LANDSCAPE PLAN (1 OF 2)
30	LANDSCAPE PLAN (2 OF 2)
31	BUILDING ELEVATIONS (1 OF 2)
32	BUILDING ELEVATIONS (2 OF 2)
33	ARCHITECTURAL SITE DETAILS
34	FENCE DETAIL
35	PHOTOMETRIC PLAN (1 OF 2)
36	PHOTOMETRIC PLAN (2 OF 2)

13. ALL RESPONSIBILITY FOR ACCURACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF CEDAR PARK MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
12. WATERSHED STATUS: THIS PROJECT IS LOCATED IN THE BUTTERCUP CREEK WATERSHED, AND IS LOCATED OVER THE EDWARDS AQUIFER RECHARGE ZONE.
13. THIS PROPERTY DOES NOT LIE WITHIN THE AE ZONE AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP AND PANEL NO. 48491C0605F AND 48491C0610F FOR WILLIAMSON COUNTY, TEXAS DATED 12/20/2019.
14. APPROVAL OF THESE PLANS BY CITY OF CEDAR PARK INDICATES COMPLIANCE WITH ALL APPLICABLE CITY REGULATIONS ONLY. APPROVAL BY OTHER GOVERNMENTAL ENTITIES MAY BE REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR DETERMINING WHAT ADDITIONAL APPROVALS MAY BE NECESSARY. COMPLIANCE WITH ACCESSIBILITY STANDARDS SUCH AS THE 2010 STANDARDS FOR ACCESSIBLE DESIGN OR THE 2012 TEXAS ACCESSIBILITY STANDARDS WAS NOT VERIFIED. THE APPLICANT IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE ACCESSIBILITY STANDARDS.
15. RETAINING WALLS OVER FOUR FEET IN HEIGHT, MEASURED FROM THE TOP OF THE FOOTING TO THE TOP OF THE WALL, SHALL BE STRUCTURALLY ENGINEERED.
16. ALL GRADING ACTIVITIES WITHIN THE ½ CRITICAL ROOT ZONE OF ALL PRESERVED TREES TO BE PERFORMED BY HAND TOOLS ONLY.
17. THERE ARE NO NATURAL SLOPES EXCEEDING 10% ON THIS SITE.
18. WATER QUALITY FACILITIES AND DETENTION ARE SATISFIED WITH A REGIONAL DETENTION AND WQ POND SD-15-00030.
19. SEE CEDAR PARK FIRE DEPARTMENT'S ARTICLE 5.01 FIRE CODE FOR LOCAL FIRE AMENDMENTS <https://www.cedarparktexas.gov/home/showpublisheddocument/15340/637340419045730000>
20. ENGINEER HAS REVIEWED PLANS PERTAINING TO THE DESIGN OF THE EXISTING DETENTION FACILITIES AND AGREES WITH THEIR DESIGN. PROPOSED DEVELOPMENT DOES NOT ADVERSELY AFFECT ANY DOWNSTREAM PROPERTIES.



BRAD J. CARABAJAL, P.E.

11/19/2024

PREPARED BY



QUIDDITY

JOB NUMBER 28559-0003-01

TEXAS ONE CALL SYSTEM

1-800-245-4545

CALL BEFORE YOU. TEXAS ONE CALL PARTICIPANTS REQUEST 72 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST

[illegible]

BENCHMARK INFORMATION:

CITY OF CEDAR RAPIDS MONUMENT NO. 16 (A 3" BRASS DISK IN CONCRETE)

N 10.142,312.68
E 3.089,223.31
ELEVATION 1004.64

TM# 41:

A SQUARE CUT IN CONCRETE SET BEARS N 33°19'30" W 66.71 FEET TO AN "X" CUT IN CONCRETE SET FOR THE SOUTHEASTERN CORNER OF LOT 4 AND THE NORTHEASTERN CORNER OF THE VIGIL SUBDIVISION

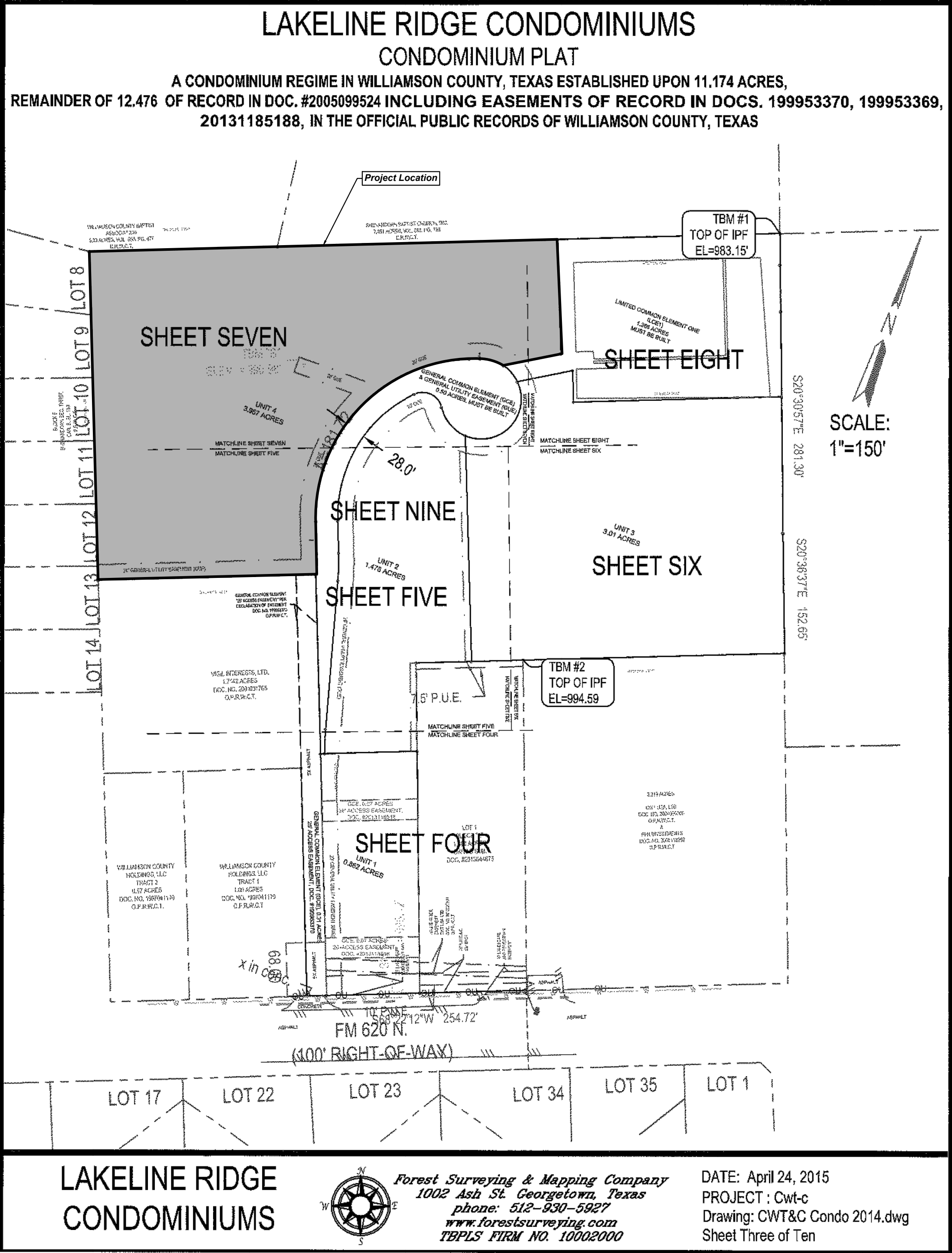
N 10.142,609.17
E 3.090,995.73
ELEVATION 995.93"

TM# 42:

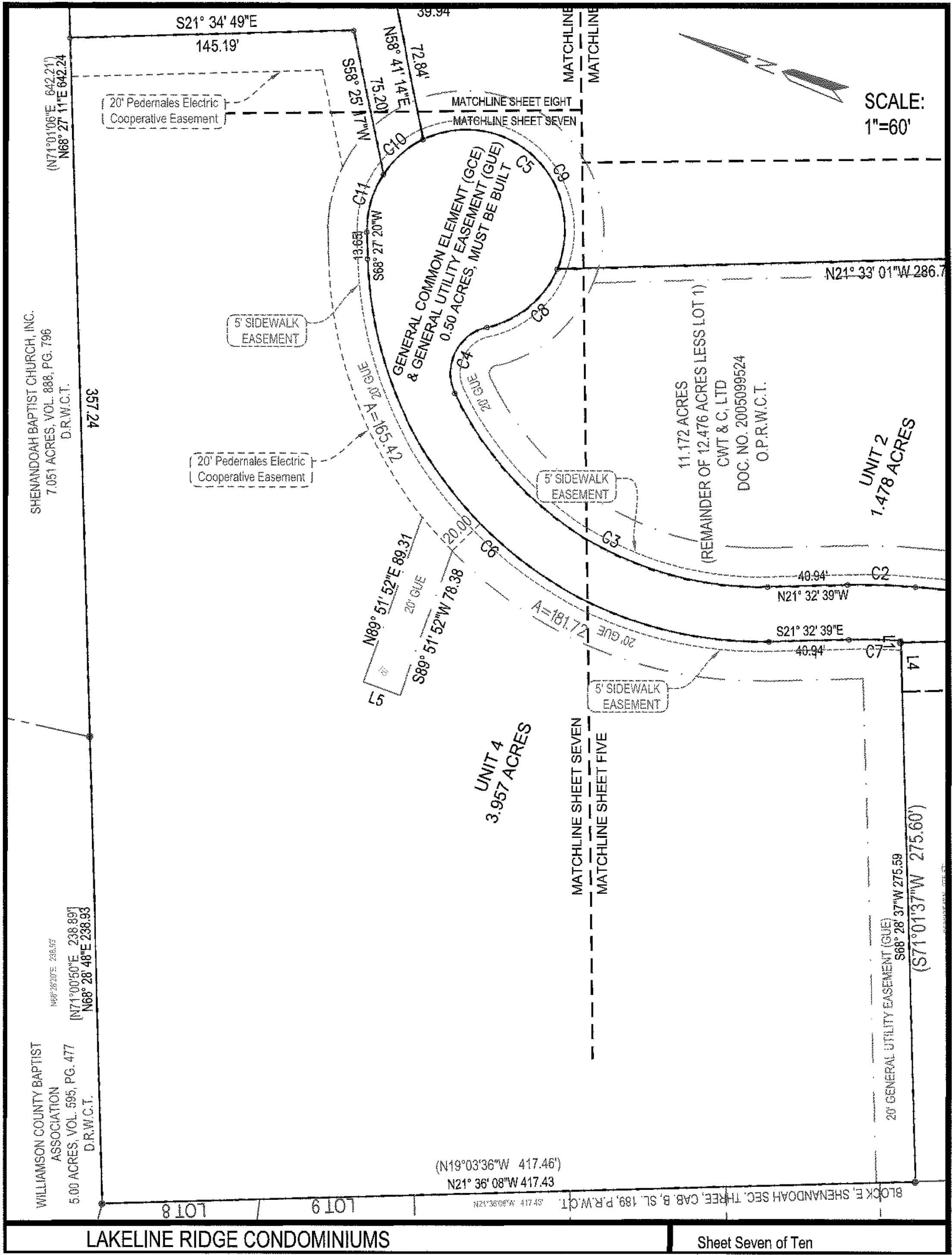
A SQUARE CUT IN CONCRETE SET BEARS N 33°54'31" W 15.74 FEET TO A 1/4" IRON ROD WITH CAP STAMPED "1984" FOUND FOR A SOUTHWEST CORNER OF LIMITED COMMON ELEMENT ONE AND A NORTHWEST CORNER OF UNIT 3.

N 10.142,386.46
E 3.091,053.92
ELEVATION 699.71


ADDITIONAL DATA: BASED ON THE TEXAS COORDINATE SYSTEM, TEXAS COORDINATE ZONE 10N. ALL DISTANCES SHOWN ARE SURFACE AND MAY BE CONVERTED TO GRID BY DIVIDING BY A SURFACE ADJUSTMENT FACTOR OF 1.000118207. ORIGIN 65.000 0.000 14.000



RECORDERS MEMORANDUM
All or parts of this plat on this page
was not clearly legible for satisfactory
recording.



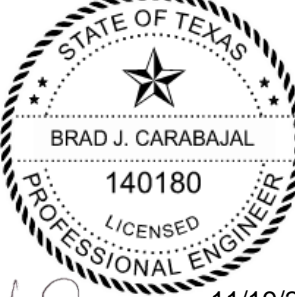
No.	Date	REVISIONS	App.



QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Registration No. 122608 & 139400
3103 North Corporate Boulevard, Suite 100 • Austin, Texas 78741 • 512-471-1905

SCALE: AS SHOWN
DATE: ISS - NOV 2024
JOB NO.: 28559-0003-01

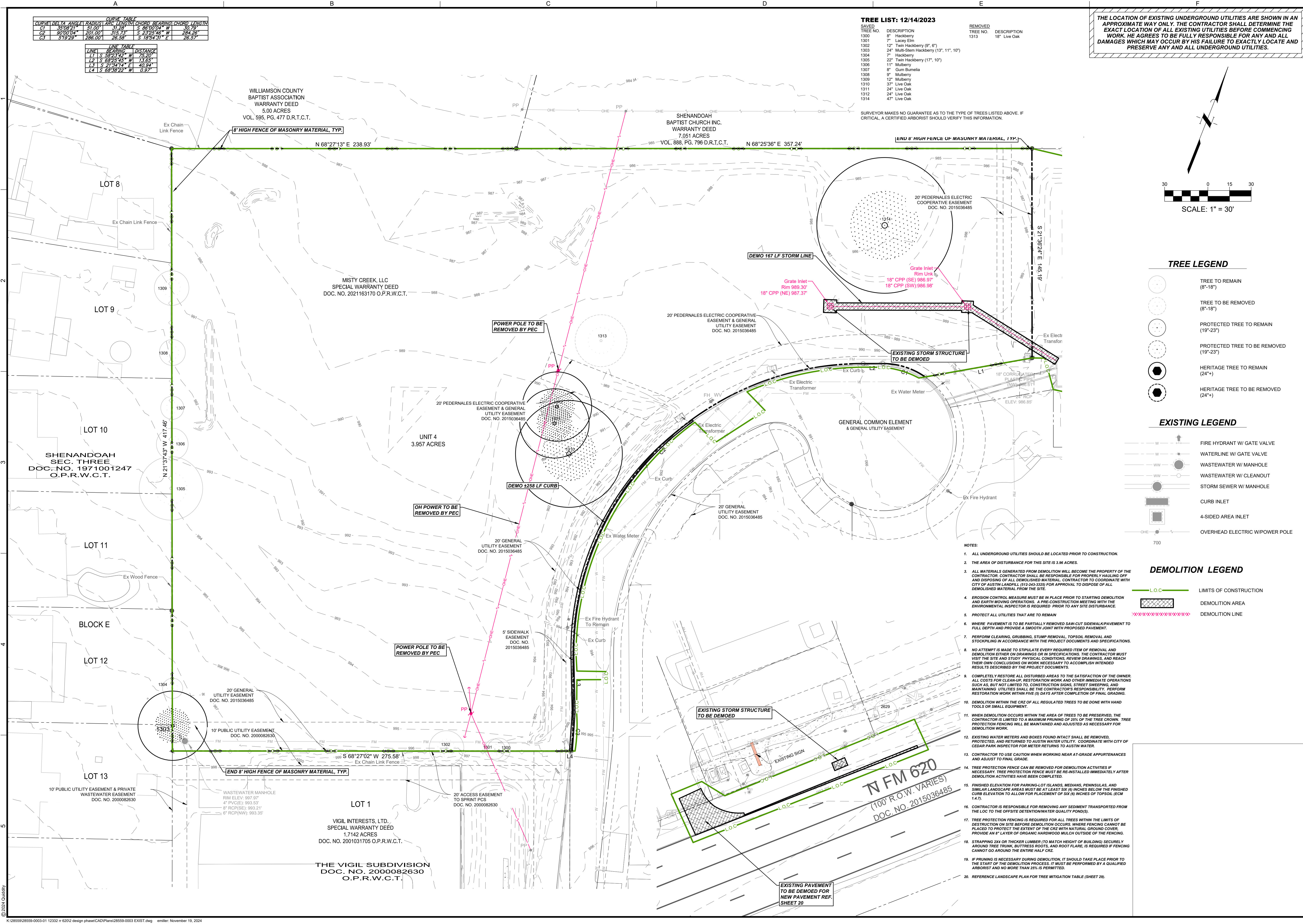
DESIGNED BY: ECM
CHECKED BY: BJC
DRAWN BY: CM



STATE OF TEXAS
BRAD J. CARABAJAL
140180
LICENSED PROFESSIONAL ENGINEER
11/19/2024

FREEHILL DEVELOPMENT COMPANY
FREEHILL RR 620
12332 RR 620, UNIT #4

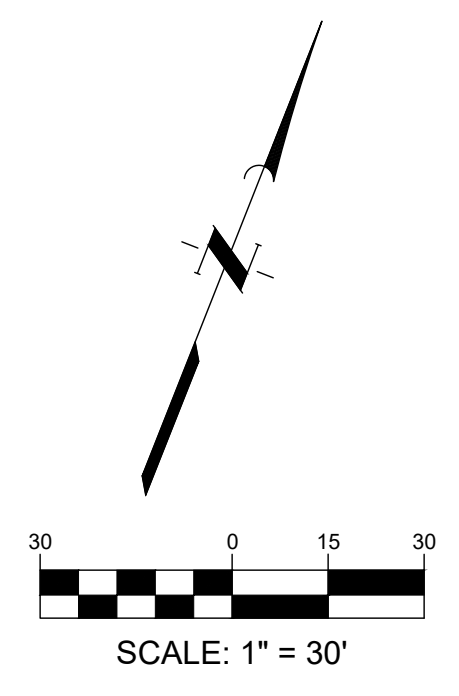
FINAL PLAT



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

TREE LIST: 12/14/2023		
SAVED		REMOVED
TREE NO.	DESCRIPTION	TREE NO.
1300	8" Hackberry	1313
1301	7" Lacey Elm	
1302	12" Twin Hackberry (9", 6")	
1303	24" Multi-Stem Hackberry (13", 11", 10")	
1304	7" Hackberry	
1305	22" Twin Hackberry (17", 10")	
1306	11" Mulberry	
1307	8" Gum Bumelia	
1308	9" Mulberry	
1309	12" Mulberry	
1310	37" Live Oak	
1311	24" Live Oak	
1312	24" Live Oak	
1314	47" Live Oak	

SURVEYOR MAKES NO GUARANTEE AS TO THE TYPE OF TREES LISTED. CRITICAL, A CERTIFIED ARBORIST SHOULD VERIFY THIS INFORMATION.



TREE LEGEND

- TREE TO REMAIN (8"-18")
- TREE TO BE REMOVED (8"-18")
- PROTECTED TREE TO REMAIN (19"-23")
- PROTECTED TREE TO BE REMOVED (19"-23")
- HERITAGE TREE TO REMAIN (24"+)
- HERITAGE TREE TO BE REMOVED (24"+)

EXISTING LEGEND

- FIRE HYDRANT W/ GATE VALVE
- WATERLINE W/ GATE VALVE
- WASTEWATER W/ MANHOLE
- WASTEWATER W/ CLEANOUT
- STORM SEWER W/ MANHOLE
- CURB INLET
- 4-SIDED AREA INLET
- OVERHEAD ELECTRIC WIPOWER POLE

DEMOLITION LEGEND

- LO.C LIMITS OF CONSTRUCTION
- DEMOLITION AREA
- DEMOLITION LINE

- NOTES:
- ALL UNDERGROUND UTILITIES SHOULD BE LOCATED PRIOR TO CONSTRUCTION.
 - THE AREA OF DISTURBANCE FOR THIS SITE IS 3.96 ACRES.
 - ALL MATERIALS GENERATED FROM DEMOLITION WILL BECOME THE PROPERTY OF THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY HAULING OFF AND DISPOSING OF ALL DEMOLISHED MATERIAL. CONTRACTOR TO COORDINATE WITH CITY OF AUSTIN LANDFILL (817-243-3333) FOR APPROVAL TO DISPOSE OF ALL DEMOLISHED MATERIAL FROM THE SITE.
 - EROSION CONTROL MEASURE MUST BE IN PLACE PRIOR TO STARTING DEMOLITION AND EARTH MOVING OPERATIONS. A PRE-CONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
 - PROTECT ALL UTILITIES THAT ARE TO REMAIN
 - WHERE PAVEMENT IS TO BE PARTIALLY REMOVED SAW-CUT SIDEWALK/PAVEMENT TO FULL DEPTH AND PROVIDE A SMOOTH JOINT WITH PROPOSED PAVEMENT.
 - PERFORM CLEANING, GRUBBING, STUMP REMOVAL, TOPSOIL REMOVAL AND STOCKPILING IN ACCORDANCE WITH THE PROJECT DOCUMENTS AND SPECIFICATIONS.
 - NO ATTEMPT IS MADE TO STIPULATE EVERY REQUIRED ITEM OF REMOVAL AND DEMOLITION EITHER ON DRAWINGS OR IN SPECIFICATIONS. THE CONTRACTOR MUST VISIT THE SITE AND STUDY PHYSICAL CONDITIONS, REVIEW DRAWINGS, AND REACH THEIR OWN CONCLUSIONS ON WORK NECESSARY TO ACCOMPLISH INTENDED RESULTS DESCRIBED BY THE PROJECT DOCUMENTS.
 - COMPLETELY RESTORE ALL DISTURBED AREAS TO THE SATISFACTION OF THE OWNER. ALL COSTS FOR CLEAN-UP, RESTORATION WORK AND OTHER IMMEDIATE OPERATIONS SUCH AS, BUT NOT LIMITED TO, CONSTRUCTION SIGNS, STREET SWEEPING, AND MAINTAINING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. PERFORM RESTORATION WORK WITHIN FIVE (5) DAYS AFTER COMPLETION OF FINAL GRADING.
 - DEMOLITION WITHIN THE CRZ OF ALL REGULATED TREES TO BE DONE WITH HAND TOOLS OR SMALL EQUIPMENT.
 - WHEN DEMOLITION OCCURS WITHIN THE AREA OF TREES TO BE PRESERVED, THE CONTRACTOR IS LIMITED TO A MAXIMUM PRUNING OF 25% OF THE TREE CROWN. TREE PROTECTION FENCING WILL BE MAINTAINED AND ADJUSTED AS NECESSARY FOR DEMOLITION WORK.
 - EXISTING WATER METERS AND BOXES FOUND INTACT SHALL BE REMOVED, PROTECTED, AND RETURNED TO AUSTIN WATER UTILITY. COORDINATE WITH CITY OF CEDAR PARK INSPECTOR FOR METER RETURNS TO AUSTIN WATER.
 - CONTRACTOR TO USE CAUTION WHEN WORKING NEAR AT-GRADE APPURTENANCES AND ADJUST TO FINAL GRADE.
 - TREE PROTECTION FENCING IS REQUIRED FOR ALL TREES WITHIN THE LIMITS OF DEMOLITION ON SITE BEFORE DEMOLITION OCCURS. WHERE FENCING CANNOT BE PLACED TO PROTECT THE EXTENT OF THE CRZ WITH NATURAL GROUND COVER, PROVIDE AN 8" LAYER OF ORGANIC HARDWOOD MULCH OUTSIDE OF THE FENCING.
 - FINISHED ELEVATION FOR PARKING-LOT ISLANDS, MEDIANS, PENINSULAS, AND SIMILAR LANDSCAPE AREAS MUST BE AT LEAST SIX (6) INCHES BELOW THE FINISHED CURB ELEVATION TO ALLOW FOR PLACEMENT OF SIX (6) INCHES OF TOPSOIL (EOM 1.4.7).
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION/WATER QUALITY POND(S).
 - TREE PROTECTION FENCING IS REQUIRED FOR ALL TREES WITHIN THE LIMITS OF DEMOLITION ON SITE BEFORE DEMOLITION OCCURS. WHERE FENCING CANNOT BE PLACED TO PROTECT THE EXTENT OF THE CRZ WITH NATURAL GROUND COVER, PROVIDE AN 8" LAYER OF ORGANIC HARDWOOD MULCH OUTSIDE OF THE FENCING.
 - STRAPPING 2X4 OR THICKER LUMBER (TO MATCH HEIGHT OF BUILDING SECURELY AROUND TREE TRUNK, BUTTRESS ROOTS, AND ROOT FLARE, IS REQUIRED IF FENCING CANNOT GO AROUND THE ENTIRE HALF CRZ.
 - IF PRUNING IS NECESSARY DURING DEMOLITION, IT SHOULD TAKE PLACE PRIOR TO THE START OF THE DEMOLITION PROCESS. IT MUST BE PERFORMED BY A QUALIFIED ARBORIST AND NO MORE THAN 25% IS PERMITTED.
 - REFERENCE LANDSCAPE PLAN FOR TREE MITIGATION TABLE (SHEET 20).

App: _____

No. _____

Date _____

REVISIONS

DESIGNED BY: _____

CHECKED BY: _____

DRAWN BY: _____

DATE: _____

JOB NO.: _____

SCALE: _____

DATE: _____

JOB NO.: _____

STATE OF TEXAS

BRAD J. CARABAJAL

140180

PROFESSIONAL ENGINEER

11/19/2024

FREEHILL DEVELOPMENT COMPANY

FREEHILL RR 620

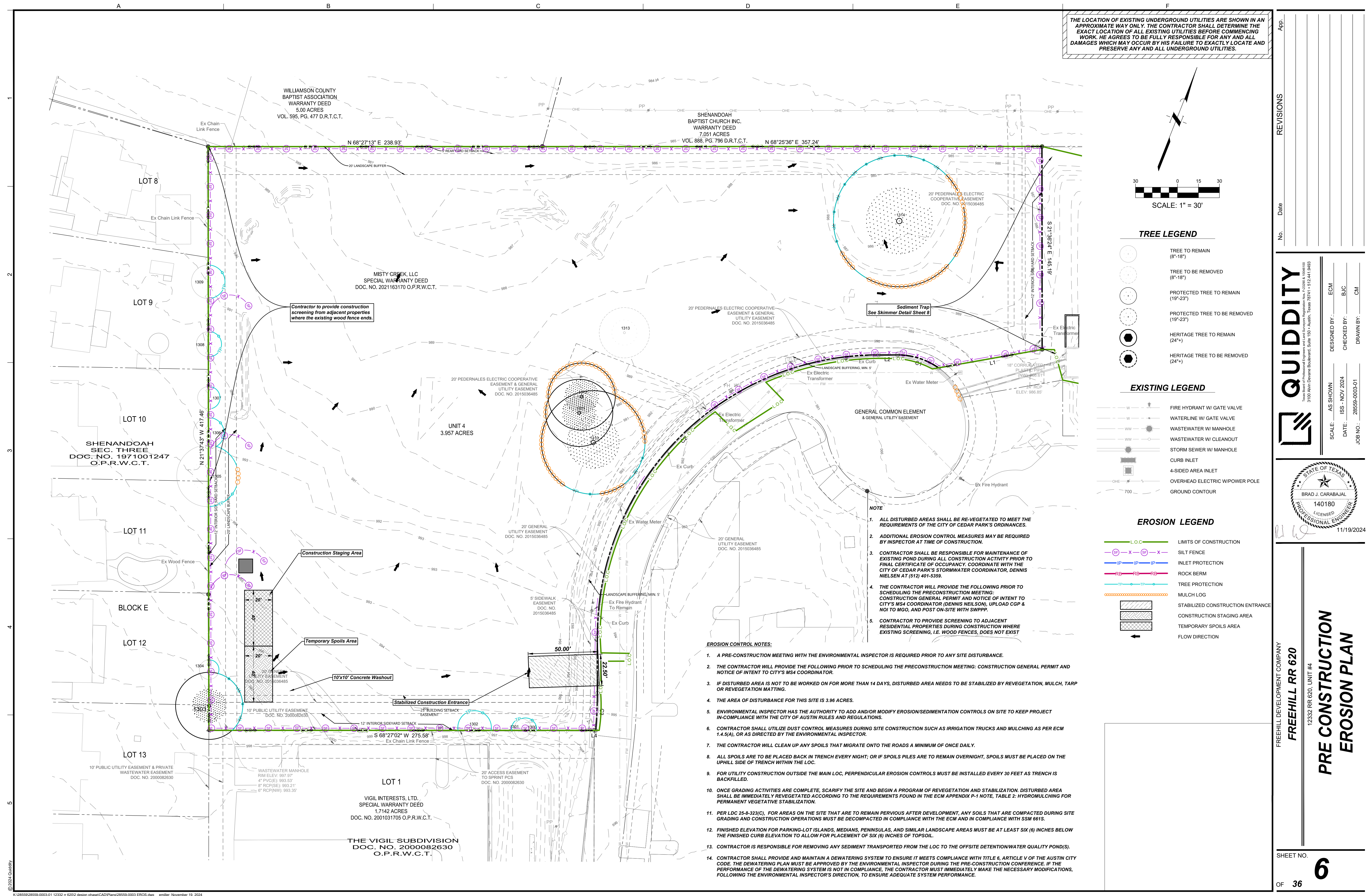
12332 RR 620, UNIT #4

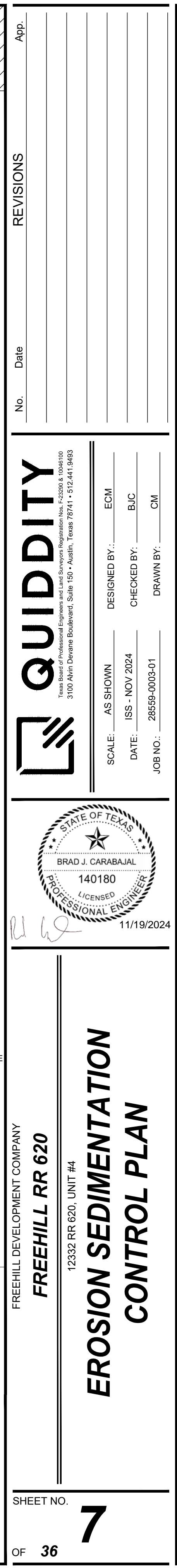
EXISTING CONDITIONS & DEMO PLAN

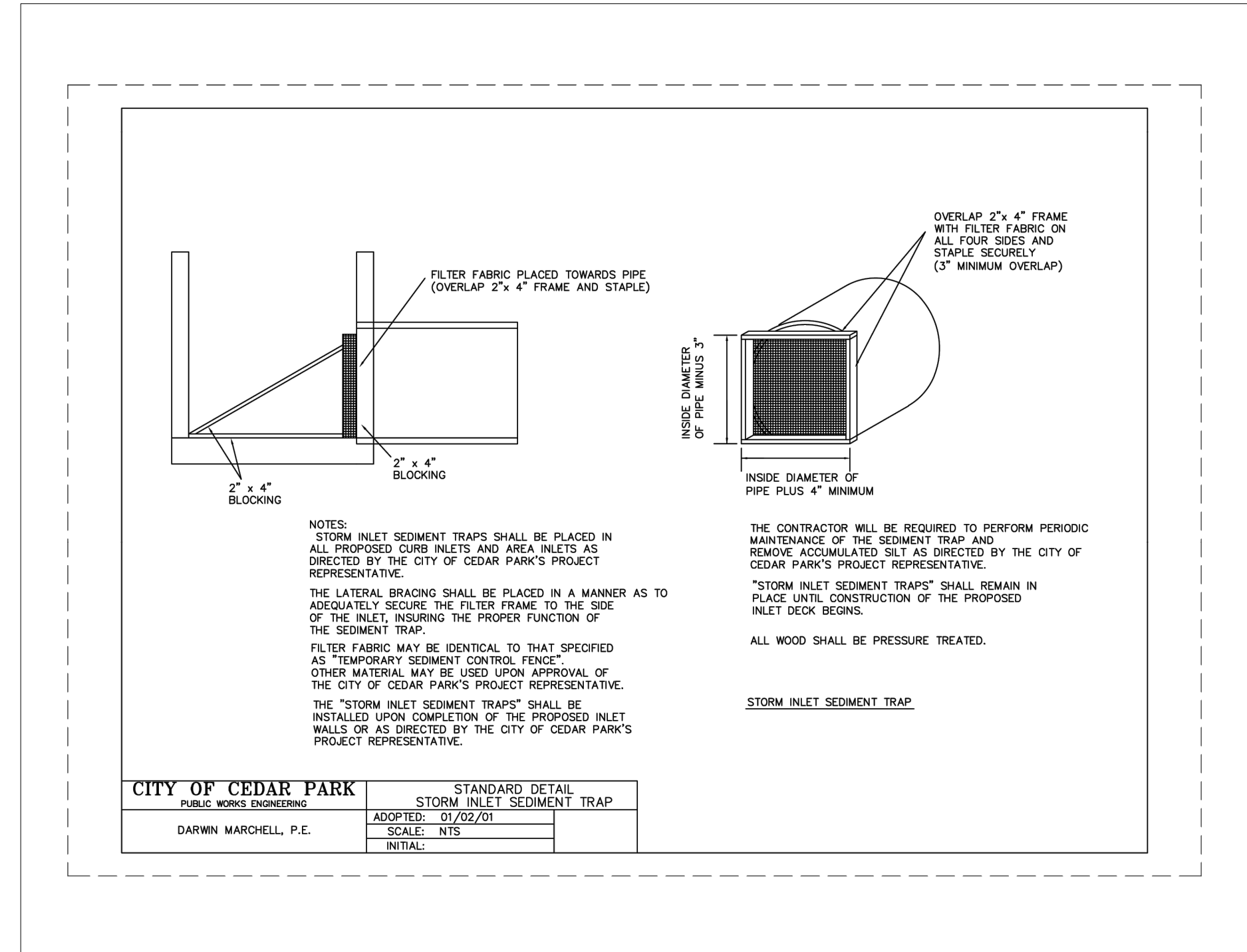
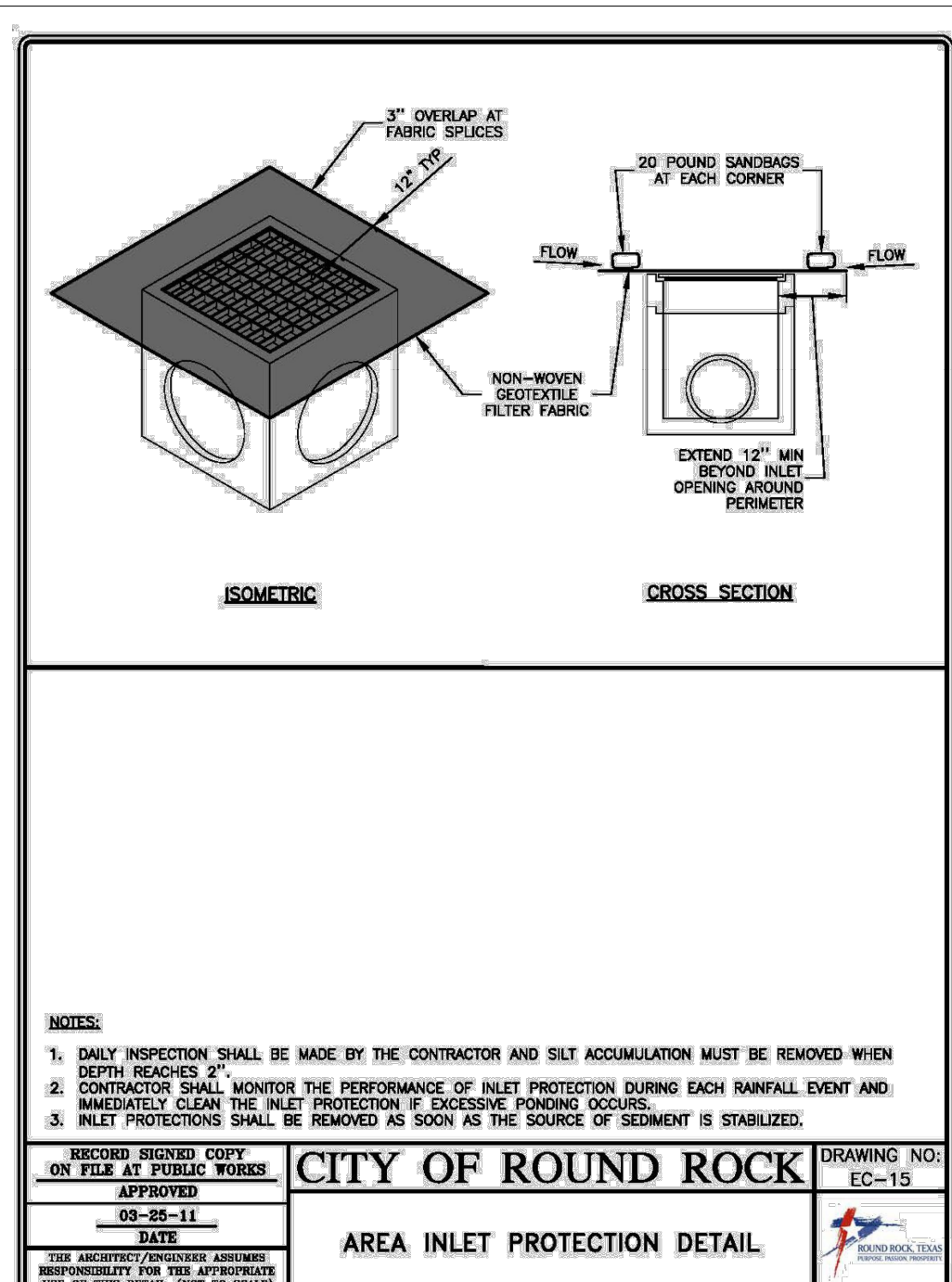
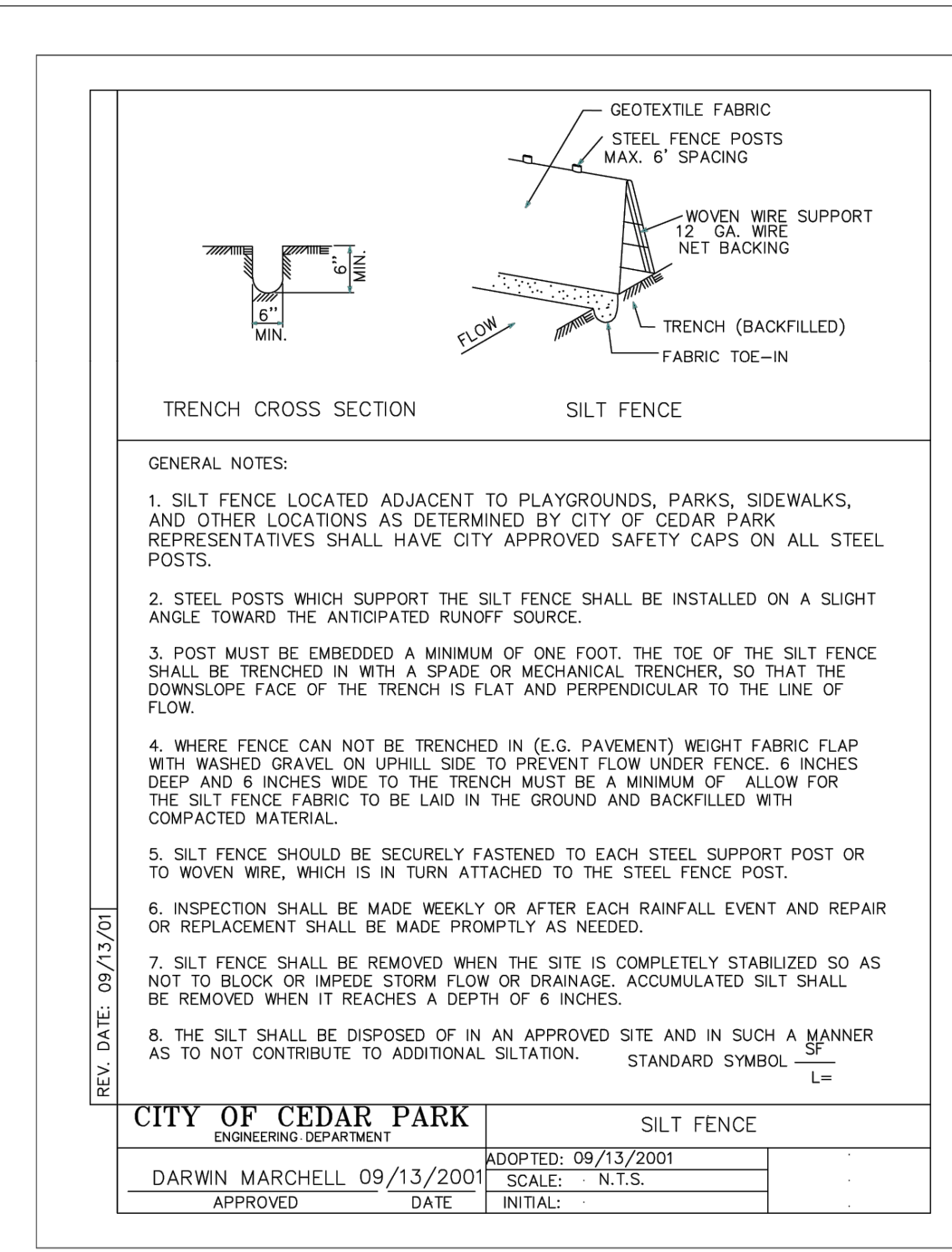
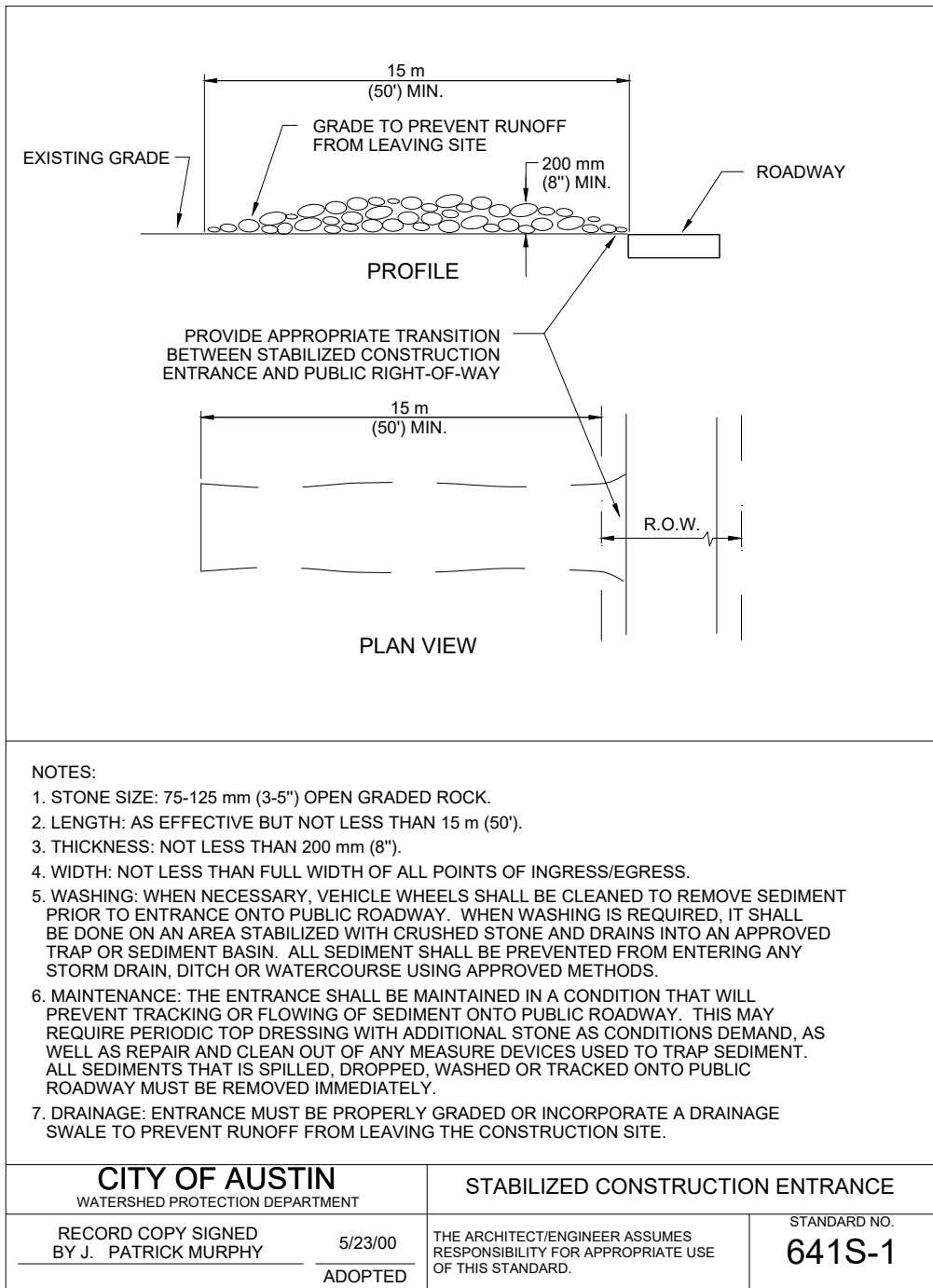
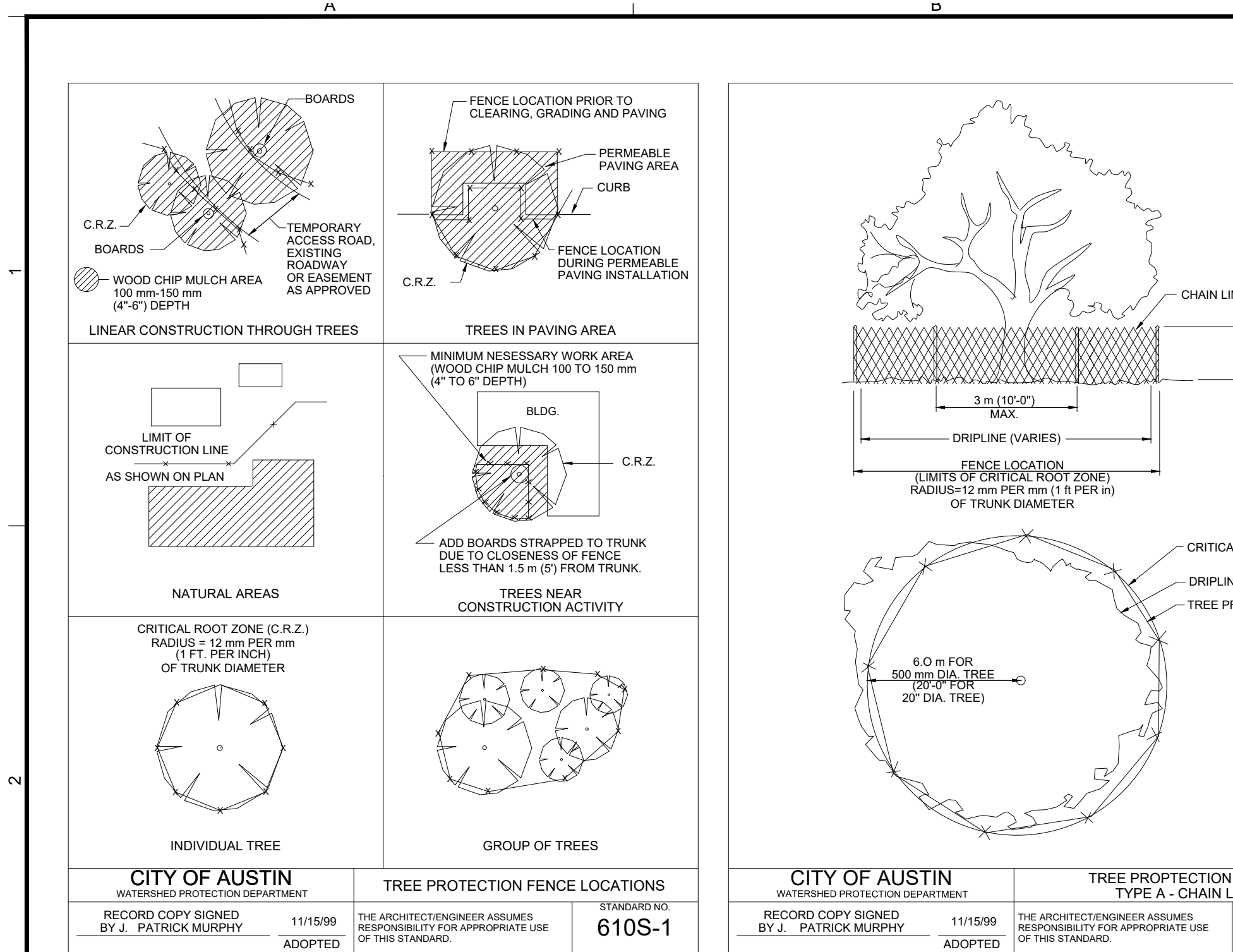
SHEET NO.

5

OF 36

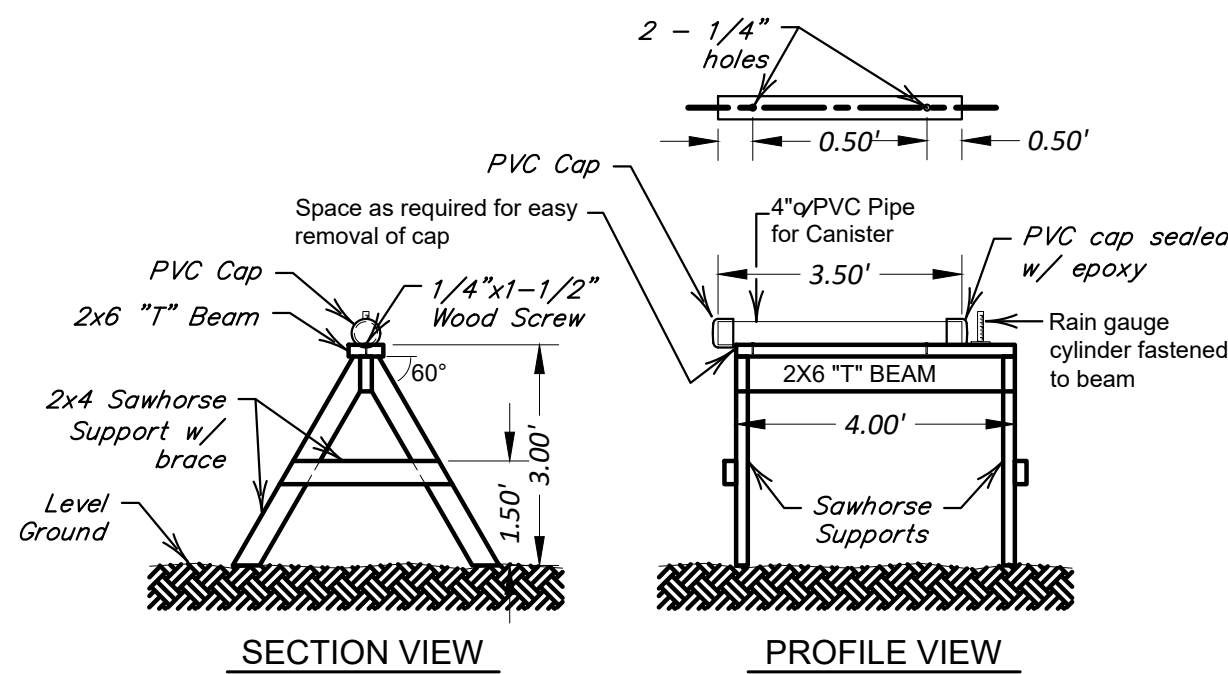






GENERAL S.W.P.P.P. NOTES:

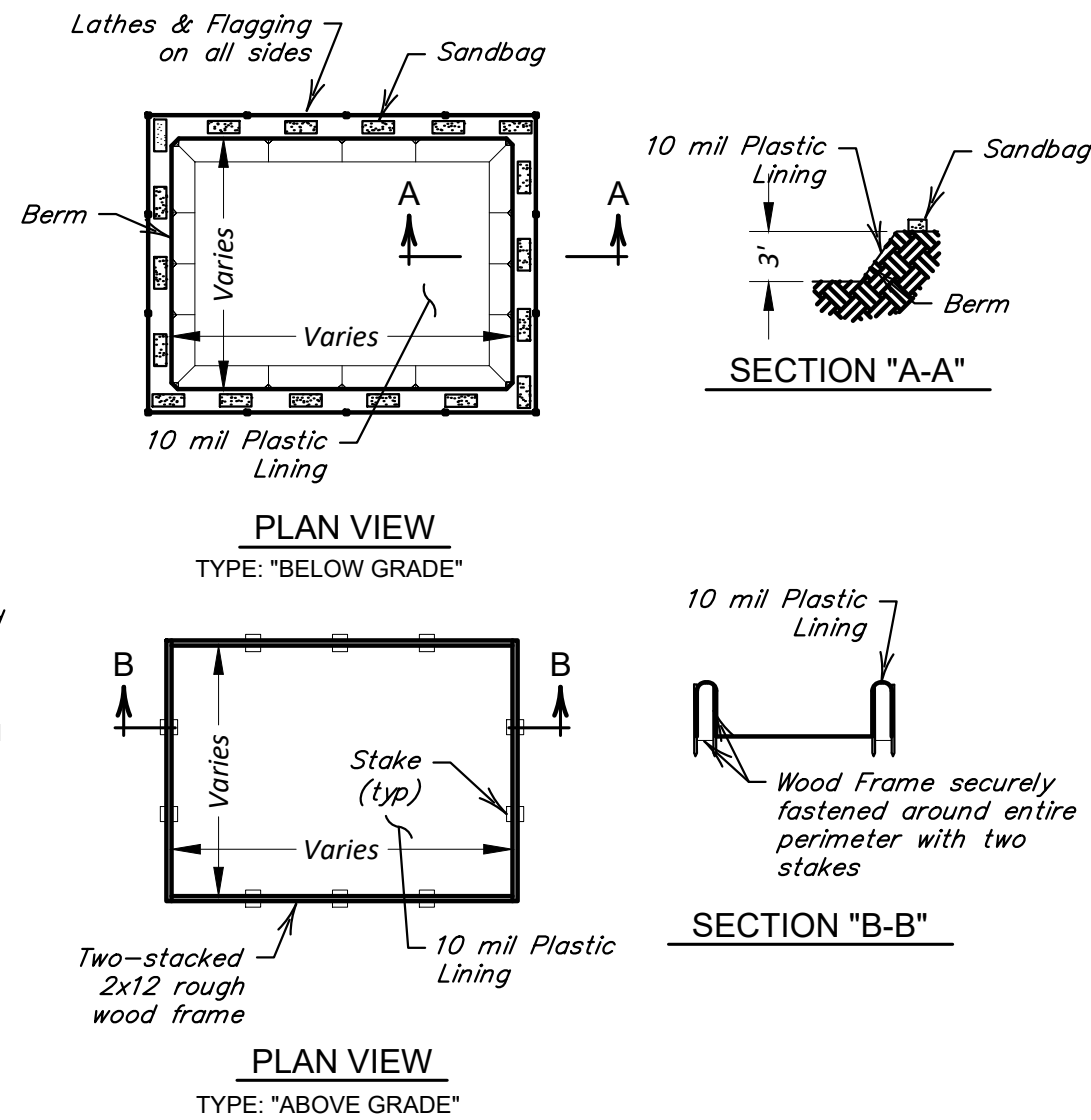
- The location of Erosion and Sedimentation Control facilities are approximate. Contractor may modify, relocate, or add facilities with prior authorization from the Engineer.
- Where a note or detail differs from the official Texas Commission on Environmental Quality (TCEQ) latest edition regulations, the TCEQ note or detail shall apply.



NOTES:

- This canister shall be used to store the complete Storm Water Pollution Prevention Plan (SWPPP) and all other related documents so that they are available on-site for the Inspector.
- The canister shall be located on solid level ground adjacent to the construction entrance and on the opposite side of the Concrete Washout Area.

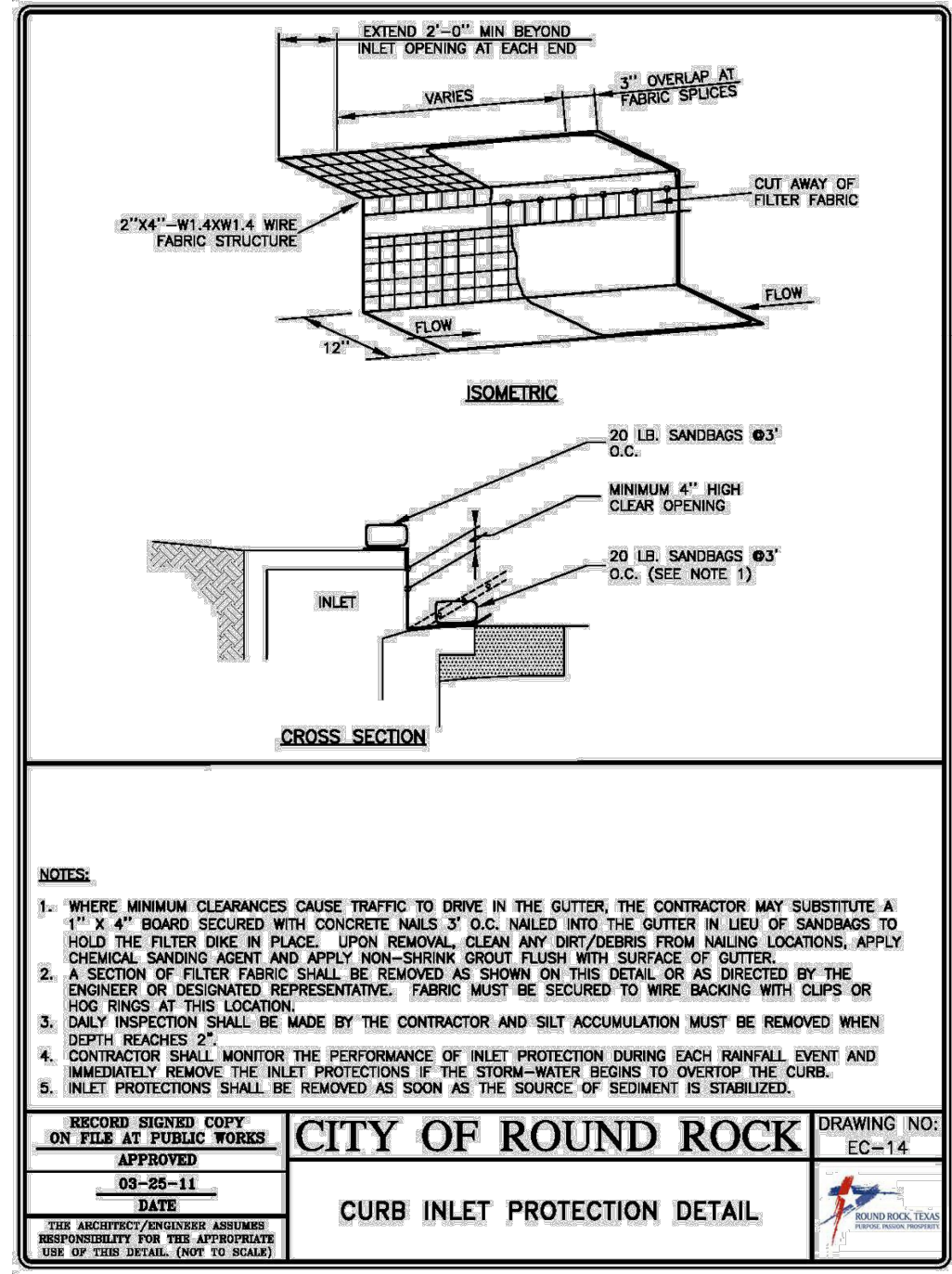
S.W.P.P.P. DOCUMENT CONTAINER
(NTS)



NOTES:

- Actual layout to be determined in the field.
- Temporary concrete washout facility should be constructed with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material. The pit shall be located in an area easily accessible to construction traffic. The pit shall be located at least 50 feet from sensitive features, storm drains, open ditches, or water bodies and protected from storm water runoff.
- When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. All materials used to construct the temporary facility should be removed from the site and disposed of. Holes, depressions or other ground disturbance caused by the removal of the temporary facilities should be backfilled and repaired.
- Excess concrete shall not be disposed of within the pit.

CONCRETE WASHOUT AREA
(NTS)



App.	
Revisions	
No.	Date

QUIDDITY
11000 Quiddity Lane, Suite 100 • Austin, Texas 78741 • 512.441.9483

DESIGNED BY: ECM
CHECKED BY: BJC
DRAWN BY: CM

SCALE: AS SHOWN
DATE: ISS - NOV 2024
JOB NO.: 28559-0003-01

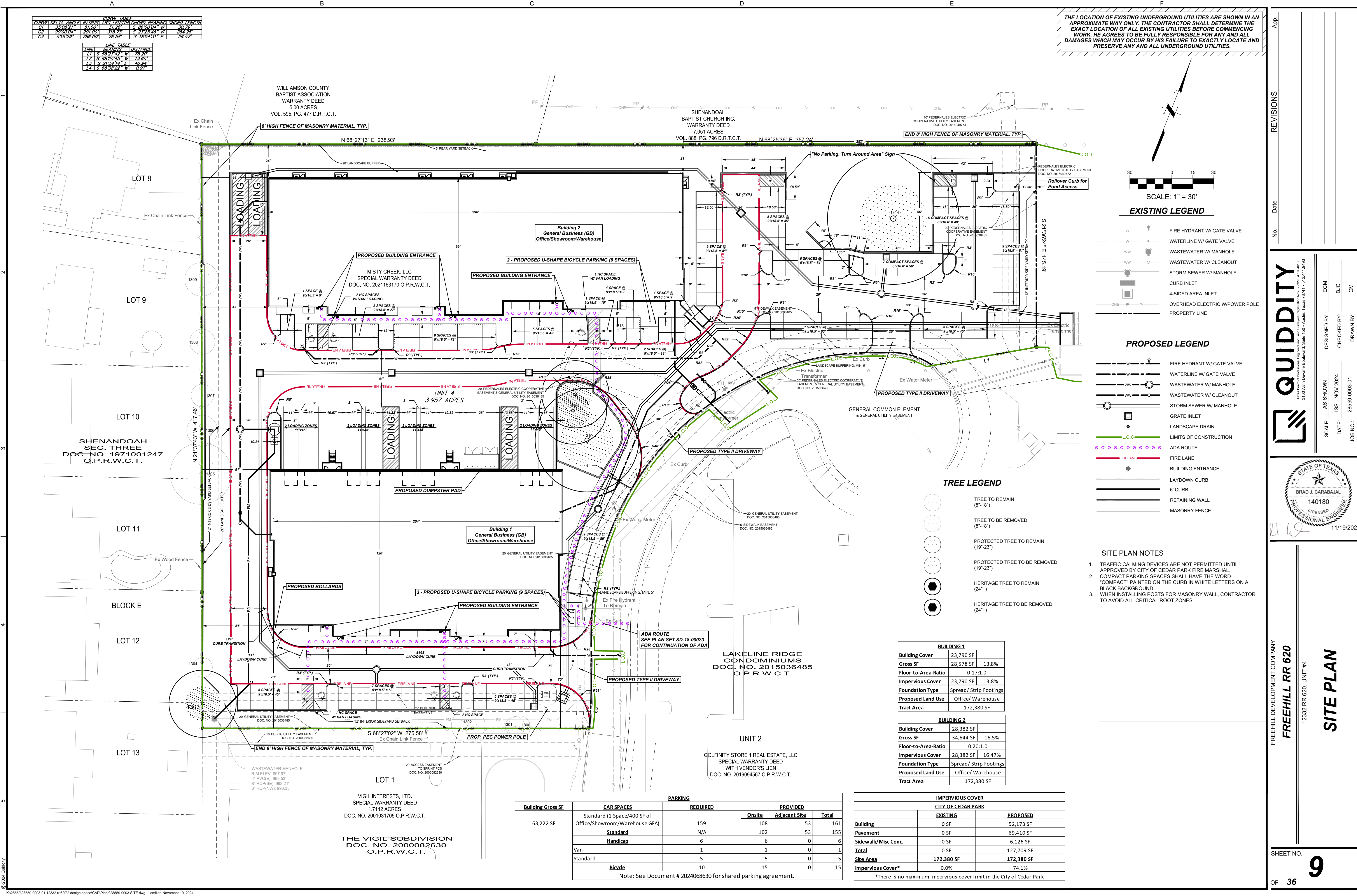
STATE OF TEXAS
BRAD J. CARABAJAL
140180
PROFESSIONAL ENGINEER
11/19/2024

FREEHILL DEVELOPMENT COMPANY
FREEHILL RR 620
12332 RR 620, UNIT #4

EROSION CONTROL DETAILS

SHEET NO. **8**

OF 36



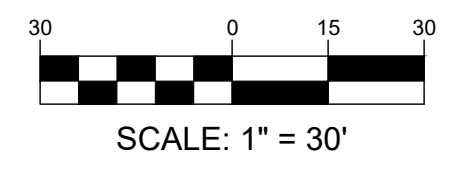
CURVE TABLE

CURVE DATA	ANGLE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	35.08°	51.00'	31.26'	S 66°00'04" W	30.79'
C2	90°00'04"	201.00'	316.74'	S 23°25'46" W	284.26'
C3	57°22'22"	296.00'	26.58'	S 18°54'31" E	26.57'

LINK TABLE

LINE	BEARING	DISTANCE
L1	S 59°14'42" W	75.20'
L2	S 69°25'46" W	13.65'
L3	S 21°34'14" E	40.94'
L4	S 68°38'22" W	0.97'

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



SCALE: 1" = 30'

- EXISTING LEGEND**
- W FIRE HYDRANT W/ GATE VALVE
 - W WATERLINE W/ GATE VALVE
 - WW WASTEWATER W/ MANHOLE
 - WW WASTEWATER W/ CLEANOUT
 - SS STORM SEWER W/ MANHOLE
 - CI CURB INLET
 - AI 4-SIDED AREA INLET
 - OHE OVERHEAD ELECTRIC W/POWER POLE
 - PL PROPERTY LINE

- PROPOSED LEGEND**
- W FIRE HYDRANT W/ GATE VALVE
 - W WATERLINE W/ GATE VALVE
 - WW WASTEWATER W/ MANHOLE
 - WW WASTEWATER W/ CLEANOUT
 - SS STORM SEWER W/ MANHOLE
 - GI GRATE INLET
 - LD LANDSCAPE DRAIN
 - L.O.C. LIMITS OF CONSTRUCTION
 - ADA ROUTE
 - FIRE LANE
 - BUILDING ENTRANCE
 - LAYDOWN CURB
 - 6" CURB
 - RETAINING WALL
 - MASONRY FENCE

TREE LEGEND

- TREE TO REMAIN (8"-18")
- TREE TO BE REMOVED (8"-18")
- PROTECTED TREE TO REMAIN (19"-23")
- PROTECTED TREE TO BE REMOVED (19"-23")
- HERITAGE TREE TO REMAIN (24"+)
- HERITAGE TREE TO BE REMOVED (24"+)

SITE PLAN NOTES

- TRAFFIC CALMING DEVICES ARE NOT PERMITTED UNTIL APPROVED BY CITY OF CEDAR PARK FIRE MARSHAL.
- COMPACT PARKING SPACES SHALL HAVE THE WORD "COMPACT" PAINTED ON THE CURB IN WHITE LETTERS ON A BLACK BACKGROUND.
- WHEN INSTALLING POSTS FOR MASONRY WALL, CONTRACTOR TO AVOID ALL CRITICAL ROOT ZONES.

BUILDING 1

Building Cover	23,790 SF	
Gross SF	28,578 SF	13.8%
Floor-to-Area-Ratio	0.17:1.0	
Impervious Cover	23,790 SF	13.8%
Foundation Type	Spread/ Strip Footings	
Proposed Land Use	Office/ Warehouse	
Tract Area	172,380 SF	

BUILDING 2

Building Cover	28,382 SF	
Gross SF	34,644 SF	16.5%
Floor-to-Area-Ratio	0.20:1.0	
Impervious Cover	28,382 SF	16.47%
Foundation Type	Spread/ Strip Footings	
Proposed Land Use	Office/ Warehouse	
Tract Area	172,380 SF	

PARKING					
Building Gross SF	CAR SPACES	REQUIRED	PROVIDED		
			Onsite	Adjacent Site	Total
63,222 SF	Standard (1 Space/400 SF of Office/Showroom/Warehouse GFA)	159	108	53	161
	Standard	N/A	102	53	155
	Handicap	6	6	0	6
	Van	1	1	0	1
	Standard	5	5	0	5
	Bicycle	10	15	0	15
	Note: See Document # 2024068630 for shared parking agreement.				

IMPERVIOUS COVER

	CITY OF CEDAR PARK	
	EXISTING	PROPOSED
Building	0 SF	52,173 SF
Pavement	0 SF	69,410 SF
Sidewalk/Misc Conc.	0 SF	6,126 SF
Total	0 SF	127,709 SF
Site Area	172,380 SF	172,380 SF
Impervious Cover*	0.0%	74.1%

*There is no maximum impervious cover limit in the City of Cedar Park

App. _____

REVISIONS

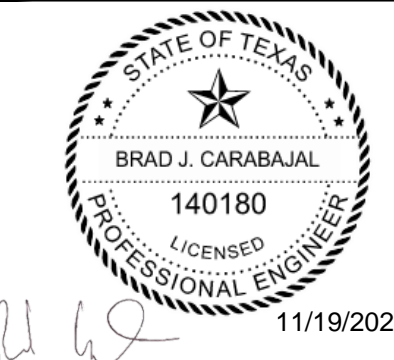
No.	Date	

QUIDDITY

1305 North Corporate Boulevard, Suite 100 Austin, Texas 78741 • 512.471.5905

DESIGNED BY: ECM
CHECKED BY: BJC
DRAWN BY: CM

SCALE: AS SHOWN
DATE: ISS - NOV 2024
JOB NO.: 28569-0003-01



FREEHILL DEVELOPMENT COMPANY

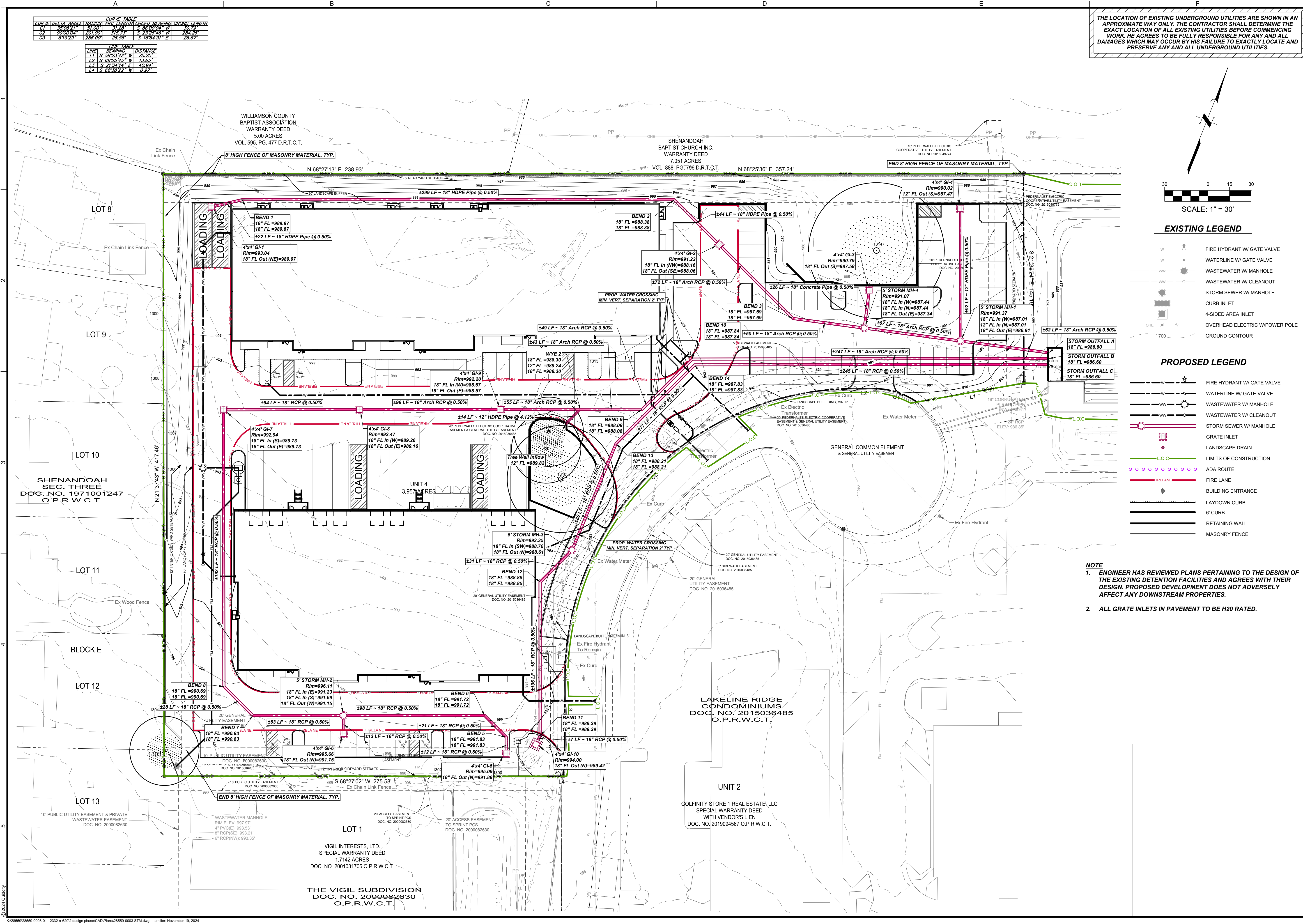
FREEHILL RR 620

12332 RR 620, UNIT #4

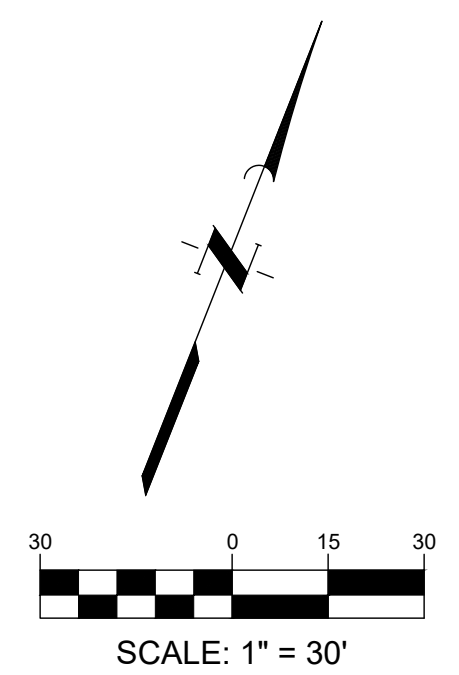
SITE PLAN

SHEET NO. **9**

OF 36



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



EXISTING LEGEND

- W FIRE HYDRANT W/ GATE VALVE
- WW WATERLINE W/ GATE VALVE
- WW WASTEWATER W/ MANHOLE
- WW WASTEWATER W/ CLEANOUT
- SW STORM SEWER W/ MANHOLE
- CI CURB INLET
- 4-SIDED AREA INLET
- OHE OVERHEAD ELECTRIC W/POWER POLE
- 700 GROUND CONTOUR

PROPOSED LEGEND

- W FIRE HYDRANT W/ GATE VALVE
- WW WATERLINE W/ GATE VALVE
- WW WASTEWATER W/ MANHOLE
- WW WASTEWATER W/ CLEANOUT
- SW STORM SEWER W/ MANHOLE
- GI GRATE INLET
- LD LANDSCAPE DRAIN
- L.O.C. LIMITS OF CONSTRUCTION
- ADA ROUTE
- FI FIRE LANE
- BE BUILDING ENTRANCE
- LC LAYDOWN CURB
- 6" CURB
- RE RETAINING WALL
- MF MASONRY FENCE

NOTE
1. ENGINEER HAS REVIEWED PLANS PERTAINING TO THE DESIGN OF THE EXISTING DETENTION FACILITIES AND AGREES WITH THEIR DESIGN. PROPOSED DEVELOPMENT DOES NOT ADVERSELY AFFECT ANY DOWNSTREAM PROPERTIES.
2. ALL GRATE INLETS IN PAVEMENT TO BE H20 RATED.

REVISIONS	No.	Date	App.

Quiddity
10000 Board of Professional Engineers and Land Surveyors Registration No. 122265 & 129400
3105 North Central Expressway, Suite 1200, Austin, Texas 78741-1101

SCALE: AS SHOWN
DATE: ISS - NOV 2024
JOB NO.: 28559-0003-01

DESIGNED BY: ECM
CHECKED BY: BJC
DRAWN BY: CM

BRAD J. CARABAJAL
140180
PROFESSIONAL ENGINEER
11/19/2024

FREEHILL RR 620 UNIT #4

12332 RR 620, UNIT #4

STORM DRAINAGE PLANS

SHEET NO. 10

OF 36

1
2
3
4
5

© 2024 Quiddity

SEWER 25 yr

25-yr Intensity = a/((t+b)^c)	
a ₂₅ =	70.71
b ₂₅ =	8.12
c ₂₅ =	0.7071

Trunk Line Design

*** Indicates an inlet lateral connection with unique formula for junction loss.

Drainage Area	Inlet / MH From	Inlet / MH To	Area (acres)	Total Area (acres)	Time Conc. (min)	Runoff "C"	C (Weighted)	Intensity "I" (in/hr)	Q ₂₅ (cfs)	Mannings "n"	Length (ft.)	Pipe Diam. or Box Rise (in.)	Grade (ft./ft.)	Full Flow Velocity (fps)	Full Flow Capacity (cfs)	Actual Velocity (out)	Hydraulic Gradient (ft/ft)	K (Constant)	Junction/ MH Loss (feet)	Hydraulic Grade Elevation (ft)	Dwnstm Flowline (ft)	Vert Adj (ft)	Upstrm Flowline (ft)	Rise in Pipe (ft)	Pipe Crown (ft)	Top of MH/Inlet Elevation (ft)
A-1	GI-1	Bend 1	0.06	0.06	5.00	0.88	0.88	11.45	0.65	0.01	22.0	18	0.0050	5.46	9.66	0.37	0.0000	0.15	0.0003	991.47	989.87	0.00	989.97	0.11	991.47	992.42
	Bend 1	WYE XX	0.00	0.06	5.07	0.00	0.88	11.41	0.65	0.01	150.0	18	0.0050	5.46	9.66	0.37	0.0000	0.1	0.0002	991.37	989.12	0.00	989.87	0.75	991.37	992.01
A-2	RD-2	WYE XX	0.65	0.65	5.00	0.88	0.88	11.45	6.50	0.01	10.0	18	0.0050	5.46	9.66	3.68	0.0022	0.35	0.0736	990.76	989.12	0.00	989.22	0.05	990.72	991.00
	Wye XX	Bend 2	0.00	0.71	5.52	0.00	0.88	11.14	6.96	0.01	150.0	18	0.0050	5.46	9.66	3.94	0.0026	0.35	0.0843	990.66	988.38	0.00	989.12	0.75	990.62	991.00
	Bend 2	GI-2	0.00	0.71	5.98	0.00	0.88	10.88	6.80	0.01	44.0	18	0.0050	5.46	9.66	3.85	0.0025	0.1	0.0230	990.19	988.16	0.00	988.38	0.22	989.88	990.51
A-3	GI-2	Bend 3	0.13	0.84	6.12	0.88	0.88	10.81	8.01	0.01	72.0	24	0.0050	6.62	20.79	2.55	0.0007	0.35	0.0354	990.06	987.69	0.00	988.06	0.36	990.06	990.66
	Bend 3	MH-4	0.00	0.84	6.30	0.00	0.88	10.72	7.94	0.01	62.0	24	0.0050	6.62	20.79	2.53	0.0007	0.1	0.0099	989.69	987.44	0.00	987.69	0.31	989.69	991.31
A-4	GI-3	MH-4	0.37	0.37	5.00	0.83	0.83	11.45	3.50	0.01	17.0	18	0.0050	5.46	9.66	1.98	0.0007	0.35	0.0213	989.31	987.35	0.00	987.44	0.09	988.94	990.64
	MH-4	MH-1	0.00	1.21	6.45	0.00	0.87	10.63	11.13	0.01	55.0	24	0.0050	6.62	20.79	3.54	0.0014	0.1	0.0195	989.28	987.00	0.00	987.28	0.28	989.28	991.05
A-5	GI-4	MH-1	0.11	0.11	5.00	0.86	0.86	11.45	1.11	0.01	92.0	12	0.0050	4.17	3.27	1.41	0.0006	0.35	0.0108	989.07	987.01	0.00	987.47	0.46	988.47	990.01
	MH-1	Outfall A	0.00	1.32	6.59	0.00	0.87	10.56	12.08	0.01	62.0	24	0.0050	6.62	20.79	3.84	0.0017	0.1	0.0230	989.01	986.60	0.00	987.01	0.31	989.01	991.37
	Outfall A		1.32								18									988.10	986.60	0.00	986.60	0.00	988.10	991.37
B-1	GI-5	Bend 5	0.07	0.07	5.00	0.81	0.81	11.45	0.63	0.01	12.0	18	0.0050	5.46	9.66	0.35	0.0000	0.35	0.0007	993.38	991.83	0.00	991.88	0.06	993.38	995.09
	Bend 5	Bend 6	0.00	0.07	5.04	0.00	0.81	11.43	0.63	0.01	21.0	18	0.0050	5.46	9.66	0.35	0.0000	0.35	0.0007	993.33	991.72	0.00	991.83	0.11	993.33	995.46
	Bend 6	MH-2	0.00	0.07	5.10	0.00	0.81	11.39	0.62	0.01	98.0	18	0.0050	5.46	9.66	0.35	0.0000	0.1	0.0002	993.22	991.23	0.00	991.72	0.49	993.22	996.11
B-2	GI-6	MH-2	0.24	0.24	5.00	0.79	0.79	11.45	2.19	0.01	13.0	18	0.0050	5.46	9.66	1.24	0.0003	1	0.0238	993.25	991.69	0.00	991.75	0.07	993.25	995.46
	MH-2	Bend 7	0.00	0.31	5.40	0.00	0.79	11.21	2.76	0.01	63.0	18	0.0050	5.46	9.66	1.56	0.0004	0.35	0.0132	992.65	990.83	0.00	991.15	0.32	992.65	995.99
	Bend 7	Bend 8	0.00	0.31	5.59	0.00	0.79	11.10	2.73	0.01	28.0	18	0.0050	5.46	9.66	1.54	0.0004	0.35	0.0130	992.33	990.69	0.00	990.83	0.14	992.33	996.16
	Bend 8	GI-7	0.00	0.31	5.68	0.00	0.79	11.05	2.72	0.01	192.0	18	0.0050	5.46	9.66	1.54	0.0004	1	0.0367	992.19	989.73	0.00	990.69	0.96	992.19	996.08
B-3	GI-7	GI-8	0.46	0.77	6.26	0.83	0.82	10.73	6.78	0.01	94.0	18	0.0050	5.46	9.66	3.83	0.0024	0.1	0.0228	991.41	989.26	0.00	989.73	0.47	991.23	992.94
B-4	GI-8	GI-9	0.52	1.29	6.55	0.86	0.83	10.59	11.38	0.01	98.0	24	0.0050	6.62	20.79	3.62	0.0015	0.1	0.0204	991.16	988.67	0.00	989.16	0.49	991.16	992.47
B-5	GI-9	Wye 2	0.41	1.70	6.80	0.86	0.84	10.46	14.91	0.01	55.0	24	0.0050	6.62	20.79	4.75	0.0025	0.1	0.0350	990.57	988.30	0.00	988.57	0.28	990.57	992.20
B-6	TW 1	Wye 2	0.06	0.06	5.00	0.42	0.42	11.45	0.28	0.01	14.0	12	0.0050	4.17	3.27	0.36	0.0000	0.35	0.0007	990.82	989.24	0.00	989.82	0.07	990.82	992.65
	Wye 2	Bend 9	0.00	1.76	6.93	0.00	0.83	10.39	15.07	0.01	43.0	24	0.0050	6.62	20.79	4.80	0.0026	0.35	0.1250	990.33	988.08	0.00	988.30	0.22	990.30	992.42
	Bend 9	Bend 10	0.00	1.76	7.04	0.00	0.83	10.34	14.99	0.01	49.0	24	0.0050	6.62	20.79	4.77	0.0026	0.35	0.1238	990.09	987.84	0.00	988.08	0.25	990.08	992.20
	Bend 10	Outfall B	0.00	1.76	7.17	0.00	0.83	10.28	14.91	0.01	247.0	24	0.0050	6.62	20.79	4.74	0.0025	0.1	0.0350	989.84	986.60	0.00	987.84	1.24	989.84	992.11
	Outfall B		1.76								24									988.60	986.60	0.00	986.60	0.00	988.60	992.11
C-1	C-1	GI-10	0.05	0.05	5.00	0.74	0.74	11.45	0.41	0.01	0.0	18	0.0050	5.46	9.66	0.23	0.0000	0.35	0.0003	991.34	904.22	0.00	904.42	0.00	905.92	
Offsite	Offsite	GI-10							9.00	0.01	0.0	18	0.0050	5.46	9.66	5.09	0.0043	0.35	0.1410	991.48	904.22	0.00	904.42	0.00	905.92	
	GI-10	Bend 11	0.00	0.05	5.00	0.00	0.74	11.45	9.41	0.01	7.0	18	0.0050	5.46	9.66	5.32	0.0047	0.35	0.1540	991.34	989.39	0.00	989.42	0.04	990.92	994.00
	Bend 11	Bend 12	0.00	0.05	5.02	0.00	0.74	11.44	9.41	0.01	106.0	18	0.0050	5.46	9.66	5.32	0.0047	0.35	0.1540	991.15	988.85	0.00	989.39	0.53	990.89	995.01
	Bend 12	MH-3	0.00	0.05	5.34	0.00	0.74	11.25	9.40	0.01	31.0	18	0.0050	5.46	9.66	5.32	0.0047	0.15	0.0659	990.50	988.70	0.00	988.85	0.16	990.35	994.31
	MH-3	Bend 13	0.00	0.05	5.44	0.00	0.74	11.19	9.40	0.01	80.0	18	0.0050	5.46	9.66	5.32	0.0047	0.15	0.0659	990.29	988.21	0.00	988.61	0.40	990.11	993.35
	Bend 13	Bend 14	0.00	0.05	5.68	0.00	0.74	11.05	9.39	0.01	77.0	18	0.0050	5.46	9.66	5.31	0.0047	0.35	0.1535	989.84	987.83	0.00	988.21	0.39	989.71	992.51
	Bend 14	Outfall C	0.00	0.05	5.92	0.00	0.74	10.92	9.39	0.01	245.0	18	0.0050	5.46	9.66	5.31	0.0047	0.1	0.0438	989.33	986.60	0.00	987.83	1.23	989.33	992.09
	Outfall C		0.05								18									988.10	986.60	0.00	986.60	0.00	988.10	

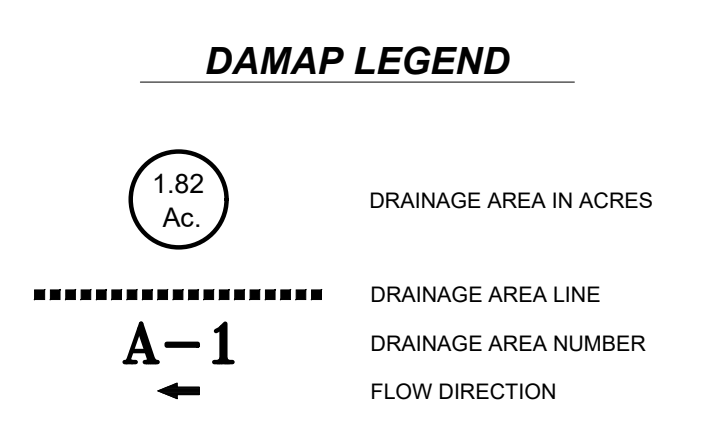
SEWER 100 yr

100-yr Intensity = a/((t+b)^c)	
a ₁₀₀ =	84.57
b ₁₀₀ =	7.47
c ₁₀₀ =	0.679

Trunk Line Design

*** Indicates an inlet lateral connection with unique formula for junction loss.

Drainage Area	Inlet / MH From	Inlet / MH To	Area (acres)	Total Area (acres)	Time Conc. (min)	Time Conc. + Pipe (min)	Runoff "C"	Total Area x "C"	C (Weighted)	Intensity "I" (in/hr)	Q ₁₀₀ (cfs)	Mannings "n"	Length (ft.)	Pipe Diam. or Box Rise (in.)	Grade (ft./ft.)	Full Flow Velocity (fps)	Full Flow Capacity (cfs)	Actual Velocity (out)	Hydraulic Gradient (ft/ft)	K (Constant)	Junction/ MH Loss (feet)	Hydraulic Grade Elevation (ft)	Dwnstm Flowline (ft)	Vert Adj (ft)	Upstrm Flowline (ft)	Rise in Pipe (ft)	Pipe Crown (ft)	MH/Inlet Elevation (ft)	Top of
A-1	GI-1	Bend 1	0.06	0.06	5.00	5.07	0.97	0.06	0.97	15.24	0.95	0.01	22.0	18	0.0050	5.46	9.66	0.54	0.0000	0.15	0.0007	991.47	989.87		989.97	0.11	991.47	992.42	
	Bend 1	WYE XX	0.00	0.06	5.07	5.52	0	0.06	0.97	15.19	0.95	0.01	150.0	18	0.0050	5.46	9.66	0.54	0.0000	0.1	0.0004	991.37	989.12		989.87	0.75	991.37	992.01	
A-2	RD-2	WYE XX	0.65	0.65	5.00	5.03	0.97	0.63	0.97	15.24	9.54	0.01	10.0	18	0.0050	5.46	9.66	5.40	0.0048	0.35	0.1584	991.56	989.12		989.22	0.05	990.72	991.00	
	Wye XX	Bend 2	0.00	0.71	5.52	5.98	0	0.69	0.97	14.82	10.20	0.01	150.0	18	0.0050	5.46	9.66	5.77	0.0055	0.35	0.1812	991.35	988.38		989.12	0.75	990.62	991.00	
	Bend 2	GI-2	0.00	0.71	5.98	6.12	0	0.69	0.97	14.48	9.97	0.01	44.0	18	0.0050	5.46	9.66	5.64	0.0053	0.1	0.0494	990.34	988.16		988.38	0.22	989.88	990.51	
A-3	GI-2	Bend 3	0.13	0.84	6.12	6.30	0.97	0.82	0.97	14.38	11.75	0.01	72.0	24	0.0050	6.62	20.79	3.74	0.0016	0.35	0.0761	990.06	987.69		988.06	0.36	990.06	990.66	
	Bend 3	MH-4	0.00	0.84	6.30	6.45	0	0.82	0.97	14.25	11.65	0.01	62.0	24	0.0050	6.62	20.79	3.71	0.0016	0.1	0.0213	989.69	987.44		987.69	0.31	989.69	991.31	
A-4	GI-3	MH-4	0.37	0.37	5.00	5.05	0.92	0.34	0.92	15.24	5.15	0.01	17.0	18	0.0050	5.46	9.66	2.91	0.0014	0.35	0.0461	989.35	987.35		987.44	0.09	988.94	990.64	
	MH-4	MH-1	0.00	1.21	6.45	6.59	0	1.15	0.96	14.15	16.33	0.01	55.0	24	0.0050	6.62	20.79	5.20	0.0031	0.1	0.0420	989.28	987.00		987.28	0.28	988.94	991.05	
A-5	GI-4	MH-1	0.11	0.11	5.00	5.37	0.95	0.11	0.95	15.24	1.63	0.01	92.0	12	0.0050	4.17	3.27	2.07	0.0012	0.35	0.0234	989.15	987.01		987.47	0.46	988.47	990.01	
	MH-1	Outfall A	0.00	1.32	6.59	6.75	0	1.26	0.95	14.05	17.72	0.01	62.0	24	0.0050	6.62	20.79	5.64	0.0036	0.1	0.0494	989.01	986.60		987.01	0.31	989.01	991.37	
	Outfall A		1.32											18								988.10	986.60		986.60	0.00	988.10	991.37	
B-1	GI-5	Bend 5	0.07	0.07	5.00	5.04	0.90	0.06	0.90	15.24	0.92	0.01	12.0	18	0.0050	5.46	9.66	0.52	0.0000	0.35	0.0015	993.38	991.83		991.88	0.06	993.38	995.09	
	Bend 5	Bend 6	0.00	0.07	5.04	5.10	0	0.06	0.90	15.21	0.92	0.01	21.0	18	0.0050	5.46	9.66	0.52	0.0000	0.35	0.0015	993.33	991.72		991.83	0.11	993.33	995.46	
	Bend 6	MH-2	0.00	0.07	5.10	5.40	0	0.06	0.90	15.16	0.92	0.01	98.0	18	0.0050	5.46	9.66	0.52	0.0000	0.1	0.0004	993.22	991.23		991.72	0.49	993.22	996.11	
B-2	GI-6	MH-2	0.24	0.24	5.00	5.04	0.87	0.21	0.87	15.24	3.23	0.01	13.0	18	0.0050	5.46	9.66	1.83	0.0006	1	0.0518	993.25	991.69		991.75	0.07	993.25	995.46	
	MH-2	Bend 7	0.00	0.31	5.40	5.59	0	0.27	0.88	14.92	4.06	0.01	63.0	18	0.0050	5.46	9.66	2.30	0.0009	0.35	0.0288	992.76	990.83		991.15	0.32	992.65	995.99	
	Bend 7	Bend 8	0.00	0.31	5.59	5.68	0	0.27	0.88	14.77	4.02	0.01	28.0	18	0.0050	5.46	9.66	2.28	0.0009	0.35	0.0282	992.67	990.69		990.83	0.14	992.33	996.16	
	Bend 8	GI-7	0.00	0.31	5.68	6.26	0	0.27	0.88	14.71	4.01	0.01	192.0	18	0.0050	5.46	9.66	2.27	0.0009	1	0.0798	992.62	989.73		990.69	0.96	992.19	996.08	
B-3	GI-7	GI-8	0.46	0.77	6.26	6.55	0.92	0.70	0.90	14.28	9.98	0.01	94.0	18	0.0050	5.46	9.66	5.64	0.0053	0.1	0.0495	992.38	989.26		989.73	0.47	991.23	992.94	
B-4	GI-8	GI-9	0.52	1.29	6.55	6.80	0.95	1.19	0.92	14.08	16.74	0.01	98.0	24	0.0050	6.62	20.79	5.33	0.0032	0.1	0.0441	991.83	988.67		989.16	0.49	991.16	992.47	
B-5	GI-9	Wye 2	0.41	1.70	6.80	6.93	0.95	1.57	0.93	13.91	21.91	0.01	55.0	24	0.0050	6.62	20.79	6.97	0.0055	0.1	0.0755	991.47	988.30		988.57	0.28	990.57	992.20	
B-6	TW 1	Wye 2	0.06	0.06	5.00	5.06	0.49	0.03	0.49	15.24	0.44	0.01	14.0	12	0.0050	4.17	3.27	0.56	0.0001	0.35	0.0017	991.10	989.24		989.82	0.07	990.82	992.65	
	Wye 2	Bend 9	0.00	1.76	6.93	7.04	0	1.60	0.91	13.82	22.17	0.01	43.0	24	0.0050	6.62	20.79	7.06	0.0056	0.35	0.2706	991.09	988.08		988.30	0.22	990.30	992.42	
	Bend 9	Bend 10	0.00	1.76	7.04	7.17	0	1.60	0.91	13.75	22.05	0.01	49.0	24	0.0050	6.62	20.79	7.02	0.0056	0.35	0.2679	990.58	987.84		988.08	0.25	990.08	992.20	
	Bend 10	Outfall B	0.00	1.76	7.17	7.79	0	1.60	0.91	13.67	21.93	0.01	247.0	24	0.0050	6.62	20.79	6.98	0.0055	0.1	0.0757	990.04	986.60		987.84	1.24	989.84	992.11	
	Outfall B		1.76											24								988.60	986.60		986.60	0.00	988.60	992.11	
C-1	C-1	GI-10	0.05	0.05	5.00	5.00	0.83	0.04	0.83	15.24	0.60	0.01		18	0.0050	5.46	9.66	0.34	0.0000	0.35	0.0006	994.69	904.22		904.42	0.00	905.92		
Offsite	Offsite	GI-10			0.00						12.90	0.01		18	0.0050	5.46	9.66	7.30	0.0088	0.35	0.2896	994.98	904.22		904.42	0.00	905.92		
	GI-10	Bend 11	0.00	0.05	5.00	5.02	0	0.04	0.83	15.24	13.50	0.01	7.0	18	0.0050	5.46	9.66	7.64	0.0097	0.35	0.3173	994.69	989.39		989.42	0.04	990.92	994.00	
	Bend 11	Bend 12	0.00	0.05	5.02	5.34	0	0.04	0.83	15.23	13.50	0.01	106.0	18	0.0050	5.46	9.66	7.64	0.0097	0.35	0.3173	994.30	988.85		989.39	0.53	990.89	995.01	
	Bend 12	MH-3	0.00	0.05	5.34	5.44	0	0.04	0.83	14.97	13.49	0.01	31.0	18	0.0050	5.46	9.66	7.63	0.0097	0.15	0.1358	992.96	988.70		988.85	0.16	990.35	994.31	
	MH-3	Bend 13	0.00	0.05	5.44	5.68	0	0.04	0.83	14.89	13.49	0.01	80.0	18	0.0050	5.46	9.66	7.63	0.0097	0.15	0.1357	992.52	988.21		988.61	0.40	990.11	993.35	
	Bend 13	Bend 14	0.00	0.05	5.68	5.92	0	0.04	0.83	14.70	13.48	0.01	77.0	18	0.0050	5.46	9.66	7.63	0.0097	0.35	0.3163	991.61	987.83		988.21	0.39	989.71	992.51	
	Bend 14	Outfall C	0.00	0.05	5.92	6.67	0	0.04	0.83	14.53	13.47	0.01	245.0	18	0.0050	5.46	9.66	7.62	0.0096	0.1	0.0903	990.55	986.60		987.83	1.23	989.33	992.09	
	Outfall C		0.05											18								988.10	986.60		986.60	0.00	988.10		



DA	IC%	Area (ac.)	L (ft)	n	Slope (ft/ft)	P	Lsheet	Lsc	Tsheet	Tsc	Tc
A-1	100	0.06	99	0.013	0.007	3.96	99	0	1.89	0.00	5.0
A-2	100	0.65	312	0.013	0.020	3.96	100	212	1.24	1.23	5.0
A-3	100	0.13	80	0.013	0.029	3.96	80	0	0.90	0.00	5.0
A-4	90	0.37	252	0.027	0.013	3.96	100	152	2.61	1.08	5.0
A-5	95	0.11	98	0.020	0.021	3.96	98	0	1.68	0.00	5.0
B-1	85	0.07	85	0.034	0.022	3.96	85	0	2.23	0.00	5.0
B-2	80	0.24	132	0.040	0.021	3.96	100	32	3.02	0.18	5.0
B-3	90	0.46	258	0.027	0.022	3.96	100	158	2.15	0.88	5.0
B-4	95	0.52	194	0.020	0.020	3.96	100	94	1.75	0.55	5.0
B-5	95	0.41	198	0.020	0.020	3.96	100	98	1.75	0.57	5.0
B-6	0	0.06	64	0.150	0.050	3.96	64	0	4.27	0.00	5.0
C-1	70	0.05	54	0.054	0.054	3.96	54	0	1.60	0.00	5.0

C Values	2 yr	10 yr	25 yr	100 yr
Grass	0.33	0.38	0.42	0.49
Concrete	0.75	0.83	0.88	0.97

DA	Area (ac.)	I.C. (%)	C2	C10	C25	C100	Tc (min)	Post							
								I2 (in/hr)	I10 (in/hr)	I25 (in/hr)	I100 (in/hr)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
A-1	0.06	100.0%	0.75	0.83	0.88	0.97	5.00	6.18	9.29	11.45	15.24	0.30	0.50	0.65	0.95
A-2	0.65	100.0%	0.75	0.83	0.88	0.97	5.00	6.18	9.29	11.45	15.24	2.99	4.98	6.50	9.54
A-3	0.13	100.0%	0.75	0.83	0.88	0.97	5.00	6.18	9.29	11.45	15.24	0.62	1.02	1.34	1.96
A-4	0.37	90.0%	0.71	0.79	0.83	0.92	5.00	6.18	9.29	11.45	15.24	1.60	2.67	3.50	5.15
A-5	0.11	95.0%	0.73	0.81	0.86	0.95	5.00	6.18	9.29	11.45	15.24	0.51	0.85	1.11	1.63
B-1	0.07	85.0%	0.69	0.76	0.81	0.90	5.00	6.18	9.29	11.45	15.24	0.29	0.48	0.63	0.92
B-2	0.24	80.0%	0.67	0.74	0.79	0.87	5.00	6.18	9.29	11.45	15.24	1.00	1.67	2.19	3.23
B-3	0.46	90.0%	0.71	0.79	0.83	0.92	5.00	6.18	9.29	11.45	15.24	2.02	3.37	4.42	6.50
B-4	0.52	95.0%	0.73	0.81	0.86	0.95	5.00	6.18	9.29	11.45	15.24	2.33	3.89	5.09	7.47
B-5	0.41	95.0%	0.73	0.81	0.86	0.95	5.00	6.18	9.29	11.45	15.24	1.84	3.06	4.01	5.89
B-6	0.06	0.0%	0.33	0.38	0.42	0.49	5.00	6.18	9.29	11.45	15.24	0.12	0.21	0.28	0.44
C-1	0.05	70.0%	0.62	0.70	0.74	0.83	5.00	6.18	9.29	11.45	15.24	0.18	0.31	0.41	0.60

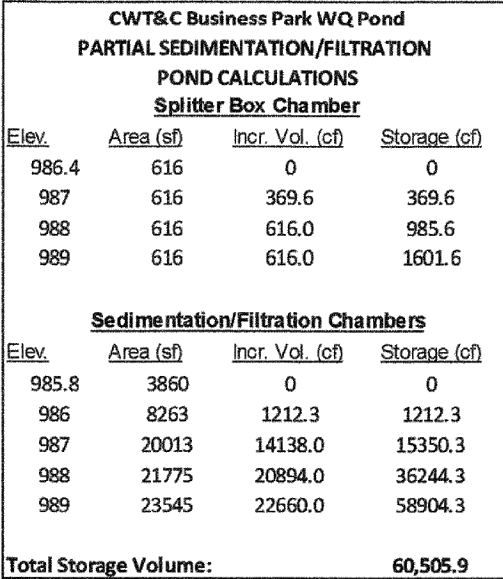
NOTE

1. See sheet 24 for existing pond calculations, Per DCM 1.2.2H, the peak water surface elevation of the existing pond generated from the 100-year Atlas 14 flows does not overtop the top of berm.

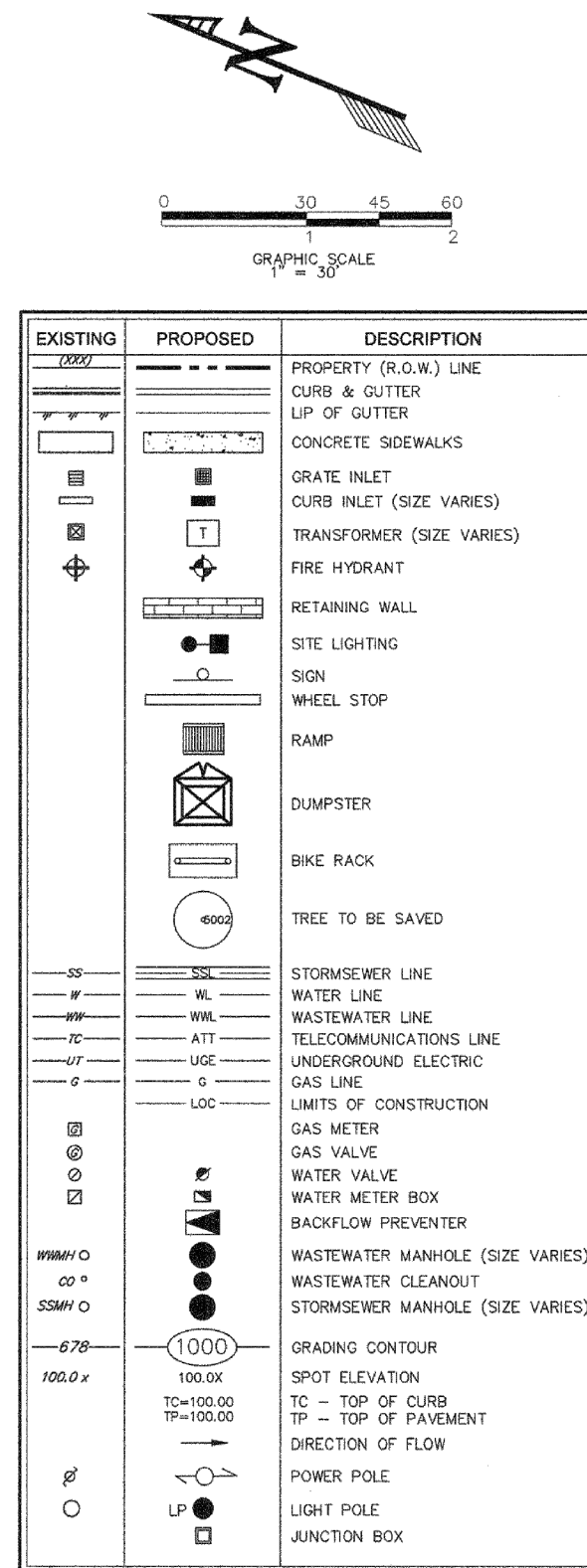
No.	Date	REVISIONS	App.

--	--

2024-32-SD



DRAINAGE LEGEND

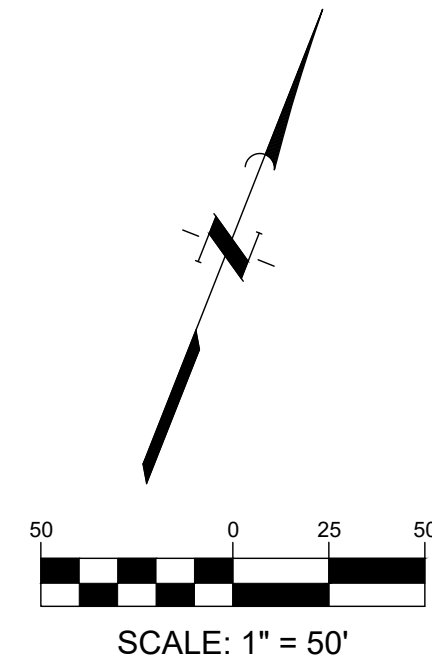


DRAINAGE SUMMARY CALCULATIONS - NCRS METHODOLOGY							
Existing Drainage Area - CWT&C Business Park, Cedar Park, Tx. from HEC-HMS							
Area #	Area (Ac)	(RCN)	Tc (Min)	Q100	Q25	Q10	Q2
E1	11.84	80.00	20.48	71.8	49.9	36.8	15.0
$T_c = (L^{0.21} \cdot N^{0.87} / (3.44 \cdot 5.0 \cdot S^{0.58} \cdot S^{0.4}) + L / 60)$ $Tc(E1) = (1/42.0 \cdot 2.1 \cdot 100^{0.87} / (3.44 \cdot 5.0 \cdot 0.02 \cdot 4) + 925 / (60 \cdot 1.9)) = 20.48 \text{ Min}$							
Proposed Drainage Areas (from HEC-HMS)							
Area #	Area (Ac)	(RCN)	Tc (Min)	Q100	Q25	Q10	Q2
OFF	1.37	80.00	13.41	9.5	6.6	4.9	2.0
P1	2.27	92.00	5.00	20.5	15.2	11.9	6.2
P2	2.86	92.72	12.28	22.8	16.8	13.2	6.9
P3	5.33	98.08	7.54	45.7	34.3	26.2	13.6
D1	RELEASED FLOW FROM DETENTION (P1 & P2)			35.0	22.5	19.3	13.5
J1	Downland Junction OFF+P2+D1			68.0	44.5	36.8	WQ
$T_c = (L^{0.21} \cdot N^{0.87} / (4 \cdot 2 \cdot 5^{0.58} \cdot S^{0.4}) + L / 60)$ $Tc(OFF) = (420 \cdot 21 \cdot 100^{0.87} / (3.44 \cdot 5.0 \cdot 0.019 \cdot 4) + 1777 / 60) = 2.39 \text{ Min}$ $Tc(P1) = (420 \cdot 0115 \cdot 100^{0.87} / (3.44 \cdot 5.0 \cdot 0.019 \cdot 4) + 239 / (60 \cdot 2.3)) = 3.10 \text{ Min}$ $Tc(P2) = (420 \cdot 0115 \cdot 100^{0.87} / (3.44 \cdot 5.0 \cdot 0.019 \cdot 4) + 1090 / (60 \cdot 2.3)) = 12.28 \text{ Min}$ $Tc(P3) = (420 \cdot 0115 \cdot 100^{0.87} / (3.44 \cdot 5.0 \cdot 0.0075 \cdot 4) + 621 / (60 \cdot 1.8)) = 7.54 \text{ Min}$							

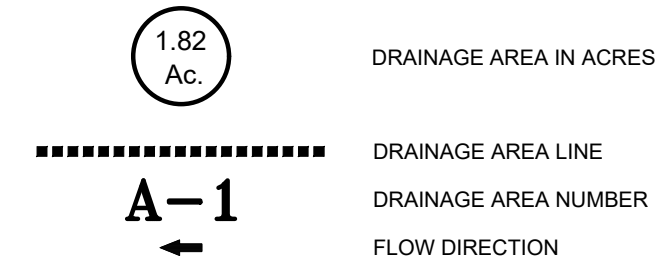
APPROVED
NOV 08 2018
PLANNING DEPT.
CITY OF CEDAR PARK

SUMMARY STORM DATA FOR CWT&B BUSINESS PARK, CEDAR PARK, TX POND						
Storm Event	Existing Q	Uncontrolled Q W/Out Pond	Proposed Released Q After Pond	Stage Storage Elevation Pond	Storage Volume (C.F.) Pond	
2 year	15.0	28.3	WQ	WQ	WQ	WQ
10 year	36.8	56.2	36.8		986.3	19,684
25 year	49.9	72.2	44.5		987.1	29,466
100 year	71.8	98.5	68.0		987.9	40,786

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



DAMAP LEGEND



NOTE

1. See Sheet 24 for existing pond calculations, Per DCM 1.2.2H, the peak water surface elevation of the existing pond generated from the 100-year Atlas 14 flows does not overtop the top of berm.
2. Per DCM 1.2.2.H, the development will not be required to match peak flow rates to pre-development conditions using the current rainfall criteria as long as the peak water surface of the pond does not overtop the top of berm.

Offsite Flows	
Storm Event	Peak Flow (cfs)
2-YR	3.5
10-YR	6.7
25-YR	9.0
100-YR	12.9

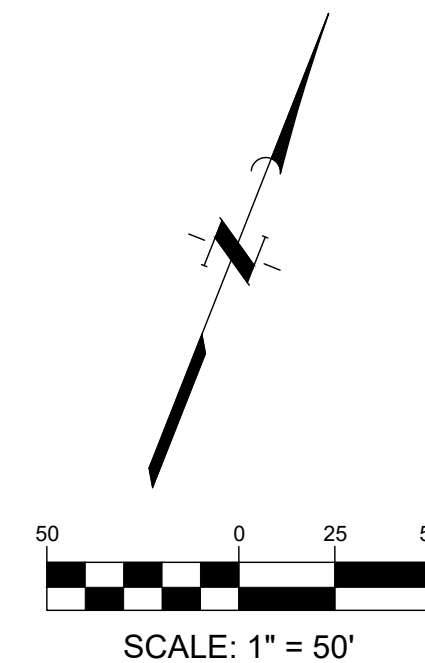
Proposed Hydrology								
	Area (Acres)	CN	%Impervious	Lag Time (Min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
OFFSITE	1.37	80.00	0	8.05	3.5	6.7	9.0	12.9

Tc (Pre Development)

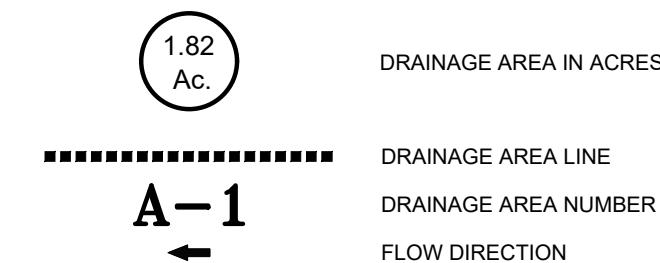
Note
*Minimum Time of Concentration is 5 min per Austin Design Manual.

DA	IC %	Area (ac.)	L (ft)	n	Slope (ft/ft)	P	Lsheet	Lsc	Tsheet	Tsc	Tc
E1	80.20	2.27	686	0.040	0.012	3.96	100.00	586.06	3.73	4.33	8.06
E2	0.00	2.86	549	0.150	0.023	3.96	100.00	449.23	8.28	2.41	10.70
E3	79.90	5.33	345	0.041	0.013	3.96	100.00	245.46	3.72	1.80	5.52
OFF	80.30	1.37	287	0.040	0.003	3.96	100.00	187.20	6.57	2.82	9.39

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



DAMAP LEGEND



NOTE

1. See Sheet 24 for existing pond calculations, Per DCM 1.2.2.H, the peak water surface elevation of the existing pond generated from the 100-year Atlas 14 flows does not overtop the top of berm.
2. Per DCM 1.2.2.H, the development will not be required to match peak flow rates to pre-development conditions using the current rainfall criteria as long as the peak water surface of the pond does not overtop the top of berm.

Offsite Flows	
Storm Event	Peak Flow (cfs)
2-YR	3.5
10-YR	6.7
25-YR	9.0
100-YR	12.9

Proposed Hydrology								
	Area (Acres)	CN	%Impervious	Lag Time (Min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
OFFSITE	1.37	80.00	0	8.05	3.5	6.7	9.0	12.9

[illegible]

QUIBITY

ECM

BY:—

DES

SSHS

[illegible]

S

OF TE
.....
A

0180

C

1

4

—

5

C

5

1

FREEHILL DEVELOPMENT COMPANY

FREEHILL RR 620

12332 RR 620, UNIT #4

OVERALL DAM - POST

SHEET NO

OF 36

15

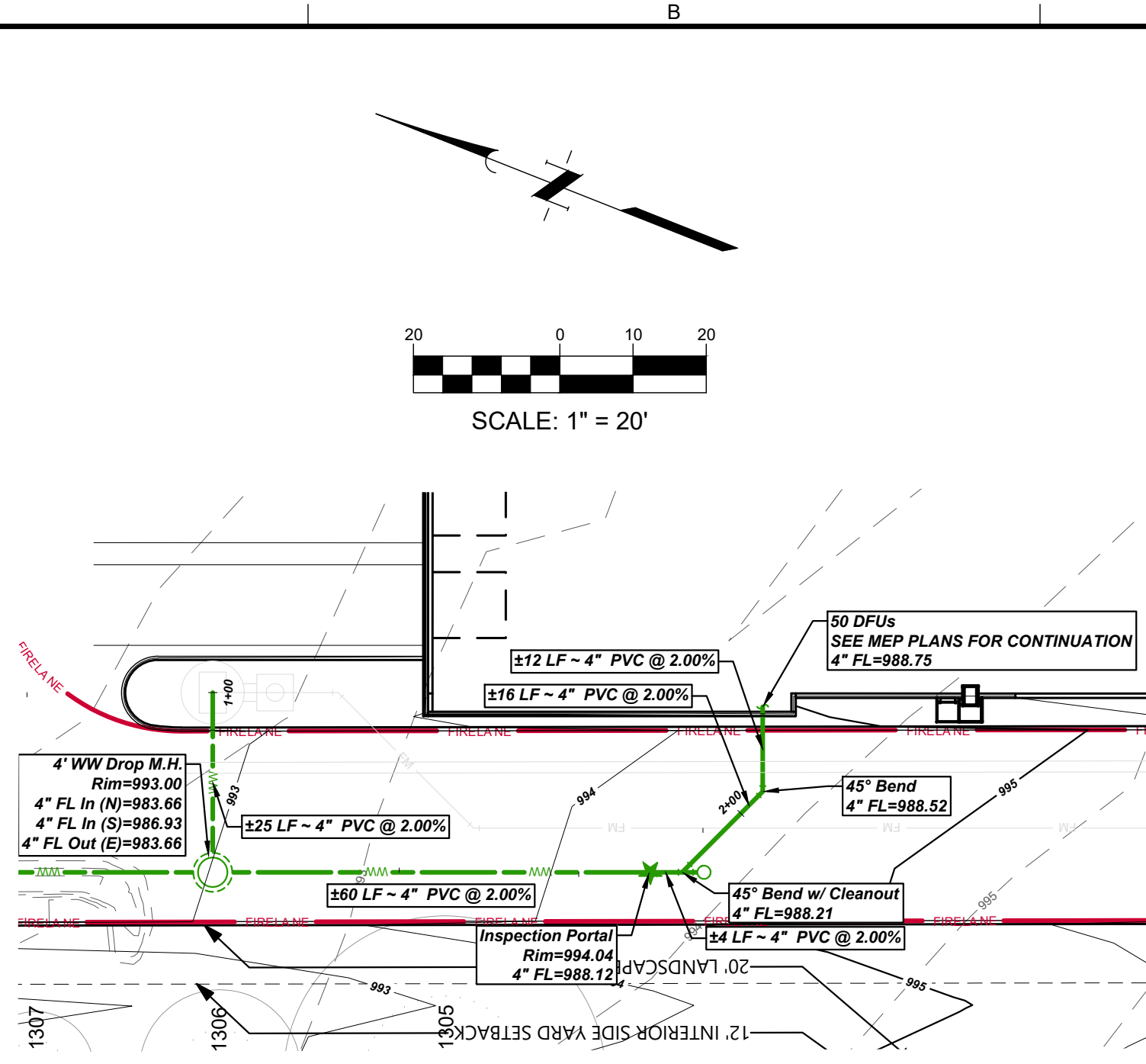
OF 36

2024-32-SD

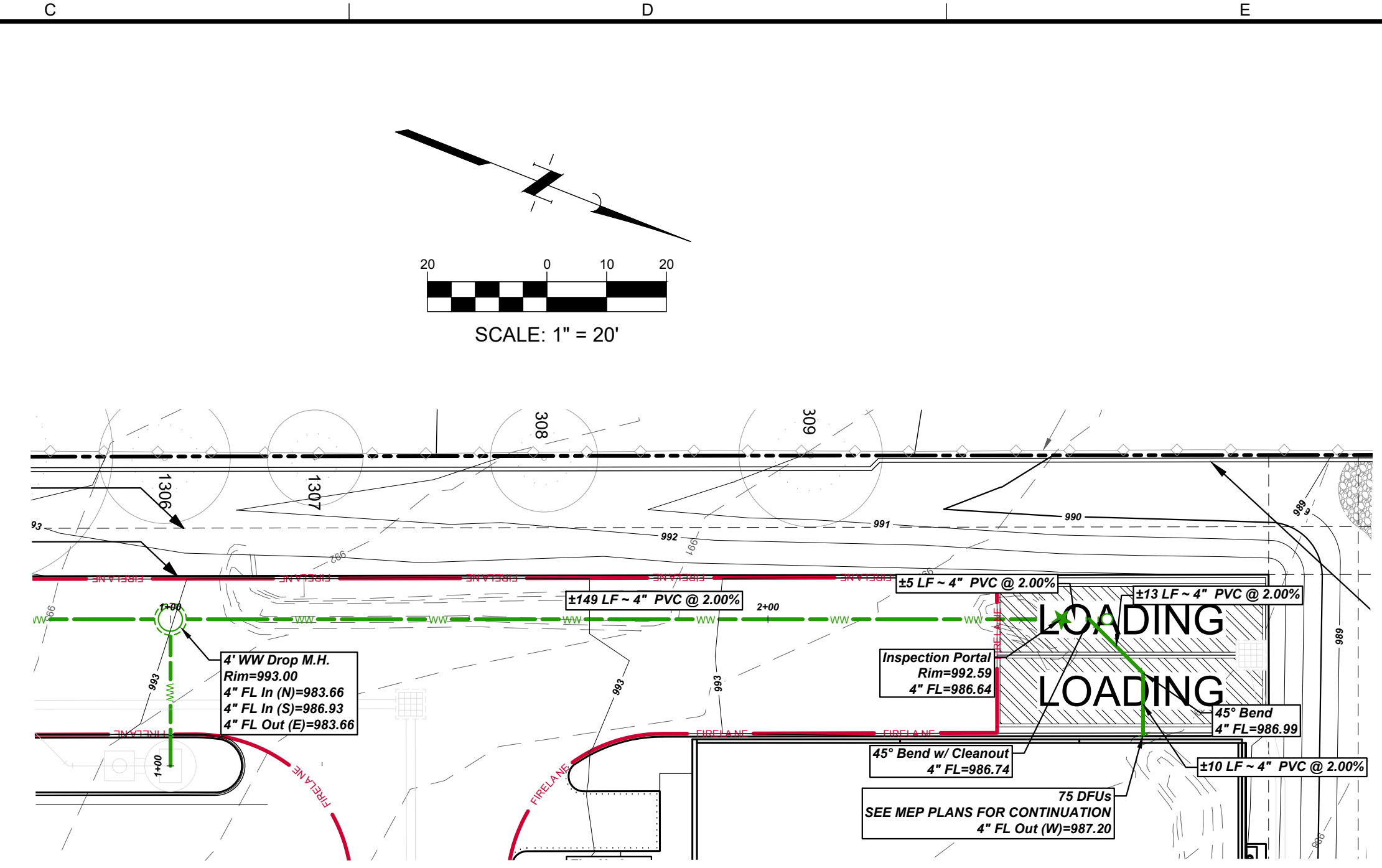
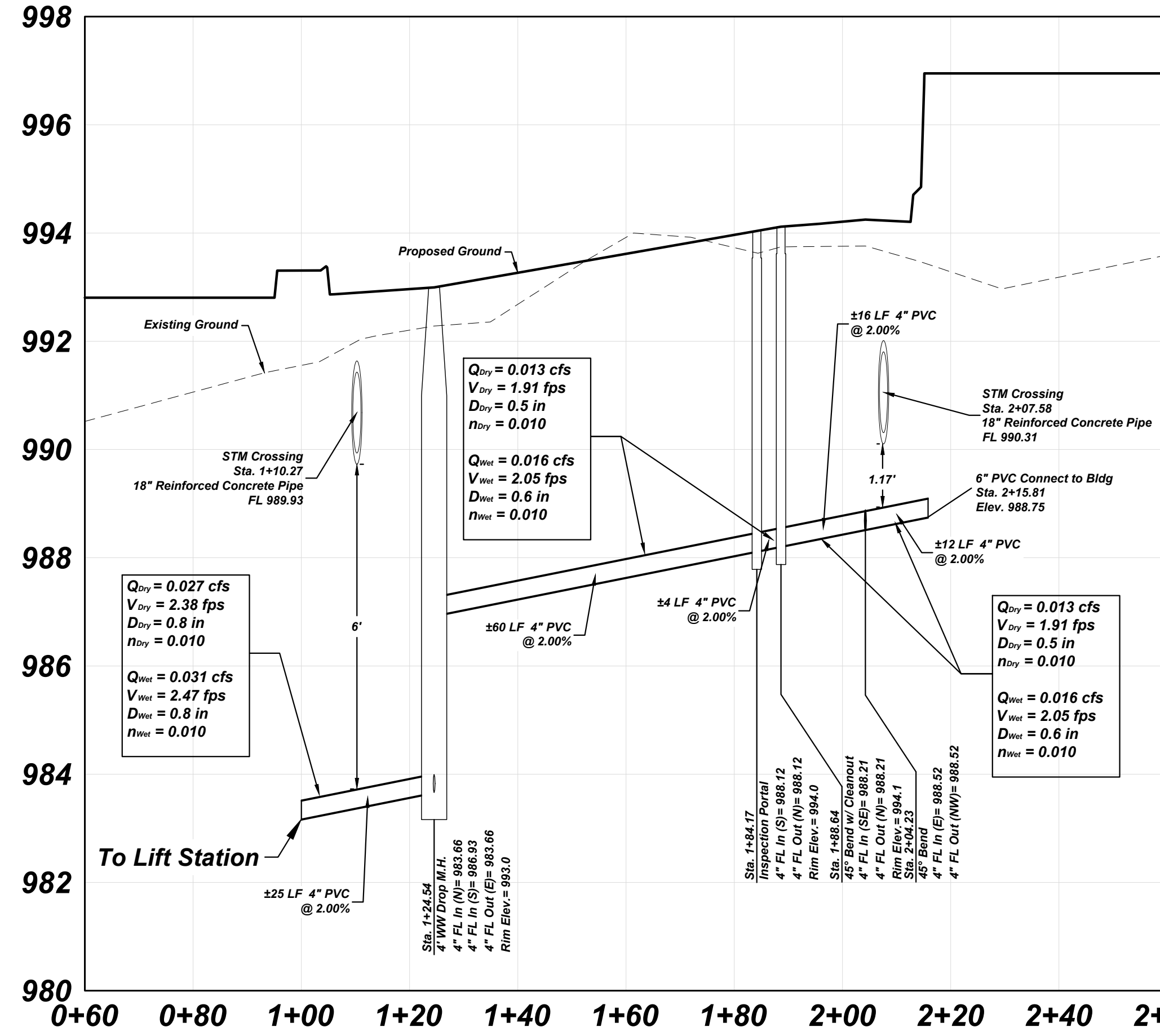
1
2
3
4
5

© 2024 Quiddity

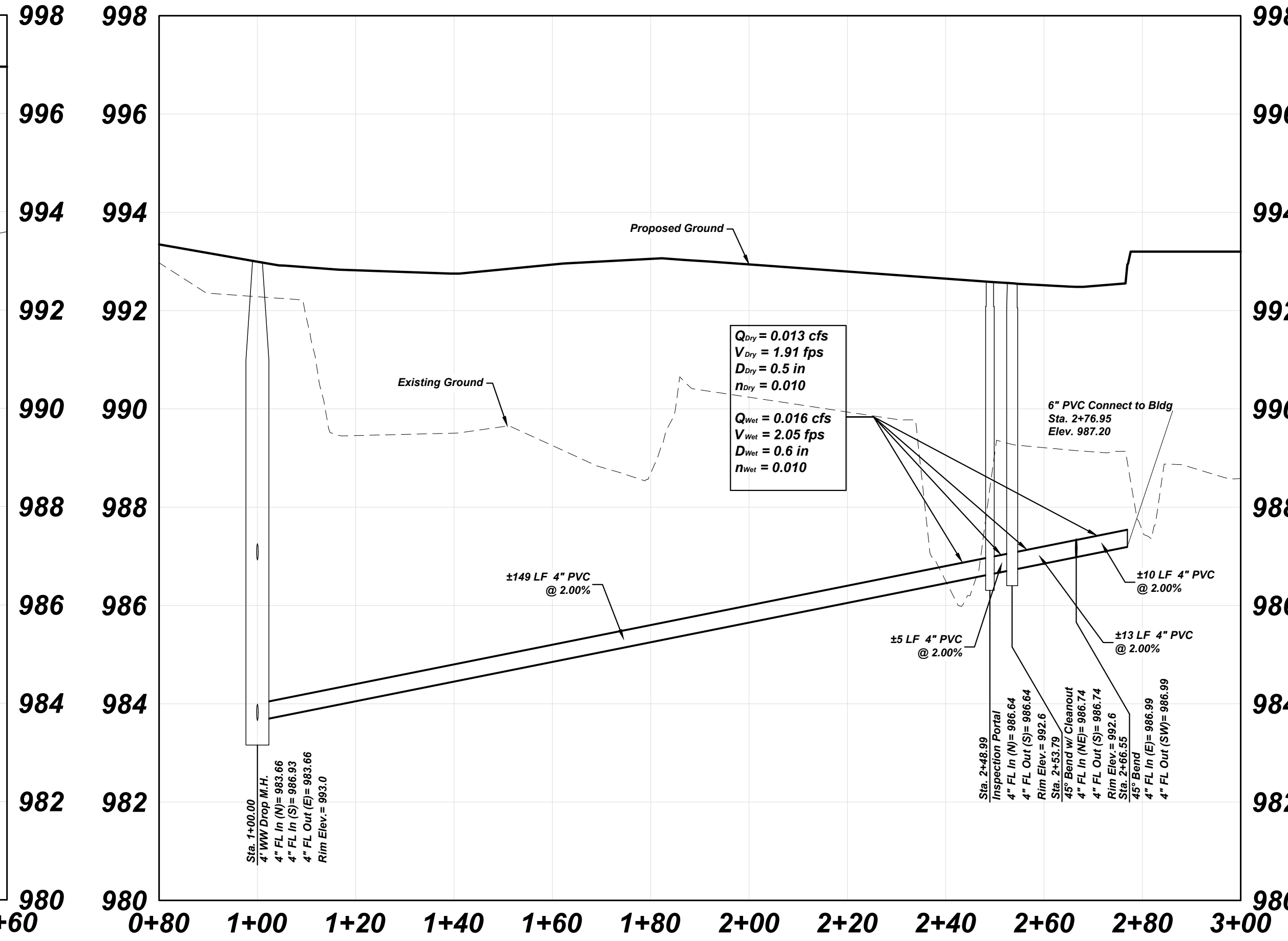
K:\28559\28559-0003-01 12332 rr 6202 design phase\CAD\Plans\28559-0003 SAN Sewer PWP.dwg emiller: November 19, 2024



WW Gravity 1



WW Gravity 2



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

- EXISTING LEGEND**
- W FIRE HYDRANT W/ GATE VALVE
 - W WATERLINE W/ GATE VALVE
 - WW WASTEWATER W/ MANHOLE
 - WW WASTEWATER W/ CLEANOUT
 - SW STORM SEWER W/ MANHOLE
 - CI CURB INLET
 - 4-SIDED AREA INLET
 - CHE OVERHEAD ELECTRIC W/POWER POLE
 - 700 GROUND CONTOUR
- PROPOSED LEGEND**
- W FIRE HYDRANT W/ GATE VALVE
 - W WATERLINE W/ GATE VALVE
 - WW WASTEWATER W/ MANHOLE
 - WW WASTEWATER W/ CLEANOUT
 - SW STORM SEWER W/ MANHOLE
 - CI CURB INLET
 - GI GRATE INLET
 - LD LANDSCAPE DRAIN
 - 700 GROUND CONTOUR
 - W & W CROSSING SEE TCEQ SECTION 217.53. (PIPE DESIGN) TABLE C.1.

COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

TRENCH EXCAVATION SAFETY PROTECTION:

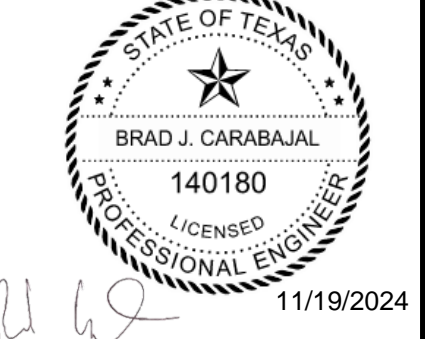
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITH THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

App.	Revisions
No.	Date

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Registration No. 123285 & 123400
3105 Arroyo Colorado Boulevard, Suite 105 Austin, Texas 78741 T 512.471.5905

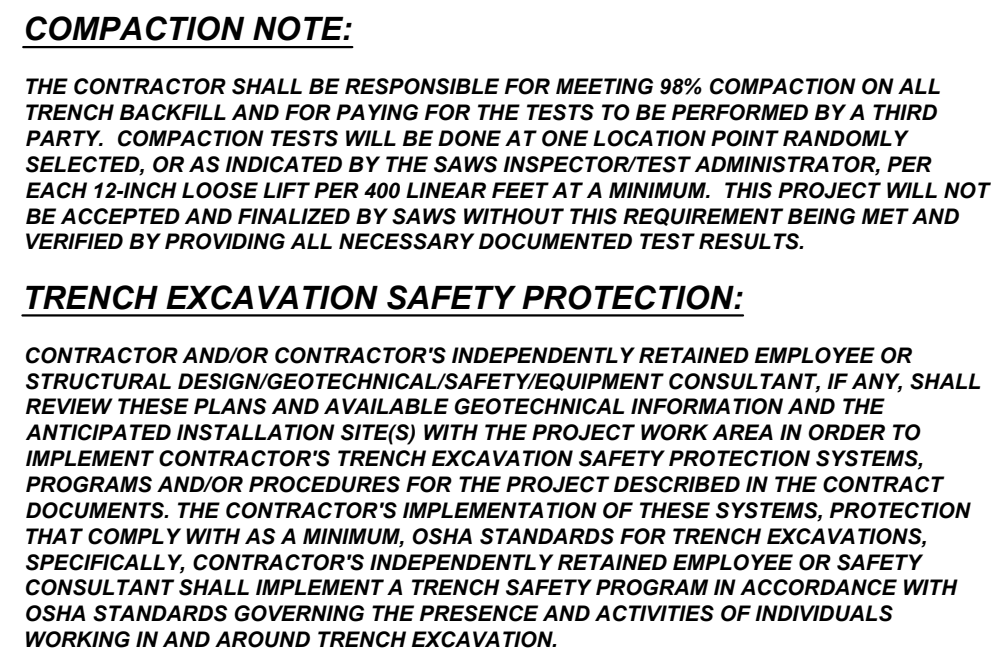
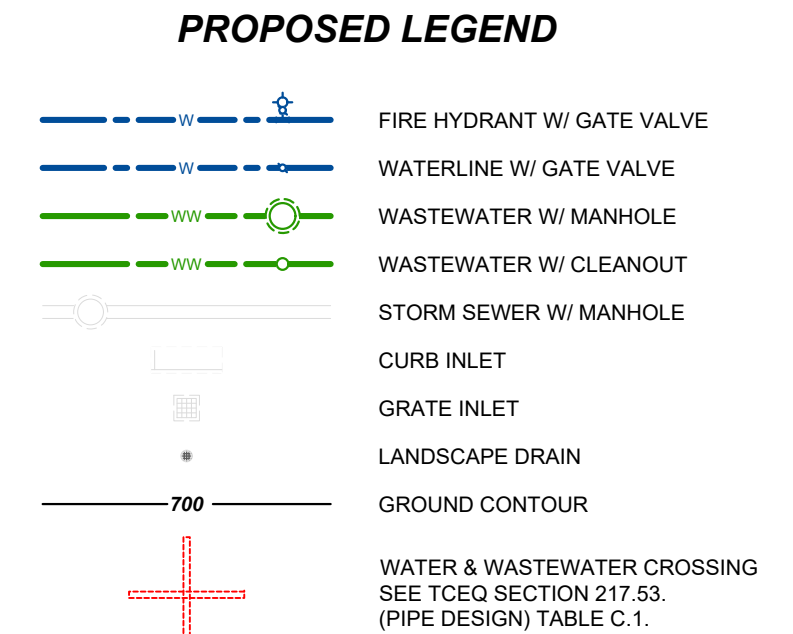
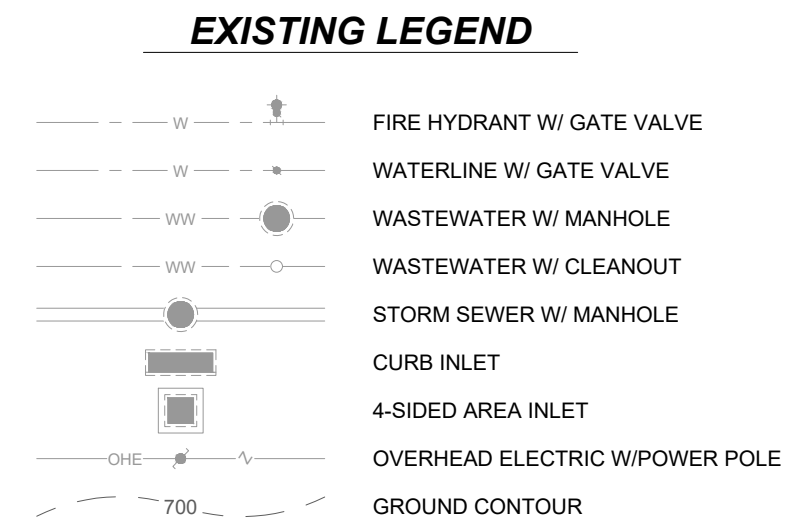
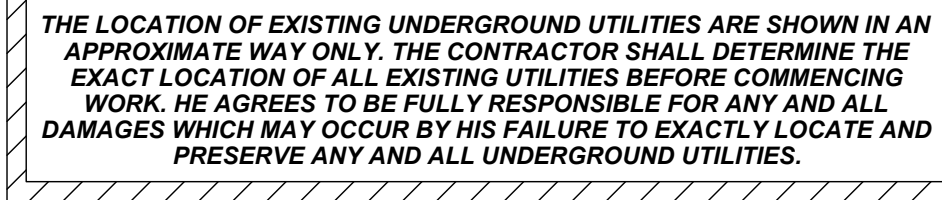
SCALE: AS SHOWN
DESIGNED BY: ECM
DATE: ISS - NOV 2024
CHECKED BY: BJC
JOB NO.: 28559-0003-01
DRAWN BY: CM



FREEHILL DEVELOPMENT COMPANY
FREEHILL RR 620
12332 RR 620, UNIT #4
WW GRAVITY PROFILE

SHEET NO. **17**
OF 36

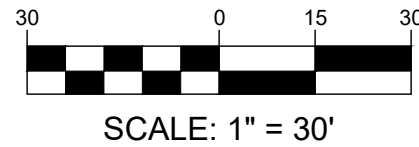
2024-32-SD



CURVE DATA TABLE				
LINE	ANGLE	RADIUS	ARC LENGTH	CHORD BEARING
C1	35.08°	51.00'	31.26'	S 86°00'04" W 30.79'
C2	90°00'04"	201.00'	316.73'	S 21°34'14" E 284.26'
C3	572.22°	286.00'	26.58'	S 18°54'31" E 26.57'

LINK TABLE		
LINE	BEARING	DISTANCE
L1	S 89°54'42" W	75.20'
L2	S 69°54'42" W	13.65'
L3	S 21°34'14" E	40.94'
L4	S 68°38'22" W	0.97'

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

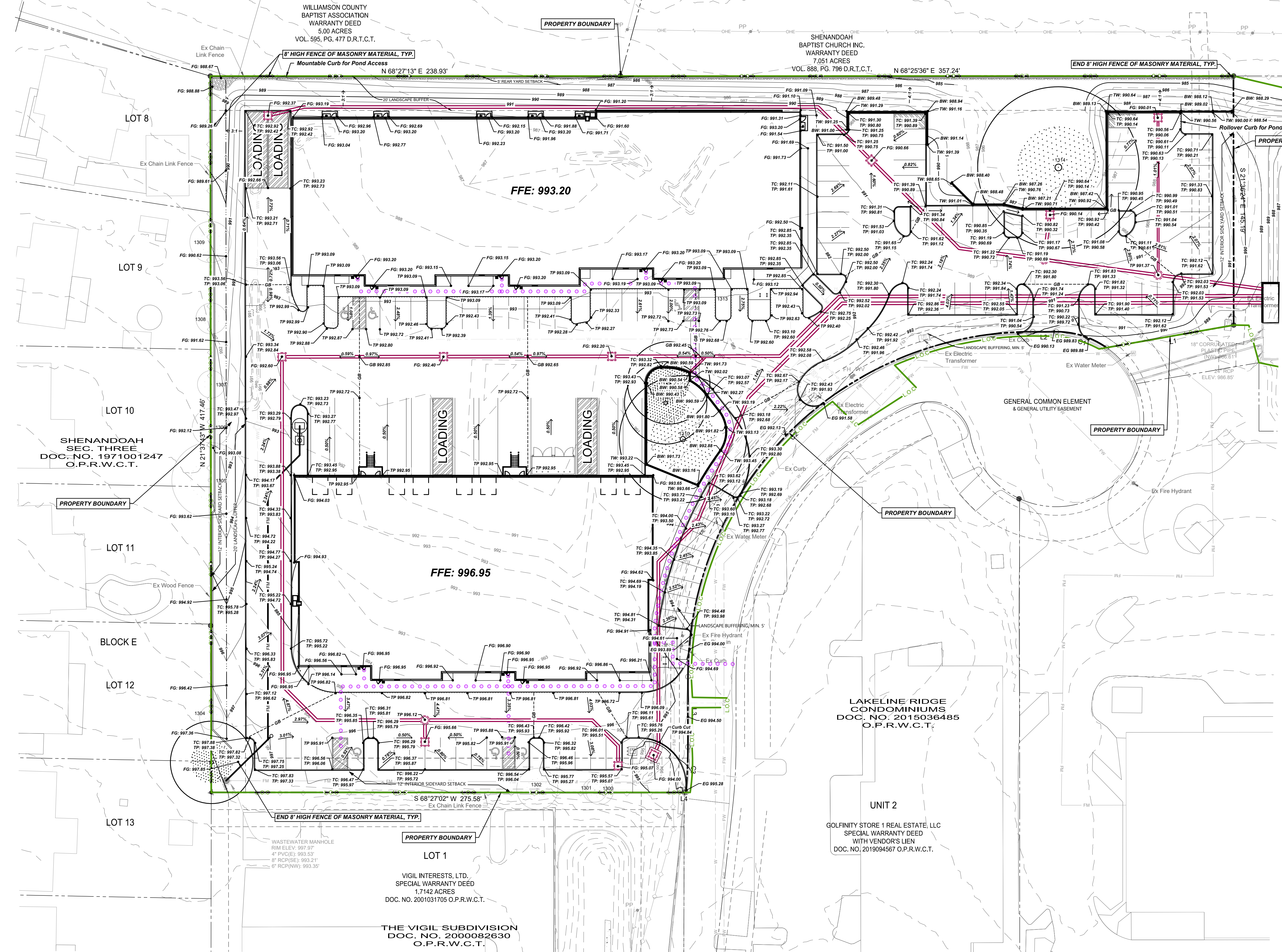


EXISTING LEGEND


- W FIRE HYDRANT W/ GATE VALVE
- WW WATERLINE W/ GATE VALVE
- WW WASTEWATER W/ MANHOLE
- WW WASTEWATER W/ CLEANOUT
- SW STORM SEWER W/ MANHOLE
- CI CURB INLET
- 4-SIDED AREA INLET
- OHE OVERHEAD ELECTRIC W/ POWER POLE

PROPOSED LEGEND

- SS STORM SEWER W/ MANHOLE
- GI GRATE INLET
- LD LANDSCAPE DRAIN
- GC GROUND CONTOUR
- GB GRADE BREAK
- TC TOP OF CURB
- TP TOP OF PAVEMENT
- FG FINISHED GROUND
- TW TOP OF WALL
- BW BOTTOM OF WALL AT FINISHED GRADE
- TS TOP OF SIDEWALK
- ADA ROUTE
- RETAINING WALL
- MASONRY FENCE
- DEEP GRADE BEAM
- LAYDOWN CURB
- 6' CURB



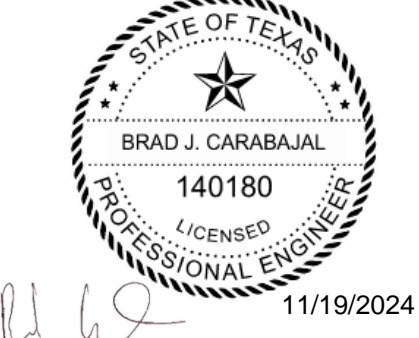
REVISIONS	
No.	Date



Quidity
10000 Board of Professional Engineers and Land Surveyors Registration No. 120000 & 1000000
3105 North Corporate Boulevard, Suite 100 Austin, Texas 78741 • 512-441-5905

DESIGNED BY: ECM
CHECKED BY: BJC
DRAWN BY: CM

SCALE: AS SHOWN
DATE: ISS - NOV 2024
JOB NO.: 28559-0003-01

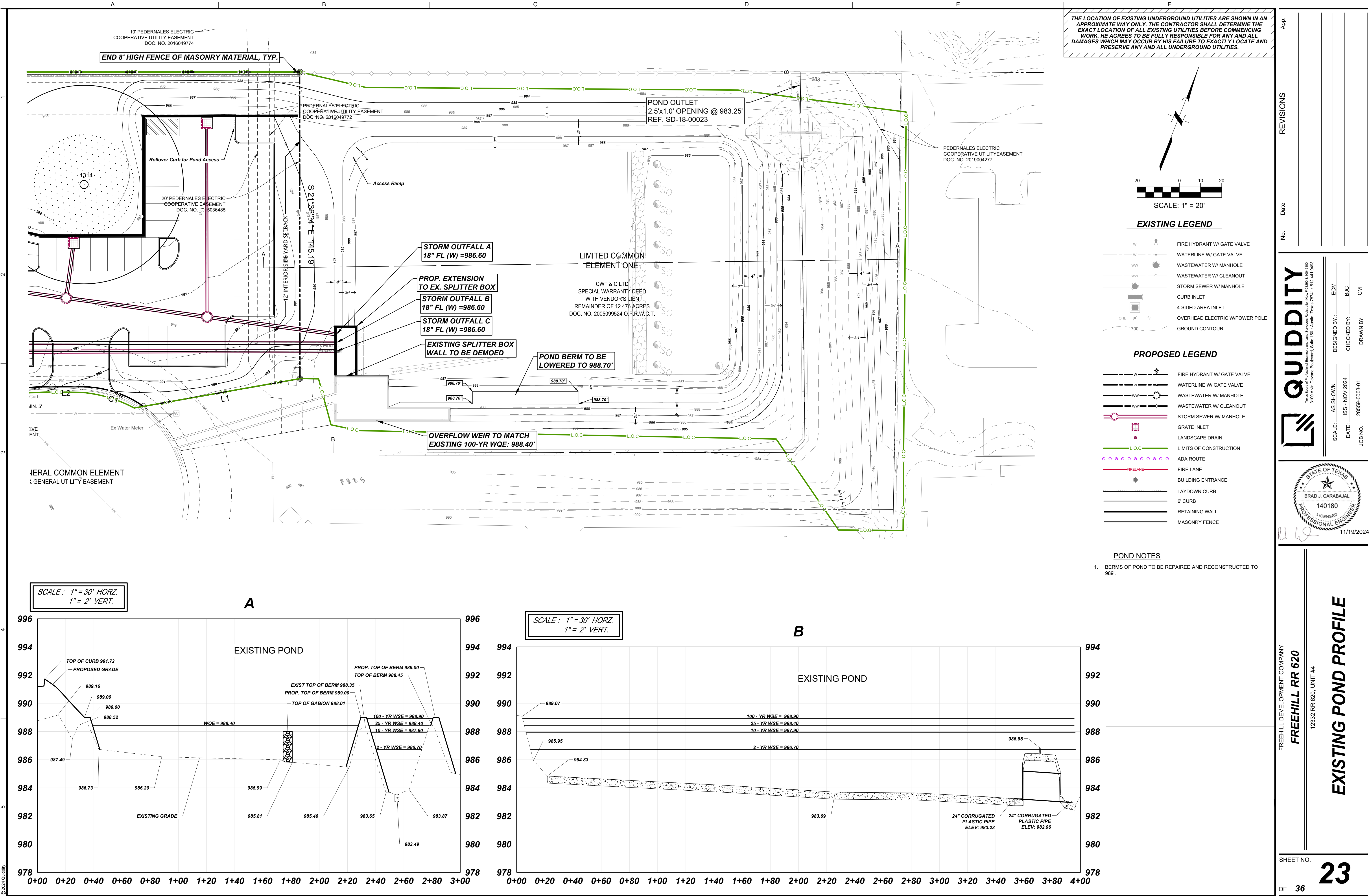


STATE OF TEXAS
BRAD J. CARABALL
140180
LICENSED PROFESSIONAL ENGINEER
11/19/2024

FREHILL DEVELOPMENT COMPANY
FREEHILL RR 620
12332 RR 620, UNIT #4
GRADING PLAN

UNIT 2
GOLFINTY STORE 1 REAL ESTATE, LLC
SPECIAL WARRANTY DEED
WITH VENDOR'S LIEN
DOC. NO. 2019094567 O.P.R.W.C.T.

SHEET NO. 19
OF 36



Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Freehill RR 620 - Overall**
Date Prepared: **10/1/2024**

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 = **10.46** acres
Predevelopment impervious area within the limits of the plan = **0.00** acres
Total post-development impervious area within the limits of the plan = **7.07** acres
Total post-development impervious cover fraction = **0.68**
 P = **32** inches
 L_M TOTAL PROJECT = **6154** 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 = **10.46** acres
Predevelopment impervious area within drainage basin/outfall area = **0.00** acres
Post-development impervious area within drainage basin/outfall area = **7.07** acres
Post-development impervious fraction within drainage basin/outfall area = **0.68**
 L_M THIS BASIN = **6154** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Sand Filter**
Removal efficiency = **89** percent
Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

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

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$
where:
 A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP
 A_C = **10.46** acres
 A_i = **7.07** acres
 A_p = **3.39** acres
 L_R = **7019** lbs

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

Desired L_M THIS BASIN = **6154** lbs.
 F = **0.88**

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 = **1.50** inches
Post Development Runoff Coefficient = **0.48**
On-site Water Quality Volume = **27480** cubic feet
Calculations from RG-348
Pages 3-36 to 3-37
Off-site area draining to BMP = **1.37** acres
Off-site Impervious cover draining to BMP = **0.00** acres
Impervious fraction of off-site area = **0.00**
Off-site Runoff Coefficient = **0.02**
Off-site Water Quality Volume = **149** cubic feet
Storage for Sediment = **5526**
Total Capture Volume (required water quality volume(s) x 1.20) = **33155** 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.
9. Filter area for Sand Filters
Designed as Required in RG-348
Pages 3-58 to 3-63
9B. Partial Sedimentation and Filtration System
Water Quality Volume for combined basins = **33155** cubic feet
Minimum filter basin area = **2748** square feet
Maximum sedimentation basin area = **10992** square feet
Minimum sedimentation basin area = **687** square feet
For minimum water depth of 2 feet
For maximum water depth of 8 feet

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

Stage-Storage Table for Detention Portion of Pond		
Elevation (ft)	Area (ac.)	Area (SF)
983.23	0.0001	4.356
983.25	0.001	43.56
983.5	0.0079	344.124
983.7	0.0284	1237.104
984	0.0547	2382.732
984.5	0.1068	4652.208
985	0.1762	7675.272
956	0.2454	10689.62
967	0.3041	13246.6
988	0.3604	15699.02
989	0.4215	18360.54

Proposed Water Quality Volume			
Elev	Area (SF)	Inc. Vol (CF)	Cumul Vol (CF)
985.4	64.8		0.0
985.6	939.5	100.4	100.4
985.8	2534.6	347.4	447.8
986.0	3696.3	623.1	1070.9
986.2	5130.6	882.7	1953.6
986.4	8101.5	1323.2	3276.8
986.6	13890.9	2199.2	5476.1
986.8	17673.3	3156.4	8632.5
987.0	18958.0	3663.1	12295.6
987.2	19699.6	3865.8	16161.4
987.4	20040.9	3974.1	20135.4
987.6	20386.7	4042.8	24178.2
987.8	20737.1	4112.4	28290.6
988.0	21082.0	4182.9	32473.5
988.2	21451.4	4254.3	36727.8
988.4	21815.4	4326.7	41054.5
988.6	22183.9	4399.9	45454.4
988.8	22556.9	4474.1	49928.5
989.0	22915.5	4547.2	54475.7

Water Quality Elevation

TCEQ TSS Summary- Existing Water Quality and Detention Pond						
Project Name	TCEQ EAPP ID No.	Total Area (Ac.)	Total Basin Area (Ac.)	Cumulative IC area (Ac.)	IC %	Associated DA Per EAPP ID No. 11001116
Body-Tek Collision Repair ⁽¹⁾		1.370		0 ⁽¹⁾	0.00%	Offsite
Private Road	11-13101102	0.550	0.550	0.550	100.00%	24.2% P1
Golfnity	11001116	1.600	1.600	1.030	64.38%	70.5% P1
Waterloo Swim Center	11-13101102	3.010	3.010	2.560	85.05%	5.3% P1 + 54.1% P4
Freehill RR 620 (WQ Pond)	Pending	3.960	3.960	2.932	74.04%	100% P2 + 20.6% P4
Existing Water Quality and Detention Pond ⁽²⁾	11001116	1.350	1.350	N/A	N/A	25.3% P4
Total			10.47	7.07		
Total Allowed for Wet Basin ⁽³⁾				8.17		
⁽¹⁾ Flows generated from Body-Tek Collision Repair (BC-00-01206-03M) are treated offsite flows which enter the Freehill RR 620 site and are conveyed to the existing water quality and detention pond. Since these flows are pre-treated, there is no associated impervious cover that must be accounted for in the TSS calculations.						
⁽²⁾ The existing water quality and detention pond was included in drainage area P4 in the Golfnity WPAP (EAPP ID No. 11001116). There are no TSS values that need to be treated by the area of the pond. It has been included in this table to demonstrate consistency with previous plans.						
⁽³⁾ The maximum impervious cover and TSS that can be treated by the water quality portion of the pond is based on the water quality volume of the pond that will exist after proposed improvements to the pond are completed with this project. The water quality volume of the pond is 41,054.5 CF.						

App. _____

REVISIONS

No. _____

Date _____

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Registration No. 122596 & 139490
3103 North Corporate Boulevard, Suite 100 - Austin, Texas 78741 - © 2024 QUIDDITY

SCALE: AS SHOWN

DESIGNED BY: ECM

DATE: ISS - NOV 2024

CHECKED BY: BJC

JOB NO.: 2659-003-01

DRAWN BY: CM

FREEHILL DEVELOPMENT COMPANY

FREEHILL RR 620

12332 RR 620, UNIT #4

EXISTING POND PLAN & CALCULATIONS (POST-DEV)

SHEET NO. 24

OF 36

© 2024 Quiddity

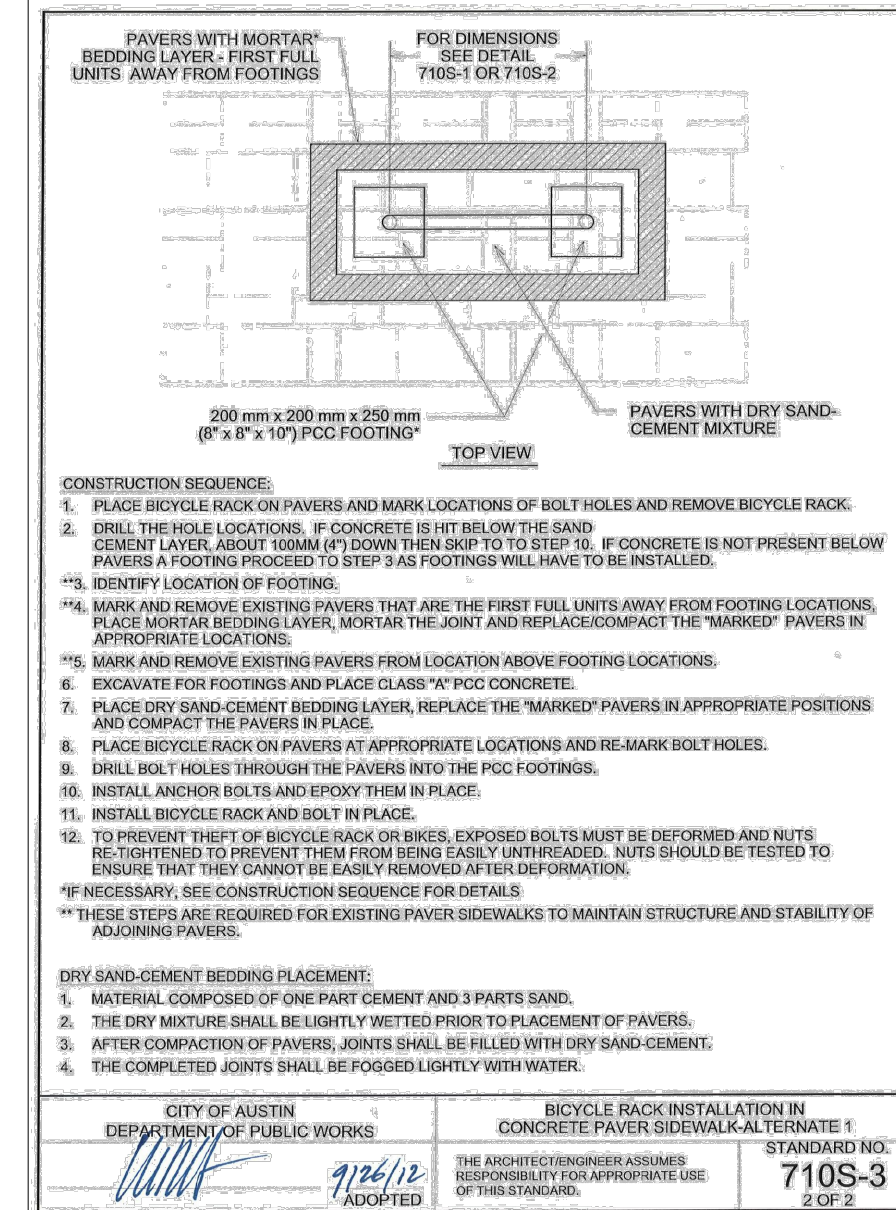
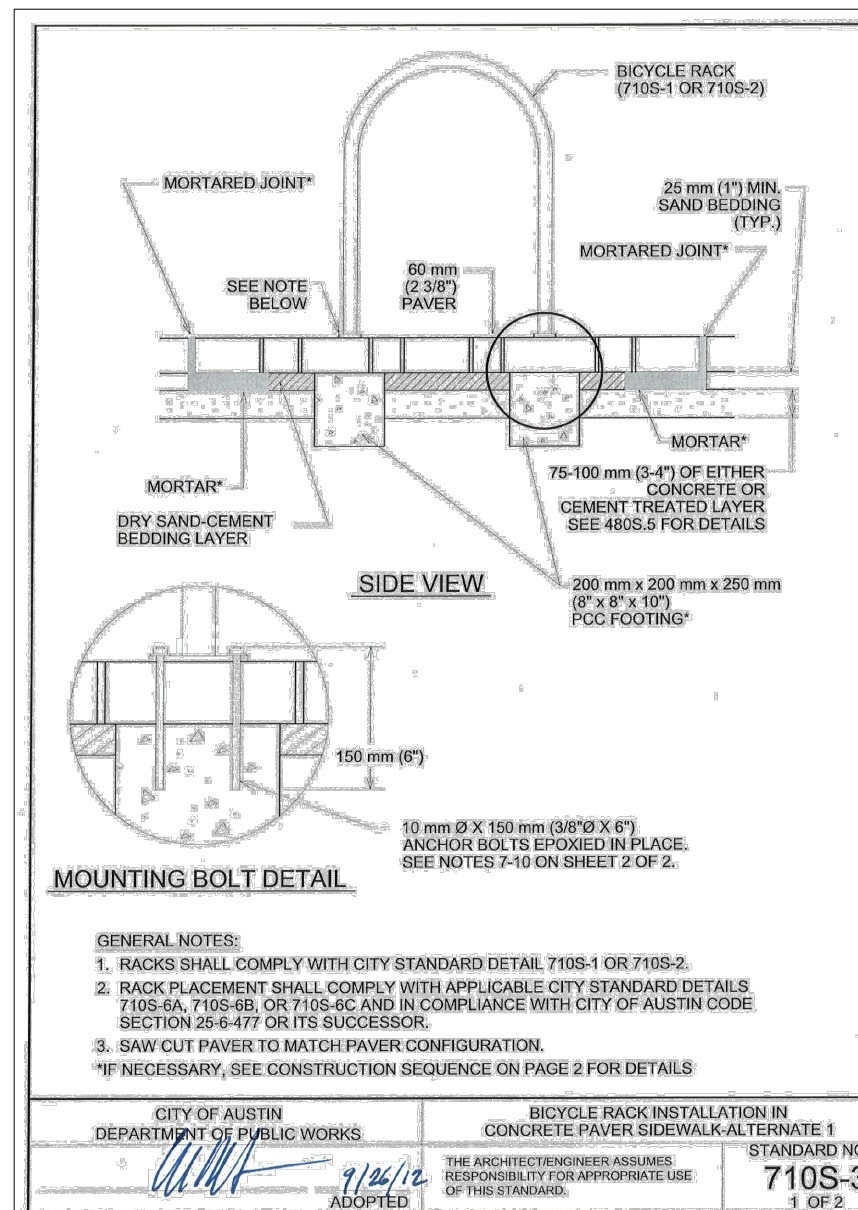
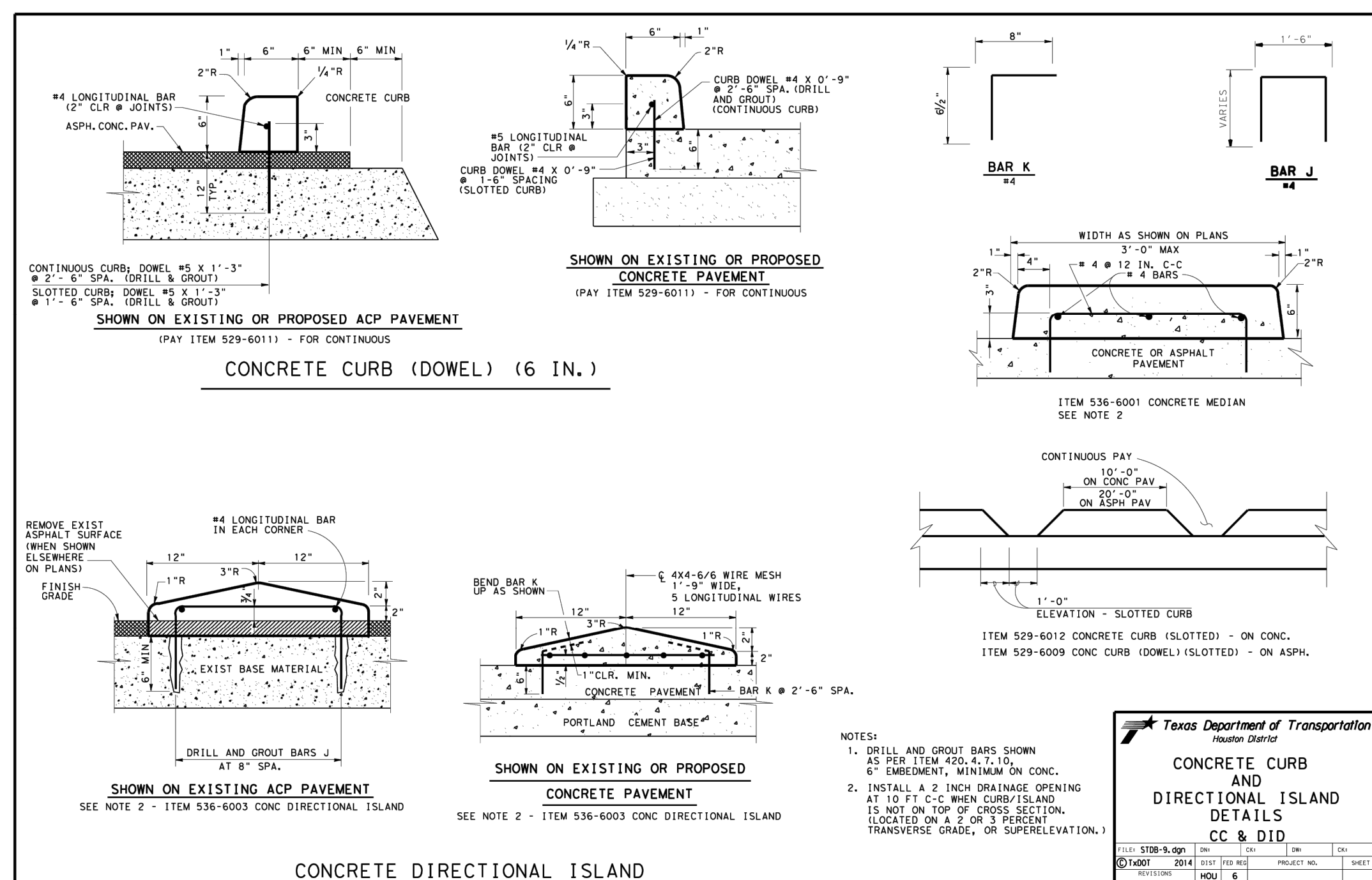
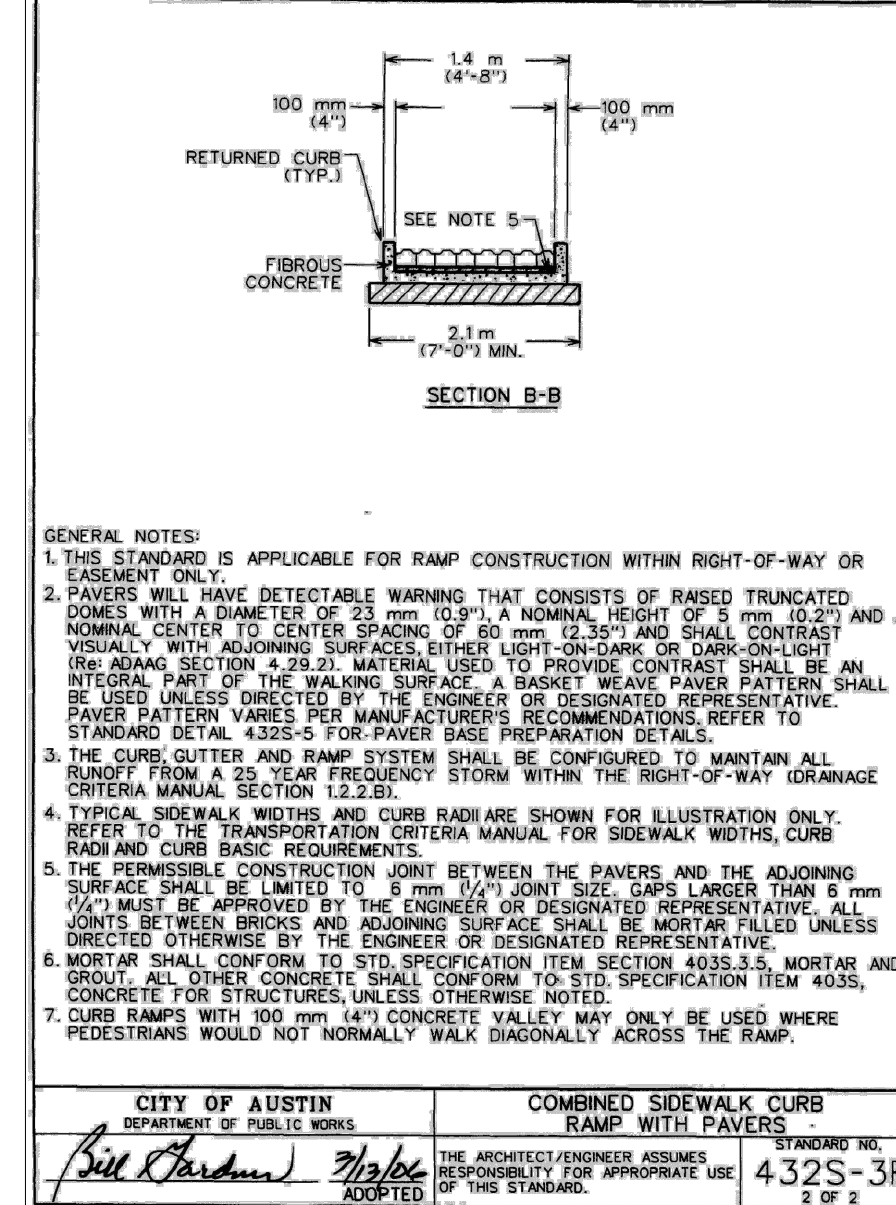
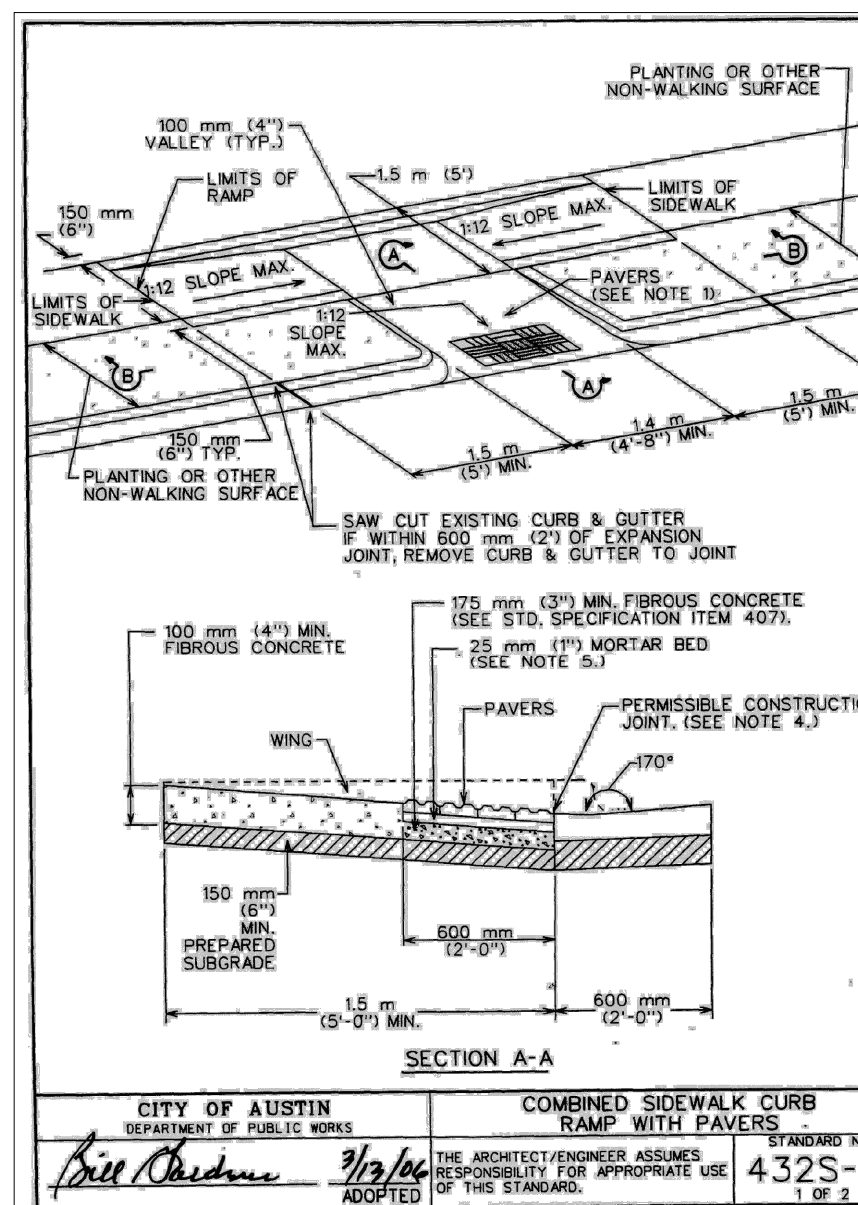
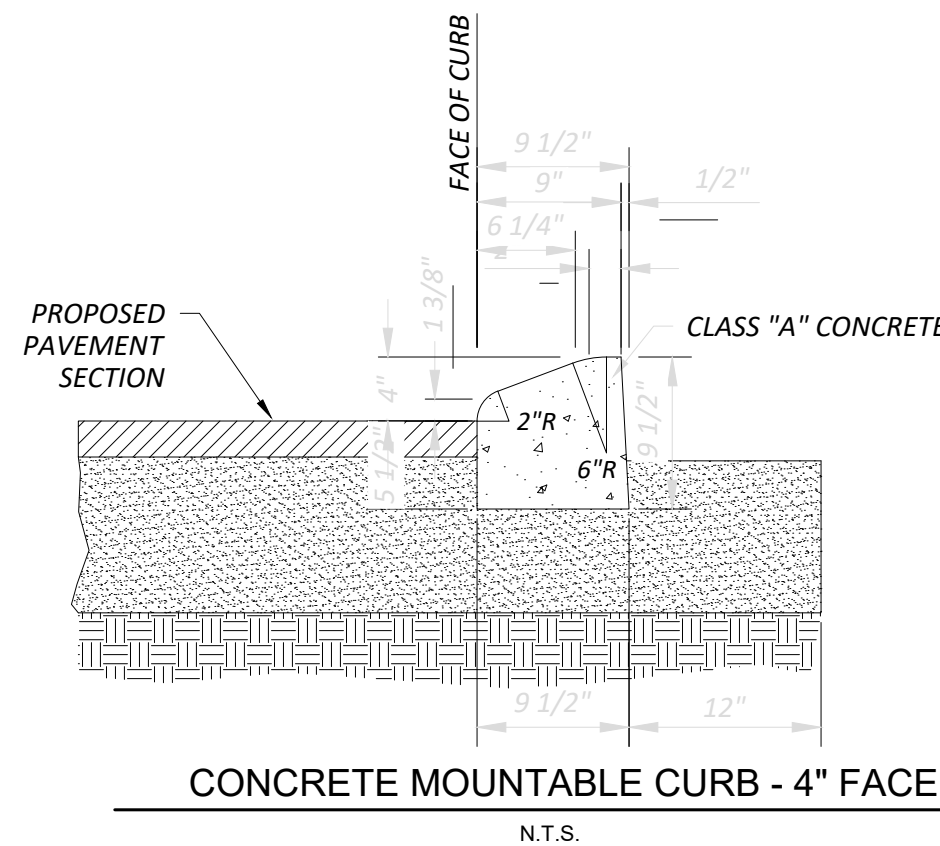
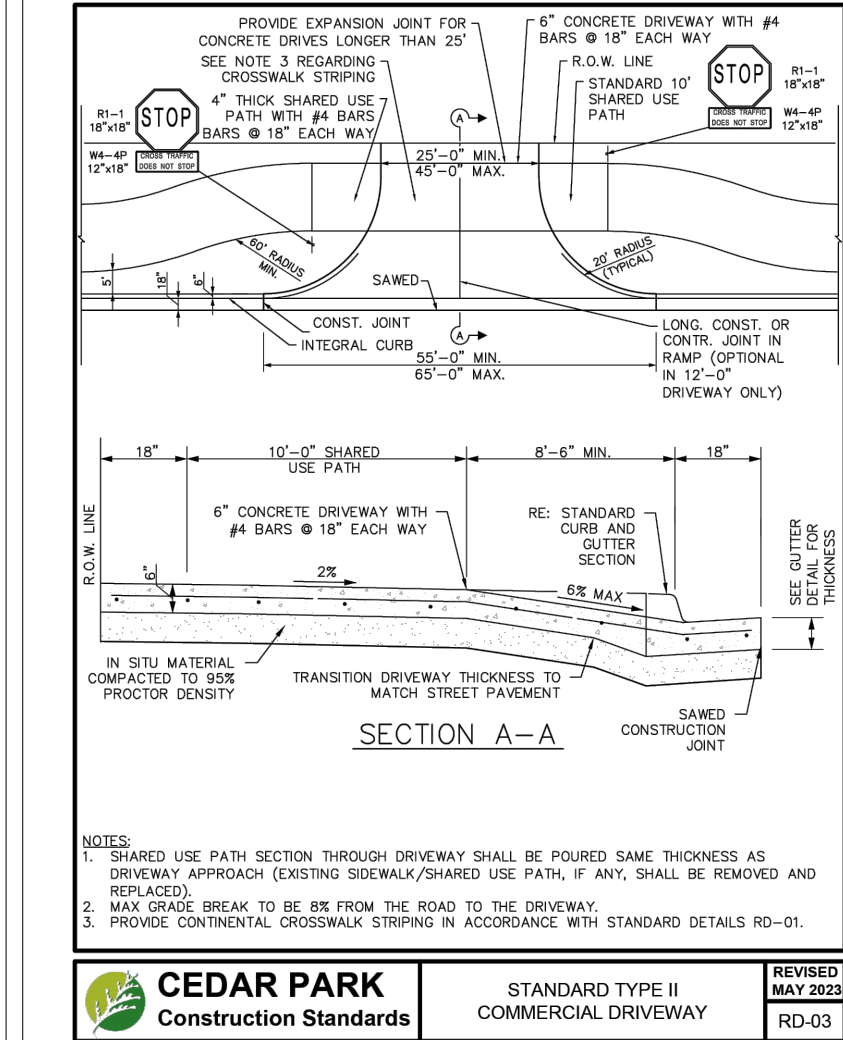
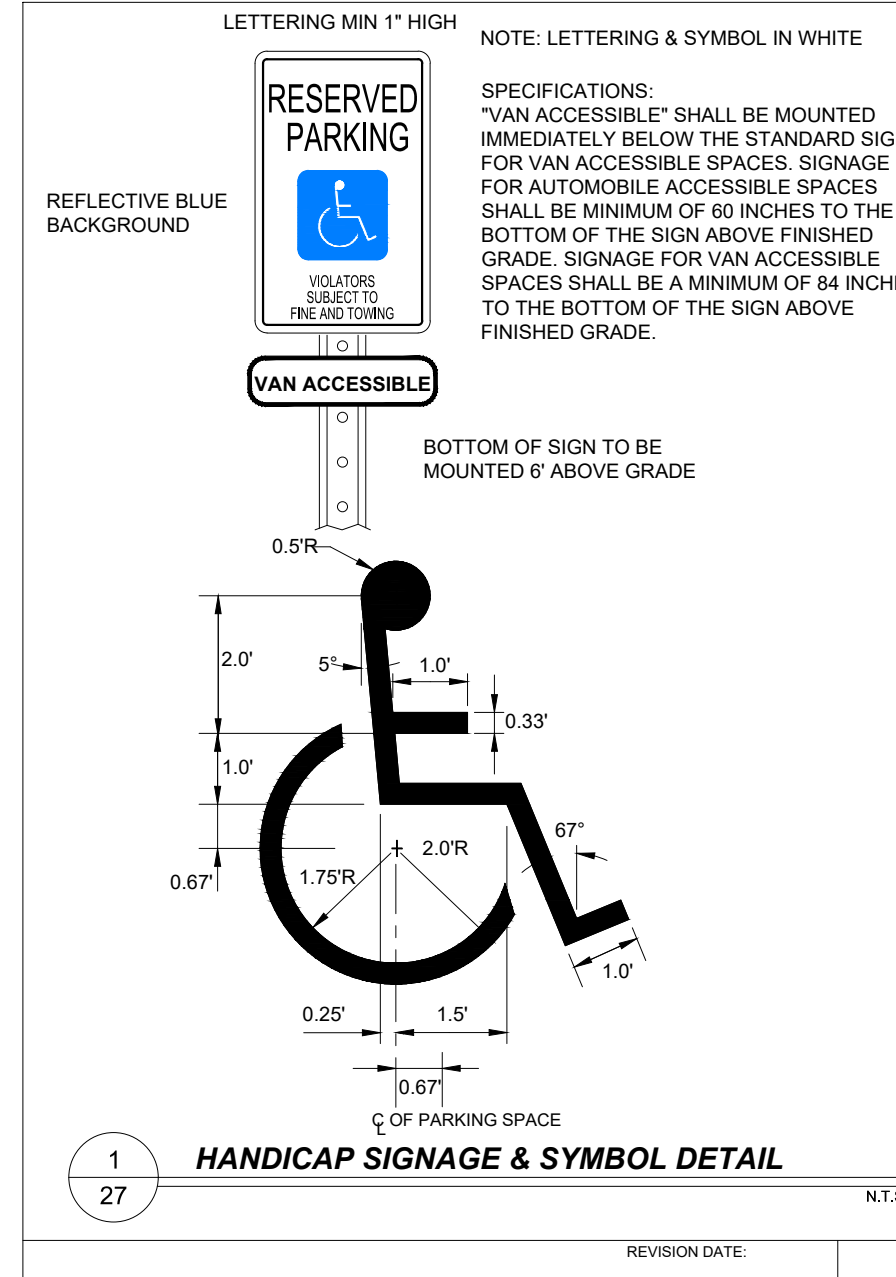
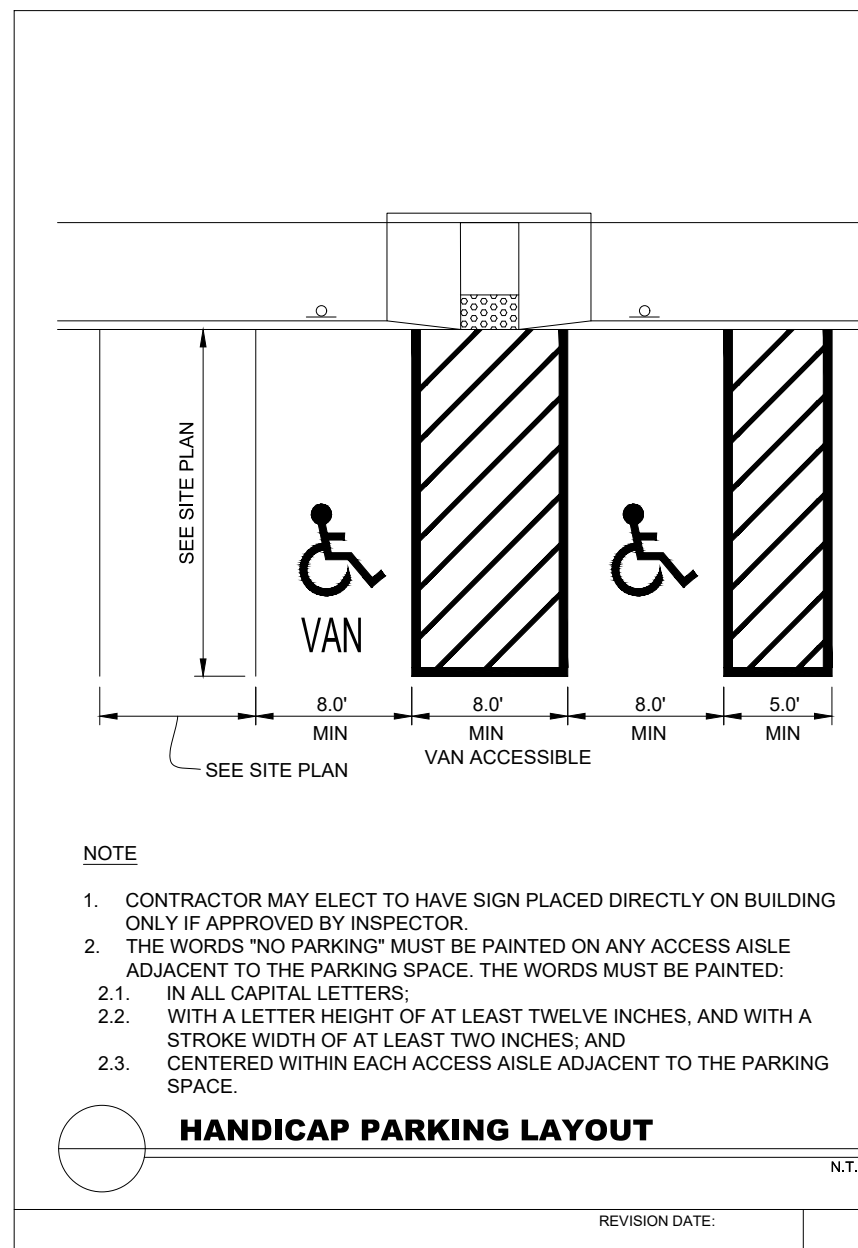
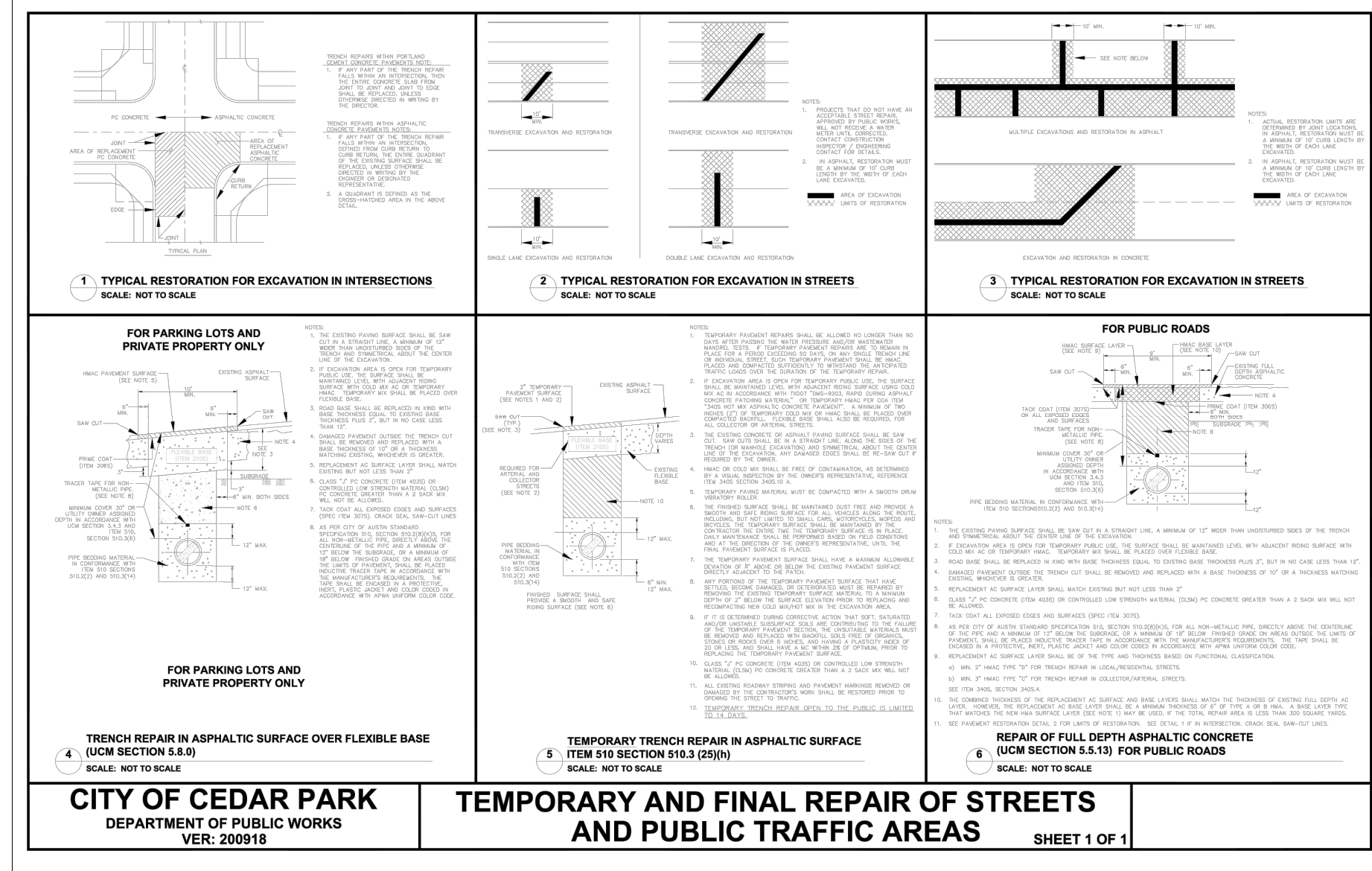
K:\28559\28559-0003-01 12332 rr 620\2 design phase\CAD\Plans\28559-0003 PRD.dwg emiller: November 19, 2024

2024-32-SD

25

APPROVED
NOV 08 2018
PLANNING DEPT.
CITY OF CEDAR PARK

Maximum sedimentation basin area = 7479 square feet For minimum water depth of 2 feet
Minimum sedimentation basin area = 467 square feet For maximum water depth of 8 feet



FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment G: Inspection, Maintenance, Repair and Retrofit Plan

TCEQ-0600 Attachment G

Inspection, Maintenance, Repair, and Retrofit Plan

Project: Freehill RR 620
Address: 12332 RR 620, Unit #4
City, State, Zip: Cedar Park, Texas, 78613

General Site Maintenance

The following guidelines should be used as an inspection and maintenance plan that should be performed at least twice annually:

- (1) Identify, replant, and restore eroded areas. Add a level spreader, energy dissipation, or other repairs as required to ensure that erosion is not repeated.
- (2) Identify areas that do not have acceptable vegetated covers (80% or higher for most BMPs). Reseed, add soil, and irrigate as required to ensure that coverage requirements are met.
- (3) Mow sites twice annually and as required to keep grass height under 18 inches. Additional mowing may be performed for site aesthetics. Export clippings from site to prevent release of nutrients from decaying plant matter. Remove any woody growth, especially from embankments, berms, and swales. For swales, grass should not be regularly mowed below four inches.
- (4) Use non-chemical methods for maintaining health of vegetation. Pesticides, herbicides, or fertilizers should only be used as a last option, and then as minimally as possible. Fertilizer should rarely be required because runoff will typically contain sufficient nutrient loads.
- (5) Irrigation may be required in order to maintain acceptable levels of vegetated coverage, especially for engineered vegetated strips.
- (6) Never deposit grass clippings, brush, or other debris in BMPs or buffers.
- (7) Prevent over-compaction of BMP components that rely partially or wholly on infiltration (vegetation strips, bioretention bed, infiltration trenches and basins). Mowing and other maintenance should be performed with hand equipment or a light-weight lawn tractor.
- (8) Remove any built-up sediment and debris, especially along uphill edges, berms, swales, and level spreaders; and around BMP inlets and outlets
- (9) Identify any other problems. A detailed inspection may be required.

Wet Basins

A clear requirement for wet basins is that a firm commitment be made to carry out both routine and non-routine maintenance tasks. The nature of the maintenance requirements are outlined below, along with design tips that can help to reduce the maintenance burden (modified from Young et al., 1996).

Routine Maintenance.

- *Mowing.* The side-slopes, embankment, and emergency spillway of the basin should be mowed at least twice a year to prevent woody growth and control weeds.
- *Inspections.* Wet 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 basin is functioning properly. There are many functions and characteristics of these BMPs that should be inspected. The embankment should be checked for subsidence, erosion, leakage, cracking, and tree growth. The condition of the emergency spillway should be checked. The inlet, barrel, and outlet should be inspected for clogging. The adequacy of upstream and downstream channel erosion protection measures should be checked. Stability of the side slopes should be checked. Modifications to the basin structure and contributing watershed should be evaluated. During semi-annual inspections, replace any dead or displaced vegetation. Replanting of various species of wetland vegetation may be required at first, until a viable mix of species is established. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage. The inspections should be carried out with as-built pond plans in hand.
- *Debris and Litter Removal.* As part of periodic mowing operations and inspections, debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the riser, and the outlet should be checked for possible clogging.
- *Erosion Control.* The basin side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion. Corrective measures such as regrading and revegetation may be necessary. Similarly, the riprap protecting the channel near the outlet may need to be repaired or replaced.

- *Nuisance Control.* Most public agencies surveyed indicate that control of insects, weeds, odors, and algae may be needed in some ponds. Nuisance control is probably the most frequent maintenance item demanded by local residents. If the ponds are properly sized and vegetated, these problems should be rare in wet ponds except under extremely dry weather conditions. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.). Biological control of algae and mosquitoes using fish such as fathead minnows is preferable to chemical applications.

Non-routine maintenance.

- *Structural Repairs and Replacement.* Eventually, the various inlet/outlet and riser works in the wet basin will deteriorate and must be replaced. Some public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yr, while concrete barrels and risers may last from 50 to 75 yr. The actual life depends on the type of soil, pH of runoff, and other factors. Polyvinyl chloride (PVC) pipe is a corrosion resistant alternative to metal and concrete pipes. Local experience typically determines which materials are best suited to the site conditions. Leakage or seepage of water through the embankment can be avoided if the embankment has been constructed of impermeable material, has been compacted, and if anti-seep collars are used around the barrel. Correction of any of these design flaws is difficult.
- *Sediment Removal.* Wet ponds will eventually accumulate enough sediment to significantly reduce storage capacity of the permanent pool. As might be expected, the accumulated sediment can reduce both the appearance and pollutant removal performance of the pond. Sediment accumulated in the sediment forebay area should be removed from the facility every two years to prevent accumulation in the permanent pool. Dredging of the permanent pool should occur at least every 20 years, or when accumulation of sediment impairs functioning of the outlet structure.
- *Harvesting.* If vegetation is present on the fringes or in the pond, it can be periodically harvested and the clippings removed to provide export of nutrients and to prevent the basin from filling with decaying organic matter.

Basin Dewatering

- A common sign of failure of some BMPs is standing water long after the rain event ends. This is especially true in sand filters, dry extended detention basins, and retention basins. In addition, wet ponds may also need to be drained for maintenance purposes. The water in each of these systems can be pumped into the storm drain conveyance system downstream of the BMP as long as it has been at least 48 hours since the last rain event. This delay usually provides sufficient time for most of the pollutants to settle out of the standing water; however, the discharge of sediment laden water is not allowed at any time. A wet basin that has been completely drained should not be left dry for an extended period of time. The wet basin should be refilled as soon as possible to prevent the clay liner from drying out.

Engineered Vegetative Filter Strips

The following guidelines should be used as an inspection and maintenance plan for the vegetative filter strips BMP that should be performed at least twice annually:

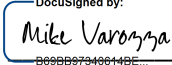
- *Inspection.* Inspect filter strips at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is most desirable. The strip should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. More frequent inspections of the grass cover during the first few years after establishment will help to determine if any problems are developing, and to plan for long-term restorative maintenance needs. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Construction of a level spreader device may be necessary to reestablish shallow overland flow.
- *Debris and Litter Removal.* Trash tends to accumulate in vegetated areas, particularly along highways. Any filter strip structures (i.e. level spreaders) should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection, but should be performed no less than 4 times per year.
- *Sediment Removal.* Sediment removal is not normally required in filter strips, since the vegetation normally grows through it and binds it to the soil. However, sediment may accumulate along the upstream boundary of the strip preventing uniform overland flow. Excess sediment should be removed by hand or with flat-bottomed shovels.
- *Grass Reseeding and Mulching.* A healthy dense grass should be maintained on the filter strip. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level. Grass damaged during the sediment removal process should be promptly replaced using the same seed mix used during filter strip establishment. If possible, flow should be diverted from the damaged areas until the grass is firmly established. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Corrective maintenance, such as weeding or replanting should be done more frequently in the first two to three years after installation to ensure stabilization. Dense vegetation may require irrigation immediately after planting, and during particularly dry periods, particularly as the vegetation is initially established.

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

An amended copy of this document will be provided to the TCEQ within thirty days of any changes in the following information

Responsible Party for Maintenance: Lakeline Ridge Condominium Association, Inc
Address: C/o Waterloo Swimming
12332 Ranch Rd. 620 N. bldg C
Austin, TX 78750

Owner Contact: Mike Varozza
Telephone Number: (512) 401-3404

Signature of Responsible Party:  10/29/2024

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment H: Pilot-Scale Field Testing Plan

Attachment H is not applicable to this project.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Attachment I: Measures for Minimizing Surface Stream Contamination

Attachment I is not applicable to this project.

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Agent Authorization Form (TCEQ-0599)

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

I Will Paton

Print Name
Manager

Title - Owner/President/Other
of FED CEDAR PARK LP

Corporation/Partnership/Entity Name
have authorized Brad Carabajal

Print Name of Agent/Engineer
of Quiddity Engineering

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:

[Signature]
Applicant's Signature

10/22/24
Date

THE STATE OF Texas §
County of Travis §



BEFORE ME, the undersigned authority, on this day personally appeared William Paton 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 22 day of October.

[Signature]
NOTARY PUBLIC

Cody Lane Griffin
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 07-17-2028

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Application Fee Form (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Freehill RR 620

Regulated Entity Location: 12332 RR 620, Unit #4, Cedar Park, Texas 78613

Name of Customer: FED CEDAR PARK LP

Contact Person: Mr. William Paton

Phone: (512) 614-2151

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

☐ San Antonio Regional Office

☐ Mailed to: TCEQ - Cashier

☐ Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone

☐ Contributing Zone

☐ Transition Zone

Type of Plan	Size	Fee Due
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	3.96 Acres	\$ 4000
Sewage Collection System	510 L.F.	\$ 650
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: 11/22/2024

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

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

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

Extension of Time Requests

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

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

**Check Payable to the “Texas Commission on
Environmental Quality”**

FREEHILL RR 620
MODIFICATION OF A PREVIOUSLY APPROVED PLAN

Core Data Form (TCEQ-10400)



TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)		<input type="checkbox"/> Other
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 RN106926181

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)			
<input checked="" type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership					
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
<i>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).</i>					
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)				If new Customer, enter previous Customer below:	
FED CEDAR PARK LP					
7. TX SOS/CPA Filing Number		8. TX State Tax ID (11 digits)		9. Federal Tax ID	10. DUNS Number (if applicable)
080537		32093289984		(9 digits)	
11. Type of Customer:		<input checked="" type="checkbox"/> Corporation		<input type="checkbox"/> Individual	
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship		Partnership: <input type="checkbox"/> General <input checked="" type="checkbox"/> Limited	
12. Number of Employees				13. Independently Owned and Operated?	
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following					
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Other:					
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant					
15. Mailing Address:		901 S. Mopac Expressway			
City		Austin		State	TX
ZIP		78746		ZIP + 4	
16. Country Mailing Information (if outside USA)				17. E-Mail Address (if applicable)	
				will.paton@freehillco.com	
18. Telephone Number		19. Extension or Code		20. Fax Number (if applicable)	

(512) 614-2151

() -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected, a new permit application is also required.)

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

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

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

FREEHILL RR 620

23. Street Address of the Regulated Entity:

12332 RR 620, Unit #4

(No PO Boxes)

City

Cedar Park

State

TX

ZIP

78613

ZIP + 4

24. County

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:

26. Nearest City

State

Nearest ZIP Code

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:

28. Longitude (W) In Decimal:

Degrees

30

Minutes

27

Seconds

54.92

Degrees

97

Minutes

48

Seconds

49.06

29. Primary SIC Code

30. Secondary SIC Code

31. Primary NAICS Code

32. Secondary NAICS Code

(4 digits) 4225

(4 digits)

(5 or 6 digits) 493110

(5 or 6 digits)

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

Industrial Warehouse and Office

34. Mailing Address:

12332 RR 620, Unit #4

City

Cedar Park

State

TX

ZIP

78613

ZIP + 4

35. E-Mail Address:

will.paton@freehillco.com

36. Telephone Number

37. Extension or Code

38. Fax Number (if applicable)

(512) 614-2151

() -

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

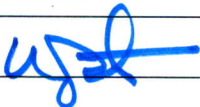
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source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

SECTION IV: Preparer Information

40. Name:	Brad Carabajal, P.E.		41. Title:	Project Engineer
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
512-685-5117		() -	bcarabajal@quiddity.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:	FED CEDAR PARK LP	Job Title:	Manager	
Name (In Print):	William Paton		Phone:	(512) 614-2151
Signature:			Date:	11/18/24