WTCPUA UPLANDS WATER TREATMENT PLANT EXPANSION

TCEQ EAPP CZP MODIFICATION

Prepared for:

West Travis County Public Utility Agency
13215 Bee Cave Parkway, Building B, Suite 110
Scottsdale, Arizona 85260

Prepared by:

Murfee Engineering Company, Inc.
Texas Registered Firm No. F-353
1101 Capital of Texas Highway South, Building D
Austin, Texas 78746
(512) 327-9204

October 2023

Table of Contents

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: WTCPUA Uplands WTP Expansion					**2. Regulated Entity No.:** 104993316				
3. Customer Name: West Travis County Public Utility Agency					**4. Customer No.:** 604021980				
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):**		11.16	
9. Application Fee:	$11,050		**10. Permanent BMP(s):**			Extended Detention Pond & VFS			
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**			7			
13. County:	Travis		**14. Watershed:**			City of Austin – Colorado River			

Application Distribution

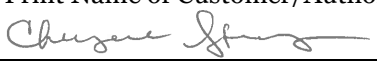
Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	_1_	___
Region (1 req.)	___	_1_	___
County(ies)	___	_1_	___
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	_1_Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin _1_Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.
Cheyenne Stowers, P.E. Print Name of Customer/Authorized Agent
 10/4/23 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):	

Contributing Zone Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Contributing Zone to the Edwards Aquifer and Relating to 30 TAC §213.24(1), 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 **Contributing Zone Plan Application** is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Customer/Agent: Cheyenne Stowers, P.E.

Date: 10/4/23

Signature of Customer/Agent:

Regulated Entity Name: West Travis County Regional Water Treatment Plant

Project Information

1. County: Travis
2. Stream Basin: Colorado River Basin
3. Groundwater Conservation District (if applicable): Southwestern Travis County GCD
4. Customer (Applicant):

   Contact Person: Jennifer Riechers
   Entity: West Travis County Public Utility Agency.
   Mailing Address: 13215 Bee Cave Parkway, Bldg B, Suite 110
   City, State: Bee Cave, Texas Zip: 78738
   Telephone: 512-263-0100 Fax: _____
   Email Address: jriechers@wtcpua.org

5. Agent/Representative (If any):

   Contact Person: Cheyenne Stowers
   Entity: Murfee Engineering Co., Inc.
   Mailing Address: 1101 Capital of Texas Hwy. S., D110
   City, State: Austin, Texas Zip: 78746
   Telephone: 512-327-9204 Fax: 512-327-2947
   Email Address: cstowers@murfee.com

6. Project Location:

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

7. ☒ The location of the project site is described below. Sufficient detail and clarity has been provided so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

   Located at 12215 Bee Cave Rd, Bldg 2, Tx 78738.

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

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

   ☒ Project site boundaries.
   ☒ USGS Quadrangle Name(s).

10. ☒ **Attachment C - Project Narrative**. A detailed narrative description of the proposed project is attached. The project description is consistent throughout the application and contains, at a minimum, the following details:

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

11. 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/Not cleared)
☒ Other: Existing Water Treatment Plant

12. The type of project is:

☐ Residential: # of Lots: _____
☐ Residential: # of Living Unit Equivalents: _____
☐ Commercial
☐ Industrial
☒ Other: Expansion of a water treatment facility.

13. Total project area (size of site): 11.16 Acres

Total disturbed area: 4.45 Acres

14. Estimated projected population: 0

15. The amount and type of impervious cover expected after construction is complete is shown below:

Table 1 - Impervious Cover

Impervious Cover of Proposed Project	*Sq. Ft.*	*Sq. Ft./Acre*	*Acres*
Structures/Rooftops	90,663	÷ 43,560 =	2.08
Parking	71,694	÷ 43,560 =	1.65
Other paved surfaces	9,573	÷ 43,560 =	0.22
Total Impervious Cover	171,930	÷ 43,560 =	3.95

Total Impervious Cover 3.95 **÷ Total Acreage** 11.16 **X 100 =** 35.4**% Impervious Cover**

16. ☒ **Attachment D - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water quality is attached. If applicable, this includes the location and description of any discharge associated with industrial activity other than construction.

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

For Road Projects Only

Complete questions 18 - 23 if this application is exclusively for a road project.

☐ N/A

18. 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.

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

- ☐ Concrete
- ☐ Asphaltic concrete pavement
- ☐ Other: _____

20. Right of Way (R.O.W.):

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

21. Pavement Area:

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

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

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

23. ☐ 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

24. ☒ **Attachment E - 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 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

25. ☐ Wastewater is to be discharged in the contributing zone. Requirements under 30 TAC §213.6(c) relating to Wastewater Treatment and Disposal Systems have been satisfied.

☒ N/A

26. Wastewater will be disposed of by:

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

☐ **Attachment F - 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):

The sewage collection system will convey the wastewater to the WTCPUA BOHLS WWTP (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

☒ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

Complete questions 27 - 33 if this project includes the installation of AST(s) with volume(s) greater than or equal to 500 gallons.

☐ N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

AST Number	Size (Gallons)	Substance to be Stored	Tank Material
1	6500	Sodium Hypochlorite (NaOCL)	HDPE
2	1000	Citric Acid	HDPE
3	1000	Sodium Hydroxide (NaOH)	HDPE
4	16500	Citric Acid, or NaOH and NaOCL	Fiberglass
5	550	Orthophosphate	HDPE
6	550	Liquid Ammonium Sulfate	HDPE
7	850	Aluminum Chlorohydrate	HDPE

Total x 1.5 = 40,425 **Gallons**

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

one tank system, the containment structure is sized to capture one and one-half (1 1/2) times the cumulative storage capacity of all systems.

☐ **Attachment G - Alternative Secondary Containment Methods**. Alternative methods for providing secondary containment are proposed. Specifications showing equivalent protection for the Edwards Aquifer are attached.

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

Table 3 - Secondary Containment

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

Total: _____ Gallons

30. Piping:

☐ All piping, hoses, and dispensers will be located inside the containment structure.
☐ Some of the piping to dispensers or equipment will extend outside the containment structure.
☐ The piping will be aboveground
☐ The piping will be underground

31. ☐ The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of: concrete.

32. ☐ **Attachment H - AST Containment Structure Drawings**. A scaled drawing of the containment structure is attached that shows the following:

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

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

☒ In the event of a spill, any spillage will be removed from the containment structure within 24 hours of the spill and disposed of properly.

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

Site Plan Requirements

Items 34 - 46 must be included on the Site Plan.

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

    Site Plan Scale: 1" = 30'.

35. 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): Travis County FIRM Panel 48453C0405J, effective 01/22/20.

36. ☒ 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, etc. are shown on the site plan.

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

37. ☒ A drainage plan showing all paths of drainage from the site to surface streams.

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

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

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

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

42. ☐ Surface waters (including wetlands).

    ☒ N/A

43. ☐ Locations where stormwater discharges to surface water.

    ☒ There will be no discharges to surface water.

44. ☐ Temporary aboveground storage tank facilities.

    ☒ Temporary aboveground storage tank facilities will not be located on this site.

45. ☒ Permanent aboveground storage tank facilities.

☐ Permanent aboveground storage tank facilities will not be located on this site.

46. ☐ Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

Practices and measures that will be used during and after construction is completed.

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

☐ N/A

48. ☒ 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

49. ☒ 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

50. 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.

51. 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 I - 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.

52. ☐ **Attachment J - 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.

53. ☐ **Attachment K - 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.

54. ☒ **Attachment L - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams is attached.

    ☐ N/A

55. ☒ **Attachment M - Construction Plans**. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. Construction plans for the proposed permanent BMPs and measures are

attached and include: Design calculations, TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

☐ N/A

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

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

☐ N/A

57. ☐ **Attachment O - 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

58. ☒ **Attachment P - 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 result in water quality degradation.

☐ N/A

Responsibility for Maintenance of Permanent BMPs and Measures after Construction is Complete.

59. ☒ 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.

60. ☒ 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.

Administrative Information

61. ☒ 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.

62. ☒ Any modification of this Contributing Zone Plan may require TCEQ review and Executive Director approval prior to construction, and may require submission of a revised application, with appropriate fees.

63. ☒ The site description, controls, maintenance, and inspection requirements for the storm water pollution prevention plan (SWPPP) developed under the EPA NPDES general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) of the technical report. All requirements of 30 TAC §213.24(1-5) have been met by the SWPPP document.

☐ The Temporary Stormwater Section (TCEQ-0602) is included with the application.

CZP APPLICATION ATTACHMENTS

ATTACHMENTS A & B: Attachments are at the end of this section.

ATTACHMENT C – PROJECT NARRATIVE
The West Travis County Public Utility Agency (WTCPUA) is proposing the construction of an additional potable water treatment facility on the existing 11.16-acre Uplands Water Treatment Plant. The proposed facility consists of a main building that houses most of the treatment equipment, with external flocculation basins, external chemical storage, and an aboveground clearwell tank. The initial CZP approval for the water treatment facility was approved in 2003 under EAPP Program ID No. 03062401. Included in this approval was a water quality pond and placement of vegetative filter strips (VFS) to fulfill water quality requirements. The currently proposed modification is to account for the impacts of additional impervious cover by the proposed expansion. The existing water quality infrastructure provides sufficient pollutant removal to meet the TCEQ requirements.

The following attachments do not necessarily apply to the specific changes represented by the proposed modification.

ATTACHMENT D – FACTORS AFFECTING SURFACE WATER QUALITY
During construction, the potential for sediment runoff during a storm event is the main factor that would affect surface water quality. The temporary controls put in place prior to initiation of construction and maintained throughout the construction period until the site is stabilized will protect any receiving stream from construction sediment.

ATTACHMENT E – VOLUME AND CHARACTER OF STORMWATER
Existing drainage exits the site in southwesterly and southeasterly directions through four drainage areas. The water quality pond serves as detention for one of the drainage areas. Stormwater runoff calculations were performed using the rational method and referencing the City of Austin Drainage Criteria Manual. Calculations were performed for both existing and proposed conditions in order to determine if the proposed impervious cover would increase runoff and require additional hydrologic study. A rainwater capture system will be designed to capture the entirety of a 100-yr rain event from the roof of the main building and then recycled into the water treatment facility. This allows for a reduction in overall stormwater runoff from the site. Pre- and post-runoff coefficients for the 0.4 and 0.01 annual exceedance probability (AEP) events provided in the following table.

Runoff Coefficient, C	AEP	
	0.4 (25 yr)	.01 (100 yr)
Pre-Project	0.48	0.55
Post-Project	0.50	0.57

ATTACHMENTS F-I: NOT APPLICABLE

ATTACHMENTS G&H: ABOVEGROUND STORAGE TANKS AND CONTAINMENT
The site will include 7 above ground storage tanks containing various chemicals related to the water treatment process. They will all have proper containment structures in the case of spills.

ATTACHMENT J – BMPs FOR UPGRADIENT STORMWATER
Stormwater from upgradient areas will be directed around the disturbance by temporary control such as silt fence and diversion berms.

Ultimately, upgradient areas will be intercepted by a VFS or water quality pond.

ATTACHMENT K - BMPs FOR ON-SITE STORMWATER
Stormwater runoff consists of sheet flow to silt fence used as a temporary BMP.

Stormwater will be conveyed to the water quality pond or through a VFS. The existing extended detention pond serves the drainage area containing the proposed building. The water quality pond was approved and constructed in 2003, with a design water quality volume of 6,274 CF. Vegetative filter strips run along the property boundaries to treat any runoff not conveyed to the pond.

ATTACHMENT L – BMPs FOR SURFACE STREAMS
The temporary controls are essential for protection of the surface streams. Once stabilization occurs, the potential for release of sediment from the site to surface streams is eliminated.

ATTACHMENT M – CONSTRUCTION PLANS
Plans are provided separate from this document. The plans contain all calculations, grading, notes, and details for the proposed site civil improvements.

ATTACHMENT N – INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN
The modifications proposed by this plan are already operating under both an approved SWPPP and Pond Maintenance Plan and are repeated here in this submittal for reference.

ATTACHMENT O – PILOT SCALE FIELD TESTING
Not Applicable

ATTACHMENT P – MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION
See discussion for Attachments K and L.

WTCPUA UPLANDS WTP EXPANSION

WATER QUALITY BMP MAINTENANCE PLAN

October 2023

PARTY RESPONSIBLE FOR MAINTENANCE

Jennifer Reichers
West Travis County Public Utility Agency
13215 Bee Cave Parkway, Bldg B, Suite 110
Bee Cave, Texas 78738
512-263-0100
jriechers@wtcpua.org

Jennifer Riechers, General Manger
Printed Name & Title

Jennifer Riechers 10/6/23
Signature **Date**

I certify 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 **Maintenance of Permanent BMPs and Measures Section** is hereby submitted for TCEQ review and executive director approval.

Cheyenne Stowers
Print Name of Customer/Authorized Agent

Cheyenne Stowers 10/4/23
Signature of Customer/Authorized Agent Date

MAINTENANCE GUIDELINES

1) Required Maintenance

The maintenance association must conduct the following activities in order to meet the maintenance requirements under its permit:

a) Routine Maintenance for All Structural (Stormwater Capture) Systems

Water quality ponds of all types have similar routine maintenance requirements, although most ponds have some unique maintenance needs, as detailed in this section. The following general maintenance requirements apply to all pond BMPs:

i) BMP facilities must be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation.

ii) During each inspection, erosion areas inside and downstream of the BMP must be identified and repaired or revegetated immediately;

iii) Grass areas in and around ponds must be mowed at least twice annually to limit vegetation height to 18 inches. Wetland plants and other vegetation in the deeper stage of an ED pond should be left unmowed, unless it presents a nuisance. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. When mowing of grass is performed, a mulching mower must be used, or grass clippings must be caught and removed, as with all water quality BMPs.

iv) Debris and litter accumulated in the facility must be removed during each inspection;

v) Excessive sediment must be removed and properly disposed of as discussed for each BMP below;

vi) Design drawdown times must not be exceeded by more than 24 hours. If drawdown times are excessive, repairs should occur immediately;

vii) With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) must be identified and repaired immediately.

viii) Maintenance access shall extend to the pond from a public or private road. The maintenance access shall have a slope of no great than 15 percent and shall be stabilized to withstand heavy equipment.

ix) Inlet and outlet structures will eventually deteriorate and must be replaced; though it may be 25-50 years before this is necessary. The Maintenance association must demonstrate how replacement will be accomplished and funded.

2) Additional Maintenance Requirements for Specific Structural (Stormwater Capture) BMPs

a) Extended Detention Pond

i) Remove sediment from the inlet structure and sedimentation chamber when sediment buildup reaches 6 inches or when the proper functioning of inlet and outlet structures is impaired. Sediment must be cleared form the inlet structure at least every year, and from the sedimentation basin at least every 5 years.

b) Vegetative Filter Strips

i) Filter strips shall be managed so that a dense, healthy vegetative cover is preserved.

ii) Un-mowed vegetative filter strips are preferred. If mowed the cutting height shall be set to a minimum of four (4) inches for turfgrass and a minimum of 18 inches for bunchgrass. Grass clippings must be removed from the VFS in order to prevent export of nutrients.

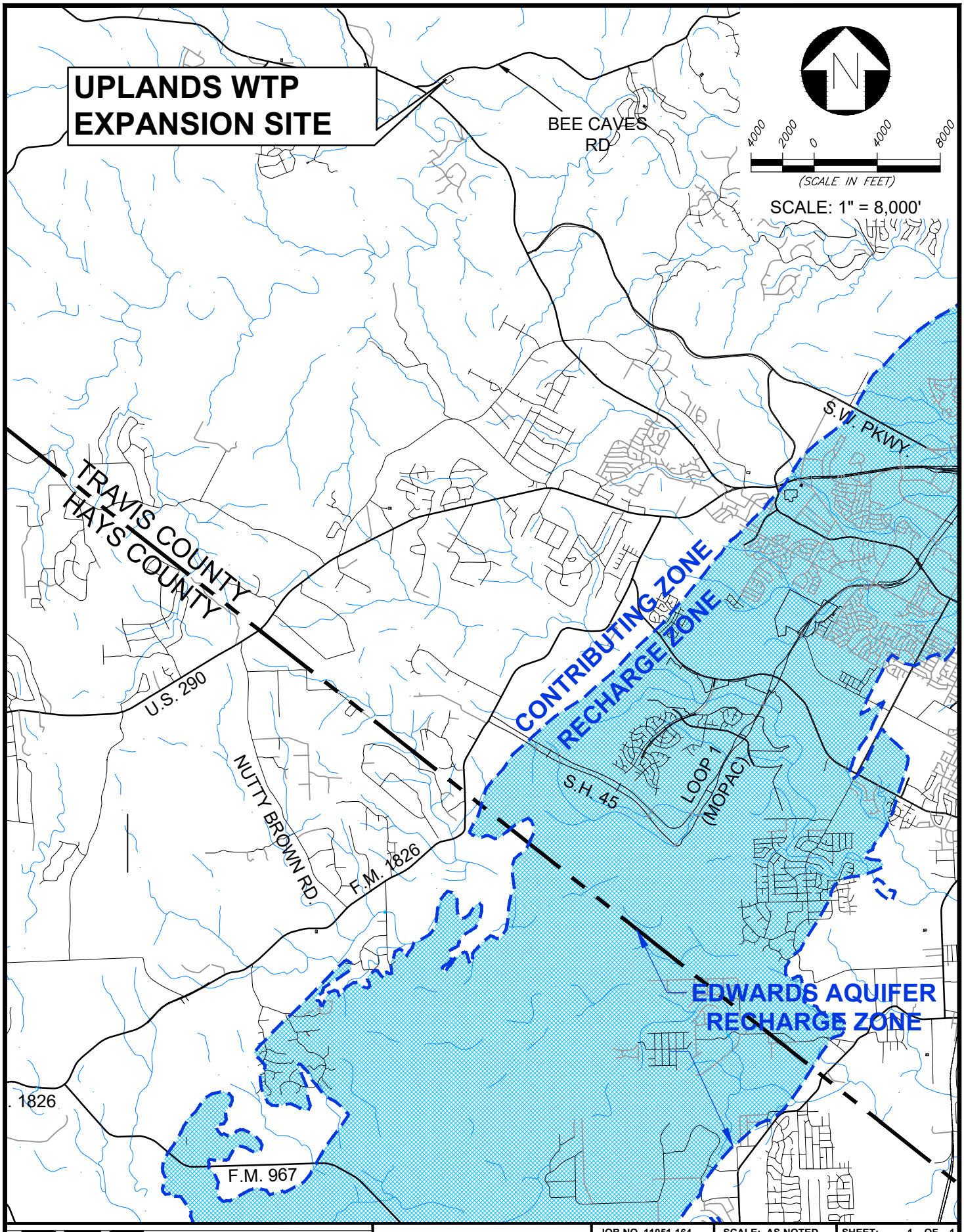
iii) Bare spots and areas of erosion identified during inspections must be replanted and restored to meet specifications.

iv) Accumulated sediment shall be removed.

v) Any disturbance to the filter strip as a result of maintenance procedures or other reasons shall be repaired, including re- establishment of the vegetation.

vi) Corrective maintenance is required if there is evidence of preferential flow paths around or through the VFS (e.g., upstream "lip" is silted in or installed too low).

ATTACHMENT A – ROAD MAP



MEC
Murfee Engineering Company Texas Registered Engineering Firm F-353
1101 Capital of Texas Highway South, Building D, Suite 110, Austin, Texas 78746, (512) 327-9204

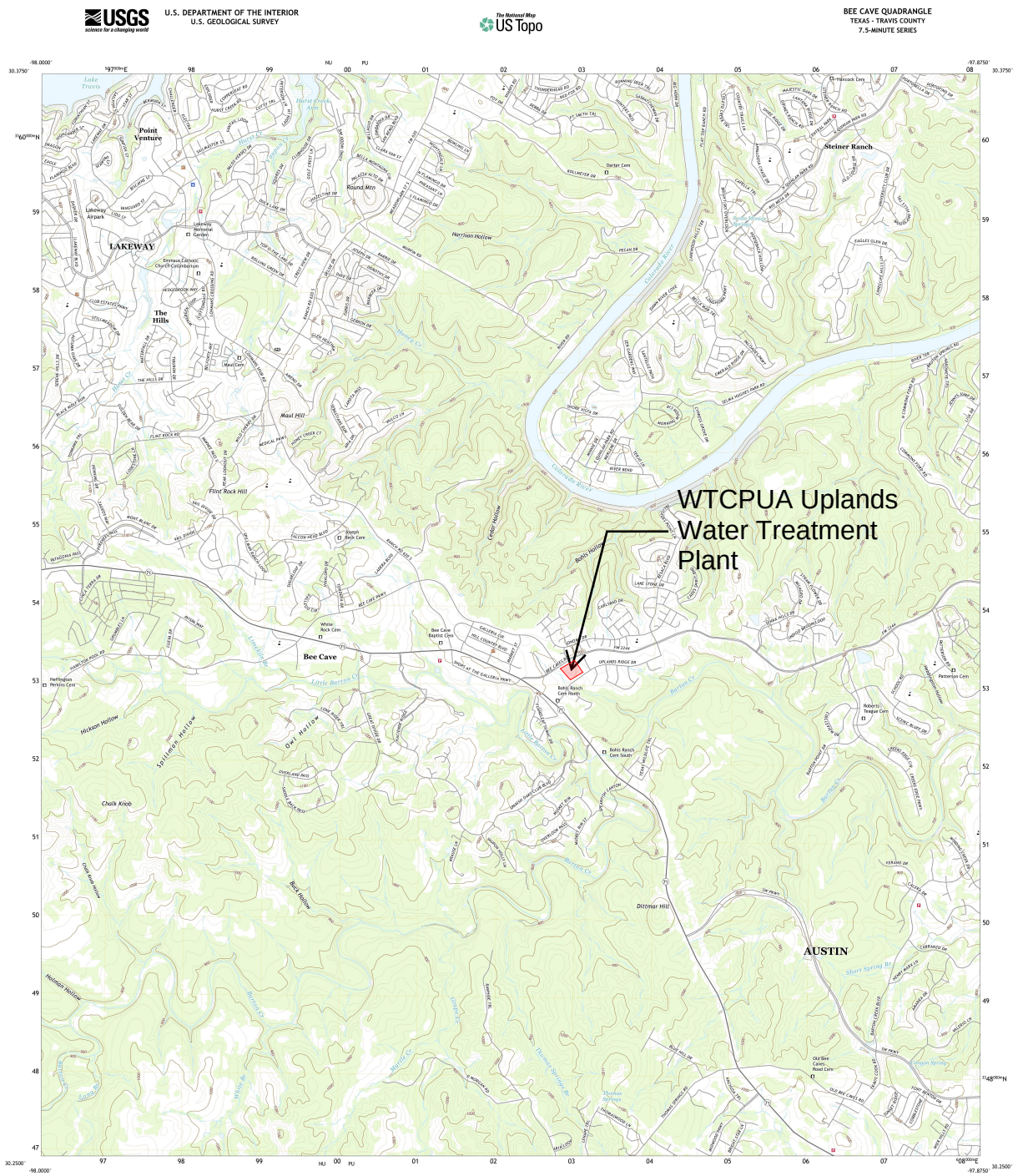
WTCPUA UPLANDS WTP EXP

ROAD MAP

JOB NO. 11051-164	SCALE: AS NOTED	SHEET: 1 OF 1
DESIGNED BY: JFS		
DRAWN BY: CS	DATE: 10/4/2023	

FILE(LAYOUT): W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\Working\CZP-e_Location Map.dwg(8X11(8000))

ATTACHMENT B
USGS QUADRANGLE MAP



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

BEE CAVE QUADRANGLE
TEXAS - TRAVIS COUNTY
7.5-MINUTE SERIES

SCALE 1:24 000

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

BEE CAVE, TX
2022

Modification of a Previously Approved Contributing Zone 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 **Modification of a Previously Approved Contributing Zone Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Cheyenne Stowers, P.E.

Date: 10/4/23

Signature of Customer/Agent:

Project Information

1. Current Regulated Entity Name: West Travis County Regional Water Treatment Plant
   Original Regulated Entity Name: West Travis County Regional Water Treatment Plant
   Assigned Regulated Entity Number(s) (RN): 104993316
   Edwards Aquifer Protection Program ID Number(s): 03062401
   ☒ The applicant has not changed and the Customer Number (CN) is: 604021980
   ☐ 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):

☒ Any physical or operational modification of any best management practices or structure(s), including but not limited to temporary or permanent ponds, dams, berms, silt fences, and diversionary structures;
☐ Any change in the nature or character of the regulated activity from that which was originally approved;
☐ A change that would significantly impact the ability to prevent pollution of the Edwards Aquifer and hydrologically connected surface water; or
☒ Any development of land previously identified in a contributing zone plan as undeveloped.

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.

CZP Modification Summary	***Approved Project***	***Proposed Modification***
Acres	11.16	11.16
Type of Development	Water Treatment Plant	WTP Expansion
Number of Residential Lots	0	0
Impervious Cover (acres)	3.32	3.95
Impervious Cover (%)	29.7	35.4
Permanent BMPs	2	2
Other	_____	_____

AST Modification Summary	***Approved Project***	***Proposed Modification***
Number of ASTs	2	7
Other	_____	_____

UST Modification Summary	***Approved Project***	***Proposed Modification***
Number of USTs	N/A	N/A
Other	_____	_____

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 previous modifications, and how this proposed modification will change the approved plan.

6. ☒ **Attachment C: Current Site Plan of the Approved Projec**t. 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. ☒ Acreage has not been added to or removed from the approved plan.
   ☐ Acreage has been added to or removed from the approved plan and is discussed in *Attachment B: Narrative of Proposed Modification*.

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.

CZP MODIFICATION ATTACHMENTS

ATTACHMENT A: ORIGINAL APPROVALS

SUBEDAQ - Travis
West Travis Co. Regional
Water Treatment Plan
8/28/03

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 28, 2003

Mr. Randy Goss
Lower Colorado River Authority
3700 Lake Austin Blvd.
Austin, Texas 78703

Re: Edwards Aquifer, Travis County
NAME OF PROJECT: West Travis County Regional Water Treatment Plant; 12215 Bee Cave Road; Village of Bee Cave, Texas
TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer
Edwards Aquifer Protection Program File No. 03062401

Dear Mr. Goss:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP application for the referenced project submitted to the Austin Regional Office by PBS&J on behalf of the Lower Colorado River Authority on June 24, 2003. Final review of the CZP submittal was completed after additional material was received on August 22, 2003. 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 Contributing Zone Plan. A motion for reconsideration must be filed no later than 20 days after the date of this approval letter. This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10% of the construction has commenced on the project or an extension of time has been requested.

PROJECT DESCRIPTION

The proposed expansion to the existing West Travis County Water Treatment Plant will be located on 11.16 acres and will consist of a clearwell, a pump station, a wash water basin, a clarifier, four buildings, an access road, sidewalks, detention pond, parking and utilities. The increased impervious cover for this project will be 1.17 acres (10.5 percent). Project wastewater will be disposed of by conveyance to the existing Lake Point wastewater treatment plant owned by the Lower Colorado River Authority.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent pollution of stormwater runoff originating on-site or up-gradient of the site and potentially flowing across and off the site after construction, two vegetative filter strips and a detention pond will be constructed. The total water quality volume in the detention pond provided is 6,274 cubic feet. The two vegetative filter strips provide 3.07 total acres of treatment. The approved measures meet the required 80 percent removal of the increased load in total suspended solids caused by the project.

SPECIAL CONDITION

Intentional discharges of sediment laden stormwater are not allowed. If dewatering excavated areas becomes necessary, a plan for removing the sediment load from the discharge must be submitted to the Austin Regional Office prior to initiating any discharges. The plan must propose how the discharge will be filtered through appropriately selected temporary best management practices. These may include vegetative filter strips, sediment traps, rock berms, silt fence rings, etc.

STANDARD CONDITIONS

1. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Prior to Commencement of Construction:

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

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

4. The applicant must provide written notification of intent to commence construction 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 name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.

5. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) 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 proposed sediment forebays 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.

During Construction:

6. During the course of regulated activities related to this project, the applicant or his 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.

7. 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 significantly reduced. 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).

8. 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.

9. 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:

10. Owners of permanent BMPs and measures must insure that the 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 Austin Regional Office within 30 days of site completion.

11. 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. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TNRCC-10263) is enclosed.

12. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone 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.

13. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50% of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone 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.

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

If you have any questions or require additional information, please contact Mr. Michael Daniels, P.E. of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Margaret Hoffman
Executive Director
Texas Commission on Environmental Quality

MH/mjd

Enclosure: Change in Responsibility for Maintenance on Permanent BMPs Form TNRCC-10263

cc: Mr. J. Scott Trainer, P.E., PBS&J, Austin
Mr. Steve Parks, Operations Manager, Lower Colorado River Authority, Austin
Mr. James Fisher, City Administrator, Village of Bee Cave
The Honorable Sam Biscoe, County Judge, Travis County
Central Records, TCEQ Information Resources Division, Austin

ATTACHMENT B – PROJECT NARRATIVE

This modification is to account for additional impervious cover that will be added for the expansion of the West Travis County Public Utility Agency (WTCPUA) Uplands Water Treatment Plant. The initial CZP approval for the water treatment facility was approved in 2003 under EAPP Program ID No. 03062401. The previous approval included an extended detention pond with 6,274 cubic feet of water quality volume and 3.07 acres of vegetative filter strips.

The proposed expansion will take place on the existing 11.16 acre treatment plant site and consists of a main building that houses most of the treatment equipment, with external flocculation basins and external chemical storage. The main building is approximately 88' wide, 144' long, and 76.5' high. An aboveground clearwell tank, approximately 41’ high and 110’ in diameter, will be added as well. Currently, the new building will drain to the existing water quality pond followed by VFS. additional vegetative filter strip will be added upstream of the extended detention pond to meet City of Bee Cave 90% removal requirements. All other drainage areas on-site drain through vegetative filter strips before leaving the site.

An analysis was conducted to determine the impact additional impervious cover would have on the site’s water quality. Using the TCEQ spreadsheet, it was determined that the existing controls on-site are still sufficient to meet the TCEQ’s removal criteria.

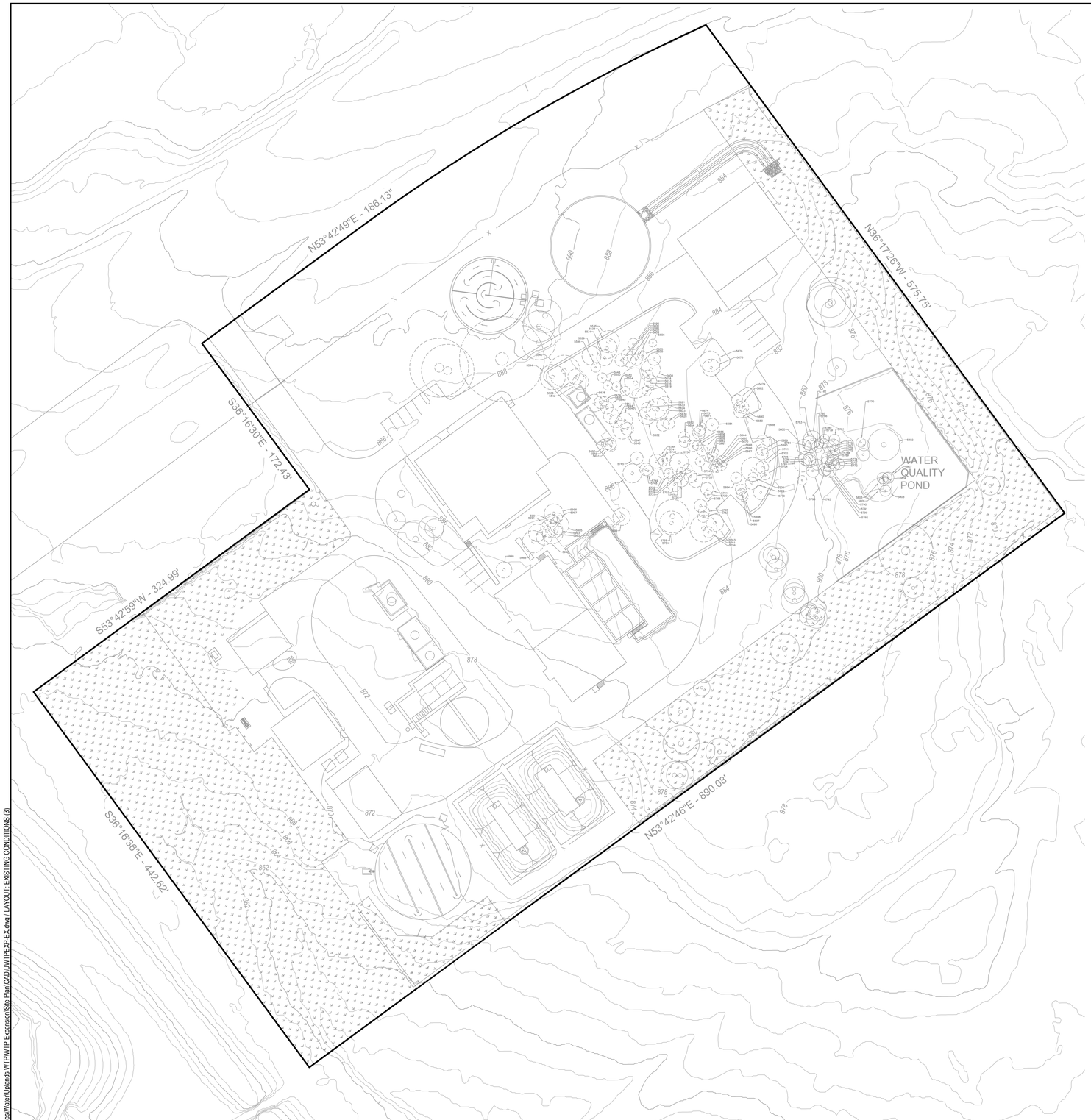
The table below provides an impervious cover summary from the original permit through this second modification.

Impervious Cover	Original (sf)	Modification 1 (sf)	Total (sf)	Total (ac)
Structures/Rooftops	64,191	26,472	90,663	2.08
Parking	71,567	127	71,694	1.65
Other Paved Surfaces	8,822	751	9,573	0.22
Total	144,580	27,350	171,930	3.95

Impervious = 3.95/11.16 = 35.4% (Original Impervious = 29.7%)

ATTACHMENT C

APPROVED SITE PLAN
PROPOSED SITE PLAN: SEE SWPPP



LEGEND

- PROPERTY BOUNDARY
- EXISTING FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING VEGETATIVE FILTER STRIP
- TREES TO REMAIN
- TREES TO REMOVE

N

0 50 100
25 75
SCALE: 1"=50'

TREE TABLE

Point #	Northing	Easting	Elevation	Description
5529	10083421.3200	3055076.9550	887.797	12" Live Oak 1115
5659	10083223.8610	3055188.8220	884.012	5" 5" Live Oak 1184
5595	10083432.4740	3055116.7690	886.363	7" 8" Live Oak 1127
5531	10083419.2780	3055089.5440	887.578	10" 9" Live Oak 1142
5661	10083325.4740	3055191.8060	883.735	6" Cedar 1111
5533	10083428.2900	3055091.6450	887.820	13" 7" Live Oak 1144
5535	10083434.5960	3055092.9630	887.605	14" Live Oak 1159
5674	10083347.9070	3055179.3090	884.690	8" 8" Live Oak 1178
5646	10083410.1380	3055080.9790	887.335	6" Cedar 1117
5538	10083401.1040	3055062.0590	888.540	10" Live Oak 1106
5602	10083416.2580	3055113.0030	886.379	8" Live Oak 1198
5606	10083315.6650	3055196.0740	883.852	7" Live Oak 1176
5640	10083406.6830	3055050.9330	889.440	20" 11" Live Oak 1148
5604	10083417.2880	3055119.6880	886.144	7" 6" Live Oak 1175
5668	10083314.2600	3055193.5400	883.890	5" 3" Live Oak 1146
5542	10083396.3930	3055066.7380	888.145	10" Live Oak 1147
5606	10083433.3000	3055135.2680	885.192	5" 3" 2" Cedar 1168
5670	10083321.2300	3055201.6820	883.501	7" Live Oak 1123
5544	10083400.9000	3055040.0960	889.471	16" Live Oak 1183
5608	10083408.4320	3055133.2690	885.672	12" Live Oak 1130
5548	10083400.4390	3055087.2410	887.221	6" Live Oak 1126
5676	10083415.9810	3055189.6250	883.353	13" Live Oak 1125
5550	10083393.0120	3055092.4250	885.849	6" Live Oak 1109
5614	10083402.3030	3055130.3370	885.761	7" Live Oak 1113
5552	10083391.9500	3055100.8160	886.413	6" 5" Cedar 1171
5616	10083395.3510	3055118.6870	886.063	19" Live Oak 1179
5554	10083387.6590	3055109.0260	886.422	6" Cedar 1183
5598	10083422.2170	3055110.7950	886.582	7" 4" Live Oak 1152
5682	10083329.5880	3055193.1110	883.820	6" Cedar 1168
5600	10083417.0220	3055105.2920	886.982	8" Live Oak 1169
5664	10083320.3320	3055195.9980	883.816	6" Live Oak 1133
5605	10083421.4230	3055125.2170	885.584	6" Live Oak 1158
5609	10083418.1110	3055136.4640	885.466	8" 8" 6" Live Oak 1129
5673	10083349.9810	3055179.8640	883.939	7" Live Oak 1165
5613	10083397.1100	3055132.9390	885.812	8" 8" Live Oak 1124
5619	10083387.7050	3055129.4020	885.584	6" Cedar 1156
5621	10083378.7490	3055133.8220	885.718	22" Live Oak 1118
5623	10083370.1280	3055139.8380	885.731	14" Live Oak 1132
5624	10083375.8430	3055146.3380	885.207	9" Live Oak 1151
5628	10083356.6110	3055150.5360	885.117	7" Cedar 1122
5630	10083355.4980	3055144.5000	885.936	8" Cedar 1172
5632	10083364.2170	3055129.6190	886.195	11" Live Oak 1200
5633	10083372.2780	3055129.0550	885.596	6" Cedar 1105
5635	10083378.0580	3055088.7790	887.187	6" Live Oak 1138
5636	10083376.9080	3055085.7620	886.748	8" Live Oak 1192
5638	10083376.2440	3055079.8630	887.399	11" Live Oak 1180
5640	10083371.9520	3055091.8260	887.321	8" 7" Live Oak 1107
5641	10083364.2580	3055095.8120	887.468	10" Live Oak 1103
5643	10083359.5920	3055108.5300	887.071	10" Live Oak 1135
5644	10083358.9160	3055100.0830	887.226	8" Live Oak 1134
5645	10083351.0250	3055106.2930	887.772	12" Live Oak 1167
5647	10083351.8380	3055110.9440	887.016	8" Live Oak 1166
5649	10083337.2930	3055094.4720	887.429	8" Live Oak 1128
5650	10083337.2700	3055091.7320	887.383	7" Live Oak 1181
5651	10083335.4190	3055095.4410	887.362	7" 5" 3" Cedar 1153
5652	10083343.9040	3055165.0580	884.218	7" Cedar 1161
5654	10083339.4040	3055165.6210	884.782	7" Cedar 1196
5655	10083335.4760	3055173.3580	884.525	7" Live Oak 1149
5656	10083330.8090	3055177.3480	884.448	6" Live Oak 1193
5658	10083331.2970	3055182.2710	884.210	7" Live Oak 1186
5665	10083318.9300	3055197.4850	883.902	6" Live Oak 1190
5667	10083316.9990	3055199.9730	883.607	7" Live Oak 1121
5671	10083304.3430	3055181.3750	883.720	6" 3" 3" 3" 2" 2" 2" 2" Cedar 1162
5675	10083409.8190	3055190.6610	883.218	11" 10" 7" Live Oak 1180
5679	10083379.1890	3055215.3530	882.455	7" 7" Live Oak 1139
5680	10083372.3760	3055220.4500	882.784	8" Live Oak 1164
5682	10083372.2850	3055217.6040	882.652	7" Live Oak 1187
5683	10083368.1500	3055218.2430	882.504	8" Live Oak 1120
5684	10083355.6740	3055191.7260	883.408	8" Cedar 1137
5688	10083338.9990	3055239.6630	882.014	9" Live Oak 1143
5689	10083331.7600	3055239.0020	882.169	7" 6" Live Oak 1114
5690	10083328.3180	3055238.7380	882.200	8" Live Oak 1157
5694	10083305.3020	3055214.4860	883.347	7" Live Oak 1140
5695	10083293.8490	3055218.8230	883.280	7" 5" Live Oak 1174
5697	10083289.7000	3055219.7340	883.642	7" 7" 5" Live Oak 1177
5698	10083287.4560	3055221.3260	883.308	6" 4" Live Oak 1131
5699	10083300.1900	3055229.2060	883.148	8" Live Oak 1141
5700	10083305.8310	3055230.4140	882.858	6" Live Oak 1119
5701	10083313.1550	3055230.3400	882.751	15" Live Oak 1136
5702	10083315.2790	3055239.1940	882.422	8" 5" Live Oak 1112
5704	10083307.7840	3055242.1350	882.317	6" 6" 5" Live Oak 1197
5710	10083291.2980	3055237.7100	883.159	9" 6" Live Oak 1191

TREE TABLE

Point #	Northing	Easting	Elevation	Description
5720	10083289.4000	3055187.7070	884.474	5" 5" Cedar 1195
5721	10083294.6850	3055186.8610	884.409	8" Live Oak 1150
5723	10083302.9020	3055175.9740	884.870	8" Live Oak 1185
5724	10083306.5380	3055171.0720	885.083	8" Live Oak 1102
5726	10083303.3090	3055162.1700	885.353	9" Live Oak 1108
5727	10083304.8350	3055158.6210	885.673	6" Cedar 1170
5729	10083310.7200	3055162.1770	885.367	6" Live Oak 1155
5731	10083314.0000	3055168.0830	884.856	8" Live Oak 1189
5734	10083320.8770	3055180.0960	884.291	6" Cedar 1104
5736	10083318.7740	3055160.2880	885.218	12" Live Oak 1173
5738	10083309.2830	3055150.1090	885.776	6" Live Oak 1194
5739	10083309.3100	3055145.7620	886.206	7" Cedar 1182
5741	10083320.9200	3055144.7900	885.861	6" Live Oak 1159
5742	10083323.5510	3055148.4810	885.705	6" 5" 5" 4" Cedar 1145
5744	10083320.9450	3055138.5030	886.122	9" Cedar 1154
5745	10083323.9680	3055130.0640	886.638	6" 6" Cedar 1110
5746	10083309.4300	3055115.7670	887.180	12" Live Oak 1116
5748	10083313.2460	3055128.7740	886.493	8" Live Oak 1131
5749	10083311.7950	3055130.8920	886.491	7" Live Oak 2769
5752	10083298.8180	3055155.6700	885.714	9" 6" 5" 3" 3" 3" 3" 2" Cedar 2735
5754	10083298.7800	3055153.9590	885.901	21" Live Oak 2731
5755	10083292.3820	3055152.9410	885.805	15" Live Oak 2765
5759	10083257.0430	3055183.3780	885.041	17" 16" Live Oak 2790
5761	10083253.4810	3055188.1250	884.593	7" Cedar 2800
5763	10083262.4830	3055194.2140	884.692	11" 7" Cedar 2774
5765	10083273.0670	3055183.7730	884.983	7" Cedar 2719
5766	10083278.7320	3055180.5760	885.194	8" 7" Cedar 2732
5767	10083268.0850	3055183.1330	884.886	7" Cedar 2780
5768	10083327.1980	3055335.0710	877.988	8" 7" LIVEOAK 2750
5769	10083336.1720	3055335.7240	877.756	7" 6" LIVEOAK 2754
5770	10083338.7510	3055332.8300	877.822	6" 5" LIVEOAK 2727
5771	10083318.2990	3055311.9110	879.016	7" LIVEOAK 2763
5772	10083317.1800	3055307.8270	879.589	7" LIVEOAK 2720
5773	10083319.2240	3055304.9680	879.619	7" LIVEOAK 2708
5774	10083322.3170	3055306.2930	879.103	7" 4" LIVEOAK 2792
5775	10083328.0690	3055308.1490	879.170	7" LIVEOAK 2714
5776	10083331.1120	3055308.2270	879.048	8" LIVEOAK 2764
5777	10083336.9530	3055306.5440	879.191	8" LIVEOAK 2781
5778	10083334.5580	3055302.9050	879.470	8" 7" LIVEOAK 2722
5779	10083341.9630	3055298.5250	879.180	6" LIVEOAK 2740
5780	10083338.2380	3055297.4300	879.206	6" LIVEOAK 2771
5781	10083341.2730	3055307.7320	878.954	7" LIVEOAK 2787
5782	10083341.6120	3055296.5700	880.294	11" LIVEOAK 2709
5783	10083338.2410	3055283.9640	880.388	9" LIVEOAK 2762
5784	10083334.9490	3055285.3680	880.253	8" LIVEOAK 2786
5785	10083334.8270	3055291.3430	879.756	7" LIVEOAK 2701
5786	10083337.5740	3055293.2540	879.577	6" LIVEOAK 2715
5787	10083330.3700	3055303.1190	879.442	6" LIVEOAK 2760
5788	10083323.9330	3055301.2990	879.846	8" LIVEOAK 2713
5789	10083320.0980	3055300.3110	879.606	7" LIVEOAK 2739
5790	10083315.3300	3055302.5480	879.651	6" LIVEOAK 2702
5791	10083317.7350	3055303.1590	879.790	8" LIVEOAK 2706
5792	10083313.0220	3055298.2470	879.839	8" 5" LIVEOAK 2784
5793	10083311.7520	3055287.0800	880.338	8" 5" LIVEOAK 2723
5794	10083319.0730	3055277.6420	880.078	11" LIVEOAK 2755
5795	10083323.8640	3055280.2370	880.901	9" LIVEOAK 2710
5796	10083323.1050	3055284.1990	880.572	8" LIVEOAK 2725
5797	10083312.0210	3055283.9390	880.756	8" LIVEOAK 2782
5798	10083302.9220	3055279.9960	881.037	6" 6" 5" LIVEOAK 2707
5799	10083311.7950	3055300.1950	879.781	6" 5" LIVEOAK 2748
5800	10083334.8860	3055278.6310	880.829	9" LIVEOAK 2716
5801	10083317.7210	3055291.1980	880.226	7" LIVEOAK 2717
5802	10083336.6000	3055304.8630	877.392	20" LIVEOAK 2749
5803	10083304.9470	3055353.5540	877.873	7" LIVEOAK 2776
5804	10083302.5520	3055354.8200	877.753	6" LIVEOAK 2768
5805	10083298.5890	3055355.5540	878.072	9" LIVEOAK 2742
5806	10083305.6790	3055357.7530	877.817	6" LIVEOAK 2795
5807	10083305.3330	3055358.9690	877.556	7" LIVEOAK 2728
5808	10083292.8740	3055356.1490	878.053	7" LIVEOAK 2711
5988	10083244.5050	3055021.8930	885.220	14" LIVEOAK 2767
5989	10083252.9700	3055020.4570	885.298	11" LIVEOAK 2757
5990	10083248.7920	3055032.0760	885.402	10" LIVEOAK 2704
5991	10083257.1700	3055037.0920	885.464	11" LIVEOAK 2746
5992	10083252.3550	3055040.1230	885.486	13" LIVEOAK 2737
5993	10083255.9030	3055042.1610	885.545	10" LIVEOAK 2705
5994	10083264.6480	3055038.5880	885.541	8" LIVEOAK 2796
5995	10083260.2940	3055046.5700	885.883	12" LIVEOAK 2779
5996	10083271.3990	3055041.1550	885.994	12" LIVEOAK 2747
5997	10083267.3360	3055044.9600	885.775	6" LIVEOAK 2753
5998	10083317.7250	3054993.8710	883.489	10" 5" CEDAR 2734
5999	10083268.2480	3055100.5440	886.397	11" LIVEOAK 2724

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APP'D DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

TCEQ-TPDES EXISTING SITE PLAN

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144251
REGISTERED PROFESSIONAL ENGINEER
10-12-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY: CES
DRAWN BY: BRD
CHECKED BY: JKB
APPROVED BY: CES
DATE: 10/12/2023

FILE NO. UWTPEXP-EX.dwg
LAYOUT: EXISTING CONDITIONS (3)

JOB NO.

SHEET NO.
1 OF 1

PLOT DATE: 2023-10-12
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-EX.dwg | LAYOUT: EXISTING CONDITIONS (3)

WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY
UPLANDS WATER TREATMENT PLANT EXPANSION

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

STORMWATER POLLUTION PREVENTION PLAN

OCTOBER 2023

Prepared for:
West Travis County Public Utility Agency
12117 Bee Cave Road, Building 3, Suite 120
Bee Cave, Texas 78738

Prepared by:
Murfee Engineering Co., Inc.
1101 Capital of Texas Hwy. South, D-110
Austin, Texas 78746
(512) 327-9204

Texas Registered Engineering Firm F-353

Operator	NOI Submitted (Mail or STEERS)	TPDES Permit Number
West Travis County Public Utility Agency		

TABLE OF CONTENTS

I. STORMWATER POLLUTION PREVENTION PLAN

A. GENERAL PROJECT AND SITE INFORMATION

1. Project Name: WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY UPLANDS WATER TREATMENT PLANT EXPANSION

2. Location: The proposed project is the construction of an additional potable water treatment facility on an existing 11.16-acre Water Treatment Plant facility site, located at 12215 Bee Cave Road, Building 2, Bee Cave TX.

3. Primary Facility Operators:

   West Travis County Public Utility Agency
   c/o Jennifer Riechers – WTCPUA General Manager
   12117 Bee Cave Road, Building 3, Suite 120
   Bee Cave, Texas 78738
   (512) 263 - 0100

   CONTRACTOR (not known at this time)

   Secondary Facility Operators: None known

4. Property Owners: West Travis County Public Utility Agency
   c/o Jennifer Riechers – WTCPUA General Manager
   12117 Bee Cave Road, Building 3, Suite 120
   Bee Cave, Texas 78738
   (512) 263 - 0100

5. Project Description: The primary purpose of this project is the construction of an additional potable water treatment facility on the existing site. The proposed facility consists of a main building that houses most of the treatment equipment, with external flocculation basins and external chemical storage. The main building is approximately 88' wide, 144' long, and 65' high and includes an aboveground clearwell that is 41’ high. In addition to the main treatment building, proposed site improvements will include site grading, relocation of an access drive, and utility line installations. Two fire hydrants are to be installed around the proposed buildings; a fire riser room will be part of the main building as well.

6. Potential Pollutants and Post Construction Stormwater Quality: Potential pollutants include silt from construction disturbance. No other significant potential pollutants are anticipated on site. Post development stormwater quality will be excellent due to stabilization of disturbed areas and establishment of permanent BMPs**.**

7. Site Area: The overall site is 11.16 acres with a disturbance of 4.45 acres. The overall topography in the area of construction is a gentle slope across the site with slopes generally in the 0-10% category.

8. Drainage/BMPs: The project lies in a watershed drained by an unnamed tributary. Extensive use of erosion controls will be utilized throughout the site. Essential to controlling fugitive sediment is minimizing the area of disturbance at any one time. Construction will be sequenced to achieve this goal. Proposed drainage patterns, construction sequencing, and temporary erosion controls can be find in the WTCPUA Uplands WTP Expansion Site Plan.

9. Existing Soils: Four soil types occur on the property based upon data obtained from the NRCS web soil survey site. Represented Series include:
   - Volente Silty Clay Loam, 1 to 8 percent slopes,
   - Brackett-Rock Outcrop-Complex, 1 to 12 percent slopes,
   - Eckrant And Speck Soils, 0 to 2 percent slopes,
   - Eckrant Very Stony Clay, 5 to 18 percent slopes

   The majority, approximately 62 percent being Eckrant and Speck.

10. Location of Receiving Waters: This project drains off the property in a southwest and south east direction entering into adjacent drainage easements.

11. Offsite Operations: Excess or unsuitable material disposal will be the responsibility of the CONTRACTOR. The CONTRACTOR shall be independently responsible as an OPERATOR for obtaining necessary permits in conjunction with the lawful offsite disposal of spoil material or acquisition of borrow material.

12. Sequence of Construction:

- 48 hours prior to beginning any work, call texas excavation system at 1-800-344-8377 for utility locations.
- install temporary erosion controls and tree/natural area protection fencing prior to pre- construction meeting.
- notify the city of bee cave, owner, and engineer for a pre-construction meeting at least 3 days prior to the meeting date.
- rough grade the access drives
- begin installation of underground utilities. restore as much disturbed area as possible.
- regrade to subgrade.
- ensure all underground utility crossings are completed. lay first course base for all access drives
- lay final base course on all streets.
- lay asphalt.
- complete permanent erosion controls and restoration of site vegetation
- remove and dispose of temporary erosion controls.
- complete any necessary final dress up.

B. POLLUTION PREVENTION CONTROLS

The goal of these controls is to retain sediment on site to the extent practicable. All control measures must be properly selected, installed and maintained in accordance with the manufacturers' specifications and good engineering practices.

The Site Plan depicts controls and any adjacent waterways. The contractor staging areas and spoils sites will be located within the disturbed areas upstream of silt fence. The area to be disturbed will be limited to the minimum necessary to complete the improvements.

1. Stabilization Controls:

   Stabilization controls are detailed on the construction plans.

2. Best Management Practices (Structural):

   a. Temporary Best Management Practices:

A stabilized construction entrance will be placed as shown on the Site Plan and silt fences will be constructed at the downstream edge of disturbed areas. The CONTRACTOR will install the erosion/sedimentation controls prior to the start of any construction and will be responsible for maintaining the erosion control measures during construction. If at some point during the project, an Operator/CONTRACTOR(S) contract is complete, then all responsibilities will return first to any remaining Operator/ CONTRACTORS and then to the Owner/Operator if there are no remaining Operator/CONTRACTORS. Refer to the Site Plan for the locations of such controls.

b. Permanent Best Management Practices:

The permanent best management practices for this site consist of permanent stabilization of disturbed areas.

3. Other Controls:

- Waste Disposal: All construction-related waste materials will be collected and stored at a temporary material or spoil disposal site. No solid materials, including building materials, shall be discharged into receiving waters.
- Sanitary Waste: Portable units will be placed on site during construction and waste will be collected and disposed of in accordance with state and local regulations.
- Off-site Vehicle Tracking: A stabilized construction entrance will be provided at the entry location to the site. This entrance will be maintained, and any sediment deposited onto adjacent streets will be removed. Vehicles leaving the site will be washed, as required.
- Dust Control: The Contractor is required to control dust on the project site through mulching or spraying water on the disturbed soils that are generating dust as necessary to control the problem.
- Dewatering: If standing water needs to be pumped or channeled on the project site, the Contractor is required to direct the water to existing temporary erosion controls or to install appropriate controls as necessary.
- Litter, construction debris, and chemicals: Contractors will be required to maintain as clean a work site as appropriate. Litter and debris will be picked up on a scheduled

basis and the generation of dust shall be minimized. All placement of emulsions, asphalt, etc. are to be placed only during suitable weather conditions. Periods of rainfall are not suitable for the placement of such materials.

- Flushing Hyper-chlorinated Water Lines – The contractor must use a chlorine diffuser to de-chlorinate water flushed from water lines and aquatic life must not be expected to be adversely affected by such water discharged.

4. Timing of Controls and Measures: Erosion and sediment structural control measures will be in place prior to clearing, grading or construction of any portion of the site. Construction phasing may occur, but in all instances erosion and sedimentation control measures will be in place in those areas prior to start of construction. Disturbed areas will be restored as described under Stabilization Practices and/or Permanent Erosion Control. Temporary erosion and sediment controls will be removed only after all disturbed areas have been restored.

5. Non-Storm Water Discharges: The following non-storm water discharges may occur from the site during the construction period. All non-storm water discharges will be directed to the Best Management Practices.

- Uncontaminated fire hydrant flushings (excludes discharges of hyper-chlorinated water, unless water the water is first de-chlorinated and discharges are not expected to adversely affect aquatic life), which include flushings from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushings do not include systems utilizing reclaimed wastewater as a source water),
- Water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where detergents and soaps are not used and where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust;
- Uncontaminated water used to control dust;

- Potable water sources including waterline flushings (excluding discharges of hyper-chlorinated water, unless the water is first de-chlorinated and discharges are not expected to adversely affect aquatic life);
- Uncontaminated air conditioning condensate;
- Uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents; and
- Irrigation drainage.
- Concrete Truck Wash Out – Authorization is limited to land disposal of wash out water from concrete trucks that are associated with off-site production facilities if the following conditions are met by the CONTRACTOR: Notify inspector of location of wash out area and jointly select required BMPS. Wash out area is shown on the Site Plan. Direct discharge to surface water, including storm sewers is prohibited. Wash water shall be discharged to areas of the construction site where structural controls have been established to prevent discharge to surface waters or to areas with minimal slope that allow infiltration and filtering. Wash out of trucks during rainfall events shall be minimized. The wash water shall not cause or contribute to groundwater contamination.

C. INSPECTION, MAINTENANCE AND RECORD KEEPING

1. Inspection Practices:

   If the Owner/Operator does not designate or provide an agent to perform the required inspections and prepare and distribute the inspection reports, the CONTRACTOR(S) are each responsible for this task. If at some point during the project, an Operator/ CONTRACTOR(S) contract is complete, then all responsibilities will return first to any remaining Operator / CONTRACTORS and then to the Owner/Operator if there are no remaining Operator/ CONTRACTORS.

   The inspector agent(s) that perform the inspections should be knowledgeable of this general permit, familiar with the construction site, and knowledgeable of the SWPPP for the site. See *Appendix D, Inspector Qualifications / Inspector Authorization.*

- The controls should be in good repair and functioning so that sediment and other potential pollutants remain on-site. Areas to be inspected include disturbed areas of the construction site that have not been finally stabilized, areas used for storage or materials that are exposed to precipitation, discharge locations, structural controls and locations where vehicles enter and exit the site. Sediment basins/traps shall be inspected for sediment buildup and when it reaches one-foot, basins shall be cleaned.
- Owner/Operator or the CONTRACTORS (the entity who is providing the inspector) must choose one of the following inspection schedules to remain in compliance with the permit **(Inspection Schedule 'B' has been chosen**):

  (a) Inspections must be conducted at least once every fourteen (14) calendar days and within 24 hours of the end of a storm event of ½ inches or greater. Please note that the 14-calendar day schedule does not restart when a storm event inspection is required.

  (b) Inspections must occur at least once every 7-calendar days regardless of when the last rainfall occurred, prior to predicted rainfall events, and within 24-hours of a storm event of ½ inches or greater.
- In the event of flooding or other uncontrollable situations that prohibit site access, inspections must be conducted as soon as practicable. Where sites have been finally or temporarily stabilized, where runoff is unlikely due to winter conditions inspections must be conducted once per month and during seasonal arid periods in arid and semi-arid areas, inspections must be conducted once every month and within 24 hours of the end of a storm event of ½ inches or greater.
- The designated inspector must prepare a written report for each inspection in accordance with the permit rules. Inspection reports must be distributed to all Primary and Secondary Operators. Sample inspection and maintenance forms are included in Appendix A.
- If the designated inspector or Operator determines that field conditions indicate that modifications to the plan are required, then such changes must be documented and indicated on a copy of the Site Plan that is kept at the designated location. A description of the need for modified controls shall be outlined on the appropriate inspection and maintenance report form. Necessary modifications to the plan and controls shall be completed within seven days following inspection.

2. Maintenance/Repairs:

- Repairs will be made to damaged areas as soon as practicable, preferably before the next anticipated storm event, after damage is discovered but no later than seven days after the inspection. If completion of the repairs before the next anticipated storm event is impracticable, the reason shall be documented in the SWPPP and maintenance scheduled ASAP. If controls have been intentionally disabled, run-over, removed or otherwise rendered ineffective, repairs must ensue immediately upon discovery. Records of repairs shall be recorded as part of the inspections on appropriate forms.
- The CONTRACTOR(S)/Operator will be responsible for ensuring maintenance of the erosion and sedimentation controls as described under Section B Part 2(a). If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts.
- Built-up sediment will be removed once it has reached a maximum depth of six inches at silt fences and rock berms.

3. Record Keeping:

Records of all components of the SWPPP including inspection, maintenance and plan modification forms, information used to complete the NOI form, and records of submittal of forms submitted to the MS4 or Secondary Operator, if any, should be retained for three (3) years after the date of final stabilization by all Primary and Secondary Operators. The CONTRACTOR(S) should keep the SWPPP and records of the construction activity on the site if possible or in the location posted on their Site Notice. The following dates should be recorded in the inspections reports in particular:

- The dates when major grading activities occur in a particular area.
- The dates when construction activities cease in an area, temporarily or permanently.
- The dates when an area is stabilized, temporarily or permanently.

D. ON-SITE MATERIALS AND SPILL CONTROL

1. Material Inventory: The materials or substances listed below may be present onsite during construction:

- Concrete and concrete products
- Metal reinforcing materials – rebar, welded wire fabric
- Wood
- Paint
- Petroleum based products
- Plastic (PVC, HDPE) and metal pipe and fittings
- Rock, gravel, sand, and soil.

2. Material Management Practices: The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff:

   a. Good Housekeeping: The following good housekeeping practices will be followed onsite during the construction project:
      - An effort will be made to store only enough product required to do the job.
      - All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers.
      - Materials will be stored in the temporary materials stockpile area as shown on the Site Plan, or an area as may be approved by the Owner and Engineer and appropriately shown on the map.
      - Products will be kept in their original containers with the original manufacturers' labels.
      - Whenever possible, all of a product will be used before disposing of the container.
      - Manufacturers' recommendations for proper use and disposal will be followed.
      - The Contractor will inspect daily to ensure proper use and disposal of materials onsite.

   b. Hazardous Products: These practices are used to reduce the risks associated with hazardous materials (if applicable):
      - Products will be kept in original containers unless they are not re-sealable.

- Original labels and material safety data will be retained, as they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and state recommended methods for proper disposal will be followed.

c. The following product specific practices will be followed onsite:

- Petroleum Products: All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers that are clearly labeled. Any asphaltic substances used onsite will be applied according to the manufacturers' recommendations.
- Fertilizers: Fertilizers will be applied only in the minimum amounts recommended by the manufacturer or as otherwise indicated on the plans. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. The contents of any partially used bags of fertilizer will be stored in a manner so as to avoid spills.
- Paints: All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system, but will be properly disposed of according to manufacturers' instructions or state and local regulations.

3. Spill Control Practices: In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Site personnel will be made aware of the manufacturers' recommended methods for spill cleanup and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept onsite in an accessible location known to site personnel.
- All spills will be immediately contained. The spilled substance and contaminated soil will then be removed and disposed of properly using approved emergency response methods.

4. Releases of Reportable Quantities (RQ): EPA has issued regulations that define what reportable quantity levels are for oil and hazardous substances. These regulations can be found at 40 CFR Part 110. 40 CFR 117, or 40 CFR Part 302. The TCEQ has issued similar regulations under 30 TAC Chapter 327. If there is an RQ release during the construction period, then the following steps must be taken:

- For quantities less than the reportable quantity* – The contractor will contain and isolate the spilled substance. The remaining spilled substance and contaminated soil will be removed and disposed of properly.

- For quantities more than the reportable quantity* – The contractor will contain and isolate the spilled substance in accordance with 30 TAC Chapter 327. The contractor will then contact the appropriate spill response team and the TCEQ Austin Regional Office (512) 339-2929 or the State Emergency Response Center at 1 (800) 832-8224 and the National Response Center immediately at (800) 424-8802. The remaining spilled substance and contaminated soil will be removed and disposed of in an appropriate manner using approved emergency response methods. The proper authorities shall be kept informed during the cleanup process. Within 14 days, modify the SWPPP with a written description of the release providing the date and circumstances of the release and the steps to be taken to prevent another release.

* Reportable quantity (RQ) is defined in 30 TAC Chapter 327. The RQ for petroleum products, oil, and industrial solid waste are shown below. For hazardous substances see 30 TAC Chapter 327.4 and 40 CFR Chapter 302.4.

The RQ for *oil, petroleum product and used oil* is as follows:

(1) The RQ for crude oil and oil other than that defined as petroleum product or used oil shall be:
   (A) for spills or discharges onto land – 210 gallons (five barrels); or
   (B) for spills or discharges directly into water in the state – quantity sufficient to create a sheen.

(2) The RQ for petroleum product or used oil shall be:
   (A) except as noted under (B) below, for spills or discharges onto land – 25 gallons;
   (B) for spills or discharges to land from PST exempted facilities – 210 gallons (five barrels); or
   (C) for spills or discharges directly into water in the state – quantity sufficient to create a sheen.

The RQ for spills or discharges into water in the state for *industrial solid waste or other substances* shall be 100 pounds.

E. STATE AND LOCAL REQUIREMENTS

The storm water pollution prevention plan complies with the requirements of the Texas Commission on Environmental Quality, City of Dripping Springs, and Hays County.

F. ADDITIONAL GENERAL PERMIT REQUIREMENTS

1. All requirements of the general construction permit attached under *Appendix C* shall be followed.

2. The permittee must post the NOI form and Construction Site Notice near the main entrance of the construction site.

3. A copy of the SWPPP must remain at the designated location on the NOI form unless impracticable.

4. If the storm water discharge from this project enters a Municipal Separate Storm Sewer System (MS4), the MS4 must be notified of the project. The discharge does enter an MS4. . (Date Mailed - TBD)

5. If relevant information provided in the NOI changes, a NOC (Notice of Change) must be submitted at least 14 days before the change occurs, if possible and must be provided to the MS4 as well.

6. Upon final stabilization or change in operator status, a NOT (Notice of Termination) form must be submitted to the TCEQ and the MS4. (A copy of the NOT is located at the end of the General Permit under *Appendix C* to this report.) If the termination is due to a transfer of operational control, the original Operator must notify, or attempt to notify, the new Operator of the requirement to obtain permit coverage. Record of this notification or attempt at notification must be retained in the SWPPP records.

7. Edwards Aquifer: If the operator is required to gain approval from the TCEQ for a Water Pollution Abatement Plan or Contributing Zone Plan, a copy of that plan must be readily available upon request. The NOI form or Site Notice must be submitted to the appropriate TCEQ field office.

G. POLLUTION PREVENTION PLAN CERTIFICATION

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

Property Owner/Facility Operator:

By: Jennifer Riechers (Name) General Manager (Title) 10/6/23 (Date)

Printed Name: Jennifer Riechers

Company: West Travis County Public Utility Agency

Address: 13215 Bee Cave Parkway, Bld B, Suite 110
Bee Cave, Texas 78738

H. SUB-CONTRACTORS' CERTIFICATION

(Have all Contractors that disturbs soil at the project site who did not submit an NOI or post a Site Notice sign this form)

I certify under penalty of law that I understand the terms and conditions of the general Texas Pollutant Discharge Elimination System (TPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Sub-Contractors:

By:_____ _____
(Name) Title Date

Printed Name:_____

Company:_____

Address:_____

_____

By:_____ _____
(Name) Title Date

Printed Name:_____

Company:_____

Address:_____

_____

H. SUB-CONTRACTORS' CERTIFICATION (Cont.)

I certify under penalty of law that I understand the terms and conditions of the general Texas Pollutant Discharge Elimination System (TPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Sub-Contractors:

By:_____ _____
(Name) Title Date

Printed Name:_____

Company:_____

Address:_____

_____

By:_____ _____
(Name) Title Date

Printed Name:_____

Company:_____

Address:_____

_____

By:_____ _____
(Name) Title Date

Printed Name:_____

Company:_____

Address:_____

II. APPENDIX A

CONSTRUCTION INSPECTION FORMS

STORMWATER INSPECTION REPORT
Site-specific BMPs

- *Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.*

General Information		
Project Name		
TPDES Tracking No.		**Location:**
Date of Inspection		
Inspector's Name(s)		
Inspector's Title(s)		
Inspector's Contact Information		
Inspector's Qualifications		
Describe present phase of construction		
Type of Inspection: ☐ Weekly ☐ Final Inspection		
Weather Information		
Has there been a storm event since the last inspection? ☐Yes ☐No **If yes, provide:** Approximate Amount of Precipitation (in):		
Weather at time of this inspection? ☐ Clear ☐Cloudy ☐ Rain ☐ Sleet ☐ Fog ☐ Snowing ☐ High Winds ☐Other:		
Are there any discharges at the time of inspection? ☐Yes ☒No **If yes, describe:**		

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1	Stabilized Construction Entrance	☐Yes ☐No ☐ N/A	☐Yes ☒No	Access is from adjacent construction site.
2	Staging Area	☐Yes ☐No ☐ N/A	☐Yes ☐No	
3	Silt Fence	☐Yes ☐No ☐ N/A	☐Yes ☐No	
4	Inlet Protection	☐Yes ☐No ☐ N/A	☐Yes ☐No	
5	Rock Berm	☐Yes ☐No ☐ N/A	☐Yes ☐No	
6	Outfalls	☐Yes ☐No ☐ N/A	☐Yes ☐No	Site sheet flows to the south.

Overall Site Issues

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	☐Yes ☐No ☐N/A	☐Yes ☐No	
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	☐Yes ☐No ☐N/A	☐Yes ☐No	
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐Yes ☐No ☐N/A	☐Yes ☐No	
4	Are discharge points and receiving waters free of any sediment deposits?	☐Yes ☐No ☐N/A	☐Yes ☐No	
5	Are storm drain inlets properly protected?	☐Yes ☐No ☐N/A	☐Yes ☐No	
6	Is the construction exit preventing sediment from being tracked into the street?	☐Yes ☐No ☐N/A	☐Yes ☐No	
7	Is trash/litter from work areas collected and placed in appropriate containers?	☐Yes ☐No ☐ N/A	☐Yes ☐No	
10	Are materials that are potential storm water contaminants stored inside or under cover?	☐Yes ☐No ☐N/A	☐Yes ☐No	
11	Are non-storm water discharges (e.g., wash water, dewatering) properly controlled?	☐Yes ☐No ☐N/A	☐Yes ☐No	
12	(Other)	☐Yes ☐No ☐N/A	☐Yes ☐No	

Notes

CERTIFICATION STATEMENT

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

Print name and title: ____Jennifer Riechers, General Manager_____

Signature: Jennifer Riechers

Date: 10/6/23

II. APPENDIX B

CERTIFIED NOTICES OF INTENT

OWNER/OPERATOR

FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
COMPANY: HAYS COUNTY	DATE:
PHONE NUMBER: FAX NUMBER:	E-MAIL:
TOTAL NO. OF PAGES INCLUDING COVER:	RE: MS4 OPERATOR NOTIFICATION

☐ AS YOU REQUESTED ☒ FOR YOUR USE ☐ PLEASE COMMENT ☐ PLEASE REPLY

This letter is to notify you that the project described on the attached TPDES form is located within your MS4 system as required by the General Construction Permit (TXR150000 effective March 5, 2018). Approval of an Edwards Aquifer Contributing Zone Plan has been requested for this project. Please call if you have any questions or need additional information.

OWNER/OPERATOR

FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
COMPANY: CITY OF DRIPPING SPRINGS	DATE:
PHONE NUMBER: FAX NUMBER:	E-MAIL:
TOTAL NO. OF PAGES INCLUDING COVER:	RE: MS4 OPERATOR NOTIFICATION

☐ AS YOU REQUESTED ☒ FOR YOUR USE ☐ PLEASE COMMENT ☐ PLEASE REPLY

This letter is to notify you that the project described on the attached TPDES form is located within your MS4 system as required by the General Construction Permit (TXR150000 effective March 5, 2018). Approval of an Edwards Aquifer Contributing Zone Plan has been requested for this project. Please call if you have any questions or need additional information.

OWNER/OPERATOR

FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
COMPANY: TCEQ FIELD OFFICE	DATE:
PHONE NUMBER: 512-339-2929 FAX NUMBER:	E-MAIL:
TOTAL NO. OF PAGES INCLUDING COVER: __	RE: TPDES CONSTRUCTION GENERAL PERMIT

☐ AS YOU REQUESTED ☒ FOR YOUR USE ☐ PLEASE COMMENT ☐ PLEASE REPLY

This letter is to notify you that an NOI form has been submitted to the TCEQ and a Large Construction Site Notice is being posted at the project site described on the attached TPDES form as required by the General Construction Permit (TXR150000 effective March 5, 2018). Approval of an Edwards Aquifer Contributing Zone plan has been requested for this project. Please call if you have any questions or need additional information.

II. APPENDIX C

TPDES General Permit for Storm Water Discharges from Construction Activities

Texas Commission on Environmental Quality

P.O. Box 13087, Austin, Texas 78711-3087

GENERAL PERMIT TO DISCHARGE UNDER THE

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

This permit supersedes and replaces
TPDES General Permit No. TXR150000,
effective March 5, 2018, and amended January 28, 2022

Construction sites that discharge stormwater associated with construction activity located in the state of Texas may discharge to surface water in the state only according to monitoring requirements and other conditions set forth in this general permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ or Commission), the laws of the State of Texas, and other orders of the Commission of the TCEQ. The issuance of this general permit does not grant to the permittee the right to use private or public property for conveyance of stormwater and certain non-stormwater discharges along the discharge route. This includes property belonging to but not limited to any individual, partnership, corporation or other entity. Neither does this general permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This general permit and the authorization contained herein shall expire at midnight, on March 5, 2028.

EFFECTIVE DATE: March 5, 2023

ISSUED DATE: February 27, 2023

For the Commission

TPDES GENERAL PERMIT NUMBER TXR150000

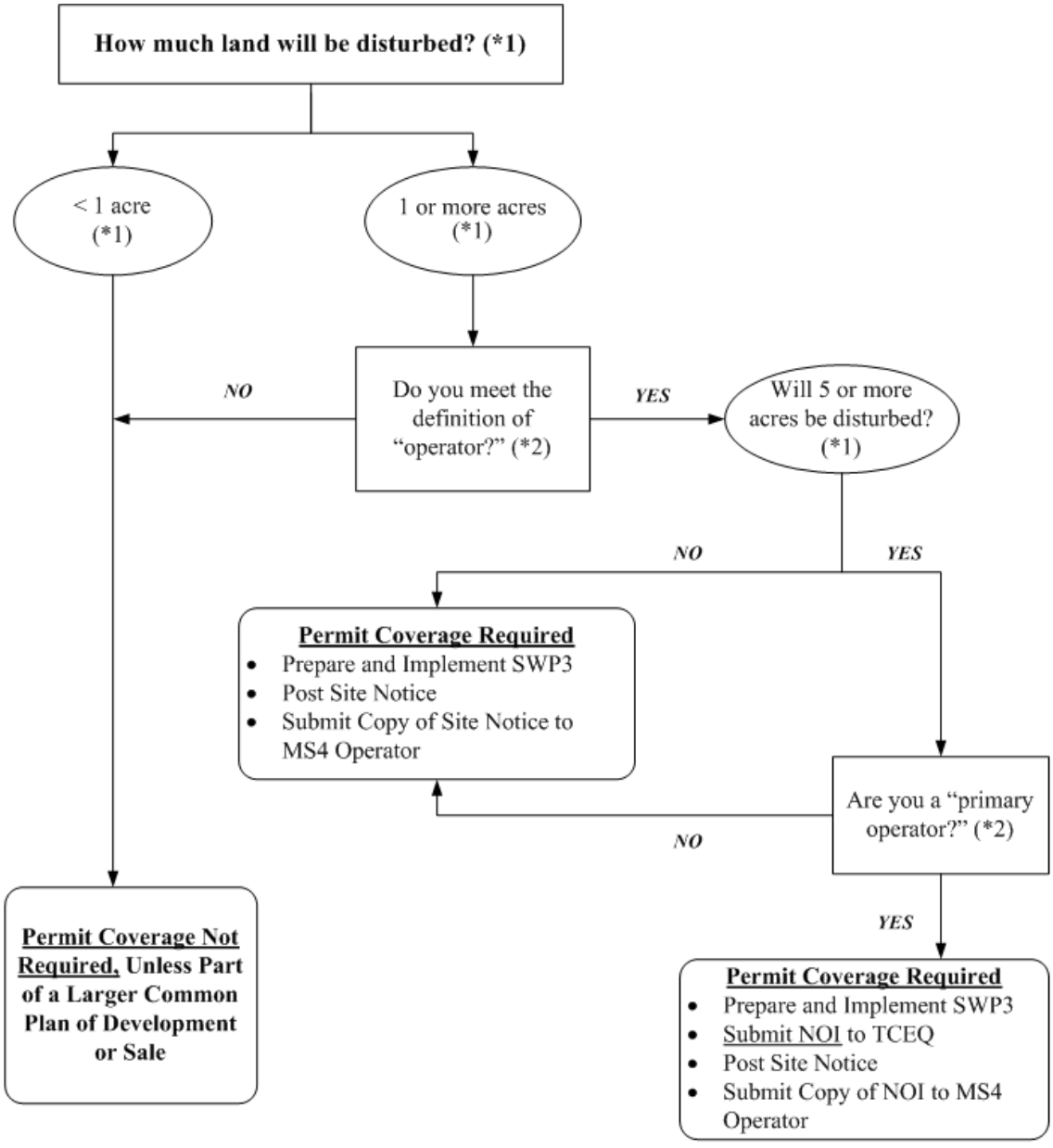
RELATING TO STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

Table of Contents

Part I. Flow Chart and Definitions

Section A. Flow Chart to Determine Whether Coverage is Required

When calculating the acreage of land area disturbed, include the disturbed land-area of all construction and construction support activities.



***(*1)** To determine the size of the construction project, use the size of the entire area to be disturbed, and include the size of the larger common plan of development or sale, if the project is part of a larger project (refer to Part I.B., "Definitions," for an explanation of "common plan of development or sale").*

***(*2)** Refer to the definitions for "operator," "primary operator," and "secondary operator" in Part I., Section B. of this permit.*

Section B. Definitions

Arid Areas – Areas with an average annual rainfall of zero (0) to ten (10) inches.

Best Management Practices (BMPs) – Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

Commencement of Construction – The initial disturbance of soils associated with clearing, grading, or excavation activities, as well as other construction-related activities (e.g., demolition; grubbing; stockpiling of fill material; placement of raw materials at the site).

Common Plan of Development – A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development (also known as a "common plan of development or sale") is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities. A common plan of development does not necessarily include all construction projects within the jurisdiction of a public entity (e.g., a city or university). Construction of roads or buildings in different parts of the jurisdiction would be considered separate "common plans," with only the interconnected parts of a project being considered part of a "common plan" (e.g., a building and its associated parking lot and driveways, airport runway and associated taxiways, a building complex, etc.). Where discrete construction projects occur within a larger common plan of development or sale but are located one quarter (¼) mile or more apart, and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale, provided that any interconnecting road, pipeline or utility project that is part of the same "common plan" is not included in the area to be disturbed.

Construction Activity – Includes soil disturbance activities, including clearing, grading, excavating, construction-related activity (e.g., stockpiling of fill material, demolition), and construction support activity. This does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g., the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing rights-of-way, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

Construction Support Activity – A construction-related activity that specifically supports construction activity, which can involve earth disturbance or pollutant-generating activities of its own, and can include, but are not limited to, activities associated with concrete or asphalt batch plants, rock crushers, equipment staging or storage areas, chemical storage areas, material storage areas, material borrow areas, and excavated material disposal areas. Construction support activity must only directly support the construction activity authorized under this general permit.

Dewatering – The act of draining accumulated stormwater or groundwater from building foundations, vaults, trenches, and other similar points of accumulation.

Discharge – For the purposes of this permit, the drainage, release, or disposal of pollutants in stormwater and certain non-stormwater from areas where soil disturbing activities (e.g., clearing, grading, excavation, stockpiling of fill material, and demolition), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck wash out, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

Drought-Stricken Area – For the purposes of this permit, an area in which the National Oceanic and Atmospheric Administration's U.S. Seasonal Drought Outlook indicates for the period during which the construction will occur that any of the following conditions are likely: (1) "Drought to persist or intensify", (2) "Drought ongoing, some improvement", (3) "Drought likely to improve, impacts ease", or (4) "Drought development likely". See http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html.

Edwards Aquifer – As defined under Texas Administrative Code (TAC) § 213.3 of this title (relating to the Edwards Aquifer), that portion of an arcuate belt of porous, water-bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

Edwards Aquifer Recharge Zone – Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the Texas Commission on Environmental Quality (TCEQ) and the appropriate regional office. The Edwards Aquifer Map Viewer, located at https://www.tceq.texas.gov/gis/edwards-viewer.html

Edwards Aquifer Contributing Zone – The area or watershed where runoff from precipitation flows downgradient to the recharge zone of the Edwards Aquifer. The contributing zone is located upstream (upgradient) and generally north and northwest of the recharge zone for the following counties: all areas within Kinney County, except the area within the watershed draining to Segment No. 2304 of the Rio Grande Basin; all areas within Uvalde, Medina, Bexar, and Comal Counties; all areas within Hays and Travis Counties, except the area within the watersheds draining to the Colorado River above a point 1.3 miles upstream from Tom Miller Dam, Lake Austin at the confluence of Barrow Brook Cove, Segment No. 1403 of the Colorado River Basin; and all areas within Williamson County, except the area within the watersheds draining to the Lampasas River above the dam at Stillhouse Hollow reservoir, Segment No. 1216 of the Brazos River Basin. The contributing zone is illustrated on the Edwards Aquifer map viewer at https://www.tceq.texas.gov/gis/edwards-viewer.html

Effluent Limitations Guideline (ELG) – Defined in 40 Code of Federal Regulations (CFR) § 122.2 as a regulation published by the Administrator under § 304(b) of the Clean Water Act (CWA) to adopt or revise effluent limitations.

Facility or Activity – For the purpose of this permit, referring to a construction site, the location of construction activity, or a construction support activity that is regulated under this general permit, including all contiguous land and fixtures (for example, ponds and materials stockpiles), structures, or appurtenances used at a construction site or industrial site.

Final Stabilization – A construction site status where any of the following conditions are met:

(a) All soil disturbing activities at the site have been completed and a uniform (that is, evenly distributed, without large bare areas) perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, or gabions) have been employed.

(b) For individual lots in a residential construction site by either:

(1) the homebuilder completing final stabilization as specified in condition (a) above; or

(2) the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization. If temporary stabilization is not feasible, then the homebuilder may fulfill this requirement by retaining perimeter controls or BMPs, and informing the homeowner of the need for removal of temporary controls and the establishment of final stabilization. Fulfillment of this requirement must be documented in the homebuilder's stormwater pollution prevention plan (SWP3).

(c) For construction activities on land used for agricultural purposes (such as pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to surface water and areas that are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

(d) In arid, semi-arid, and drought-stricken areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:

(1) temporary erosion control measures (for example, degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by the operator, and

(2) the temporary erosion control measures are selected, designed, and installed to achieve 70% of the native background vegetative coverage within three years.

High-Level Radioactive Waste – Meaning as assigned by 42 United States Code (U.S.C.) Section 10101 (12) and includes spent nuclear fuel as defined by 42 U.S.C. Section 10101 (23).

Hyperchlorination of Waterlines – Treatment of potable water lines or tanks with chlorine for disinfection purposes, typically following repair or partial replacement of the waterline or tank, and subsequently flushing the contents.

Impaired Water – A surface water body that is identified as impaired on the latest approved CWA § 303(d) List or waters with an EPA-approved or established total maximum daily load (TMDL) that are found on the latest EPA approved *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)*, which lists the category 4 and 5 water bodies.

Indian Country Land – (1) All land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation; (2) all dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and (3) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. (40 CFR § 122.2)

Indian Tribe – Any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian Reservation (40 CFR § 122.2).

Infeasible – Not technologically possible, or not economically practicable and achievable in light of best industry practices. (40 CFR § 450.11(b)).

Large Construction Activity – Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than five (5) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities).

Linear Project – Includes the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.

Low Rainfall Erosivity Waiver (LREW) – A written submission to the executive director from an operator of a construction site that is considered as small construction activity under the permit, which qualifies for a waiver from the requirements for small construction activities, only during the period of time when the calculated rainfall erosivity factor is less than five (5).

Minimize – To reduce or eliminate to the extent achievable using stormwater controls that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) – A separate storm sewer system owned or operated by the United States, a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over the disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, that discharges to surface water in the state.

Notice of Change (NOC) – Written notification to the executive director from a discharger authorized under this permit, providing changes to information that was previously provided to the agency in a notice of intent form.

Notice of Intent (NOI) – A written submission to the executive director from an applicant requesting coverage under this general permit.

Notice of Termination (NOT) – A written submission to the executive director from a discharger authorized under this general permit requesting termination of coverage.

Operator – The person or persons associated with a large or small construction activity that is either a primary or secondary operator as defined below:

Primary Operator – The person or persons associated with construction activity that meets either of the following two criteria:

(a) the person or persons have on-site operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

(b) the person or persons have day-to-day operational control of those activities at a construction site that are necessary to ensure compliance with a Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (for example, they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

Secondary Operator – The person or entity, often the property owner, whose operational control is limited to:

(a) the employment of other operators, such as a general contractor, to perform or supervise construction activities; or

(b) the ability to approve or disapprove changes to construction plans and specifications, but who does not have day-to-day on-site operational control over construction activities at the site.

Secondary operators must either prepare their own SWP3 or participate in a shared SWP3 that covers the areas of the construction site, where they have control over the construction plans and specifications.

If there is not a primary operator at the construction site, then the secondary operator is defined as the primary operator and must comply with the requirements for primary operators.

Outfall – For the purpose of this permit, a point source at the point where stormwater runoff associated with construction activity discharges to surface water in the state and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other water of the U.S. and are used to convey waters of the U.S.

Permittee – An operator authorized under this general permit. The authorization may be gained through submission of a notice of intent, by waiver, or by meeting the requirements for automatic coverage to discharge stormwater runoff and certain non-stormwater discharges from construction activity.

Point Source – Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff (40 CFR § 122.2).

Pollutant – Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into any surface water in the state. The term "pollutant" does not include tail water or runoff water from irrigation or rainwater runoff from cultivated or uncultivated rangeland, pastureland, and farmland. For the purpose of this permit, the term “pollutant” includes sediment.

Pollution – The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose (Texas Water Code (TWC) § 26.001(14)).

Rainfall Erosivity Factor (R factor) – The total annual erosive potential that is due to climatic effects, and is part of the Revised Universal Soil Loss Equation (RUSLE).

Receiving Water – A "Water of the United States" as defined in 40 CFR § 122.2 or a surface water in the state into which the regulated stormwater discharges.

Semi-arid Areas – Areas with an average annual rainfall of 10 to 20 inches.

Separate Storm Sewer System – A conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), designed or used for collecting or conveying stormwater; that is not a combined sewer, and that is not part of a publicly owned treatment works (POTW).

Small Construction Activity – Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities).

Steep Slopes – Where a state, Tribe, local government, or industry technical manual (e.g., stormwater BMP manual) has defined what is to be considered a "steep slope", this permit's definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 15 percent or greater in grade.

Stormwater (or Stormwater Runoff) – Rainfall runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Associated with Construction Activity – Stormwater runoff, as defined above, from a construction activity.

Structural Control (or Practice) – A pollution prevention practice that requires the construction of a device, or the use of a device, to reduce or prevent pollution in stormwater runoff. Structural controls and practices may include but are not limited to: silt fences, earthen dikes, drainage swales, sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

Surface Water in the State – Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state (from the mean high water mark (MHWM) out 10.36 miles into the Gulf), and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems which are authorized by state or federal law, regulation, or permit, and which are created for the purpose of waste treatment are not considered to be water in the state.

Temporary Stabilization – A condition where exposed soils or disturbed areas are provided a protective cover or other structural control to prevent the migration of pollutants. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either permanent stabilization can be achieved or until further construction activities take place.

Thawing Conditions – For the purposes of this permit, thawing conditions are expected based on the historical likelihood of two (2) or more days with daytime temperatures greater than 32 degrees Fahrenheit (℉). This date can be determined by looking at historical weather data.

NOTE: The estimation of thawing conditions is for planning purposes only. During construction, the permittee will be required to conduct site inspections based upon actual conditions (i.e., if thawing conditions occur sooner than expected, the permittee will be required to conduct inspections at the regular frequency).

Total Maximum Daily Load (TMDL) – The total amount of a pollutant that a water body can assimilate and still meet the Texas Surface Water Quality Standards.

Turbidity – A condition of water quality characterized by the presence of suspended solids and/or organic material.

Waters of the United States – Waters of the United States or waters of the U.S. means the term as defined in 40 CFR § 122.2.

Part II. Permit Applicability and Coverage

Section A. Discharges Eligible for Authorization

1. Stormwater Associated with Construction Activity

   Discharges of stormwater runoff and certain non-stormwater discharges from small and large construction activities may be authorized under this general permit, except as described in Part II.C. of this permit.

2. Discharges of Stormwater Associated with Construction Support Activities

   Discharges of stormwater runoff and certain non-stormwater discharges from construction support activities as defined in Part I.B. of this general permit may be authorized, provided that the following conditions are met:

   (a) the construction support activities are located within one (1) mile from the boundary of the construction site where the construction activity authorized under the permit is being conducted that requires the support of these activities;

   (b) an SWP3 is developed and implemented for the permitted construction site according to the provisions in Part III.F. of this general permit, including appropriate controls and measures to reduce erosion and the discharge of pollutants in stormwater runoff according to the provisions in Part IV. of this general permit;

   (c) the activities are directly related to the construction site;

   (d) the activities are not a commercial operation, nor serve other unrelated construction projects; and

   (e) the activities do not continue to operate beyond the completion of the construction activity at the project it supports.

   Construction support activities that operate outside the terms provided in (a) through (e) above must obtain authorization under a separate Texas Pollutant Discharge Elimination System (TPDES) permit, which may include the TPDES Multi-Sector General Permit (MSGP), TXR050000 (related to stormwater discharges associated with industrial activity), an alternative general permit (if available), or an individual water quality permit.

3. Non-Stormwater Discharges

   The following non-stormwater discharges from sites authorized under this general permit are also eligible for authorization under this general permit:

(a) discharges from emergency fire-fighting activities (emergency fire-fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, or similar activities);

(b) uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life), which include flushings from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushings do not include systems utilizing reclaimed wastewater as a source water);

(c) water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where solvents, detergents, and soaps are not used, where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust;

(d) uncontaminated water used to control dust;

(e) potable water sources, including waterline flushings, but excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life;

(f) uncontaminated air conditioning condensate;

(g) uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents; and

(h) lawn watering and similar irrigation drainage.

4. Other Permitted Discharges

   Any discharge authorized under a separate National Pollutant Discharge Elimination System (NPDES), TPDES, or TCEQ permit may be combined with discharges authorized by this general permit, provided those discharges comply with the associated permit.

Section B. Concrete Truck Wash Out

The wash out of concrete trucks at regulated construction sites must be performed in accordance with the requirements of Part VI of this general permit.

Section C. Limitations on Permit Coverage

1. Post Construction Discharges

   Discharges that occur after construction activities have been completed, and after the construction site and any supporting activity site have undergone final stabilization, are not eligible for coverage under this general permit. Discharges originating from the sites are not authorized under this general permit following the submission of the Notice of Termination (NOT) or removal of the appropriate TCEQ site notice, as applicable, for the regulated construction activity.

2. Prohibition of Non-Stormwater Discharges

   Except as otherwise provided in Part II.A. of this general permit, only discharges that are composed entirely of stormwater associated with construction activity may be authorized under this general permit.

3. Compliance with Water Quality Standards

   Discharges to surface water in the state that would cause, have the reasonable potential to cause, or contribute to a violation of water quality standards or that would fail to protect and maintain existing designated uses of surface water in the state are not eligible for coverage under this general permit. The executive director may require an application for an individual permit or alternative general permit (see Parts II.H.2. and 3.) to authorize discharges to surface water in the state if the executive director determines that any activity will cause, has the reasonable potential to cause, or contribute to a violation of water quality standards or is found to cause, has the reasonable potential to cause, or contribute to, the impairment of a designated use. The executive director may also require an application for an individual permit considering factors described in Part II.H.3. of this general permit.

4. Impaired Receiving Waters and Total Maximum Daily Load (TMDL) Requirements

   The permittee shall determine whether the authorized discharge is to an impaired water body on the latest EPA-approved CWA § 303(d) List or waters with an EPA-approved or established TMDL that are found on the latest EPA-approved *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)*, which lists the category 4 and 5 water bodies.

   New sources or new discharges of the pollutants of concern to impaired waters are not authorized by this permit unless otherwise allowable under 30 TAC Chapter 305 and applicable state law. Impaired waters are those that do not meet applicable water quality standard(s) and are listed as category 4 or 5 in the current version of the *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)*, and waterbodies listed on the CWA § 303(d) List. Pollutants of concern are those for which the water body is listed as impaired.

   Discharges of the pollutants of concern to impaired water bodies for which there is a TMDL are not eligible for coverage under this general permit unless they are consistent with the approved TMDL. Permittees must incorporate the conditions and requirements applicable to their discharges into their SWP3, in order to be eligible for coverage under this general permit. For consistency with the construction stormwater-related items in an approved TMDL, the SWP3 must be consistent with any applicable condition, goal, or requirement in the TMDL, TMDL Implementation Plan (I-Plan), or as otherwise directed by the executive director.

5. Discharges to the Edwards Aquifer Recharge or Contributing Zone

   Discharges cannot be authorized by this general permit where prohibited by 30 TAC Chapter 213 (relating to Edwards Aquifer). In addition, commencement of construction (see definition for commencement of construction in Part I.B. above)) at a site regulated under 30 TAC Chapter 213, may not begin until the appropriate Edwards Aquifer Protection Plan (EAPP) has been approved by the TCEQ's Edwards Aquifer Protection Program.

   (a) For new discharges located within the Edwards Aquifer Recharge Zone, or within that area upstream from the recharge zone and defined as the Contributing Zone (CZ), operators must meet all applicable requirements of, and operate according to, 30 TAC Chapter 213 (Edwards Aquifer Rule) in addition to the provisions and requirements of this general permit.

(b) For existing discharges located within the Edwards Aquifer Recharge Zone, the requirements of the agency-approved Water Pollution Abatement Plan (WPAP) under the Edwards Aquifer Rule are in addition to the requirements of this general permit. BMPs and maintenance schedules for structural stormwater controls, for example, may be required as a provision of the rule. All applicable requirements of the Edwards Aquifer Rule for reductions of suspended solids in stormwater runoff are in addition to the requirements in this general permit for this pollutant.

(c) For discharges located within ten (10) stream miles upstream of the Edwards Aquifer recharge zone, applicants shall also submit a copy of the NOI to the appropriate TCEQ regional office.

Counties: Comal, Bexar, Medina, Uvalde, and Kinney

Contact: TCEQ Water Program Manager
San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480
(210) 490-3096

Counties: Williamson, Travis, and Hays

Contact: TCEQ Water Program Manager
Austin Regional Office
12100 Park 35 Circle
Room 179, Building A
Austin, Texas 78753
(512) 339-2929

6. Discharges to Specific Watersheds and Water Quality Areas

Discharges otherwise eligible for coverage cannot be authorized by this general permit where prohibited by 30 TAC Chapter 311 (relating to Watershed Protection) for water quality areas and watersheds.

7. Protection of Streams and Watersheds by Other Governmental Entities

This general permit does not limit the authority or ability of federal, other state, or local governmental entities from placing additional or more stringent requirements on construction activities or discharges from construction activities.

8. Indian Country Lands

Stormwater runoff from construction activities occurring on Indian Country lands are not under the authority of the TCEQ and are not eligible for coverage under this general permit. If discharges of stormwater require authorization under federal NPDES regulations, authority for these discharges must be obtained from the U.S. Environmental Protection Agency (EPA).

9. Exempt Oil and Gas Activities

The CWA § 402(l)(2) provides that stormwater discharges from construction activities related to oil and gas exploration, production, processing, or treatment, or transmission facilities are exempt from regulation under this permit. The term “oil and gas exploration, production, processing, or treatment operations, or transmission facilities” is defined in 33 U.S.C. Annotated § 1362 (24).

The exemption in CWA § 402(l)(2) *includes* stormwater discharges from construction activities regardless of the amount of disturbed acreage, which are necessary to prepare a site for drilling and the movement and placement of drilling equipment, drilling waste management pits, in field treatment plants, and in field transportation infrastructure (e.g., crude oil pipelines, natural gas treatment plants, and both natural gas transmission pipeline compressor and crude oil pumping stations) necessary for the operation of most producing oil and gas fields. Construction activities are defined in 33 U.S. Code § 1362(24) and interpreted by EPA in the final rule. *See* June 12, 2006 Amendments to the NPDES Regulations for Storm Water Discharges Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities (71 FR 33628, Part V. Terminology).

The exemption *does not include* stormwater discharges from the construction of administrative buildings, parking lots, and roads servicing an administrative building at an oil and gas site, as these are considered traditional construction activities.

As described in 40 CFR § 122.26(c)(1)(iii) [*regulations prior to 2006*], discharges from oil and gas construction activities are waived from CWA § 402(l)(2) permit coverage *unless* the construction activity (or construction support activity) has had a discharge of stormwater resulting in the discharge of a reportable quantity of oil or hazardous substances or the discharge contributes to a violation of water quality standards.

Exempt oil and gas activities which have lost their exemption as a result of one of the above discharges, must obtain permit coverage under this general permit, an alternative general permit, or a TPDES individual permit prior to the next discharge.

10. Stormwater Discharges from Agricultural Activities

Stormwater discharges from agricultural activities that are not point source discharges of stormwater are not subject to TPDES permit requirements. These activities may include clearing and cultivating ground for crops, construction of fences to contain livestock, construction of stock ponds, and other similar agricultural activities. Discharges of stormwater runoff associated with the construction of facilities that are subject to TPDES regulations, such as the construction of concentrated animal feeding operations, would be point sources regulated under this general permit.

11. Endangered Species Act

Discharges that would adversely affect a listed endangered or threatened aquatic or aquatic-dependent species or its critical habitat are not authorized by this permit, unless the requirements of the Endangered Species Act are satisfied. Federal requirements related to endangered species apply to all TPDES permitted discharges and site-specific controls may be required to ensure that protection of endangered or threatened species is achieved. If a permittee has concerns over potential impacts to listed species, the permittee may contact TCEQ for additional information.

12. Storage of High-Level Radioactive Waste

Discharges of stormwater from construction activities associated with the construction of a facility that is licensed for the storage of high-level radioactive waste by the United States Nuclear Regulatory Commission under 10 CFR Part 72 are not authorized by this general permit. Texas Health and Safety Code (THSC) § 401.0525 prohibits TCEQ from issuing any TPDES authorizations for the construction or operation of these facilities.

Discharges of stormwater from the construction activities associated with the construction of a facility located at the site of currently or formerly operating nuclear power reactors and currently or formerly operating nuclear research and test reactors operated by a university are not prohibited under THSC § 401.0525 and continue to be regulated under this general permit.

13. Other

    Nothing in Part II. of the general permit is intended to negate any person's ability to assert *force majeure* (act of God, war, strike, riot, or other catastrophe) defenses found in 30 TAC § 70.7

Section D. Deadlines for Obtaining Authorization to Discharge

1. Large Construction Activities

   (a) New Construction – Discharges from sites where the commencement of construction activity occurs on or after the effective date of this general permit must be authorized, either under this general permit or a separate TPDES permit, prior to the commencement of those construction activities.

   (b) Ongoing Construction – Operators of large construction activities continuing to operate after the effective date of this permit, and authorized under the TPDES Construction General Permit (CGP) TXR150000 (effective on March 5, 2018, and amended on January 28, 2022), must submit an NOI to renew authorization or an NOT to terminate coverage under this general permit within 90 days of the effective date of this general permit. During this interim or grace period, as a requirement of this TPDES permit, the operator must continue to meet the conditions and requirements of the issued and amended 2018 TPDES CGP.

2. Small Construction Activities

   (a) New Construction – Discharges from sites where the commencement of construction activity occurs on or after the effective date of this general permit must be authorized, either under this general permit or a separate TPDES permit, prior to the commencement of those construction activities.

   (b) Ongoing Construction – Discharges from ongoing small construction activities that commenced prior to the effective date of this general permit, and that do not meet the conditions to qualify for termination of this permit as described in Part II.F. of this general permit, must meet the requirements to be authorized, either under this general permit or a separate TPDES permit, within 90 days of the effective date of this general permit. During this interim period, as a requirement of this TPDES permit, the operator must continue to meet the conditions and requirements of the issued and amended 2018 TPDES CGP.

Section E. Obtaining Authorization to Discharge

1. Automatic Authorization for Small Construction Activities with Low Potential for Erosion

   Operators of small construction activity, as defined in Part I.B. of this general permit, shall not submit an NOI for coverage, unless otherwise required by the executive director.

   Operators of small construction activities, which occur in certain counties and during periods of low potential for erosion that do not meet the conditions of the waiver described in Part II.G. of this general permit, may be automatically authorized under this general permit if all the following conditions are met prior to the commencement of construction.

   (a) The construction activity occurs in a county and during the corresponding date range(s) listed in Appendix A;

(b) The construction activity is initiated and completed, including either final or temporary stabilization of all disturbed areas, within the time frame identified in Appendix A for the location of the construction site;

(c) All temporary stabilization is adequately maintained to effectively reduce or prohibit erosion, permanent stabilization activities have been initiated, and a condition of final stabilization is completed no later than 30 days following the end date of the time frame identified in Appendix A for the location of the construction site; the permittee signs a completed TCEQ Small Construction Site Notice for low potential for erosion (Form TCEQ-20964), including the certification statement;

(d) A signed and certified copy of the TCEQ Small Construction Site Notice for low potential for erosion is posted at the construction site in a location where it is readily available for viewing by the general public, local, state, and federal authorities prior to commencing construction activities, and maintained in that location until final stabilization has been achieved;

NOTE: Posted TCEQ site notices may have a redacted signature as long as there is an original signed and certified TCEQ site notice, with a viewable signature, located on-site and available for review by any applicable regulatory authority.

(e) A copy of the signed and certified TCEQ Small Construction Site Notice for low potential for erosion is provided to the operator of any MS4 receiving the discharge at least two (2) days prior to commencement of construction activities;

(f) Discharges of stormwater runoff or other non-stormwater discharges from any supporting concrete batch plant or asphalt batch plant is separately authorized under an individual TPDES permit, another TPDES general permit, or under an individual TCEQ permit where stormwater and non-stormwater is disposed of by evaporation or irrigation (discharges are adjacent to water in the state); and

(g) Any non-stormwater discharges are either authorized under a separate permit or authorization, are not considered by TCEQ to be a wastewater, or are captured and routed for disposal at a publicly operated treatment works or licensed waste disposal facility.

If all of the conditions in (a) – (h) above are met, then the operator(s) of small construction activities with low potential for erosion are not required to develop a SWP3.

If an operator is conducting small construction activities and any of the above conditions (a) – (h) are not met, the operator cannot declare coverage under the automatic authorization for small construction activities with low potential for erosion and must meet the requirements for automatic authorization (all other) small construction activities, described below in Part II.E.2.

For small construction activities that occur during a period with a low potential for erosion, where automatic authorization under this section is not available, an operator may apply for and obtain a waiver from permitting (Low Rainfall Erosivity Waiver – LREW), as described in Part II.G. of this general permit. Waivers from coverage under the LREW do not allow for any discharges of non-stormwater and the operator must ensure that discharges on non-stormwater are either authorized under a separate permit or authorization.

2. Automatic Authorization for Small Construction Activities

Operators of small construction activities as defined in Part I.B. of this general permit shall not submit an NOI for coverage, unless otherwise required by the executive director.

Operators of small construction activities, as defined in Part I.B. of this general permit or as defined but who do not meet in the conditions and requirements located in Part II.E.1 above, may be automatically authorized for small construction activities, provided that they meet all of the following conditions:

(a) develop a SWP3 according to the provisions of this general permit, that covers either the entire site or all portions of the site for which the applicant is the operator, and implement the SWP3 prior to commencing construction activities;

(b) all operators of regulated small construction activities must post a copy of a signed and certified TCEQ Small Construction Site Notice (Form TCEQ-20963), the notice must be posted at the construction site in a location where it is safely and readily available for viewing by the general public, local, state, and federal authorities, at least two (2) days prior to commencing construction activity , and maintain the notice in that location until completion of the construction activity (for linear construction activities, e.g. pipeline or highway, the TCEQ site notice must be placed in a publicly accessible location near where construction is actively underway; notice for these linear sites may be relocated, as necessary, along the length of the project, and the notice must be safely and readily available for viewing by the general public; local, state, and federal authorities);

(c) operators must maintain a posted TCEQ Small Construction Site Notice on the approved TCEQ form at the construction site until final stabilization has been achieved; and

> NOTE: Posted TCEQ site notices may have a redacted signature as long as there is an original signed and certified TCEQ Small Construction Site Notice, with a viewable signature, located on-site and available for review by an applicable regulatory authority.

(d) provide a copy of the signed and certified TCEQ Small Construction Site Notice to the operator of any municipal separate storm sewer system (MS4) receiving the discharge at least two (2) days prior to commencement of construction activities.

(e) if signatory authority is delegated by an authorized representative, then a Delegation of Signatory form must be submitted as required by 30 TAC § 305.128 (relating to Signatories to Reports). Operators for small construction activities must submit this form via mail following the instructions on the approved TCEQ paper form. A new Delegation of Signatory form must be submitted if the delegation changes to another individual or position.

As described in Part I.B of this general permit, large construction activities include those that will disturb less than five (5) acres of land, but that are part of a larger common plan of development or sale that will ultimately disturb five (5) or more acres of land and must meet the requirements of Part II.E.3. below.

3. Authorization for Large Construction Activities

Operators of large construction activities that qualify for coverage under this general permit must meet all of the following conditions:

(a) develop a SWP3 according to the provisions of this general permit that covers either the entire site or all portions of the site where the applicant is the operator. The SWP3 must be developed and implemented prior to obtaining coverage and prior to commencing construction activities;

(b) primary operators of large construction activities must submit an NOI prior to commencing construction activity at a construction site. A completed NOI must be submitted to TCEQ electronically using the online ePermits system on TCEQ's website.

Operators with an electronic reporting waiver must submit a completed paper NOI to TCEQ at least seven (7) days prior to commencing construction activity to obtain provisional coverage 48-hours from the postmark date for delivery to the TCEQ. An authorization is no longer provisional when the executive director finds the NOI is administratively complete, and an authorization number is issued to the permittee for the construction site indicated on the NOI.

If an additional primary operator is added after the initial NOI is submitted, the additional primary operator must meet the same requirements for existing primary operator(s), as indicated above.

If the primary operator changes due to responsibility at the site being transferred from one primary operator to another after the initial NOI is submitted, the new primary operator must submit an electronic NOI, unless they request and obtain a waiver from electronic reporting, at least ten (10) days prior to assuming operational control of a construction site and commencing construction activity.

(c) all operators of large construction activities must post a TCEQ Large Construction Site Notice on the approved TCEQ form (Form TCEQ-20961) in accordance with Part III.D.2. of this permit. The TCEQ site notice must be located where it is safely and readily available for viewing by the general public, local, state, and federal authorities prior to commencing construction activities, and must be maintained in that location until final stabilization has been achieved. For linear construction activities, e.g., pipeline or highway, the TCEQ site notice must be placed in a publicly accessible location near where construction is actively underway; notice for these linear sites may be relocated, as necessary, along the length of the project, and the notice must be safely and readily available for viewing by the general public, local, state, and federal authorities;

(d) two days prior to commencing construction activities, all primary operators must:

i. provide a copy of the signed NOI to the operator of any MS4 receiving the discharge and to any secondary construction operator, and

ii. list in the SWP3 the names and addresses of all MS4 operators receiving a copy;

(e) if signatory authority is delegated by an authorized representative, then a Delegation of Signatories form must be submitted as required by 30 TAC § 305.128 (relating to Signatories to Reports). Primary operators must submit this form electronically using the State of Texas Environmental Electronic Reporting System (STEERS), TCEQ's online permitting system, or by paper if the permittee requested and obtained an electronic reporting waiver. A new Delegation of Signatories form must be submitted, if the delegation changes to another individual or position;

(f) all persons meeting the definition of "secondary operator" in Part I of this permit are hereby notified that they are regulated under this general permit, but are not required to submit an NOI, provided that a primary operator at the site has submitted an NOI, or prior to commencement of construction activities, a primary operator is required to submit an NOI and the secondary operator has provided notification to the operator(s) of the need to obtain coverage (with records of notification available upon request). Any secondary operator notified under this provision may alternatively submit an NOI under this general permit, may seek coverage under an alternative TPDES individual permit, or may seek coverage under an alternative TPDES general permit if available; and

(g) all secondary operators of large construction activities must post a copy of the signed and certified TCEQ Large Construction Site Notice for Secondary Operators on the approved TCEQ form (Form TCEQ-20962) and provide a copy of the signed and certified TCEQ site notice to the operator of any MS4 receiving the discharge at least two (2) days prior to the commencement construction activities.

NOTE: Posted TCEQ site notices may have a redacted signature as long as there is an original signed and certified TCEQ Large Construction Site Notice for Secondary Operators, with a viewable signature, located on-site and available for review by an applicable regulatory authority.

Applicants must submit an NOI using the online ePermits system (accessed using STEERS) available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

4. Waivers for Small Construction Activities:

Operators of certain small construction activities may obtain a waiver from coverage under this general permit, if applicable. The requirements are outlined in Part II.G. below.

5. Effective Date of Coverage

(a) Operators of small construction activities as described in either Part II.E.1. or II.E.2. above are authorized immediately following compliance with the applicable conditions of Part II.E.1. or II.E.2. Secondary operators of large construction activities as described in Part II.E.3. above are authorized immediately following compliance with the applicable conditions in Part II.E.3. For activities located in areas regulated by 30 TAC Chapter 213, related to the Edwards Aquifer, this authorization to discharge is separate from the requirements of the operator's responsibilities under that rule. Construction may not commence for sites regulated under 30 TAC Chapter 213 until all applicable requirements of that rule are met.

(b) Primary operators of large construction activities as described in Part II.E.3. above that electronically submit an NOI are authorized immediately following confirmation of receipt of the electronic form by the TCEQ, unless otherwise notified by the executive director.

Operators with an electronic reporting waiver are provisionally authorized 48-hours from the date that a completed paper NOI is postmarked for delivery to the TCEQ, unless otherwise notified by the executive director. An authorization is no longer provisional when the executive director finds the NOI is administratively complete and an authorization number is issued to the permittee for the construction site indicated on the NOI.

For construction activities located in areas regulated by 30 TAC Chapter 213, related to the Edwards Aquifer, this authorization to discharge is separate from the requirements of the operator's responsibilities under that rule. Construction activities may not commence for sites regulated under 30 TAC Chapter 213 until all applicable requirements of that rule are met.

(c) Operators are not prohibited from submitting late NOIs or posting late site notices to obtain authorization under this general permit. The TCEQ reserves the right to take appropriate enforcement action for any unpermitted activities that may have occurred between the time construction commenced and authorization under this general permit was obtained.

(d) If operators that submitted NOIs have active authorizations for construction activities that are ongoing when this general permit expires on March 5, 2028, and a new general permit is issued, a 90-day interim (grace) period is granted to provide coverage that is administratively continued until operators with active authorizations can obtain coverage under the newly issued CGP. The 90-day grace period starts on the effective date of the newly issued CGP.

6. Contents of the NOI

The NOI form shall require, at a minimum, the following information:

(a) the TPDES CGP authorization number for existing authorizations under this general permit, where the operator submits an NOI to renew coverage within 90 days of the effective date of this general permit;

(b) the name, address, and telephone number of the operator filing the NOI for permit coverage;

(c) the name (or other identifier), address, county, and latitude/longitude of the construction project or site;

(d) the number of acres that will be disturbed by the applicant;

(e) the estimated construction project start date and end date;

(f) confirmation that the project or site will not be located on Indian Country lands;

(g) confirmation if the construction activity is associated with an oil and gas exploration, production, processing, or treatment, or transmission facility (see Part II.C.9.)

(h) confirmation that the construction activities are not associated with the construction of a facility that is licensed for the storage of high-level radioactive waste by the United States Nuclear Regulatory Commission under 10 CFR Part 72 (see Part II.C.12.);

(i) confirmation that a SWP3 has been developed in accordance with all conditions of this general permit, that it will be implemented prior to commencement of construction activities, and that it is compliant with any applicable local sediment and erosion control plans; for multiple operators who prepare a shared SWP3, the confirmation for an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator;

(j) name of the receiving water(s);

(k) the classified segment number for each classified segment that receives discharges from the regulated construction activity (if the discharge is not directly to a classified segment, then the classified segment number of the first classified segment that those discharges reach); and

(l) the name of all surface waters receiving discharges from the regulated construction activity that are on the latest EPA-approved CWA § 303(d) List of impaired waters or *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)* as not meeting applicable state water quality standards.

7. Notice of Change (NOC)

(a) If relevant information provided in the NOI changes, the operator that has submitted the NOI must submit an NOC to TCEQ at least fourteen (14) days before the change occurs. Where a 14-day advance notice is not possible, the operator must submit an NOC to TCEQ within fourteen (14) days of discovery of the change. If the operator becomes aware that it failed to submit any relevant facts or submitted

incorrect information in an NOI, the correct information must be submitted to TCEQ in an NOC within fourteen (14) days after discovery.

(b) Information on an NOC may include, but is not limited to, the following:

i. a change in the description of the construction project;

ii. an increase in the number of acres disturbed (for increases of one (1) or more acres);

iii. or the name of the operator (where the name of the operator has changed).

(c) Electronic NOC.

Applicants must submit an NOC using the online ePermits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. All waivers from electronic reporting are not transferrable. Electronic reporting waivers expire on the same date as the authorization to discharge, except for temporary waivers that expire one (1) year from issuance. A copy of the NOC form or letter must also be placed in the SWP3 and provided to the operator of any MS4 receiving the discharge. Operators are authorized immediately following confirmation of receipt of the electronic form by the TCEQ, unless otherwise notified by the executive director.

(d) Paper NOC.

Applicants who request and obtain an electronic reporting waiver shall submit the NOC on a paper form provided by the executive director, or by letter if an NOC form is not available.

(e) A copy of the NOC form or letter must also be placed in the SWP3 and provided to the operator of any MS4 receiving the discharge. A list that includes the names and addresses of all MS4 operators receiving a copy of the NOC (or NOC letter) must be included in the SWP3. Information that may not be included on an NOC includes but is not limited to the following:

i. transfer of operational control from one operator to another, including a transfer of the ownership of a company. A transfer of ownership of a company includes changes to the structure of a company, such as changing from a partnership to a corporation or changing corporation types, so that the filing or charter number that is on record with the Texas Secretary of State (SOS) must be changed.

ii. coverage under this general permit is not transferable from one operator to another. Instead, the new operator will need to submit an NOI or LREW, as applicable, and the previous operator will need to submit an NOT.

iii. a decrease in the number of acres disturbed. This information must be included in the SWP3 and retained on site.

8. Signatory Requirement for NOI Forms, NOT Forms, NOC Forms, and Construction Site Notices

NOI forms, NOT forms, NOC forms, and Construction Site Notices that require a signature must be signed according to 30 TAC § 305.44 (relating to Signatories for Applications).

Section F. Terminating Coverage

1. Notice of Termination (NOT) Required

   Each operator that has submitted an NOI for authorization of large construction activities under this general permit must apply to terminate that authorization following the conditions described in this section of the general permit.

   Authorization of large construction must be terminated by submitting an NOT electronically via the online ePermits system available through the TCEQ website, or on a paper NOT form to TCEQ supplied by the executive director with an approved waiver from electronic reporting. Authorization to discharge under this general permit terminates at midnight on the day a paper NOT is postmarked for delivery to the TCEQ or immediately following confirmation of the receipt of the NOT submitted electronically by the TCEQ.

   Applicants must submit an NOT using the online ePermits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge, except for temporary waivers that expire one (1) year from issuance.

   The NOT must be submitted to TCEQ, and a copy of the NOT provided to the operator of any MS4 receiving the discharge (with a list in the SWP3 of the names and addresses of all MS4 operators receiving a copy), within 30 days after any of the following conditions are met:

   (a) final stabilization has been achieved on all portions of the site that are the responsibility of the operator;

   (b) a transfer of operational control has occurred (See Section II.F.4. below); or

   (c) the operator has obtained alternative authorization under an individual TPDES permit or alternative TPDES general permit.

   Compliance with the conditions and requirements of this permit is required until the NOT is submitted and approved by TCEQ.

2. Minimum Contents of the NOT

   The NOT form shall require, at a minimum, the following information:

   (a) if authorization for construction activity was granted following submission of an NOI, the permittee's site-specific TPDES authorization number for a specific construction site;

   (b) an indication of whether final stabilization has been achieved at the site and a NOT has been submitted or if the permittee is simply no longer an operator at the site;

   (c) the name, address, and telephone number of the permittee submitting the NOT;

   (d) the name (or other identifier), address, county, and location (latitude/longitude) of the construction project or site; and

   (e) a signed certification that either all stormwater discharges requiring authorization under this general permit will no longer occur, or that the applicant is no longer the operator of the facility or construction site, and that all temporary structural erosion controls have either been removed, will be removed on a schedule defined in the SWP3, or have been transferred to a new operator if the new operator has applied for permit coverage. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal.

3. Termination of Coverage for Small Construction Sites and for Secondary Operators at Large Construction Sites

   (a) Each operator that has obtained automatic authorization for small construction or is a secondary operator for large construction must perform the following when terminating coverage under the permit:

      i. remove the TCEQ site notice;

      ii. complete the applicable portion of the TCEQ site notice related to removal of the TCEQ site notice; and

      iii. submit a copy of the completed TCEQ site notice to the operator of any MS4 receiving the discharge (or provide alternative notification as allowed by the MS4 operator, with documentation of such notification included in the SWP3).

   (b) The activities described in Part II.F.3.(a) above must be completed by the operator within 30 days of meeting any of the following conditions:

      i. final stabilization has been achieved on all portions of the site that are the responsibility of the operator;

      ii. a transfer of day-to-day operational control over activities necessary to ensure compliance with the SWP3 and other permit conditions has occurred (See Section II.F.4. below); or

      iii. the operator has obtained alternative authorization under an individual or general TPDES permit.

   For Small Construction Sites and Secondary Operators at Large Construction Sites, authorization to discharge under this general permit terminates immediately upon removal of the applicable TCEQ construction site notice. Compliance with the conditions and requirements of this permit is required until the TCEQ construction site notice is removed. The construction site notice cannot be removed until final stabilization has been achieved.

4. Transfer of Day-to-Day Operational Control

   (a) When the primary operator of a large construction activity changes or operational control over activities necessary to ensure compliance with the SWP3 and other permit conditions is transferred to another primary operator, the original operator must do the following:

      i. submit an NOT within ten (10) days prior to the date that responsibility for operations terminates, and the new operator must submit an NOI at least ten (10) days prior to the transfer of operational control, in accordance with condition (c) below; and

      ii. submit a copy of the NOT from the primary operator terminating its coverage under the permit and its operational control of the construction site and submit a copy of the NOI from the new primary operator to the operator of any MS4 receiving the discharge in accordance with Part II.F.1. above.

   (b) For transfer of operational control, operators of small construction activities and secondary operators of large construction activities who are not required to submit an NOI must do the following:

      i. the existing operator must remove the original TCEQ construction site notice, and the new operator must post the required TCEQ construction site notice prior to the transfer of operational control, in accordance with the conditions in Part II.F.4.(c) i or ii below; and

ii. a copy of the TCEQ construction site notice, which must be completed and provided to the operator of any MS4 receiving the discharge, in accordance with Part II.F.3. above.

(c) Each operator is responsible for determining its role as an operator as defined in Part I.B. and obtaining authorization under the permit, as described above in Part II.E. 1. - 3. Where authorization has been obtained by submitting an NOI for coverage under this general permit, permit coverage is not transferable from one operator to another. A transfer of operational control can include changes to the structure of a company, such as changing from a partnership to a corporation, or changing to a different corporation type such that a different filing (or charter) number is established with the Texas Secretary of State (SOS). A transfer of operational control can also occur when one of the following criteria is met, as applicable:

i. another operator has assumed control over all areas of the site that do not meet the definition for final stabilization;

ii. all silt fences and other temporary erosion controls have either been removed, scheduled for removal as defined in the SWP3, or transferred to a new operator, provided that the original permitted operator has attempted to notify the new operator in writing of the requirement to obtain permit coverage. Records of this notification (or attempt at notification) shall be retained by the operator transferring operational control to another operator in accordance with Part VI of this permit. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal; or

iii. a homebuilder has purchased one (1) or more lots from an operator who obtained coverage under this general permit for a common plan of development or sale. The homebuilder is considered a new operator and shall comply with the requirements of this permit. Under these circumstances, the homebuilder is only responsible for compliance with the general permit requirements as they apply to the lot(s) it has operational control over in a larger common plan of development, and the original operator remains responsible for common controls or discharges, and must amend its SWP3 to remove the lot(s) transferred to the homebuilder.

Section G. Waivers from Coverage

The executive director may waive the otherwise applicable requirements of this general permit for stormwater discharges from small construction activities under the terms and conditions described in this section.

1. Waiver Applicability and Coverage

Operators of small construction activities may apply for and receive a waiver from the requirements to obtain authorization under this general permit, when the calculated rainfall erosivity (R) factor for the entire period of the construction project is less than five (5).

The operator must submit a Low Rainfall Erosivity Waiver (LREW) certification form to the TCEQ electronically via the online ePermits system available through the TCEQ website. The LREW form is a certification by the operator that the small construction activity will commence and be completed within a period when the value of the calculated R factor is less than five (5).

Applicants who request and obtain an electronic reporting waiver shall submit the LREW on a paper form provided by the executive director at least seven (7) days prior to commencing construction activity to obtain provisional coverage 48-hours from the postmark date for delivery to the TCEQ. An authorization is no longer provisional when the executive director finds the LREW is administratively complete, and an authorization number is issued to the permittee for the construction site indicated on the LREW. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge, except for temporary waivers that expire one (1) year from issuance.

This LREW from coverage does not apply to any non-stormwater discharges, including what is allowed under this permit. The operator must ensure that all non-stormwater discharges are either authorized under a separate permit or authorization or are captured and routed to an authorized treatment facility for disposal.

2. Steps to Obtaining a Waiver

The construction site operator may calculate the R factor to request a waiver using the following steps:

(a) estimate the construction start date and the construction end date. The construction end date is the date that final stabilization will be achieved.

(b) find the appropriate Erosivity Index (EI) zone in Appendix B of this permit.

(c) find the EI percentage for the project period by adding the results for each period of the project using the table provided in Appendix D of this permit, in EPA Fact Sheet 2.1, or in USDA Handbook 703, by subtracting the start value from the end value to find the percent EI for the site.

(d) refer to the Isoerodent Map (Appendix C of this permit) and interpolate the annual isoerodent value for the proposed construction location.

(e) multiply the percent value obtained in Step (c) above by the annual isoerodent value obtained in Step (d). This is the R factor for the proposed project. If the value is less than five (5), then a waiver may be obtained. If the value is five (5) or more, then a waiver may not be obtained, and the operator must obtain coverage under Part II.E.2. of this permit.

Alternatively, the operator may calculate a site-specific R factor utilizing the following online calculator: https://lew.epa.gov/, or using another available resource.

A copy of the LREW certification form is not required to be posted at the small construction site.

3. Effective Date of an LREW

Unless otherwise notified by the executive director, operators of small construction activities seeking coverage under an LREW are provisionally waived from the otherwise applicable requirements of this general permit 48-hours from the date that a completed paper LREW certification form is postmarked for delivery to TCEQ, or immediately upon receiving confirmation of approval of an electronic submittal, made via the online ePermits system available through the TCEQ website.

Applicants seeking coverage under an LREW must submit an application for an LREW using the online ePermits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

4. Activities Extending Beyond the LREW Period

   If a construction activity extends beyond the approved waiver period due to circumstances beyond the control of the operator, the operator must either:

   (a) recalculate the R factor using the original start date and a new projected ending date, and if the R factor is still under five (5), submit a new LREW form at least two (2) days before the end of the original waiver period; or

   (b) obtain authorization under this general permit according to the requirements for automatic authorization for small construction activities in Part II.E.2. of this permit, prior to the end of the approved LREW period.

Section H. Alternative TPDES Permit Coverage

1. Individual Permit Alternative

   Any discharge eligible for coverage under this general permit may alternatively be authorized under an individual TPDES permit according to 30 TAC Chapter 305 (relating to Consolidated Permits). Applications for individual permit coverage must be submitted at least 330 days prior to commencement of construction activities to ensure timely authorization. Existing coverage under this general permit should not be terminated until an individual permit is issued and in effect.

2. General Permit Alternative

   Any discharges eligible for authorization under this general permit may alternatively be authorized under a separate general permit according to 30 TAC Chapter 205 (relating to General Permits for Waste Discharges), as applicable.

3. Individual Permit Required

   The executive director may require an operator of a construction site, otherwise eligible for authorization under this general permit, to apply for an individual TPDES permit in the following circumstances:

   (a) the conditions of an approved TMDL or TMDL I-Plan on the receiving water;

   (b) the activity being determined to cause, has a reasonable potential to cause, or contribute to a violation of water quality standards or being found to cause, or contribute to, the loss of a designated use of surface water in the state; and

   (c) any other consideration defined in 30 TAC Chapter 205 (relating to General Permits for Waste Discharges) including 30 TAC § 205.4(c)(3)(D), which allows the commission to deny authorization under the general permit and require an individual permit if a discharger has been determined by the executive director to have been out of compliance with any rule, order, or permit of the commission, including non-payment of fees assessed by the executive director.

      A discharger with a TCEQ compliance history rating of “unsatisfactory” is ineligible for coverage under this general permit. In that case, 30 TAC § 60.3 requires the executive director to deny or suspend an authorization to discharge under a general permit. However, per TWC § 26.040(h), a discharger is entitled to a hearing before the commission prior to having an authorization denied or suspended for having an “unsatisfactory” compliance history.

   Denial of authorization to discharge under this general permit or suspension of a permittee’s authorization under this general permit for reasons other than compliance history shall be done according to commission rules in 30 TAC Chapter 205 (relating to General Permits for Waste Discharges).

Section I. Permit Expiration

1. This general permit is effective for a term not to exceed five (5) years. All active discharge authorizations expire on the date provided on page one (1) of this permit. Following public notice and comment, as provided by 30 TAC § 205.3 (relating to Public Notice, Public Meetings, and Public Comment), the commission may amend, revoke, cancel, or renew this general permit. All authorizations that are active at the time the permit term expires will be administratively continued as indicated in Part II.I.2. below and in Part II.D.1.(b) and D.2.(b) of this permit.
2. If the executive director publishes a notice of the intent to renew or amend this general permit before the expiration date, the permit will remain in effect for existing, authorized discharges until the commission takes final action on the permit. Upon issuance of a renewed or amended permit, permittees may be required to submit an NOI within 90 days following the effective date of the renewed or amended permit, unless that permit provides for an alternative method for obtaining authorization.
3. If the commission does not propose to reissue this general permit within 90 days before the expiration date, permittees shall apply for authorization under an individual permit or an alternative general permit. If the application for an individual permit is submitted before the expiration date, authorization under this expiring general permit remains in effect until the issuance or denial of an individual permit. No new NOIs will be accepted nor new authorizations honored under the general permit after the expiration date.

Part III. Stormwater Pollution Prevention Plans (SWP3)

All regulated construction site operators shall prepare an SWP3, prior to submittal of an NOI, to address discharges authorized under Parts II.E.2. and II.E.3. of this general permit that will reach waters of the U.S. This includes discharges to MS4s and privately owned separate storm sewer systems that drain into surface water in the state or waters of the U.S.

Individual operators at a site may develop separate SWP3s that cover only their portion of the project, provided reference is made to the other operators at the site. Where there is more than one (1) SWP3 for a site, operators must coordinate to ensure that BMPs and controls are consistent and do not negate or impair the effectiveness of each other. Regardless of whether a single comprehensive SWP3 is developed or separate SWP3s are developed for each operator, it is the responsibility of each operator to ensure compliance with the terms and conditions of this general permit in the areas of the construction site where that operator has control over construction plans and specifications or day-to-day operations.

An SWP3 must describe the implementation of practices that will be used to minimize to the extent practicable the discharge of pollutants in stormwater associated with construction activity and non-stormwater discharges described in Part II.A.3., in compliance with the terms and conditions of this permit.

An SWP3 must also identify any potential sources of pollution that have been determined to cause, have a reasonable potential to cause, or contribute to a violation of water quality standards or have been found to cause or contribute to the loss of a designated use of surface water in the state from discharges of stormwater from construction activities and construction support activities. Where potential sources of these pollutants are present at a construction site, the SWP3 must also contain a description of the management practices that will be used to prevent these pollutants from being discharged into surface water in the state or waters of the U.S.

> NOTE: Construction support activities can also include vehicle repair areas, fueling areas, etc. that are present at a construction site solely for the support construction activities and are only used by operators at the construction site.

The SWP3 is intended to serve as a road map for how the construction operator will comply with the effluent limits and other conditions of this permit. Additional portions of the effluent limits are established in Part IV. of the permit.

Section A. Shared SWP3 Development

For more effective coordination of BMPs and opportunities for cost sharing, a cooperative effort by the different operators at a site is encouraged. Operators of small and large construction activities must independently obtain authorization under this permit but may work together with other regulated operators at the construction site to prepare and implement a single, comprehensive SWP3, which can be shared by some or all operators, for the construction activities that each of the operators are performing at the entire construction site.

1. The SWP3 must include the following:
   (a) for small construction activities – the name of each operator that participates in the shared SWP3;
   (b) for large construction activities – the name of each operator that participates in the shared SWP3, the general permit authorization numbers of each operator (or the date that the NOI was submitted to TCEQ by each operator that has not received an authorization number for coverage under this permit); and
   (c) for large and small construction activities – the signature of each operator participating in the shared SWP3.
2. The SWP3 must clearly indicate which operator is responsible for satisfying each shared requirement of the SWP3. If the responsibility for satisfying a requirement is not described in the plan, then each permittee is entirely responsible for meeting the requirement within the boundaries of the construction site where they perform construction activities. The SWP3 must clearly describe responsibilities for meeting each requirement in shared or common areas.
3. The SWP3 may provide that one operator is responsible for preparation of a SWP3 in compliance with the CGP, and another operator is responsible for implementation of the SWP3 at the project site.

Section B. Responsibilities of Operators

1. Secondary Operators and Primary Operators with Control Over Construction Plans and Specifications

   All secondary operators and primary operators with control over construction plans and specifications shall:
   (a) ensure the project specifications allow or provide that adequate BMPs are developed to meet the requirements of Part III of this general permit;
   (b) ensure that the SWP3 indicates the areas of the project where they have control over project specifications, including the ability to make modifications in specifications;
   (c) ensure that all other operators affected by modifications in project specifications are notified in a timely manner so that those operators may modify their BMP s as necessary to remain compliant with the conditions of this general permit; and

(d) ensure that the SWP3 for portions of the project where each operator has control indicates the name and site-specific TPDES authorization number(s) for operators with the day-to-day operational control over those activities necessary to ensure compliance with the SWP3 and other permit conditions. If a primary operator has not been authorized or has abandoned the site, the secondary operator is considered to be the responsible party and must obtain authorization as a primary operator under the permit, until the authority for day-to-day operational control is transferred to another primary operator. The new primary operator must update or develop a new SWP3 that will reflect the transfer of operational control and include any additional updates to the SWP3 to meet requirements of the permit.

2. Primary Operators with Day-to-Day Operational Control

Primary operators with day-to-day operational control of those activities at a project that are necessary to ensure compliance with an SWP3 and other permit conditions must ensure that the SWP3 accomplishes the following requirements:

(a) meets the requirements of this general permit for those portions of the project where they are operators;

(b) identifies the parties responsible for implementation of BMPs described in the SWP3;

(c) indicates areas of the project where they have operational control over day-to-day activities; and

(d) the name and site-specific TPDES authorization number of the parties with control over project specifications, including the ability to make modifications in specifications for areas where they have operational control over day-to-day activities.

Section C. Deadlines for SWP3 Preparation, Implementation, and Compliance

The SWP3 must be prepared prior to obtaining authorization under this general permit, and implemented prior to commencing construction activities that result in soil disturbance. The SWP3 must be prepared so that it provides for compliance with the terms and conditions of this general permit.

Section D. Plan Review and Making Plans Available

1. The SWP3 must be retained on-site at the construction site or, if the site is inactive or does not have an on-site location to store the plan, a notice must be posted describing the location of the SWP3. The SWP3 must be made readily available at the time of an on-site inspection to: the executive director; a federal, state, or local agency approving sediment and erosion plans, grading plans, or stormwater management plans; local government officials; and the operator of a municipal separate storm sewer receiving discharges from the site. If the SWP3 is retained off-site, then it shall be made available as soon as reasonably possible. In most instances, it is reasonable that the SWP3 shall be made available within 24 hours of the request.

   NOTE: The SWP3 may be prepared and kept electronically, rather than in paper form, if the records are: (a) in a format that can be read in a similar manner as a paper record; (b) legally valid with no less evidentiary value than their paper equivalent; and (c) immediately accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be, if the records were stored in paper form.

2. Operators with authorization for construction activity under this general permit must post a TCEQ site notice at the construction site at a place readily available for viewing by the general public, and local, state, and federal authorities.

(a) Primary and secondary operators of large construction activities must each post a TCEQ construction site notice, respective to their role as an operator at the construction site, as required above and according to requirements in Part II.E.3. of this general permit.

(b) Primary and secondary operators of small construction activities must post the TCEQ site notice as required in Part III.D.2.(a) above and for the specific type of small construction described in Part II.E.1. and 2. of the permit.

(c) If the construction project is a linear construction project, such as a pipeline or highway, the notices must be placed in a publicly accessible location near where construction is actively underway. TCEQ construction site notices for small and large construction activities at these linear construction sites may be relocated, as necessary, along the length of the project, but must still be readily available for viewing by the general public; local, state, and federal authorities; and contain the following information:

i. the site-specific TPDES authorization number for the project if assigned;

ii. the operator name, contact name, and contact phone number;

iii. a brief description of the project; and

iv. the location of the SWP3.

3. This permit does not provide the general public with any right to trespass on a construction site for any reason, including inspection of a site; nor does this permit require that permittees allow members of the general public access to a construction site.

Section E. Revisions and Updates to SWP3s

The permittee must revise or update the SWP3, including the site map, within seven (7) days of when any of the following occurs:

1. a change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants and that has not been previously addressed in the SWP3;
2. changing site conditions based on updated plans and specifications, new operators, new areas of responsibility, and changes in BMPs; or
3. results of inspections or investigations by construction site personnel authorized by the permittee, operators of a municipal separate storm sewer system receiving the discharge, authorized TCEQ personnel, or a federal, state or local agency approving sediment and erosion plans indicate the SWP3 is proving ineffective in eliminating or significantly minimizing pollutants in discharges authorized under this general permit.

Section F. Contents of SWP3

The SWP3 must be developed and implemented by primary operators of small and large construction activities and include, at a minimum, the information described in this section and must comply with the construction and development effluent guidelines in Part IV. of the general permit.

1. A site or project description, which includes the following information:

(a) a description of the nature of the construction activity;

(b) a list of potential pollutants and their sources;

(c) a description of the intended schedule or sequence of activities that will disturb soils for major portions of the site, including estimated start dates and duration of activities;

(d) the total number of acres of the entire property and the total number of acres where construction activities will occur, including areas where construction support activities (defined in Part I.B. of this general permit) occur;

(e) data describing the soil or the quality of any discharge from the site;

(f) a map showing the general location of the site (e.g., a portion of a city or county map);

(g) a detailed site map (or maps) indicating the following:

i. property boundary(ies);

ii. drainage patterns and approximate slopes anticipated before and after major grading activities;

iii. areas where soil disturbance will occur (note any phasing), including any demolition activities;

iv. locations of all controls and buffers, either planned or in place;

v. locations where temporary or permanent stabilization practices are expected to be used;

vi. locations of construction support activities, including those located off-site;

vii. surface waters (including wetlands) either at, adjacent, or in close proximity to the site, and also indicate whether those waters are impaired;

NOTE: Surface waters adjacent to or in close proximity to the site means any receiving waters within the site and all receiving waters within one mile downstream of the site's discharge point(s).

viii. locations where stormwater discharges from the site directly to a surface water body or a municipal separate storm sewer system;

ix. vehicle wash areas; and

x. designated points on the site where vehicles will exit onto paved roads (for instance, this applies to construction transition from unstable dirt areas to exterior paved roads).

Where the amount of information required to be included on the map would result in a single map being difficult to read and interpret, the operator shall develop a series of maps that collectively include the required information.

(h) the location and description of support activities authorized under the permittee's NOI, including asphalt plants, concrete plants, and other activities providing support to the construction site that is authorized under this general permit;

(i) the name of receiving waters at or near the site that may be disturbed or that may receive discharges from disturbed areas of the project;

(j) a copy of this TPDES general permit (an electronic copy of this TPDES general permit or a current link to this TPDES general permit on the TCEQ webpage is acceptable);

(k) the NOI and the acknowledgement of provisional and non-provisional authorization for primary operators of large construction sites, and the TCEQ site notice for small construction sites and for secondary operators of large construction sites;

(l) if signatory authority is delegated by an authorized representative, then a copy of the formal notification to TCEQ, as required by 30 TAC 305.128 relating to Signatories to Reports must be filed in the SWP3 and made available for review upon request by TCEQ or local MS4 Operator. For primary operators of large construction activities, the formal notification to TCEQ must be submitted either electronically through

STEERS, TCEQ's electronic reporting system, or, if qualifying for an electronic reporting waiver, by paper on a Delegation of Signatories form. For operators or small construction activities, the formal notification to TCEQ must be submitted by paper on a Delegation of Signatories form.

(m) stormwater and allowable non-stormwater discharge locations, including storm drain inlets on site and in the immediate vicinity of the construction site where construction support activities will occur; and

(n) locations of all pollutant-generating activities at the construction site and where construction support activities will occur, such as the following: Paving operations; concrete, paint and stucco washout and water disposal; solid waste storage and disposal; and dewatering operations.

2. A description of the BMPs that will be used to minimize pollution in runoff.

The description must identify the general timing or sequence for installation and implementation. At a minimum, the description must include the following components:

(a) General Requirements

i. Erosion and sediment controls must be designed to retain sediment on-site to the extent practicable with consideration for local topography, soil type, and rainfall.

ii. Control measures must be properly selected, installed, and maintained according to good engineering practices, and the manufacturer's or designer's specifications.

iii. Controls must be developed to minimize the offsite transport of litter, construction debris, construction materials, and other pollutants required of Part IV.D.

(b) Erosion Control and Stabilization Practices

The SWP3 must include a description of temporary and permanent erosion control and stabilization practices for the construction site, where small or large construction activity will occur. The erosion control and stabilization practices selected by the permittee must be compliant with the requirements for sediment and erosion control, located in Part IV. of this permit. The description of the SWP3 must also include a schedule of when the practices will be implemented. Site plans must ensure that existing vegetation at the construction site is preserved where it is possible.

i. Erosion control and stabilization practices may include but are not limited to: establishment of temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, slope texturing, temporary velocity dissipation devices, flow diversion mechanisms, and other similar measures.

ii. The following records must be maintained and either attached to or referenced in the SWP3, and made readily available upon request to the parties listed in Part III.D.1 of this general permit:

(A) the dates when major grading activities occur;

(B) the dates when construction activities temporarily or permanently cease on a portion of the site; and

(C) the dates when stabilization measures are initiated.

iii. Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding fourteen (14) calendar days. Stabilization

measures that provide a protective cover must be initiated immediately in portions of the site where construction activities have permanently ceased. The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased. Except as provided in (A) through (D) below, these measures must be completed as soon as practicable, but no more than fourteen (14) calendar days after the initiation of soil stabilization measures:

(A) where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased due to frozen conditions, non-vegetative controls must be implemented until thawing conditions (as defined in Part I.B. of this general permit) are present, and vegetative stabilization measures can be initiated as soon as practicable.

(B) in arid areas, semi-arid areas, or drought-stricken areas, as they are defined in Part I.B. of this general permit, where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased or is precluded by arid conditions, other types of erosion control and stabilization measures must be initiated at the site as soon as practicable. Where vegetative controls are infeasible due to arid conditions, and within fourteen (14) calendar days of a temporary or permanent cessation of construction activity in any portion of the site, the operator shall immediately install non-vegetative erosion controls in areas of the construction site where construction activity is complete or has ceased. If non-vegetative controls are infeasible, the operator shall install temporary sediment controls as required in Part III.F.2.(b)iii.(C) below.

(C) in areas where non-vegetative controls are infeasible, the operator may alternatively utilize temporary perimeter controls. The operator must document in the SWP3 the reason why stabilization measures are not feasible, and must demonstrate that the perimeter controls will retain sediment on site to the extent practicable. The operator must continue to inspect the BMPs at the frequencies established in Part III.F.8.(c) for unstabilized sites.

(D) the requirement for permittees to initiate stabilization is triggered as soon as it is known with reasonable certainty that construction activity at the site or in certain areas of the site will be stopped for 14 or more additional calendar days. If the initiation or completion of vegetative stabilization is prevented by circumstances beyond the control of the permittee, the permittee must employ and implement alternative stabilization measures immediately. When conditions at the site changes that would allow for vegetative stabilization, then the permittee must initiate or complete vegetative stabilization as soon as practicable.

iv. Final stabilization must be achieved prior to termination of permit coverage.

v. TCEQ does not expect that temporary or permanent stabilization measures to be applied to areas that are intended to be left un-vegetated or un-stabilized following construction (e.g., dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, or materials).

(c) Sediment Control Practices

The SWP3 must include a description of any sediment control practices used to remove eroded soils from stormwater runoff, including the general timing or sequence for implementation of controls. Controls selected by the permittee must be compliant with the requirements in Part IV. of this permit.

i. Sites With Drainage Areas of Ten (10) or More Acres

(A) Sedimentation Basin(s) or Impoundments

(1) A sedimentation basin or similar impoundment is required, where feasible, for a common drainage location that serves an area with ten (10) or more acres disturbed at one time. A sedimentation basin or impoundment may be temporary or permanent, and must provide sufficient storage to contain a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained. When calculating the volume of runoff from a 2-year, 24-hour storm event, it is not required to include the flows from offsite areas and flow from onsite areas that are either undisturbed or have already undergone permanent stabilization, if these flows are diverted around both the disturbed areas of the site and the sediment basin or similar impoundment. Capacity calculations shall be included in the SWP3. Sedimentation basins must be designed for and appropriate for controlling runoff at the site and existing detention or retention ponds at the site may not be appropriate.

(2) Where rainfall data is not available, or a calculation cannot be performed, the sedimentation basin must provide at least 3,600 cubic feet of storage per acre drained until final stabilization of the site.

(3) If a sedimentation basin or impoundment is not feasible, then the permittee shall provide equivalent control measures until final stabilization of the site. In determining whether installing a sediment basin or impoundment is feasible, the permittee may consider factors such as site soils, slope, available area, public safety, precipitation patterns, site geometry, site vegetation, infiltration capacity, geotechnical factors, depth to groundwater, and other similar considerations. The permittee shall document the reason that the sediment basins or impoundments are not feasible, and shall utilize equivalent control measures, which may include a series of smaller sediment basins or impoundments.

(4) Unless infeasible, when discharging from sedimentation basins and impoundments, the permittee shall utilize outlet structures that withdraw water from the surface.

(B) Perimeter Controls: At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area, and for those side slope boundaries deemed appropriate as dictated by individual site conditions.

ii. Controls for Sites with Drainage Areas Less than Ten (10) Acres:

(A) Sediment traps and sediment basins may be used to control solids in stormwater runoff for drainage locations serving less than ten (10) acres. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area, and for those side slope boundaries deemed appropriate as dictated by individual site conditions.

(B) Alternatively, a sediment basin that provides storage for a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained may be utilized. Where rainfall data is not available or a calculation cannot be performed, a temporary or permanent sediment basin providing 3,600 cubic feet of storage per acre drained may be provided. If a calculation is performed, then the calculation shall be included in the SWP3.

(C) If sedimentation basins or impoundments are used, the permittee shall comply with the requirements in Part IV.F. of this general permit.

3. Description of Permanent Stormwater Controls

A description of any stormwater control measures that will be installed during the construction process to control pollutants in stormwater discharges that may occur after construction operations have been completed must be included in the SWP3. Permittees are responsible for the installation and maintenance of stormwater management measures, as follows:

(a) permittees authorized under the permit for small construction activities are responsible for the installation and maintenance of stormwater control measures prior to final stabilization of the site; or

(b) permittees authorized under the permit for large construction activities are responsible for the installation and maintenance of stormwater control measures prior to final stabilization of the site and prior to submission of an NOT.

4. Other Required Controls and BMPs

(a) Permittees shall minimize, to the extent practicable, the off-site vehicle tracking of sediments and dust. The SWP3 shall include a description of controls utilized to control the generation of pollutants that could be discharged in stormwater from the site.

(b) The SWP3 must include a description of construction and waste materials expected to be stored on-site and a description of controls to minimize pollutants from these materials.

(c) The SWP3 must include a description of potential pollutant sources in discharges of stormwater from all areas of the construction site where construction activity, including construction support activities, will be located, and a description of controls and measures that will be implemented at those sites to minimize pollutant discharges.

(d) Permittees shall place velocity dissipation devices at discharge locations and along the length of any outfall channel (i.e., runoff conveyance) to provide a non-erosive flow velocity from the structure to a water course, so that the natural physical and biological characteristics and functions are maintained and protected.

(e) Permittees shall design and utilize appropriate controls in accordance with Part IV. of this permit to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water from the site.

(f) Permittees shall ensure that all other required controls and BMPs comply with all of the requirements of Part IV. of this general permit.

(g) For demolition of any structure with at least 10,000 square feet of floor space that was built or renovated before January 1, 1980, and the receiving waterbody is impaired for polychlorinated biphenyls (PCBs):

i. implement controls to minimize the exposure of PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures to precipitation and to stormwater; and

ii. ensure that disposal of such materials is performed in compliance with applicable state, federal, and local laws.

5. Documentation of Compliance with Approved State and Local Plans

   (a) Permittees must ensure that the SWP3 is consistent with requirements specified in applicable sediment and erosion site plans or site permits, or stormwater management site plans or site permits approved by federal, state, or local officials.

   (b) SWP3s must be updated as necessary to remain consistent with any changes applicable to protecting surface water resources in sediment erosion site plans or site permits, or stormwater management site plans or site permits approved by state or local official for which the permittee receives written notice.

   (c) If the permittee is required to prepare a separate management plan, including but not limited to a WPAP or Contributing Zone Plan in accordance with 30 TAC Chapter 213 (related to the Edwards Aquifer), then a copy of that plan must be either included in the SWP3 or made readily available upon request to authorized personnel of the TCEQ. The permittee shall maintain a copy of the approval letter for the plan in its SWP3.

6. Maintenance Requirements

   (a) All protective measures identified in the SWP3 must be maintained in effective operating condition. If, through inspections or other means, as soon as the permittee determines that BMPs are not operating effectively, then the permittee shall perform maintenance as necessary to maintain the continued effectiveness of stormwater controls, and prior to the next rain event if feasible. If maintenance prior to the next anticipated storm event is impracticable, the reason shall be documented in the SWP3 and maintenance must be scheduled and accomplished as soon as practicable. Erosion and sediment controls that have been intentionally disabled, run-over, removed, or otherwise rendered ineffective must be replaced or corrected immediately upon discovery.

   (b) If periodic inspections or other information indicates a control has been used incorrectly, is performing inadequately, or is damaged, then the operator shall replace or modify the control as soon as practicable after making the discovery.

   (c) Sediment must be removed from sediment traps and sedimentation ponds no later than the time that design capacity has been reduced by 50%. For perimeter controls such as silt fences, berms, etc., the trapped sediment must be removed before it reaches 50% of the above-ground height.

   (d) If sediment escapes the site, accumulations must be removed at a frequency that minimizes off-site impacts, and prior to the next rain event, if feasible. If the permittee does not own or operate the off-site conveyance, then the permittee shall work with the owner or operator of the property to remove the sediment.

7. Observation and Evaluation of Dewatering Controls Pursuant to Part IV.C. of this General Permit

   (a) Personnel provided by the permittee must observe and evaluate dewatering controls at a minimum of once per day on the days where dewatering discharges from the construction site occur. Personnel conducting these evaluations must be knowledgeable of this general permit, the construction activities at the site, and the SWP3 for the site. Personnel conducting these evaluations are not required to have signatory authority for reports under 30 TAC § 305.128 (relating to Signatories to Reports).

(b) Requirements for Observations and Evaluations

i. A report summarizing the scope of any observation and evaluation must be completed within 24-hours following the evaluation. The report must also include, at a minimum, the following:

(A) date of the observations and evaluation;

(B) name(s) and title(s) of personnel making the observations and evaluation;

(C) approximate times that the dewatering discharge began and ended on the day of evaluation, or if the dewatering discharge is a continuous discharge that continues after normal business hours, indicate that the discharge is continuous (this information can be reported by personnel initiating the dewatering discharge);

(D) estimates of the rate (in gallons per day) of discharge on the day of evaluation;

(E) whether or not any indications of pollutant discharge were observed at the point of discharge (e.g., foam, oil sheen, noticeable odor, floating solids, suspended sediments, or other obvious indicators of stormwater pollution); and

(F) major observations, including: the locations of where erosion and discharges of sediment or other pollutants from the site have occurred; locations of BMPs that need to be maintained; locations of BMPs that failed to operate as designed or proved inadequate for a particular location; and locations where additional BMPs are needed.

ii. Actions taken as a result of evaluations, including the date(s) of actions taken, must be described within, and retained as a part of, the SWP3. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SWP3 and this permit. The report must be retained as part of the SWP3 and signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

iii. The names and qualifications of personnel making the evaluations for the permittee may be documented once in the SWP3 rather than being included in each report.

8. Inspections of All Controls

(a) Personnel provided by the permittee must inspect disturbed areas (cleared, graded, or excavated) of the construction site that do not meet the requirements of final stabilization in this general permit, all locations where stabilization measures have been implemented, areas of construction support activity covered under this permit, stormwater controls (including pollution prevention controls) for evidence of, or the potential for, the discharge of pollutants, areas where stormwater typically flows within the construction site, and points of discharge from the construction site.

i. Personnel conducting these inspections must be knowledgeable of this general permit, the construction activities at the site, and the SWP3 for the site.

ii. Personnel conducting these inspections are not required to have signatory authority for inspection reports under 30 TAC § 305.128 (relating to Signatories to Reports).

(b) Requirements for Inspections

i. Inspect all stormwater controls (including sediment and erosion control measures identified in the SWP3) to ensure that they are installed properly, appear to be operational, and minimizing pollutants in discharges, as intended.

ii. Identify locations on the construction site where new or modified stormwater controls are necessary.

iii. Check for signs of visible erosion and sedimentation that can be attributed to the points of discharge where discharges leave the construction site or discharge into any surface water in the state flowing within or adjacent to the construction site.

iv. Identify any incidents of noncompliance observed during the inspection.

v. Inspect locations where vehicles enter or exit the site for evidence of off-site sediment tracking.

vi. If an inspection is performed when discharges from the construction site are occurring: identify all discharge points at the site, and observe and document the visual quality of the discharge (i.e., color, odor, floating, settled, or suspended solids, foam, oil sheen, and other such indicators of pollutants in stormwater).

vii. Complete any necessary maintenance needed, based on the results of the inspection and in accordance with the requirements listed in Part III.F.6. above.

(c) Inspection frequencies:

i. Inspections of construction sites must be conducted at least once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater, unless as otherwise provided below in Part III.F.8.(c)ii. – v. below.

(A) If a storm event produces 0.5 inches or more of rain within a 24-hour period (including when there are multiple, smaller storms that alone produce less than 0.5 inches but together produce 0.5 inches or more in 24 hours), you are required to conduct one inspection within 24 hours of when 0.5 inches of rain or more has fallen. When the 24-hour inspection time frame occurs entirely outside of normal working hours, you must conduct an inspection by no later than the end of the next business day.

(B) If a storm event produces 0.5 inches or more of rain within a 24-hour period on the first day of a storm and continues to produce 0.5 inches or more of rain on subsequent days, you must conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the last day of the storm that produces 0.5 inches or more of rain (i.e., only two (2) inspections would be required for such a storm event). When the 24-hour inspection time frame occurs entirely outside of normal working hours, you must conduct an inspection by no later than the end of the next business day.

ii. Inspection frequencies must be conducted at least once every month in areas of the construction site that meet final stabilization or have been temporarily stabilized.

iii. Inspection frequencies for construction sites, where runoff is unlikely due to the occurrence of frozen conditions at the site, must be conducted at least once every month until thawing conditions begin to occur (see definitions for thawing conditions in Part I.B.). The SWP3 must also contain a record of the approximate beginning and ending dates of when frozen conditions occurred at the site, which resulted in inspections being conducted monthly, while those

conditions persisted, instead of at the interval of once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

iv. In arid, semi-arid, or drought-stricken areas, inspections must be conducted at least once every month and within 24 hours after the end of a storm event of 0.5 inches or greater. The SWP3 must also contain a record of the total rainfall measured, as well as the approximate beginning and ending dates of when drought conditions occurred at the site, which resulted in inspections being conducted monthly, while those conditions persisted, instead of at the interval of once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

v. As an alternative to the inspection schedule in Part III.F.8.(c)i. above, the SWP3 may be developed to require that these inspections will occur at least once every seven (7) calendar days. If this alternative schedule is developed, then the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.

vi. The inspection procedures described in Part III.F.8.(c)i. – v above can be performed at the frequencies and under the applicable conditions indicated for each schedule option, provided that the SWP3 reflects the current schedule and that any changes to the schedule are made in accordance with the following provisions: the inspection frequency schedule can only be changed a maximum of once per calendar month and implemented within the first five (5) business days of a calendar month; and the reason for the schedule change documented in the SWP3 (e.g., end of "dry" season and beginning of "wet" season).

(d) Utility line installation, pipeline construction, and other examples of long, narrow, linear construction activities may provide inspection personnel with limited access to the areas described in Part III.F.8.(a) above.

i. Inspection of linear construction sites could require the use of vehicles that could compromise areas of temporary or permanent stabilization, cause additional disturbance of soils, and result in the increase the potential for erosion. In these circumstances, controls must be inspected at least once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater, but representative inspections may be performed.

ii. For representative inspections, personnel must inspect controls along the construction site for 0.25 mile above and below each access point where a roadway, undisturbed right-of-way, or other similar feature intersects the construction site and allows access to the areas described in Part III.F.8.(a) above. The conditions of the controls along each inspected 0.25-mile portion may be considered as representative of the condition of controls along that reach extending from the end of the 0.25-mile portion to either the end of the next 0.25-mile inspected portion, or to the end of the project, whichever occurs first.

As an alternative to the inspection schedule described in Part III.F.8.(c)i. above, the SWP3 may be developed to require that these inspections will occur at least once every seven (7) calendar days. If this alternative schedule is developed, the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.

iii. the SWP3 for a linear construction site must reflect the current inspection schedule. Any changes to the inspection schedule must be made in accordance with the following provisions:

(A) the schedule may be changed a maximum of one time each month;

(B) the schedule change must be implemented at the beginning of a calendar month, and

(C) the reason for the schedule change must be documented in the SWP3 (e.g., end of "dry" season and beginning of "wet" season).

(e) Adverse Conditions.

Requirements for inspections may be temporarily suspended for adverse conditions. Adverse conditions are conditions that are either dangerous to personnel (e.g., high wind, excessive lightning) or conditions that prohibit access to the site (e.g., flooding, freezing conditions). Adverse conditions that result in the temporary suspension of a permit requirement to inspect must be documented and included as part of the SWP3. Documentation must include:

i. the date and time of the adverse condition,

ii. names of personnel that witnessed the adverse condition, and

iii. a narrative for the nature of the adverse condition.

(f) In the event of flooding or other adverse conditions which prohibit access to the inspection sites, inspections must be conducted as soon as access is practicable. Inspection Reports.

i. A report summarizing the scope of any inspection must be completed within 24-hours following the inspection. The report must also include the date(s) of the inspection and major observations relating to the implementation of the SWP3. Major observations in the report must include: the locations of where erosion and discharges of sediment or other pollutants from the site have occurred; locations of BMPs that need to be maintained; locations of BMPs that failed to operate as designed or proved inadequate for a particular location; and locations where additional BMPs are needed.

ii. Actions taken as a result of inspections, including the date(s) of actions taken, must be described within, and retained as a part of, the SWP3. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SWP3 and this permit. The report must be retained as part of the SWP3 and signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

iii. The names and qualifications of personnel making the inspections for the permittee may be documented once in the SWP3 rather than being included in each report.

(g) The SWP3 must be modified based on the results of inspections, as necessary, to better control pollutants in runoff. Revisions to the SWP3 must be completed within seven (7) calendar days following the inspection. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in the SWP3 and wherever possible those changes implemented before the next storm event. If implementation before the next anticipated storm event is impracticable, these changes must be implemented as soon as practicable. If necessary, modify your site map to reflect changes to your stormwater controls that are no longer accurately reflected on the current site map.

9. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for all eligible non-stormwater components of the discharge, as listed in Part II.A.3. of this permit.

10. The SWP3 must include the information required in Part III.B. of this general permit.

11. The SWP3 must include pollution prevention procedures that comply with Part IV.D. of this general permit.

Part IV. Erosion and Sediment Control Requirements Applicable to All Sites

Except as provided in 40 CFR §§ 125.30-125.32, any discharge regulated under this general permit, with the exception of sites that obtained waivers based on low rainfall erosivity, must achieve, at a minimum, the following effluent limitations representing the degree of effluent reduction attainable by application of the best practicable control technology currently available (BPT). The BPT are also required by and must satisfy the Effluent Limitations Guideline (ELG) permitting requirement for application of 40 CFR § 450.24 New Source Performance Standards (NSPS), 40 CFR § 450.22 Best Available Technology Economically Achievable (BAT), and 40 CFR § 450.23 Best Conventional Pollutant Control Technology (BCT).

Section A. Erosion and Sediment Controls

Design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed, and maintained to:

1. control stormwater volume and velocity within the site to minimize soil erosion in order to minimize pollutant discharges;
2. control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge point(s);
3. minimize the amount of soil exposed during construction activity;
4. minimize the disturbance of steep slopes;
5. minimize sediment discharges from the site. The design, installation, and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
6. provide and maintain appropriate natural buffers around surface water in the state. Direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible. If providing buffers is infeasible, the permittee shall document the reason that natural buffers are infeasible and shall implement additional erosion and sediment controls to reduce sediment load;
7. preserve native topsoil at the site, unless the intended function of a specific area of the site dictates that the topsoil be disturbed or removed, or it is infeasible; and
8. minimize soil compaction. In areas of the construction site where final vegetative stabilization will occur or where infiltration practices will be installed, either:
   (a) restrict vehicle and equipment use to avoid soil compaction; or
   (b) prior to seeding or planting areas of exposed soil that have been compacted, use techniques that condition the soils to support vegetative growth, if necessary and feasible.

   Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted.
9. TCEQ does not consider stormwater control features (e.g., stormwater conveyance channels, storm drain inlets, sediment basins) to constitute “surface water” for the purposes of triggering the buffer requirement in Part IV.A.(6) above.

Section B. Soil Stabilization

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating, or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding fourteen (14) calendar days. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next workday, following the day when the earth-disturbing activities have temporarily or permanently ceased. Temporary stabilization must be completed no more than fourteen (14) calendar days after initiation of soil stabilization measures, and final stabilization must be achieved prior to termination of permit coverage. In arid, semi-arid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative non-vegetative stabilization measures must be employed as soon as practicable. Refer to Part III.F.2.(b) for complete erosion control and stabilization practice requirements. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed.

Section C. Dewatering

Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited, unless managed by appropriate controls to address sediment and prevent erosion. Operators must observe and evaluate the dewatering controls once per day while the dewatering discharge occurs as described in Part III.F.7. of this general permit.

Section D. Pollution Prevention Measures

Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented, and maintained to:

1. minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
2. minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater;
3. minimize the exposure of waste materials by closing waste container lids at the end of the workday and during storm events. For waste containers that do not have lids, where the container itself is not sufficiently secure enough to prevent the discharge of pollutants absent a cover and could leak, the permittee must provide either a cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, stormwater, and wind, or a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment). Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use);
4. minimize exposure of wastes by implementing good housekeeping measures. Wastes must be cleaned up and disposed of in designated waste containers on days of operation at the site. Wastes must be cleaned up immediately if containers overflow;

5. minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302 as soon as you have knowledge of the release. You must also, within seven (7) calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release; and
6. minimize exposure of sanitary waste by positioning portable toilets so that they are secure and will not be tipped or knocked over, and so that they are located away from surface water in the state and stormwater inlets or conveyances.

Section E. Prohibited Discharges

The following discharges are prohibited:

1. wastewater from wash out of concrete, unless managed by an appropriate control;
2. wastewater from wash out and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
3. fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. soaps or solvents used in vehicle and equipment washing; and
5. toxic or hazardous substances from a spill or other release.

Section F. Surface Outlets

When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible. If infeasible, the permittee must provide documentation in the SWP3 to support the determination, including the specific conditions or time periods when this exception will apply.

Part V. Stormwater Runoff from Concrete Batch Plants

Discharges of stormwater runoff from concrete batch plants present at regulated construction sites and operated as a construction support activity may be authorized under the provisions of this general permit, provided that the following requirements are met for concrete batch plant(s) authorized under this permit. Only the discharges of stormwater runoff and non-stormwater from concrete batch plants that meet the requirements of a construction support activity can be authorized under this permit (see the requirements for "Non-Stormwater Discharges" in Part II.A.3. and "Discharges of Stormwater Associated with Construction Support Activity" in Part II.A.2.).

If discharges of stormwater runoff or non-stormwater from concrete batch plants are not authorized under this general permit, then discharges must be authorized under an alternative general permit or individual permit [see the requirement in Part II.A.2.(c)].

This permit does not authorize the discharge or land disposal of any wastewater from concrete batch plants at regulated construction sites. Authorization for these wastes must be obtained under an individual permit or an alternative general permit.

Section A. Benchmark Sampling Requirements

1. Operators of concrete batch plants authorized under this general permit shall sample the stormwater runoff from the concrete batch plants according to the requirements of this section of this general permit, and must conduct evaluations on the effectiveness of the SWP3 based on the following benchmark monitoring values:

Table 1. Benchmark Parameters

Benchmark Parameter	Benchmark Value	Sampling Frequency	Sample Type
Oil and Grease (*1)	15 mg/L	1/quarter (*2) (*3)	Grab (*4)
Total Suspended Solids (*1)	50 mg/L	1/quarter (*2) (*3)	Grab (*4)
pH	6.0 – 9.0 Standard Units	1/quarter (*2) (*3)	Grab (*4)
Total Iron (*1)	1.3 mg/L	1/quarter (*2) (*3)	Grab (*4)

(*1) All analytical results for these parameters must be obtained from a laboratory that is accredited based on rules located in 30 TAC § 25.4 (a) or through the National Environmental Laboratory Accreditation Program (NELAP). Analysis must be performed using sufficiently sensitive methods for analysis that comply with the rules located in 40 CFR §§ 136.1(c) and 122.44(i)(1)(iv).

(*2) When discharge occurs. Sampling is required within the first 30 minutes of discharge. If it is not practicable to take the sample, or to complete the sampling, within the first 30 minutes, sampling must be completed within the first hour of discharge. If sampling is not completed within the first 30 minutes of discharge, the reason must be documented and attached to all required reports and records of the sampling activity.

(*3) Sampling must be conducted at least once during each of the following periods. The first sample must be collected during the first full quarter that a stormwater discharge occurs from a concrete batch plant authorized under this general permit.

January through March
April through June
July through September
October through December

For projects lasting less than one full quarter, a minimum of one sample shall be collected, provided that a stormwater discharge occurred at least once following submission of the NOI or following the date that automatic authorization was obtained under Part II.E.2., and prior to terminating coverage.

(*4) A grab sample shall be collected from the stormwater discharge resulting from a storm event that is at least 0.1 inches of measured precipitation that occurs at least 72 hours from the previously measurable storm event. The sample shall be collected downstream of the concrete batch plant, and where the discharge exits any BMPs utilized to handle the runoff from the batch plant, prior to commingling with any other water authorized under this general permit.

2. The permittee must compare the results of sample analyses to the benchmark values above, and must include this comparison in the overall assessment of the SWP3's effectiveness. Analytical results that exceed a benchmark value are not a violation of this permit, as these values are not numeric effluent limitations. Results of analyses are indicators that modifications of the SWP3 should be assessed and may be necessary to protect water quality. The operator must investigate the cause for each exceedance and must document the results of this investigation in the SWP3 by the end of the quarter following the sampling event.

   The operator's investigation must identify the following:

   (a) any additional potential sources of pollution, such as spills that might have occurred;

   (b) necessary revisions to good housekeeping measures that are part of the SWP3;

   (c) additional BMPs, including a schedule to install or implement the BMPs; and

   (d) other parts of the SWP3 that may require revisions in order to meet the goal of the benchmark values.

   Background concentrations of specific pollutants may also be considered during the investigation. If the operator is able to relate the cause of the exceedance to background concentrations, then subsequent exceedances of benchmark values for that pollutant may be resolved by referencing earlier findings in the SWP3. Background concentrations may be identified by laboratory analyses of samples of stormwater run-on to the permitted facility, by laboratory analyses of samples of stormwater run-off from adjacent non-industrial areas, or by identifying the pollutant is a naturally occurring material in soils at the site.

Section B. Best Management Practices (BMPs) and SWP3 Requirements

Minimum SWP3 Requirements – The following are required in addition to other SWP3 requirements listed in this general permit, which include, but are not limited to the applicable requirements located in Part III.F.8. of this general permit, as follows:

1. Description of Potential Pollutant Sources – The SWP3 must provide a description of potential sources (activities and materials) that can cause, have a reasonable potential to cause or contribute to a violation of water quality standards or have been found to cause, or contribute to, the loss of a designated use of surface water in the state in stormwater discharges associated with concrete batch plants authorized under this permit. The SWP3 must describe the implementation of practices that will be used to minimize to the extent practicable the discharge of pollutants in stormwater discharges associated with industrial activity and non-stormwater discharges (described in Part II.A.3. of this general permit), in compliance with the terms and conditions of this general permit, including the protection of water quality, and must ensure the implementation of these practices.

   The following must be developed, at a minimum, in support of developing this description:

   (a) Drainage – The site map must include the following information:

      i. the location of all outfalls for stormwater discharges associated with concrete batch plants that are authorized under this permit;

      ii. a depiction of the drainage area and the direction of flow to the outfall(s);

      iii. structural controls used within the drainage area(s);

iv. the locations of the following areas associated with concrete batch plants that are exposed to precipitation: vehicle and equipment maintenance activities (including fueling, repair, and storage areas for vehicles and equipment scheduled for maintenance); areas used for the treatment, storage, or disposal of wastes; liquid storage tanks; material processing and storage areas; and loading and unloading areas; and

v. the locations of the following: any bag house or other dust control device(s); recycle/sedimentation pond, clarifier or other device used for the treatment of facility wastewater (including the areas that drain to the treatment device); areas with significant materials; and areas where major spills or leaks have occurred.

(b) Inventory of Exposed Materials – A list of materials handled at the concrete batch plant that may be exposed to stormwater and precipitation and that have a potential to affect the quality of stormwater discharges associated with concrete batch plants that are authorized under this general permit.

(c) Spills and Leaks – A list of significant spills and leaks of toxic or hazardous pollutants that occurred in areas exposed to stormwater and precipitation and that drain to stormwater outfalls associated with concrete batch plants authorized under this general permit must be developed, maintained, and updated as needed.

(d) Sampling Data – A summary of existing stormwater discharge sampling data must be maintained, if available.

2. Measures and Controls – The SWP3 must include a description of management controls to regulate pollutants identified in the SWP3's "Description of Potential Pollutant Sources" from Part V.B.1. of this permit, and a schedule for implementation of the measures and controls. This must include, at a minimum:

(a) Good Housekeeping – Good housekeeping measures must be developed and implemented in the area(s) associated with concrete batch plants.

i. Operators must prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), settled dust, or other significant materials from paved portions of the site that are exposed to stormwater. Measures used to minimize the presence of these materials may include regular sweeping or other equivalent practices. These practices must be conducted at a frequency that is determined based on consideration of the amount of industrial activity occurring in the area and frequency of precipitation, and shall occur at least once per week when cement or aggregate is being handled or otherwise processed in the area.

ii. Operators must prevent the exposure of fine granular solids, such as cement, to stormwater. Where practicable, these materials must be stored in enclosed silos, hoppers or buildings, in covered areas, or under covering.

(b) Spill Prevention and Response Procedures – Areas where potential spills that can contribute pollutants to stormwater runoff and precipitation, and the drainage areas from these locations, must be identified in the SWP3. Where appropriate, the SWP3 must specify material handling procedures, storage requirements, and use of equipment. Procedures for cleaning up spills must be identified in the SWP3 and made available to the appropriate personnel.

(c) Inspections – Qualified facility personnel (i.e., a person or persons with knowledge of this general permit, the concrete batch plant, and the SWP3 related to the concrete batch plant(s) for the site) must be identified to inspect designated equipment and areas of the facility specified in the SWP3. Personnel conducting these inspections are not required to have signatory authority for inspection reports under 30 TAC § 305.128. Inspections of facilities in operation must be performed

once every seven (7) days. Inspections of facilities that are not in operation must be performed at a minimum of once per month. The current inspection frequency being implemented at the facility must be recorded in the SWP3. The inspection must take place while the facility is in operation and must, at a minimum, include all areas that are exposed to stormwater at the site, including material handling areas, above ground storage tanks, hoppers or silos, dust collection/containment systems, truck wash down and equipment cleaning areas. Follow-up procedures must be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections must be maintained and be made readily available for inspection upon request.

(d) Employee Training – An employee training program must be developed to educate personnel responsible for implementing any component of the SWP3, or personnel otherwise responsible for stormwater pollution prevention, with the provisions of the SWP3. The frequency of training must be documented in the SWP3, and at a minimum, must consist of one (1) training prior to the initiation of operation of the concrete batch plant.

(e) Record Keeping and Internal Reporting Procedures – A description of spills and similar incidents, plus additional information that is obtained regarding the quality and quantity of stormwater discharges, must be included in the SWP3. Inspection and maintenance activities must be documented and records of those inspection and maintenance activities must be incorporated in the SWP3.

(f) Management of Runoff – The SWP3 shall contain a narrative consideration for reducing the volume of runoff from concrete batch plants by diverting runoff or otherwise managing runoff, including use of infiltration, detention ponds, retention ponds, or reusing of runoff.

3. Comprehensive Compliance Evaluation – At least once per year, one or more qualified personnel (i.e., a person or persons with knowledge of this general permit, the concrete batch plant, and the SWP3 related to the concrete batch plant(s) for the site) shall conduct a compliance evaluation of the plant. The evaluation must include the following:

(a) visual examination of all areas draining stormwater associated with regulated concrete batch plants for evidence of, or the potential for, pollutants entering the drainage system. These include, but are not limited to: cleaning areas, material handling areas, above ground storage tanks, hoppers or silos, dust collection/containment systems, and truck wash down and equipment cleaning areas. Measures implemented to reduce pollutants in runoff (including structural controls and implementation of management practices) must be evaluated to determine if they are effective and if they are implemented in accordance with the terms of this permit and with the permittee's SWP3. The operator shall conduct a visual inspection of equipment needed to implement the SWP3, such as spill response equipment.

(b) based on the results of the evaluation, the following must be revised as appropriate within two (2) weeks of the evaluation: the description of potential pollutant sources identified in the SWP3 (as required in Part V.B.1., "Description of Potential Pollutant Sources"); and pollution prevention measures and controls identified in the SWP3 (as required in Part V.B.2., "Measures and Controls"). The revisions may include a schedule for implementing the necessary changes.

(c) the permittee shall prepare and include in the SWP3 a report summarizing the scope of the evaluation, the personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the SWP3, and actions taken in response to the findings of the evaluation. The report must identify any incidents of noncompliance. Where the report does not identify incidences of noncompliance, the report must contain a statement that the evaluation did not identify any

incidence(s), and the report must be signed according to 30 TAC § 305.128 (relating to Signatories to Reports).

(d) the Comprehensive Compliance Evaluation may substitute for one of the required inspections delineated in Part V.B.2.(c) of this general permit.

Section C. Prohibition of Wastewater Discharges

Wastewater discharges associated with concrete production including wastewater disposal by land application are not authorized under this general permit. These wastewater discharges must be authorized under an alternative TCEQ water quality permit or otherwise disposed of in an authorized manner. Discharges of concrete truck wash out at construction sites may be authorized if conducted in accordance with the requirements of Part VI of this general permit.

Part VI. Concrete Truck Wash Out Requirements

This general permit authorizes the land disposal of wash out from concrete trucks at construction sites regulated under this general permit, provided the following requirements are met. Any discharge of concrete production wastewater to surface water in the state must be authorized under a separate TCEQ general permit or individual permit.

A. Discharge of concrete truck wash out water to surface water in the state, including discharge to storm sewers, is prohibited by this general permit.

B. Concrete truck wash out water shall be disposed in areas at the construction site where structural controls have been established to prevent discharge to surface water in the state, or to areas that have a minimal slope that allow infiltration and filtering of wash out water to prevent discharge to surface water in the state. Structural controls may consist of temporary berms, temporary shallow pits, temporary storage tanks with slow rate release, or other reasonable measures to prevent runoff from the construction site.

C. Wash out of concrete trucks during rainfall events shall be minimized. The discharge of concrete truck wash out water is prohibited at all times, and the operator shall insure that its BMPs are sufficient to prevent the discharge of concrete truck wash out as the result of rainfall or stormwater runoff.

D. The disposal of wash out water from concrete trucks, made under authorization of this general permit must not cause or contribute to groundwater contamination.

E. If a SWP3 is required to be implemented, the SWP3 shall include concrete wash out areas on the associated site map.

Part VII. Retention of Records

The permittee must retain the following records for a minimum period of three (3) years from the date that a NOT is submitted as required in Part II.F.1. and 2. of this permit. For activities in which an NOT is not required, records shall be retained for a minimum period of three (3) years from the date that the operator terminates coverage under Section II.F.3. of this permit. Records include:

A. a copy of the SWP3;

B. all reports and actions required by this permit, including a copy of the TCEQ construction site notice;

C. all data used to complete the NOI, if an NOI is required for coverage under this general permit; and

D. all records of submittal of forms submitted to the operator of any MS4 receiving the discharge and to the secondary operator of a large construction site, if applicable.

Part VIII. Standard Permit Conditions

A. The permittee has a duty to comply with all permit conditions. Failure to comply with any permit condition is a violation of the permit and statutes under which it was issued (CWA and TWC), and is grounds for enforcement action, for terminating, revoking and reissuance, or modification, or denying coverage under this general permit, or for requiring a discharger to apply for and obtain an individual TPDES permit, based on rules located in TWC § 23.086, 30 TAC § 305.66, and 40 CFR § 122.41 (a).

B. Authorization under this general permit may be modified, suspended, revoked and reissued, terminated or otherwise suspended for cause, based on rules located in TWC § 23.086, 30 TAC § 305.66, and 40 CFR § 122.41(f). Filing a notice of planned changes or anticipated non-compliance by the permittee does not stay any permit condition. The permittee must furnish to the executive director, upon request and within a reasonable time, any information necessary for the executive director to determine whether cause exists for modifying, revoking and reissuing, terminating or, otherwise suspending authorization under this permit, based on rules located in TWC § 23.086, 30 TAC § 305.66, and 40 CFR § 122.41 (h). Additionally, the permittee must provide to the executive director, upon request, copies of all records that the permittee is required to maintain as a condition of this general permit.

C. It is not a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the permit conditions.

D. Inspection and entry shall be allowed under TWC Chapters 26-28, Texas Health and Safety Code §§ 361.032-361.033 and 361.037, and 40 CFR § 122.41(i). The statement in TWC § 26.014 that commission entry of a facility shall occur according to an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility or site, but merely describes the commission's duty to observe appropriate rules and regulations during an inspection.

E. The discharger is subject to administrative, civil, and criminal penalties, as applicable, under TWC Chapter 7 for violations including but not limited to the following:

1. negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under CWA § 402, or any requirement imposed in a pretreatment program approved under CWA §§ 402(a)(3) or 402(b)(8);
2. knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under a permit, including monitoring reports or reports of compliance or noncompliance; and
3. knowingly violating CWA §303 and placing another person in imminent danger of death or serious bodily injury.

F. All reports and other information requested by the executive director must be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

G. Authorization under this general permit does not convey property or water rights of any sort and does not grant any exclusive privilege.

H. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

I. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

J. The permittee shall comply with the monitoring and reporting requirements in 40 CFR § 122.41(j) and (l), as applicable.

K. Analysis must be performed using sufficiently sensitive methods for analysis that comply with the rules located in 40 CFR §§ 136.1(c) and 122.44(i)(1)(iv).

Part IX. Fees

A. A fee of must be submitted along with the NOI:

1. $225 if submitting an NOI electronically, or
2. $325 if submitting a paper NOI.

B. Fees are due upon submission of the NOI. An NOI will not be declared administratively complete unless the associated fee has been paid in full.

C. No separate annual fees will be assessed for this general permit. The Water Quality Annual Fee has been incorporated into the NOI fees as described above.

Appendix A: Automatic Authorization

Periods of Low Erosion Potential by County – Eligible Date Ranges

Andrews: Nov. 15 - Apr. 30

Archer: Dec. 15 - Feb. 14

Armstrong: Nov. 15 - Apr. 30

Bailey: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Baylor: Dec. 15 - Feb. 14

Borden: Nov. 15 - Apr. 30

Brewster: Nov. 15 - Apr. 30

Briscoe: Nov. 15 - Apr. 30

Brown: Dec. 15 - Feb. 14

Callahan: Dec. 15 - Feb. 14

Carson: Nov. 15 - Apr. 30

Castro: Nov. 15 - Apr. 30

Childress: Dec. 15 - Feb. 14

Cochran: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Coke: Dec. 15 - Feb. 14

Coleman: Dec. 15 - Feb. 14

Collingsworth: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28

Concho: Dec. 15 - Feb. 14

Cottle: Dec. 15 - Feb. 14

Crane: Nov. 15 - Apr. 30

Crockett: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30

Crosby: Nov. 15 - Apr. 30

Culberson: Nov. 1 - May 14

Dallam: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Dawson: Nov. 15 - Apr. 30

Deaf Smith: Nov. 15 - Apr. 30

Dickens: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30

Dimmit: Dec. 15 - Feb. 14

Donley: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28

Eastland: Dec. 15 - Feb. 14

Ector: Nov. 15 - Apr. 30

Edwards: Dec. 15 - Feb. 14

El Paso: Jan. 1 - Jul. 14, or May 15 - Jul. 31, or Jun. 1 - Aug. 14, or Jun. 15 - Sept. 14, or Jul. 1 - Oct. 14, or Jul. 15 - Oct. 31, or Aug. 1 - Apr. 30, or Aug. 15 - May 14, or Sept. 1 - May 30, or Oct. 1 - Jun. 14, or Nov. 1 - Jun. 30, or Nov. 15 - Jul. 14

Fisher: Dec. 15 - Feb. 14

Floyd: Nov. 15 - Apr. 30

Foard: Dec. 15 - Feb. 14

Gaines: Nov. 15 - Apr. 30

Garza: Nov. 15 - Apr. 30

Glasscock: Nov. 15 - Apr. 30

Hale: Nov. 15 - Apr. 30

Hall: Feb. 1 - Mar. 30

Hansford: Nov. 15 - Apr. 30

Hardeman: Dec. 15 - Feb. 14

Hartley: Nov. 15 - Apr. 30

Haskell: Dec. 15 - Feb. 14

Hockley: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Howard: Nov. 15 - Apr. 30

Hudspeth: Nov. 1 - May 14

Hutchinson: Nov. 15 - Apr. 30

Irion: Dec. 15 - Feb. 14

Jeff Davis: Nov. 1 - Apr. 30 or Nov. 15 - May 14

Jones: Dec. 15 - Feb. 14

Kent: Nov. 15 - Jan. 14 or Feb. 1 - Mar. 30

Kerr: Dec. 15 - Feb. 14

Kimble: Dec. 15 - Feb. 14

King: Dec. 15 - Feb. 14

Kinney: Dec. 15 - Feb. 14

Knox: Dec. 15 - Feb. 14

Lamb: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Loving: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Lubbock: Nov. 15 - Apr. 30

Lynn: Nov. 15 - Apr. 30

Martin: Nov. 15 - Apr. 30

Mason: Dec. 15 - Feb. 14

Maverick: Dec. 15 - Feb. 14

McCulloch: Dec. 15 - Feb. 14

Menard: Dec. 15 - Feb. 14

Midland: Nov. 15 - Apr. 30

Mitchell: Nov. 15 - Apr. 30

Moore: Nov. 15 - Apr. 30

Motley: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30

Nolan: Dec. 15 - Feb. 14

Oldham: Nov. 15 - Apr. 30

Parmer: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Pecos: Nov. 15 - Apr. 30
Potter: Nov. 15 - Apr. 30
Presidio: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Randall: Nov. 15 - Apr. 30
Reagan: Nov. 15 - Apr. 30
Real: Dec. 15 - Feb. 14
Reeves: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Runnels: Dec. 15 - Feb. 14
Schleicher: Dec. 15 - Feb. 14
Scurry: Nov. 15 - Apr. 30
Shackelford: Dec. 15 - Feb. 14
Sherman: Nov. 15 - Apr. 30
Stephens: Dec. 15 - Feb. 14
Sterling: Nov. 15 - Apr. 30
Stonewall: Dec. 15 - Feb. 14
Sutton: Dec. 15 - Feb. 14
Swisher: Nov. 15 - Apr. 30
Taylor: Dec. 15 - Feb. 14
Terrell: Nov. 15 - Apr. 30
Terry: Nov. 15 - Apr. 30
Throckmorton: Dec. 15 - Feb. 14
Tom Green: Dec. 15 - Feb. 14
Upton: Nov. 15 - Apr. 30
Uvalde: Dec. 15 - Feb. 14
Val Verde: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30
Ward: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Wichita: Dec. 15 - Feb. 14
Wilbarger: Dec. 15 - Feb. 14
Winkler: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Yoakum: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Young: Dec. 15 - Feb. 14
Wheeler: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28
Zavala: Dec. 15 - Feb. 14

Appendix B: Storm Erosivity (EI) Zones in Texas

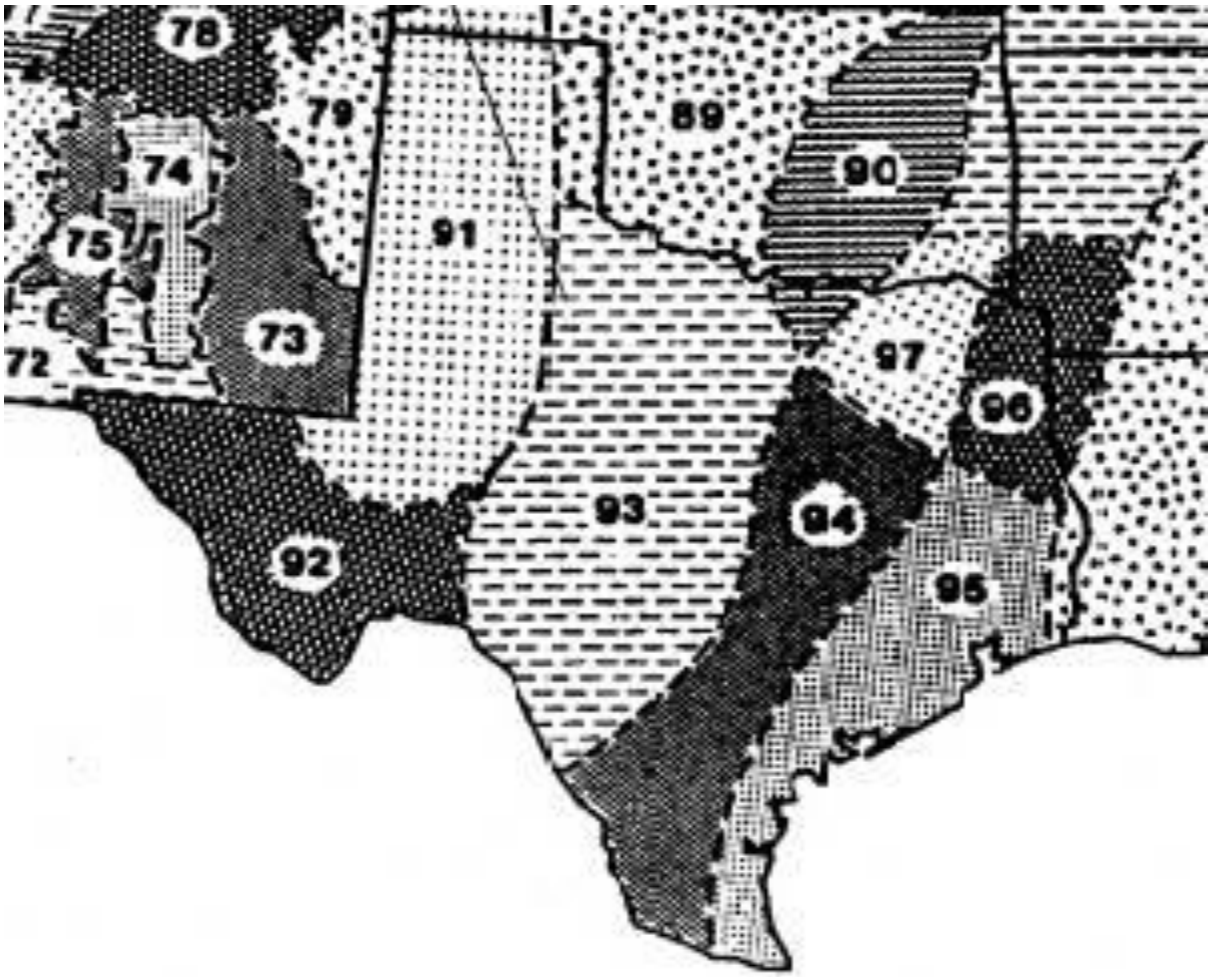


Figure B. EI Distribution Zones

Adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service

Appendix C: Isoerodent Map

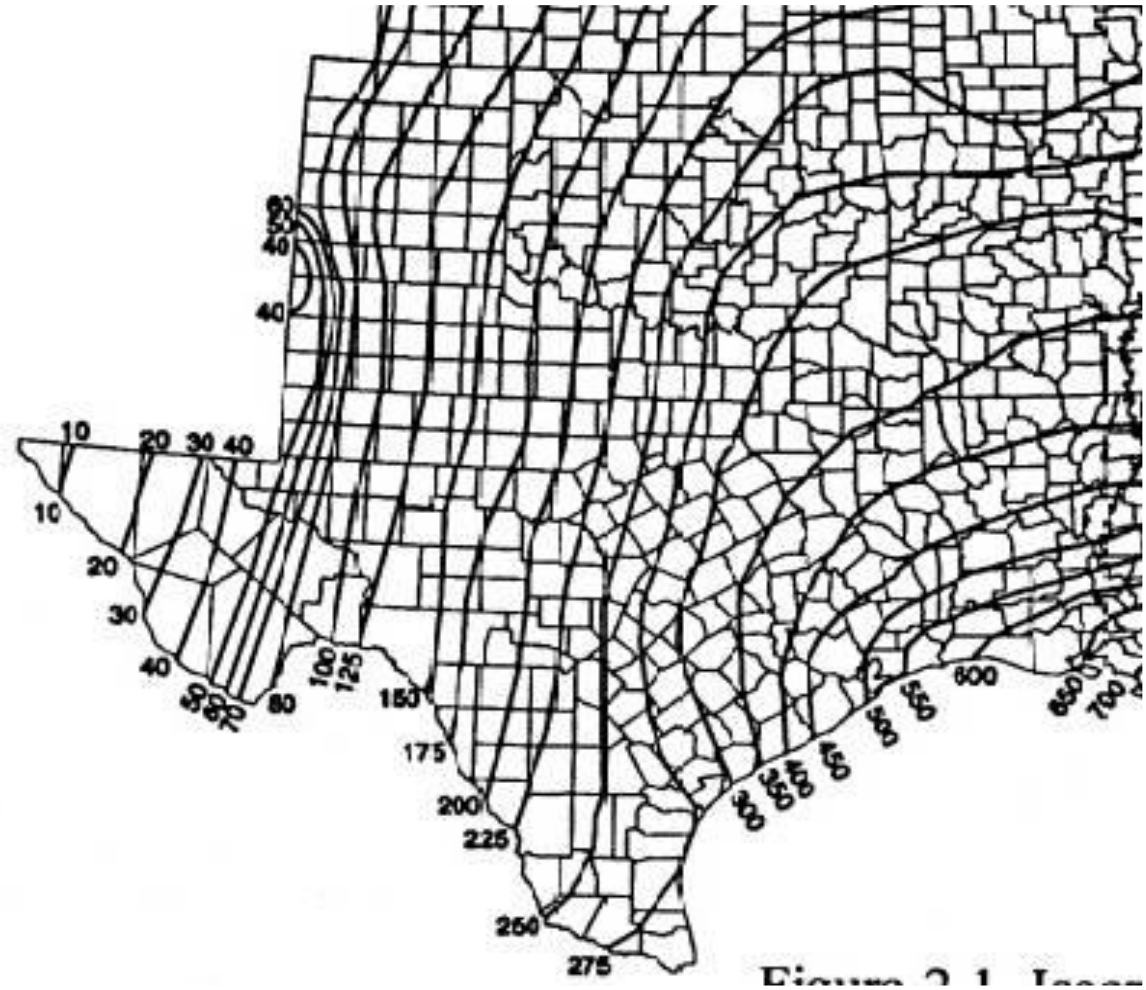


Figure C. Isoerodent Map of Texas. Units are hundreds ft*tonf*in(ac*h*yr)$^{-1}$

Adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service

Appendix D: Erosivity Indices for EI Zones in Texas

Table D. EI as percentage of average annual computed selected geographic areas (EI number) by date period (month/day).

Date Periods* (Month/Day)

EI #	1/1	1/16	1/31	2/15	3/1	3/16	3/31	4/15	4/30	5/15	5/30	6/14	6/29	7/14	7/29	8/13	8/28	9/12	9/27	10/12	10/27	11/11	11/26	12/11	12/31
89	0	1	1	2	3	4	7	2	8	27	38	48	55	62	69	76	83	90	94	97	98	99	100	100	100
90	0	1	2	3	4	6	8	13	21	29	37	46	54	60	65	69	74	81	87	92	95	97	98	99	100
91	0	0	0	0	1	1	1	2	6	16	29	39	46	53	60	67	74	81	88	95	99	99	100	100	100
92	0	0	0	0	1	1	1	2	6	16	29	39	46	53	60	67	74	81	88	95	99	99	100	100	100
93	0	1	1	2	3	4	6	8	13	25	40	49	56	62	67	72	76	80	85	91	97	98	99	99	100
94	0	1	2	4	6	8	10	15	21	29	38	47	53	57	61	65	70	76	83	88	91	94	96	98	100
95	0	1	3	5	7	9	11	14	18	27	35	41	46	51	57	62	68	73	79	84	89	93	96	98	100
96	0	2	4	6	9	12	17	23	30	37	43	49	54	58	62	66	70	74	78	82	86	90	94	97	100
97	0	1	3	5	7	10	14	20	28	37	48	56	61	64	68	72	77	81	86	89	92	95	98	99	100
106	0	3	6	9	13	17	21	27	33	38	44	49	55	61	67	71	75	78	81	84	86	90	94	97	100

*Each period begins on the date listed in the table above and lasts until the day before the following period. The final period begins on December 11 and ends on December 31.

Table adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service.

II. APPENDIX D

Inspector Qualifications/Authorization

INSPECTOR QUALIFICATIONS
FOR THE
TPDES CONSTRUCTION GENERAL PERMIT

(INSPECTOR TO BE DETERMINED)

INSPECTOR AUTHORIZATION

I, _____, certify that qualified inspectors employed or contracted by _____, are designated as authorized representatives that can perform the site inspections for our projects and execute inspection forms as required by the TPDES Construction General Permit TXR1500000. I understand that my company, as the project Operator, is responsible for maintaining and repairing erosion controls as noted on the inspection reports and that failure to do so could possibly result in enforcement action from the Texas Commission on Environmental Quality or the Environmental Protection Agency.

_____ _____

Signature Date

_____ _____

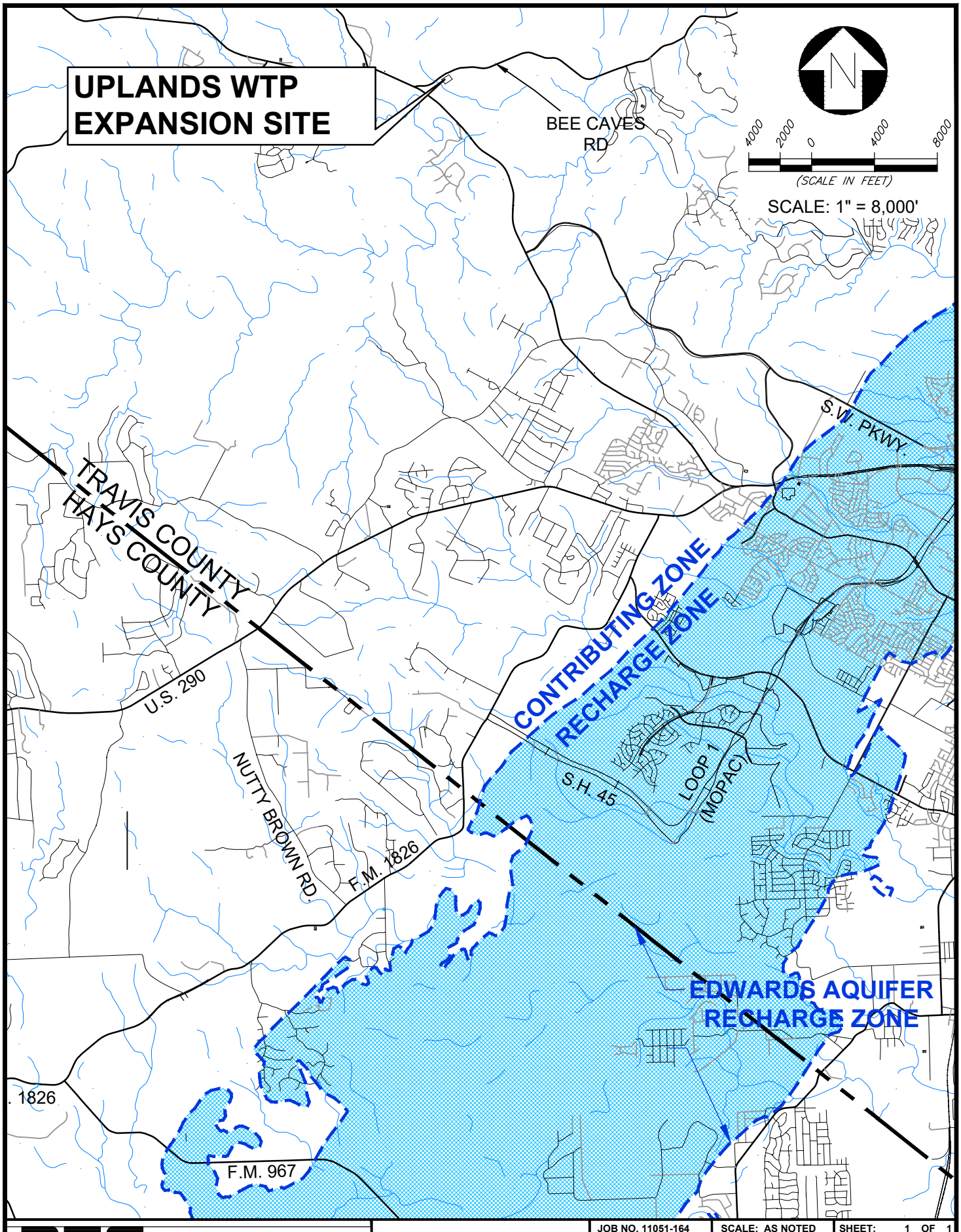
Printed Name Title

II. APPENDIX E

TCEQ CONTRIBUTING ZONE PLAN APPROVAL LETTER

III. EXHIBIT A

PROJECT LOCATION/ROAD MAP



MEC
Murfee Engineering Company Texas Registered Engineering Firm F-353
1101 Capital of Texas Highway South, Building D, Suite 110, Austin, Texas 78746, (512) 327-9204

WTCPUA UPLANDS WTP EXP

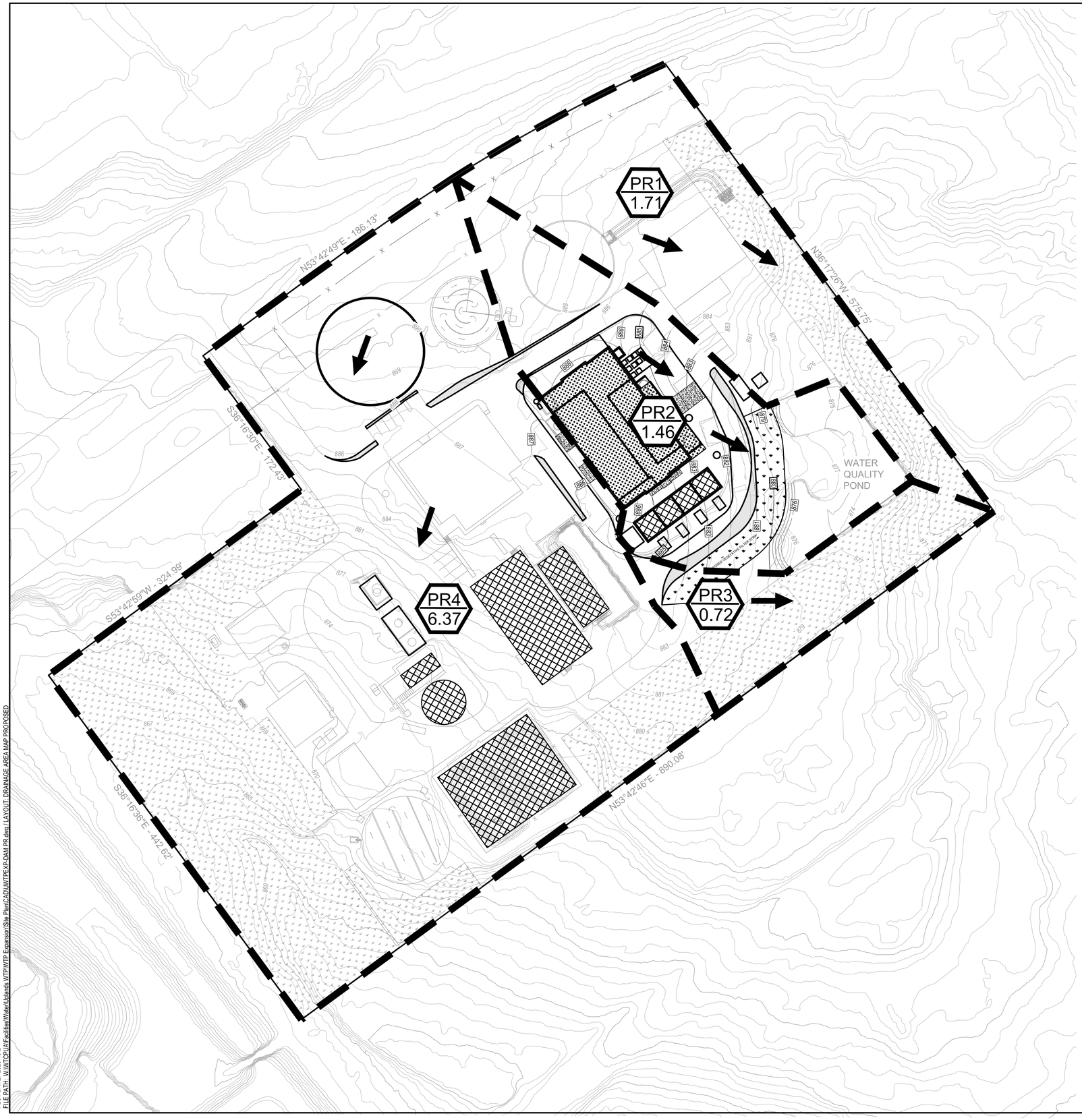
ROAD MAP

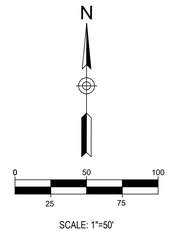
JOB NO. 11051-164	SCALE: AS NOTED	SHEET: 1 OF 1
DESIGNED BY: JFS		
DRAWN BY: CS		DATE: 10/4/2023

FILE(LAYOUT): W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\Working\CZP-e_Location Map.dwg(8X11(8000))

III. EXHIBIT B

DRAINAGE AREA MAP





LEGEND

- PROPERTY BOUNDARY
- FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING VEGETATIVE FILTER STRIP
- PROPOSED VEGETATIVE FILTER STRIP
- PROPOSED DRAINAGE BOUNDARY
- PR XX — DRAINAGE AREA W/ ACREAGE
- FLOW ARROW / DISCHARGE POINTS
- OPEN AIR BASIN (NO STORM WATER DISCHARGE)
- 100-YR RAINWATER CAPTURE (NO STORM WATER DISCHARGE)

NOTES:
1. THE FOOTPRINT OF BUILDINGS WITH 100-YR RAINFALL CAPTURE AND OPEN TANKS ARE REMOVED FROM DRAINAGE AREA TOTALS. RESULTING IN TOTAL DRAINAGE AREA ACREAGE LESS THAN TOTAL SITE AREA.

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APPR DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

PROPOSED DRAINAGE AREA MAP

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-DAM PR.dwg LAYOUT: DRAINAGE AREA MAP PROPOSED
JOB NO.	
SHEET NO.	1 OF 2

PLOT DATE: 2023-10-2
FILE PATH: V:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-DAM PR.dwg | LAYOUT: DRAINAGE AREA MAP PROPOSED

PROJECT: WTPCUA UPWTPEXP

CALCULATION OF IMPERVIOUS COVER FOR RUNOFF

Condition	Area	SF	Acres	Imperv. Cover (sf)	Imperv. Cover (%)
PROPOSED	PR1	74333	1.71	11,453	15.4%
	PR2	63650	1.46	23,217	36.5%
	PR3	31368	0.72	1,528	4.9%
	PR4	277350	6.37	102,297	36.9%
	TOTAL	446701	10.25	138,495	31.0%

Condition	Area	SF	Acres	Imperv. Cover (sf)	Imperv. Cover (%)
EXISTING	EX1	74333	1.71	11,309	15.2%
	EX2	83085	1.91	19,922	24.0%
	EX3	31368	0.72	1,320	4.2%
	EX4	274532	6.30	89,004	32.4%
	TOTAL	463318	10.64	121,555	26.2%

*Note: The footprint of buildings with 100-YR rainfall capture and open tanks are removed from drainage area totals. Resulting in total drainage area acreage less than total site area.

RUNOFF COEFFICIENT CALCULATIONS									
AREA	TOTAL (SF)	TOTAL (ACRES)	% IMP. COVER	IMPERV. (ACRES)	PERVIOUS (ACRES)	2 YEAR	10 YEAR	25 YEAR	100 YEAR
PR1	74,333	1.71	15.4%	0.26	1.44	0.36	0.42	0.46	0.54
PR2	63,650	1.46	36.5%	0.53	0.93	0.45	0.52	0.57	0.64
PR3	31,368	0.72	4.9%	0.04	0.69	0.31	0.37	0.41	0.48
PR4	277,350	6.37	36.9%	2.35	4.02	0.46	0.52	0.57	0.64

RUNOFF COEFFICIENT CALCULATIONS									
AREA	TOTAL (SF)	TOTAL (ACRES)	% IMP. COVER	IMPERV. (ACRES)	PERVIOUS (ACRES)	2 YEAR	10 YEAR	25 YEAR	100 YEAR
EX1	74,333	1.71	15.2%	0.26	1.45	0.36	0.42	0.46	0.54
EX2	83,085	1.91	24.0%	0.46	1.45	0.40	0.46	0.51	0.58
EX3	31,368	0.72	4.2%	0.03	0.69	0.31	0.37	0.41	0.48
EX4	274,532	6.30	32.4%	2.04	4.26	0.44	0.50	0.55	0.62

TIME OF CONCENTRATION - EXISTING								
Drng Area	Elev1	Elev2	L (ft)	S (ft/ft)	Flow Type	n	Vel (fps)	t(c)
EX1	892.3	890.5	50	0.036	Sheet	0.200	-	4.9
	890.5	882	233	0.036	SCF-P	-	3.9	1.0
	882	872.5	163	0.058	SCF-U	-	3.9	0.7
							Total (min):	6.6
EX2	892.1	891.3	50	0.016	Sheet	0.200	-	6.8
	891.3	881.6	365	0.027	SCF-P	-	3.3	1.8
	881.6	870.8	190	0.057	SCF-U	-	3.8	0.8
							Total (min):	9.5
EX3	885.6	882.8	50	0.056	Sheet	0.016	-	0.5
	882.8	874.5	246	0.034	SCF-U	-	3.0	1.4
							Total (min):	1.9
EX4	892	889.8	100	0.022	Sheet	0.200	-	10.4
	889.8	869.7	461	0.044	SCF-P	-	4.2	1.8
	869.7	856	258	0.053	SCF-U	-	3.7	1.2
							Total (min):	13.4

TIME OF CONCENTRATION - PROPOSED								
Drng Area	Elev1	Elev2	L (ft)	S (ft/ft)	Flow Type	n	Vel (fps)	t(c)
PR1	892.3	890.5	50	0.036	Sheet	0.200	-	4.9
	890.5	882	233	0.036	SCF-P	-	3.9	1.0
	882	872.5	163	0.058	SCF-U	-	3.9	0.7
							Total (min):	6.6
PR2	892.1	891.3	50	0.016	Sheet	0.200	-	6.8
	891.3	881.6	412	0.024	SCF-P	-	3.1	2.2
	881.6	870.8	190	0.057	SCF-U	-	3.8	0.8
							Total (min):	9.8
PR3	885.6	882.8	50	0.056	Sheet	0.016	-	0.5
	882.8	874.5	246	0.034	SCF-U	-	3.0	1.4
							Total (min):	1.9
PR4	892	889.8	100	0.022	Sheet	0.200	-	10.4
	889.8	869.7	461	0.044	SCF-P	-	4.2	1.8
	869.7	856	258	0.053	SCF-U	-	3.7	1.2
							Total (min):	13.4

CALCULATION OF STORMWATER RUNOFF														
AREA	AC	t(c) (min.)	C(2)	I(2)	Q(2)	C(10)	I(10)	Q(10)	C(25)	I(25)	Q(25)	C(100)	I(100)	Q(100)
PR1	1.7	6.6	0.36	5.83	4	0.42	8.85	6	0.46	10.86	9	0.54	14.18	13
PR2	1.5	9.8	0.45	5.09	3	0.52	7.71	6	0.57	9.46	8	0.64	12.33	12
PR3	0.7	5.0	0.31	6.31	1	0.37	9.61	3	0.41	11.79	4	0.48	15.42	5
PR4	6.4	13.4	0.46	4.48	13	0.52	6.78	23	0.57	8.33	30	0.64	10.87	45
AREA	AC	t(c) (min.)	C(2)	I(2)	Q(2)	C(10)	I(10)	Q(10)	C(25)	I(25)	Q(25)	C(100)	I(100)	Q(100)
EX1	1.7	6.6	0.36	5.83	4	0.42	8.85	6	0.46	10.86	9	0.54	14.18	13
EX2	1.9	9.5	0.40	5.16	4	0.46	7.82	7	0.51	9.59	9	0.58	12.51	14
EX3	0.7	5.0	0.31	6.31	1	0.37	9.61	3	0.41	11.79	3	0.48	15.42	5
EX4	6.3	13.4	0.44	4.48	12	0.50	6.78	21	0.55	8.33	29	0.62	10.87	43

TOTAL RUNOFF				
	2 YR	10 YR	25 YR	100 YR
Proposed Q (cfs)	21	37	50	75
Existing Q (cfs)	21	37	50	75

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO. | DESCRIPTION | BY | DATE | APPROVED | APP'D DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

DRAINAGE CALCULATIONS

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-3204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY: CES
DRAWN BY: BRD
CHECKED BY: JKB
APPROVED BY: CES
DATE: 10/2/2023

FILE NO. UWTPEXP-DAM PR.dwg
LAYOUT: DRAINAGE CALCULATIONS

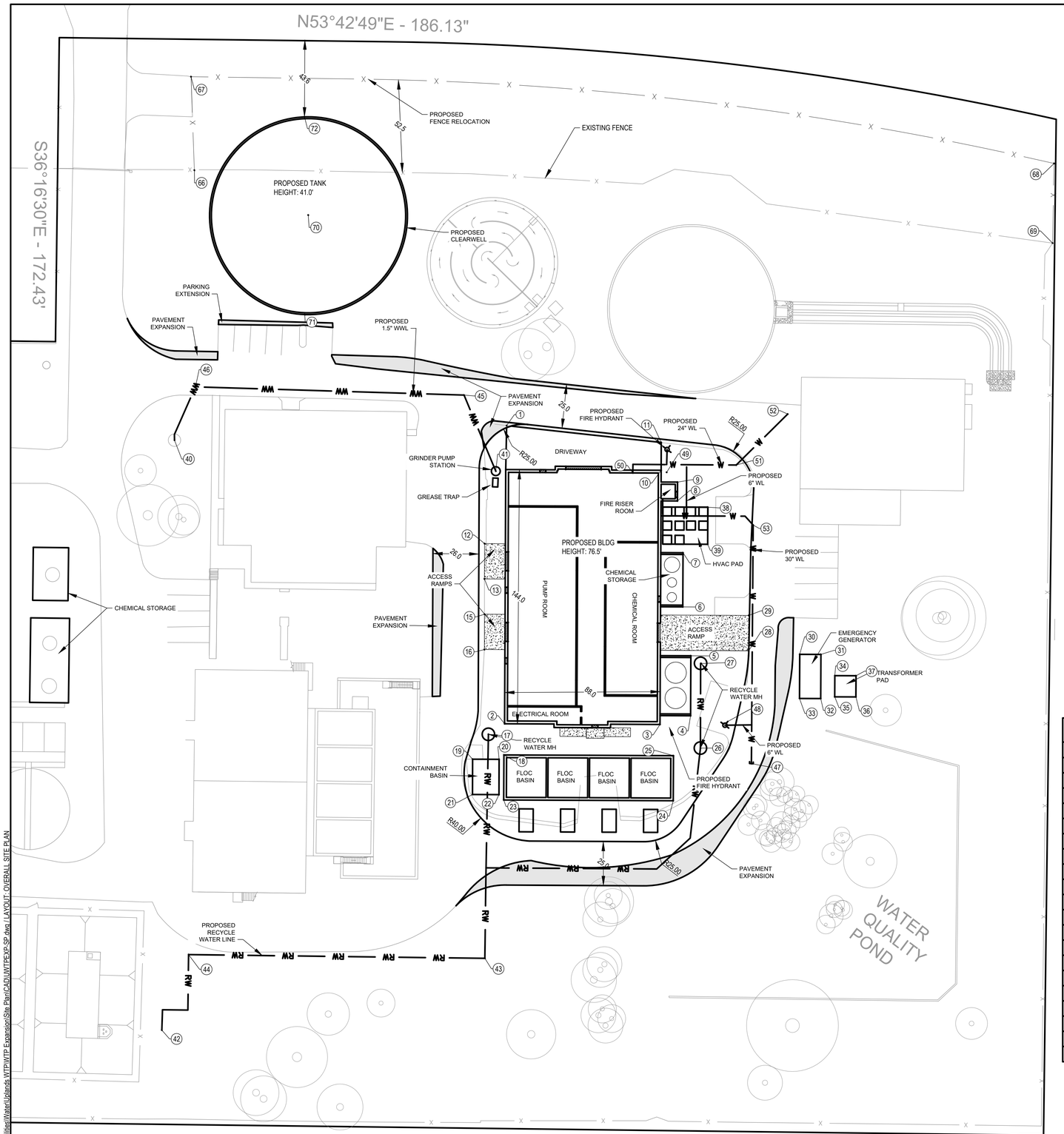
JOB NO.

SHEET NO.
2 OF 2

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-DAM PR.dwg | LAYOUT: DRAINAGE CALCULATIONS

III. EXHIBIT C

TCEQ-TPDES SITE PLAN



LEGEND

- PROPERTY BOUNDARY
- EXISTING FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- W — PROPOSED WATERLINE
- WW — PROPOSED WASTEWATER LINE
- RW — PROPOSED RECYCLE WATER LINE
- PROPOSED FIRE HYDRANT
- ASPHALT PAVEMENT EXPANSION
- TREES

0 15 30 45 60

SCALE: 1"=30'

NOTE:
1. PAVING AND FIRE LANE DETAILS SEE SHEET 11.

Existing Structures	Imp. Cover (Sq. Ft.)	Imp. Cover (Ac)
Roads	71,567	1.64
Buildings	23,198	0.53
Open Tanks	23,025	0.53
Closed Tanks	17,968	0.41
Equipment Pads	8,822	0.20
Total Existing IC	144,580	3.32
Proposed Structures	**Imp. Cover (Sq. Ft.)**	**Imp. Cover (Ac)**
Roads	6,336	0.15
Buildings	13,871	0.32
Open Tanks	2,748	0.06
Closed Tanks	9,853	0.23
Equipment Pads	751	0.02
Total Proposed IC	33,559	0.77
Total Structures to be Demolished	6,209	0.14
Total Overall IC	171,930	3.95
Total Site Area		11.16
Percent Impervious Cover		35.4%

NORTHING AND EASTING TABLE			NORTHING AND EASTING TABLE			NORTHING AND EASTING TABLE		
POINT #	NORTHING	EASTING	POINT #	NORTHING	EASTING	POINT #	NORTHING	EASTING
1	10083409.8082	3055041.6783	22	10083240.2319	3055164.0168	42	10083018.8222	3055091.8611
2	10083274.2197	3055142.4018	23	10083239.4424	3055167.9777	43	10083161.3687	3055213.4542
3	10083326.8589	3055212.9178	24	10083296.8692	3055244.9073	44	10083062.0976	3055078.2082
4	10083341.2308	3055223.7602	25	10083317.3036	3055229.6533	45	10083409.1048	3055012.0147
5	10083368.4255	3055203.4597	26	10083329.9456	3055239.2516	46	10083321.3037	3054887.7540
6	10083387.8164	3055183.1354	27	10083368.4857	3055210.7661	47	10083340.2801	3055267.5900
7	10083412.3902	3055164.7915	28	10083390.3845	3055227.8848	48	10083348.6363	3055241.3520
8	10083433.9140	3055144.5908	29	10083406.4311	3055215.8721	49	10083443.2043	3055129.9472
9	10083442.4614	3055138.2103	30	10083406.1897	3055252.1894	50	10083431.3677	3055114.8341
10	10083442.2487	3055126.7811	31	10083413.3680	3055261.8056	51	10083470.1993	3055158.9444
11	10083454.8646	3055117.3090	32	10083393.3343	3055276.7605	52	10083510.7919	3055164.8195
12	10083348.9050	3055071.9437	33	10083386.1559	3055267.1443	53	10083448.8017	3055187.0763
13	10083332.8775	3055083.9071	34	10083408.5015	3055275.3277	66	10083418.9625	3054813.4022
15	10083316.9420	3055095.9961	35	10083398.8853	3055282.5060	67	10083460.0999	3054780.0075
16	10083300.9172	3055107.9584	36	10083406.0637	3055292.1222	68	10083714.9380	3055199.8396
17	10083263.9443	3055138.6886	37	10083415.6799	3055284.9439	69	10083678.4094	3055226.3206
18	10083259.8768	3055152.7237	38	10083441.4345	3055160.4877	70	10083437.4453	3054880.1826
19	10083247.2860	3055140.0327	39	10083424.6061	3055173.0498	71	10083391.2739	3054912.5135
20	10083256.2589	3055152.0529	40	10083290.0300	3054896.4540	72	10083480.5820	3054845.0305
21	10083231.2590	3055151.9966	41	10083385.5102	3055052.3128			

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APP'D DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

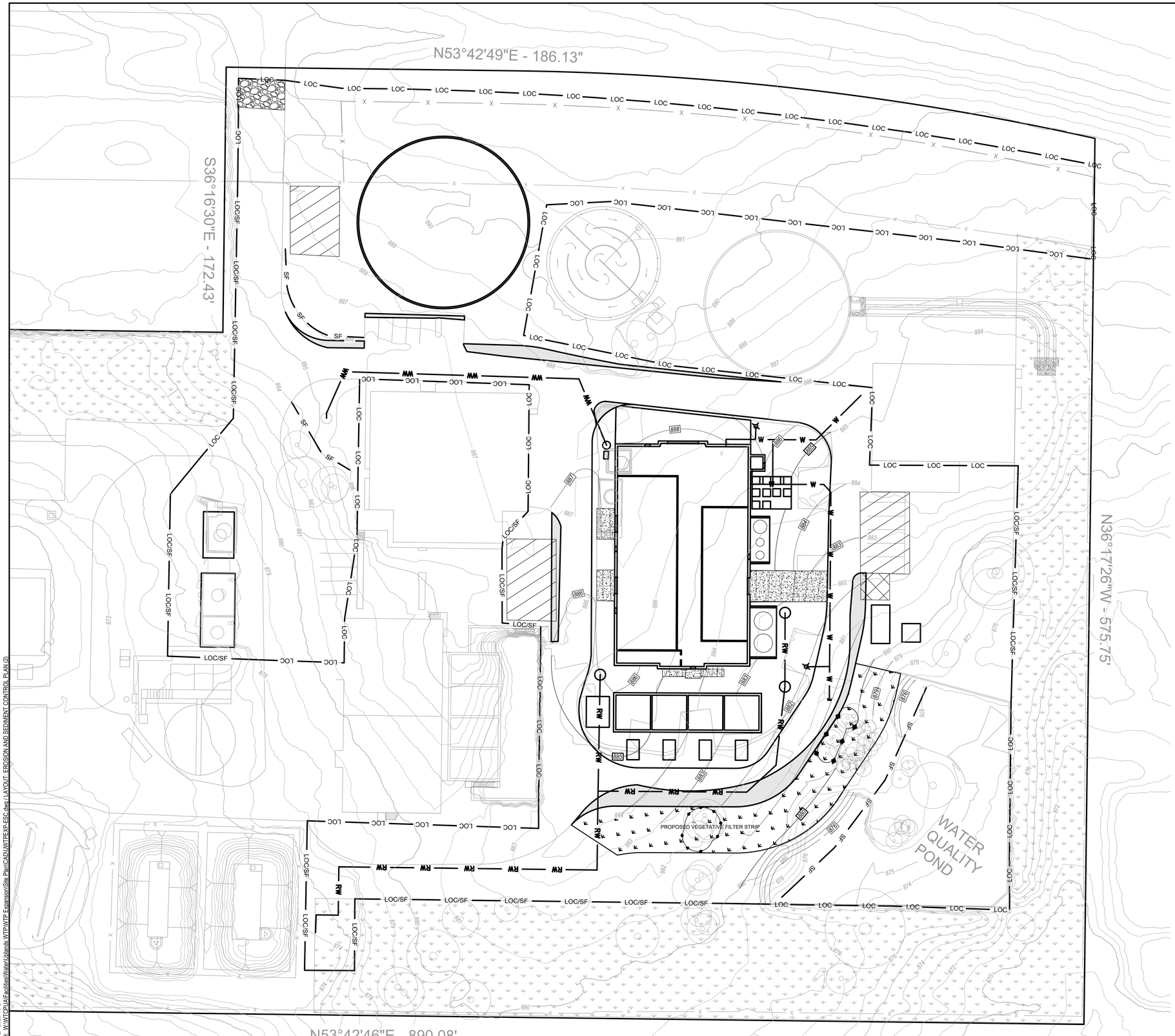
TCEQ-TPDES SITE PLAN

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-SP.dwg LAYOUT: OVERALL SITE PLAN
JOB NO.	
SHEET NO.	1 OF 2

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPU\AllFacilities\WaterUplands\WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-SP.dwg | LAYOUT: OVERALL SITE PLAN



N

0 30 60
15 45

SCALE: 1"=30'

LEGEND

- PROPERTY BOUNDARY
- FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- LOC — LOC — LIMITS OF CONSTRUCTION
- SF — SF — SILT FENCE
- LOC/SF — LIMITS OF CONSTRUCTION/SILT FENCE
- PROPOSED VEGETATIVE FILTER STRIP
- EXISTING VEGETATIVE FILTER STRIP
- TREES
- TREE PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY SPOILS SITE/STAGING AREA
- CONCRETE WASHOUT AREA
- W — W — PROPOSED WATERLINE
- WW — PROPOSED WASTEWATER LINE
- PROPOSED FIRE HYDRANT

NOTES:
1. SILT FENCE TO BE PLACED ON UP-GRADIENT SIDE OF DISTURBANCE TO DIRECT RUNOFF AWAY FROM DISTURBANCE.
2. SILT FENCE PLACED DOWN GRADIENT OF DISTURBANCE TO HAVE J-HOOKS AT 100 FOOT INTERVALS.
3. MULCH PROCESSED ON SITE MAY BE USED FOR TEMPORARY STABILIZATION.
4. CONTRACTOR SHALL PROVIDE MEANS OF WATERING FOR DUST CONTROL.
5. NO TREES TO BE REMOVED IN CONSTRUCTION STAGING AREA.
6. NO TREES SHALL BE REMOVED IN LAYING OF PIPE WITHOUT PRIOR APPROVAL FROM ENGINEER OR OWNER UNLESS NOTED ON THE PLANS.
7. INSTALL ORANGE CONSTRUCTION FENCING AT LIMITS OF CONSTRUCTION UNLESS SILT FENCE IS CALLED FOR IN THE PLANS.

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APPD DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

TCEQ-TPDES SITE PLAN

STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED PROFESSIONAL ENGINEER
Cheyenne Stowers
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-ESC.dwg (LAYOUT: EROSION AND SEDIMENT CONTROL PLAN (2))
JOB NO.	
SHEET NO.	2 OF 2

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-ESC.dwg | LAYOUT: EROSION AND SEDIMENT CONTROL PLAN (2)

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

I Jennifer Riechers,
Print Name

WTCPUA General Manager,
Title - Owner/President/Other

of West Travis County Public Utility Agency,
Corporation/Partnership/Entity Name

have authorized Cheyenne Stowers, P.E.
Print Name of Agent/Engineer

of Murfee 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:

Jennifer Riechers — 10/6/23

Applicant's Signature — Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Jennifer Riechers 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 6 day of October 2023

Sandra B. Swinney

NOTARY PUBLIC

Sandra B. Swinney

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 03-23-2024

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: WTCPUA Uplands WTP Expansion
Regulated Entity Location: Bee Cave, Texas
Name of Customer: West Travis County Public Utility Agency
Contact Person: Jennifer Riechers Phone: 512-263-0100
Customer Reference Number (if issued):CN 604021980
Regulated Entity Reference Number (if issued):RN 104993316
Austin Regional Office (3373)

☐ Hays ☒ Travis ☐ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	11.16 Acres	$ 6,500.00
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	7 Tanks	$ 4,550
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____ Date: 10/4/23

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Core Data Form

TCEQ Use Only

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

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☐ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal (*Core Data Form should be submitted with the renewal form*) ☒ Other **Modification**

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 604021980		RN 104993316

SECTION II: Customer Information

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

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership

☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name (*If an individual, print last name first: eg: Doe, John*) *If new Customer, enter previous Customer below:*

West Travis County Public Utility Agency

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
07077345	32002919481	74-298231	

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

Government: ☐ City ☐ County ☐ Federal ☐ State ☒ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☐ 21-100 ☒ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☐ **Yes** ☒ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following:*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

13215 Bee Cave Parkway, Bldg B, Suite 110

City	State	ZIP	ZIP + 4
Bee Cave	TX	78738	

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

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 263-0100		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

WTCPU Uplands Water Treatment Plant

23. Street Address of the Regulated Entity: *(No PO Boxes)*							
	12215 Bee Cave Rd, Bldg 2						
	City	Bee Cave	State	TX	ZIP	78738	ZIP + 4
24. County							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	

26. Nearest City	State	Nearest ZIP Code

27. Latitude (N) In Decimal:	30.306675		28. Longitude (W) In Decimal:	-97.930277	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)	31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)
4941			

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

Utility - water treatment

34. Mailing Address:	West Travis County Public Utility Agency						
	13215 Bee Cave Parkway, Bldg B, Suite 110						
	City	Bee Cave	State	TX	ZIP	78738	ZIP + 4

35. E-Mail Address:	jriechers@wtcpua.org

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(512) 263-100		( ) -

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

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Cheyenne Stowers	41. Title:	Project Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 327-9204		( ) -	cstowers@murfee.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:	West Travis County Public Utility Agency	Job Title:	General Manager
Name*(In Print)* :	Jennifer Riechers	Phone:	(512) 263-0100
Signature:	Jennifer Riechers	Date:	10/6/23

WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY

UPLANDS WATER TREATMENT PLANT EXPANSION SITE PLAN

12215 BEE CAVE RD, BLDG 2, TX 78738

WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY
12215 BEE CAVE RD, BLDG 2, TX 78738
PERMIT #

NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF BEE CAVE MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. THIS PROJECT IS LOCATED IN THE CITY OF BEE CAVE CITY LIMITS.
3. THIS PROJECT IS LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE.
4. NO PORTION OF THIS PROJECT LIES WITHIN A DESIGNATED FLOOD HAZARD ZONE BASED ON FLOOD INSURANCE RATE MAPS 48453C0405J EFFECTIVE DATE JANUARY 22, 2020.
5. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CONTACT THE TEXAS EXCAVATION SYSTEM FOR UTILITY LOCATIONS.
6. A SEPARATE BUILDING PERMIT FROM THE CITY OF BEE CAVE WILL BE REQUIRED.
7. CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES PROPERLY.
8. THE WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY IS THE WATER AND WASTEWATER PROVIDER.
9. A WTCPUA REPRESENTATIVE MUST BE PRESENT AT THE TIME OF CONNECTION TO THE EXISTING SYSTEM.
10. CONSTRUCTION HOURS ARE 7:00AM - 7:00 PM

SCALE: NOT TO SCALE
MAPSCO PG. : 550P
GRID #: WY-26
WTCPUA WW GRID C8

Sheet List Table

Sheet Number	Sheet Title
1	COVER
2	GENERAL NOTES 1
3	GENERAL NOTES 2
4	EXISTING CONDITIONS - ADJACENT PROPERTY OWNERS AND EASEMENTS
5	EXISTING CONDITIONS - TREE REMOVAL AND DEMOLITION PLAN
6	OVERALL SITE PLAN
7	SOILS AND VEGETATIVE COVER
8	SLOPE MAP
9	EROSION AND SEDIMENTATION CONTROL PLAN
10	GRADING PLAN
11	FIRE AND PAVING
12	EXISTING DRAINAGE ARE MAP
13	PROPOSED DRAINAGE AREA MAP
14	DRAINAGE CALCULATIONS
15	WATER QUALITY PLAN
16	WQ CALCULATIONS 1
17	WQ CALCULATIONS 2
18	DETAILS

I CERTIFY THAT THESE ENGINEERING DOCUMENTS ARE COMPLETE, ACCURATE, AND ADEQUATE FOR THE INTENDED PURPOSES, INCLUDING CONSTRUCTION BUT ARE NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL APPROVAL BY THE CITY OF BEE CAVE. THE DRAWINGS, PLANS, AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION COMPLY WITH THE APPLICABLE TECHNICAL CODES, RULES, AND REGULATIONS. I DO CERTIFY THAT THE ENGINEERING WORK BEING SUBMITTED HEREIN COMPLIES WITH ALL PROVISIONS OF THE TEXAS ENGINEERING PRACTICE ACT.

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

SUBMITTED FOR APPROVAL BY:
MURFEE ENGINEERING COMPANY, INC.

REGISTERED PROFESSIONAL ENGINEER DATE

APPROVED BY:

BEE CAVE CITY COUNCIL DATE

CITY OF BEE CAVE DATE

CITY OF BEE CAVE PERMIT NO.

WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY DATE

LAKE TRAVIS FIRE AND RESCUE DATE

OWNER
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY
c/o JENNIFER RIECHERS - WTCPUA GENERAL MANAGER
13215 BEE CAVE PKWY, BLDG B, SUITE 110
BEE CAVE, TEXAS 78738
PHONE # (512) 263-0100

ARCHITECT
FGMA ARCHITECTS, INC
3711 S MOPAC EXPWY, BLDG 2 SUITE 150
AUSTIN, TEXAS 78746
PHONE # (512) 474-8085

SURVEYOR
SURVEY AND MAPPING, LLC
4801 SOUTHWEST PARKWAY, BLDG 2, SUITE 100
AUSTIN, TEXAS 78735
CONTACT PERSON: DONALD J. ZDANCEWICZ, RPLS
PHONE # (512) 447-0575

ENGINEER
MURFEE ENGINEERING COMPANY, INC.
GEORGE W. MURFEE, P.E.
1101 CAPITAL OF TEXAS HIGHWAY SOUTH,
BUILDING D, SUITE 110, AUSTIN, TEXAS 78746
PH # (512) 327-9204
FAX # (512) 306-9620

NO.	DESCRIPTION	BY	DATE	APPROVED	DATE

SUBMITTAL DATE: OCTOBER 3, 2023

MEC
MURFEE ENGINEERING COMPANY
1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
TEXAS REGISTERED ENGINEERING FIRM F-353

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-CV.dwg

CONTACT INFORMATION:

FACILITIES AND LAND OWNER:

WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY
13215 BEE CAVE PARKWAY, SUITE B-110
BEE CAVE, TEXAS 78736
512-263-0100
JREICHERS@WTCPUA.ORG

OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:
MURFEE ENGINEERING COMPANY
1101 CAPITAL OF TEXAS HIGHWAY, SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
512-327-9204
CONTACT: BLAKE WEST, P. E.

PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL AND TREE PROTECTION MAINTENANCE:
CONTRACTOR

WTCPUA WATER & WASTEWATER GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE STATE STATUTES AND U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS (0.S.H.A.). COPIES OF O.S.H.A. STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE. INFORMATION AND RELATED REFERENCE MATERIALS MAY BE OBTAINED FROM O.S.H.A. AUSTIN AREA OFFICE - LA COSTA GREEN BLDG 1033, LA POSADA DR, SUITE 375, AUSTIN, TEXAS 78752-3832, 512- 374-0271.
2. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE CITY OF BEE CAVE TECHNICAL CRITERIA MANAUL AND THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND TO THE STATE LAW, (VERNON'S ANNOTATED TEXAS STATUTES, ARTICLE 1436 ©) AND THE NEED FOR EFFECTIVE PRECAUTIONARY MEASURES WHEN OPERATING IN THE VICINITY OF ELECTRICAL LINES. THE CONTRACTOR IS RESPONSIBLE FOR ALL SAFETY REQUIREMENTS, AND FOR COORDINATION OF ALL WORK WITH THE APPROPRIATE ELECTRIC UTILITY COMPANY.
3. THE CONTRACTOR SHALL CONTACT THE TEXAS EXCAVATION SYSTEM AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION. THE LOCATION AND TYPE OF UTILITIES AND UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE NOT GUARANTEED TO BE ACCURATE OR ALL- INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. IN ADDITIONAL TO NORMAL PRECAUTIONS WHEN EXCAVATING, USE EXTRA CAUTION WHEN EXCAVATING WITHIN 25 FEET OF ANY UTILITIES SHOWN ON THE PLANS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION BETWEEN HIMSELF AND OTHER CONTRACTORS AND UTILITIES IN THE VICINITY OF THE PROJECT. THIS INCLUDES ALL WATER, WASTEWATER, GAS, ELECTRICAL, TELEPHONE, CABLE TELEVISION, AND STREET AND DRAINAGE WORK. ONCE THE CONTRACTOR BECOMES AWARE OF A POSSIBLE CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER AND WTCPUA INSPECTOR WITHIN TWENTY-FOUR (24) HOURS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ALL SPOIL MATERIAL FROM THE CONSTRUCTION SITE. ALL SPOILS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED SPOIL SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SECURING A PERMIT FOR THE SITE. THE CONTRACTOR SHALL NOTIFY THE WTCPUA INSPECTOR AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO DISPOSAL OF THE MATERIAL. NO SPOILS ARE TO REMAIN OVERNIGHT IN THE FLOODPLAIN.
6. NO BLASTING OR BURNING WILL BE ALLOWED.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, AT HIS EXPENSE, ALL UTILITIES, PAVEMENT, CURB, FENCES OR ANY OTHER ITEMS DAMAGED DURING CONSTRUCTION REGARDLESS OF WHETHER THESE ITEMS ARE SHOWN ON THE CONSTRUCTION PLANS.
8. WHENEVER EXISTING UTILITIES, INDICATED OR NOT ON PLANS, PRESENT OBSTRUCTIONS TO GRADE AND/OR ALIGNMENT OF PROPOSED PIPE, CONTRACTOR IS TO IMMEDIATELY NOTIFY THE ENGINEER WHO WILL DETERMINE IF EXISTING IMPROVEMENTS ARE TO BE RELOCATED OR IF THE GRADE AND/OR ALIGNMENT OF PROPOSED PIPE IS TO BE CHANGED.
9. DUST PREVENTION SHALL BE PROVIDED BY THE CONTRACTOR AT HIS OWN EXPENSE. DUST CONTROL SHALL INCLUDE SPRAYING OF WATER ON ALL DISTURBED AREAS, SPOIL PILES, OR HAUL MATERIALS ASSOCIATED WITH THE PROJECT OR OTHER METHODS APPROVED BY THE WTCPUA.
10. CLEANUP - UPON COMPLETION AND BEFORE MAKING APPLICATION FOR ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL CLEAN ALL STREETS AND ALL GROUND OCCUPIED BY HIM IN CONNECTION WITH THE WORK OF ALL RUBBISH, EXCESS MATERIALS, EXCESS EXCAVATED MATERIALS, AND TEMPORARY STRUCTURES AND EQUIPMENT. ALL PARTS OF THE WORK SHALL BE LEFT IN A NEAT AND PRESENTABLE CONDITION SATISFACTORY TO THE WTCPUA AND OTHER GOVERNMENTAL BODIES HAVING JURISDICTION PRIOR TO SUBMITTAL OF THE FINAL PAYMENT.
11. THE CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS TO MINIMIZE DISRUPTION OF DELIVERIES, PARKING, AND OTHER ACTIVITIES.
12. DEWATERING, IF NECESSARY, SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL NOT CONSTITUTE A BASIS FOR ADDITIONAL PAYMENT.
13. THE MINIMUM DEPTH OF COVER FROM TOP OF PIPE TO FINISHED GRADE FOR ALL WATER LINES SHALL BE FOUR FEET. INSTALL LINES TO AVOID HIGH POINTS.
14. CONCRETE SHALL BE CLASS 'A' WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI, UNLESS OTHERWISE NOTED. '
15. REINFORCING STEEL SHALL BE ASTM A 615M, GRADE 60 UNLESS OTHERWISE NOTED.
16. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE WTCPUA MUST RELY ON THE ADEQUACY OF THE DESIGN ENGINEER. APPROVAL OF THESE PLANS BY THE WTCPUA DOES NOT RELEASE THE DESIGN ENGINEER OF THESE RESPONSIBILITIES.

SPOILS MANAGEMENT AND DISPOSAL NOTES

1. TEMPORARY HOLDING SITES AS NECESSARY TO STOCKPILE EXCAVATED SOILS, EMBEDMENT MATERIAL, AND/OR PIPING AND APPURTENANCES MAY BE LOCATED WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS.
2. NO PERMANENT SPOILS DISPOSAL SHALL BE ALLOWED ON-SITE, UNLESS APPROVED BY THE OWNER AND GOVERNING AUTHORITY.
3. ALL SPOILS MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED SPOIL DISPOSAL SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SECURING A PERMIT FOR THE SITE; AND SHALL NOTIFY THE OWNER AND/OR ENGINEER AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO DISPOSAL OF ANY SPOIL MATERIAL.

HOURS OF CONSTRUCTION

1. NO WORK SHALL BE DONE BETWEEN THE HOURS OF 7:00 P.M. AND 7:00 A.M; NOR ON SUNDAYS OR LEGAL HOLIDAYS WITHOUT THE WRITTEN PERMISSION OF THE WTCPUA IN EACH CASE, EXCEPT SUCH WORK AS MAY BE NECESSARY FOR THE PROPER CARE, MAINTENANCE AND PROTECTION OF THE WORK ALREADY DONE OR IN THE CASE OF AN EMERGENCY.

LIMITS OF CONSTRUCTION

1. THE LIMITS OF CONSTRUCTION SHALL BE BOUNDED BY THE RIGHT OF WAY LINE OR PERMANENT/TEMPORARY EASEMENT LIMITS SHOWN ON THE PLANS. LIMITS OF CONSTRUCTION MAY BE FURTHER RESTRICTED BY PLACEMENT OF SILT FENCE, TREE PROTECTION FENCING, OR OTHER APPURTENANCES AS SHOWN ON THE PLANS.
2. LIMITS OF CONSTRUCTION SHALL BE CLEARLY DELINEATED BY THE CONTRACTOR BY INSTALLING SILT FENCE, ORANGE TENSAR FENCING (4-FOOT ROLL TIED TO 6-FOOT POSTS SET AT 10-FOOT INTERVALS) OR OTHER BARRIERS AS APPROVED BY THE ENGINEER. ALL TEMPORARY BARRIERS SHALL BE REMOVED AT THE END OF THE PROJECT.
3. ANY AREAS OUTSIDE THE LIMITS OF CONSTRUCTION DISTURBED BY THE CONTRACTOR SHALL IMMEDIATELY BE RESTORED TO PRECONSTRUCTION CONDITION.

SANITARY FACILITIES

1. PROVISIONS SHALL BE MADE FOR NECESSARY SANITARY CONVENIENCES FOR THE USE OF LABORERS ON THE WORK. THE FACILITIES MUST BE PROPERLY SECLUDED FROM PUBLIC OBSERVATION AND SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR.

PROTECTION OF BORE PITS

1. INSTALL BARRIER FENCING (TENSAR ORANGE FENCING OR CHAIN LINK FENCING) TO SURROUND THE BORE PITS. BARRIER FENCING SHALL REMAIN IN PLACE AT ALL TIMES WHILE THE BORE PIT IS OPEN. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY AND SAFETY AT THE BORE PITS.

HORIZONTAL CONTROLS

1. ALL LINEWORK SHALL BE STAKED PRIOR TO CONSTRUCTION WITH SEALED CUT SHEETS PROVIDED TO THE WTCPUA INSPECTOR PRIOR TO CONSTRUCTION.

CONSTRUCTION SEQUENCING:

1. 48 HOURS PRIOR TO BEGINNING ANY WORK, CALL TEXAS EXCAVATION SYSTEM AT 1-800-344-8377 FOR UTILITY LOCATIONS.
2. INSTALL TEMPORARY EROSION CONTROLS AND TREE/NATURAL AREA PROTECTION FENCING PRIOR TO PRE-CONSTRUCTION MEETING.
3. NOTIFY THE CITY OF BEE CAVE, OWNER, AND ENGINEER FOR A PRE-CONSTRUCTION MEETING AT LEAST 3 DAYS PRIOR TO THE MEETING DATE.
4. ROUGH GRADE THE ACCESS DRIVES.
5. BEGIN INSTALLATION OF UNDERGROUND UTILITIES. RESTORE AS MUCH DISTURBED AREA AS POSSIBLE.
6. REGRADE TO SUBGRADE.
7. ENSURE ALL UNDERGROUND UTILITY CROSSINGS ARE COMPLETED. LAY FIRST COURSE BASE FOR ALL ACCESS DRIVES.
8. LAY FINAL BASE COURSE ON ALL STREETS.
9. LAY ASPHALT.
10. COMPLETEPERMANENT EROSION CONTROLS AND RESTORATION OF SITE VEGETATION.
11. REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROLS.
12. COMPLETE ANY NECESSARY FINAL DRESS UP.

WEST TRAVIS COUNTY PUA WATER AND WASTEWATER UTILITY NOTES

1. WEST TRAVIS COUNTY PUA IS THE WATER AND / OR WASTEWATER SERVICE PROVIDER FOR THIS PROJECT. A PRE-CONSTRUCTION MEETING WITH THE WTCPUA SHALL BE HELD PRIOR TO COMMENCEMENT OF CONSTRUCTION TO SCHEDULE INSPECTION OF INSTALLATION OF WATER/WASTEWATER FACILITIES. WATER FACILITIES WILL BE INSPECTED UP TO, AND INCLUDING, THE WATER METER AND/OR FIRE HYDRANTS. THE CONTACT NUMBER FOR WTCPUA IS (512) 263- 0100.
2. THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND STANDARD DETAILS CURRENT AT THE TIME OF CONSTRUCTION SHALL GOVERN MATERIALS AND METHODS USED TO PERFORM THIS WORK. CITY OF AUSTIN SPECIFICATIONS AND STANDARD DETAILS ARE AVAILABLE AT HTTPS://LIBRARY.MUNICODE.COM/TX/AUSTIN/CODES/
3. CONTRACTOR SHALL OBTAIN ALL APPROVALS AND PERMITS, INCLUDING BUT NOT LIMITED TO STREET/DRIVEWAY CUT AND UTILITY CUT PERMITS FROM THE APPROPRIATE GOVERNMENTAL AGENCY BEFORE BEGINNING CONSTRUCTION WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR ALLEY.
4. THE WTCPUA SHALL BE CONTACTED AT (512) 263-0100 AT LEAST 48 HOURS BEFORE CONNECTING TO THEIR EXISTING WATER AND/OR WASTEWATER FACILITIES.
5. THE CONTRACTOR SHALL CONTACT THE TEXAS EXCAVATION SYSTEM AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION. IN ADVANCE OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS.
6. WHERE WATER LINES AND SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION). ANY DEVIATION THESE STANDARDS SHALL REQUIRE A VARIANCE APPROVED BY TCEQ BEFORE SUBMITTING PIPING ASSIGNMENTS TO THE WTCPUA.
7. THE CITY OF AUSTIN SPECIFICATION ITEM 509S WILL BE REQUIRED AS A MINIMUM TRENCH SAFETY MEASURE. CONTRACT DOCUMENTS, WHICH INCLUDE A TRENCH SAFETY PLAN SIGNED AND SEALED BY A TEXAS PROFESSIONAL ENGINEER AND A PAY ITEM FOR TRENCH SAFETY MEASURES, IN COMPLIANCE WITH OSHA, STATE, COUNTY, AND CITY REQUIREMENTS BEFORE BEGINNING WORK ON THE PROJECT.
8. ALL MATERIAL TESTS, INCLUDING SOIL DENSITY TESTS AND RELATED SOIL ANALYSIS, SHALL BE ACCOMPLISHED BY AN INDEPENDENT LABORATORY FUNDED BY THE OWNER IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 1804S.4.
9. THRUST RESTRAINT SHALL BE BY METAL THRUST RESTRAINTS IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(22).
10. LOCATOR 'FINDER' WIRE - ALL NON -METALLIC WATER LINES SHALL HAVE A FINDER WIRE LOCATED ABOVE THE PIPE. THE WIRE SHALL BE POLY-INSULATED NO. 10 SOLID COPPER AND WILL TERMINATE AT EACH ISOLATION VALVE SUCH THAT IT IS ACCESSIBLE FROM THE VALVE BOX.
11. LOCATOR 'FINDER' WIRE - ALL NON-METALLIC WASTEWATER LINES SHALL HAVE A FINDER WIRE LOCATED ABOVE THE PIPE. THE WIRE SHALL BE POLY-INSULATED NO. 10 SOLID COPPER AND WILL TERMINATE AT READILY ACCESSIBLE LOCATIONS THROUGHOUT THE COLLECTION SYSTEM.
12. CONTRACTOR SHALL HAVE NECESSARY EROSION AND SEDIMENTATION CONTROLS IN PLACE PRIOR TO COMMENCING WATER/WASTEWATER FACILITY CONSTRUCTION.
13. RECORD DRAWINGS, AS STIPULATED BY THE WTCPUA, SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR VERIFICATION AND FURNISHED TO THE WTCPUA UPON COMPLETION OF THE PROJECT.
14. WHERE EXISTING WATER AND/OR WASTEWATER INFRASTRUCTURE IS TO BE ABANDONED, THE ENGINEER SHALL SUBMIT AN ABANDONMENT PLAN FOR APPROVAL BY THE WTCPUA.

EROSION/SEDIMENTATION CONTROL NOTES:

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS, TREE/NATURAL AREA PROTECTIVE FENCING, AND CONDUCT "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CITY OF BEE CAVE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE CITY OF BEE CAVE ESC PLAN SHALL BE CONSULTED AND USED AS THE BASIS FOR A TPDES REQUIRED SWPPP. IF A SWPPP IS REQUIRED, IT SHALL BE AVAILABLE FOR REVIEW BY THE CITY OF BEE CAVE ENVIRONMENTAL INSPECTOR AT ALL TIMES DURING CONSTRUCTION, INCLUDING AT THE PRE-CONSTRUCTION MEETING.
3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND ENVIRONMENTAL INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS, TREE/NATURAL AREA PROTECTION MEASURES AND "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE OWNER OR OWNER'S REPRESENTATIVE SHALL NOTIFY THE DEVELOPMENT SERVICES DEPARTMENTAT LEAST THREE DAYS PRIOR TO THE MEETING DATE.
5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY AUTHORIZED CITY OF BEE CAVE STAFF. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
6. THE CONTRACTOR IS REQUIRED TO PROVIDE A CERTIFIED INSPECTOR THAT IS EITHER A LICENSED ENGINEER (OR PERSON DIRECTLY SUPERVISED BY THE LICENSED ENGINEER) OR CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC OR CPESC - IT), CERTIFIED EROSION, SEDIMENT AND STORMWATER - INSPECTOR (CESSWI OR CESSWI - IT) OR CERTIFIED INSPECTOR OF SEDIMENTATION AND EROSION CONTROLS (CISEC OR CISEC - IT) CERTIFICATION TO INSPECT THE CONTROLS AND FENCES AT WEEKLY OR BI-WEEKLY INTERVALS AND AFTER ONE-HALF (½) INCH OR GREATER RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES OR ONE-THIRD (⅓) OF THE INSTALLED HEIGHT OF THE CONTROL WHICHEVER IS LESS.
7. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
8. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS; ONE SQUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT A CITY OF AUSTIN ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION.
9. TEMPORARY AND PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:
   A. ALL DISTURBED AREAS TO BE REVEGETATED ARE REQUIRED TO PLACE A MINIMUM OF SIX (6) INCHES OF TOPSOIL [SEE STANDARD SPECIFICATION ITEM NO. 601S.3(A)]. DO NOT ADD TOPSOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES.

- TOPSOIL SALVAGED FROM THE EXISTING SITE IS ENCOURAGED FOR USE, BUT IT SHOULD MEET THE STANDARDS SET FORTH IN 601S.

  AN OWNER/ENGINEER MAY PROPOSE USE OF ONSITE SALVAGED TOPSOIL WHICH DOES NOT MEET THE CRITERIA OF STANDARD SPECIFICATION 601S BY PROVIDING A SOIL ANALYSIS AND A WRITTEN STATEMENT FROM A QUALIFIED PROFESSIONAL IN SOILS, LANDSCAPE ARCHITECTURE, OR AGRONOMY INDICATING THE ONSITE TOPSOIL WILL PROVIDE AN EQUIVALENT GROWTH MEDIA AND SPECIFYING WHAT, IF ANY, SOIL AMENDMENTS ARE REQUIRED.

- SOIL AMENDMENTS SHALL BE WORKED INTO THE EXISTING ONSITE TOPSOIL WITH A DISC OR TILLER TO CREATE A WELL-BLENDED MATERIAL.

THE VEGETATIVE STABILIZATION OF AREAS DISTURBED BY CONSTRUCTION SHALL BE AS FOLLOWS:

TEMPORARY VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH OR INCLUDE A COOL SEASON COVER CROP: (WESTERN WHEATGRASS (PASCOPYRUM SMITHII) AT 5.6 POUNDS PER ACRE, OATS (AVENA SATIVA) AT 4.0 POUNDS PER ACRE, CEREAL RYE GRAIN (SECALE CEREALE) AT 45 POUNDS PER ACRE. CONTRACTOR MUST ENSURE THAT ANY SEED APPLICATION REQUIRING A COOL SEASON COVER CROP DOES NOT UTILIZE ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) OR PERENNIAL RYEGRASS (LOLIUM PERENNE). COOL SEASON COVER CROPS ARE NOT PERMANENT EROSION CONTROL.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE OR A NATIVE PLANT SEED MIX CONFORMING TO ITEM 604S OR 609S. REFER TO CITY OF BEE CAVE TECHNICAL CRITERIA MANUAL FOR EXCEPTIONS TO STANDARD SPECIFICATION 604S.
   A. FERTILIZER SHALL BE APPLIED ONLY IF WARRANTED BY A SOIL TEST AND SHALL CONFORM TO ITEM NO. 606S, FERTILIZER AND CITY OF BEE CAVE ORDINANCES FOR LANDSCAPING. FERTILIZATION SHOULD NOT OCCUR WHEN RAINFALL IS EXPECTED OR DURING SLOW PLANT GROWTH OR DORMANCY. CHEMICAL FERTILIZER MAY NOT BE APPLIED IN THE CRITICAL WATER QUALITY ZONE.
   B. HYDROMULCH SHALL COMPLY WITH TABLE 1, BELOW.
   C. TEMPORARY EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95% TOTAL COVERAGE SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR TEMPORARY STABILIZATION ARE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
   D. WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF BEE CAVE ENVIRONMENTAL CRITERIA MANUAL, AND COA STANDARD SPECIFICATION 604S OR 609S. REFER TO CITY OF BEE CAVE TECHNICAL CRITERIA MANUAL FOR EXCEPTIONS TO STANDARD SPECIFICATION 604S.

TABLE 1: HYDROMULCHING FOR TEMPORARY VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
100% OR ANY BLEND OF WOOD, CELULOSE, STRAW, AND/OR COTTON PLANT MATERIAL (EXCEPT NO MULCH SHALL EXCEED 30% PAPER)	70% OR GREATER WOOD/STRAW 30% OR LESS PAPER OR NATURAL FIBERS	0-3 MONTHS	MODERATE SLOPES; FROM FLAT TO 3:1	1,500 TO 2,000 LBS PER ACRE

PERMANENT VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING IS CONSIDERED TO BE TEMPORARY STABILIZATION ONLY. IF COOL SEASON COVER CROPS EXIST WHERE PERMANENT VEGETATIVE STABILIZATION IS DESIRED, THE GRASSES SHALL BE MOWED TO A HEIGHT OF LESS THAN ONE-HALF (½) INCH AND THE AREA SHALL BE RE-SEEDED IN ACCORDANCE WITH TABLE 2 BELOW. ALTERNATIVELY, THE COOL SEASON COVER CROP CAN BE MIXED WITH BERMUDAGRASS OR NATIVE SEED AND INSTALLED TOGETHER, UNDERSTANDING THAT GERMINATION OF WARM-SEASON SEED TYPICALLY REQUIRES SOIL TEMPERATURES OF 60 TO 70 DEGREES.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE WITH A PURITY OF 95% AND A MINIMUM PURE LIVE SEED (PLS) OF 0.83. BERMUDA GRASS IS A WARM SEASON GRASS AND IS CONSIDERED PERMANENT EROSION CONTROL. PERMANENT VEGETATIVE STABILIZATION CAN ALSO BE ACCOMPLISHED WITH A NATIVE PLANT SEED MIX CONFORMING TO ITEM 604S OR 609S.
   A. FERTILIZER USE SHALL FOLLOW THE RECOMMENDATION OF A SOIL TEST. SEE ITEM 606S, FERTILIZER AND CITY OF BEE CAVE LANDSCAPE ORDINANCES. APPLICATIONS OF FERTILIZER (AND PESTICIDE) ON CITY-OWNED AND MANAGED PROPERTY REQUIRES THE YEARLY SUBMITTAL OF A PESTICIDE AND FERTILIZER APPLICATION RECORD, ALONG WITH A CURRENT COPY OF THE APPLICATOR'S LICENSE. FOR CURRENT COPY OF THE RECORD TEMPLATE CONTACT THE CITY OF AUSTIN'S IPM COORDINATOR.
   B. HYDROMULCH SHALL COMPLY WITH TABLE 2, BELOW.
   C. WATER THE SEEDED AREAS IMMEDIATELY AFTER INSTALLATION TO ACHIEVE GERMINATION AND A HEALTHY STAND OF PLANTS THAT CAN ULTIMATELY SURVIVE WITHOUT SUPPLEMENTAL WATER. APPLY THE WATER UNIFORMLY TO THE PLANTED AREAS WITHOUT CAUSING DISPLACEMENT OR EROSION OF THE MATERIALS OR SOIL. MAINTAIN THE SEEDBED IN A MOIST CONDITION FAVORABLE FOR PLANT GROWTH. ALL WATERING SHALL COMPLY WITH CITY CODE CHAPTER 6-4 (WATER CONSERVATION), AT RATES AND FREQUENCIES DETERMINED BY A LICENSED IRRIGATOR OR OTHER QUALIFIED PROFESSIONAL, AND AS ALLOWED BY THE AUSTIN WATER UTILITY AND CURRENT WATER RESTRICTIONS AND WATER CONSERVATION INITIATIVES.
   D. PERMANENT EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95 PERCENT FOR THE NON-NATIVE MIX, AND 95 PERCENT COVERAGE FOR THE NATIVE MIX SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR STABILITY MUST BE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
   E. WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF BEE CAVE ENVIRONMENTAL CRITERIA MANUAL AND COA STANDARD SPECIFICATIONS 604S AND 609S. REFER TO CITY OF BEE CAVE TECHNICAL CRITERIA MANUAL FOR EXCEPTIONS TO STANDARD SPECIFICATION 604S.

TABLE 2: HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
BONDED FIBER MATRIX (BFM)	80% ORGANIC DEFIBRATED FIBERS 10% TACKIFIER	6 MONTHS	ON SLOPES UP TO 2:1 AND EROSIVE SOIL CONDITIONS	2,500 TO 4,000 LBS PER ACRE (SEE MANUFACTURERS RECOMMENDATIONS
FIBER REINFORCED MATRIX (FRM)	65% ORGANIC DEFIBRATED FIBERS 25% REINFORCING FIBERS OR LESS 10% TACKIFIER	UP TO 12 MONTHS	ON SLOPES UP TO 1:1 AND EROSIVE SOIL CONDITIONS	3,000 TO 4,500 LBS PER ACRE (SEE MANUFACTURERS RECOMMENDATIONS)

STANDARD TREE PROTECTION NOTES

1. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
2. PROTECTIVE FENCES SHALL BE ERECTED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.
3. PROTECTIVE FENCES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
4. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIP LINES.
5. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES, AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE) , FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
   a. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
   b. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL), OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY ABORIST;
   c. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
6. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
7. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIP LINES MAY BE PERMITTED IN THE FOLLOWING CASES:
8. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE APPROXIMATELY 2 TO 4 FEET BEYOND THE AREA DISTURBED;
9. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIP LINE, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA (PRIOR TO SITE GRADING SO THAT THIS AREA IS GRADED SEPARATELY PRIOR TO PAVING INSTALLATION TO MINIMIZED ROOT DAMAGE);
10. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORK SPACE BETWEEN THE FENCE AND THE BUILDING;
11. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE CITY ARBORIST AT 974-1876 TO DISCUSS ALTERNATIVES.
12. SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.
13. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FT (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
14. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
15. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
16. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
17. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIP LINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
18. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.).
19. ALL FINISHED PRUNING SHALL BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE ON REQUEST FROM THE CITY ARBORIST).
20. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NON-COMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

NO.	DESCRIPTION	BY	DATE	APPROVED	APP'D DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

GENERAL NOTES 1

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED PROFESSIONAL ENGINEER
10-02-23

MURFEE ENGINEERING COMPANY
1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353

DESIGNED BY: CES
DRAWN BY: BRD
CHECKED BY: JKB
APPROVED BY: CES
DATE: 10/2/2023

FILE NO. UWTPEXP-CV.dwg LAYOUT: GENERAL NOTES 1

JOB NO.

SHEET NO. 2 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-CV.dwg / LAYOUT: GENERAL NOTES 1

CITY OF BEE CAVE GENERAL CONSTRUCTION NOTES

THE FOLLOWING NOTES SHALL BE INCLUDED ON A GENERAL NOTE SHEET AS PART OF ANY NPS/DEVELOPMENT PERMIT, SITE DEVELOPMENT PERMIT, AND SUBDIVISION CONSTRUCTION PLAN APPLICATION. **ANY CHANGES TO THESE NOTES SHALL BE CLOUDED ON THE PLAN SET**.

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER.
2. THE CONTRACTOR SHALL CONTACT THE TEXAS EXCAVATION SYSTEM AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS 48 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES THAT ARE TO BE EXTENDED, TIED TO, CROSSED, OR ALTERED; OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS.
3. CONTACT THE AUTHORITY HAVING JURISDICTION (WTCPUA) FOR EXISTING WATER AND WASTEWATER LOCATIONS 48 HOURS PRIOR TO CONSTRUCTION.
4. ANY CHANGES OR REVISIONS TO THESE PLANS MUST FIRST BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO CONSTRUCTION OF THE REVISION. THE CITY ENGINEER MAY ALLOW FIELD ADJUSTMENTS WITHOUT FORMAL APPROVAL OF A CORRECTION, ON A CASE-BY-CASE BASIS, WITH THOSE CHANGES TO BE REFLECTED ON THE RECORD DRAWINGS.
5. A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO ANY PARTIAL OR COMPLETE ROADWAY CLOSURES. TRAFFIC CONTROL PLANS SHALL BE SITE SPECIFIC AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. LANE CLOSURES ON ARTERIALS AND ANY FULL ROAD CLOSURES REQUIRE MESSAGE BOARDS NOTIFYING THE PUBLIC ONE WEEK PRIOR TO THE CLOSURE.
6. NO WORK IS TO BE PERFORMED BETWEEN THE HOURS OF 7:00 P.M. AND 7:00 A.M PER THE CITY'S NOISE ORDINANCE. REQUESTS FOR EXCEPTIONS TO THE NOISE ORDINANCE MUST BE MADE IN WRITING TO THE CITY MANAGER.
7. CONTACT THE CITY ENGINEERING STAFF (512-767-6675) AT LEAST 4 DAYS PRIOR TO WORK TO SCHEDULE ANY INSPECTIONS ON WEEKENDS OR CITY HOLIDAYS.
8. NO STREET LIGHTS OR SIGNS OF ANY KIND ARE TO BE PLACED WITHIN ANY SIDEWALKS.
9. NO BLASTING IS ALLOWED.
10. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
11. THE CONTRACTOR SHALL GIVE THE CITY OF BEE CAVE 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. CONTACT THE PLANNING & DEVELOPMENT DEPARTMENT AT 512-767-6675.
12. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND THE CITY OF BEE CAVE REPRESENTATIVES PRIOR TO INSTALLATION OF EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION MEASURES AND PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL NOTIFY THE CITY OF BEE CAVE ENGINEERING STAFF AT LEAST THREE (3) DAYS PRIOR TO THE MEETING DATE. FOR PROJECT IN THE ETJ, THE PRE-CONSTRUCTION MEETING MUST BE SCHEDULED THROUGH TRAVIS COUNTY AND COORDINATED WITH THE CITY TO CONDUCT A SIMULTANEOUS CITY/COUNTY PRE-CONSTRUCTION MEETING. THE APPLICANT IS RESPONSIBLE FOR COORDINATING/SCHEDULING ATTENDANCE OF REPRESENTATIVES FROM THE UTILITY AND FIRE AUTHORITY HAVING JURISDICTION.
13. THE CONTRACTOR AND ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF BEE CAVE
14. ACCURATE "RECORD DRAWINGS" FOLLOWING THE COMPLETION OF ALL CONSTRUCTION. THESE "RECORD DRAWINGS" SHALL MEET THE SATISFACTION OF THE ENGINEERING DEPARTMENTS PRIOR TO FINAL ACCEPTANCE
15. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT EASEMENTS AND PROVIDE REVEGETATION IN ACCORDANCE WITH CITY STANDARDS. CLEANUP SHALL BE TO THE SATISFACTION OF THE ENGINEER.
16. CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS AND PROJECT ENGINEERING REFERENCE POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO OWNER.
17. THE CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. IN THE EVENT THAT A FENCE MUST BE REMOVED, THE CONTRACTOR SHALL REPLACE SAID FENCE OR PORTION THEREOF WITH THE SAME TYPE OF FENCING TO A QUALITY OF EQUAL OR BETTER THAN THE ORIGINAL FENCE.
18. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 1033 LA POSADA DR. SUITE 375, AUSTIN, TEXAS 78752- 3832.
19. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT WHERE NOT SPECIFICALLY COVERED IN THE PROJECT SPECIFICATIONS SHALL CONFORM TO ALL CITY OF AUSTIN DETAILS AND STANDARD SPECIFICATIONS IN ACCORDANCE WITH THE CITY OF BEE CAVE ENGINEERING TECHNICAL MANUAL.
20. PROJECT SPECIFICATIONS TAKE PRECEDENCE OVER PLANS AND SPECIAL CONDITIONS GOVERN OVER TECHNICAL SPECIFICATIONS.
21. HOT MIX ASPHALTIC CONCRETE PAVEMENT SHALL BE MINIMUM THICKNESS OF 2 INCHES WITH NO RECYCLED ASPHALT SHINGLES CONTENT.
22. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY RISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT.
23. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION BETWEEN HIMSELF AND OTHER CONTRACTORS AND UTILITIES IN THE VICINITY OF THE PROJECT. THIS INCLUDES GAS, WATER, WASTEWATER, ELECTRICAL, TELEPHONE, CABLE TV AND STREET DRAINAGE WORK. ONCE THE CONTRACTOR BECOMES AWARE OF A POSSIBLE CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER WITHIN TWENTY-FOUR (24) HOURS.
25. THE CONTRACTOR MUST OBTAIN A CONSTRUCTION WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY ALL WHO USE WATER.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE SITE FREE FROM SOIL, SEDIMENT AND DEBRIS. CONTRACTOR WILL NOT REMOVE SOIL, SEDIMENT OR DEBRIS FROM ANY AREA OR VEHICLE BY MEANS OF WATER. ONLY SHOVELING AND SWEEPING WILL BE ALLOWED. CONTRACTOR WILL BE RESPONSIBLE FOR
DUST CONTROL FROM THE SITE.
27. THE CITY OF BEE CAVE SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.
28. AN ENGINEER'S CONCURRENCE LETTER AND RECORD DRAWINGS SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO CONDUCTING THE FINAL CITY INSPECTION. THE ENGINEER AND CONTRACTOR SHALL VERIFY THAT ALL FINAL REVISIONS AND CHANGES HAVE BEEN MADE TO THE DIGITAL COPY PRIOR TO CITY SUBMITTAL. RECORD CONSTRUCTION DRAWINGS, INCLUDING ROADWAY AND ALL UTILITIES SHALL BE PROVIDED TO THE CITY IN DIGITAL FORMAT AS AUTOCAD ".DWG" FILES, MICROSTATION ".DGN" FILES OR ESRI ".SHP" FILES. LINE WEIGHTS, LINE TYPES AND TEXT SIZE SHALL BE SUCH THAT IF HALF-SIZE PRINTS (11"X17") WERE PRODUCED, THE PLANS WOULD STILL BE LEGIBLE. ALL REQUIRED DIGITAL FILES SHALL CONTAIN A MINIMUM OF TWO CONTROL POINTS REFERENCED TO THE STATE PLANE GRID COORDINATE SYSTEM - TEXAS CENTRAL ZONE (4203), IN US SURVEY FEET AND SHALL INCLUDE ROTATION INFORMATION AND SCALE FACTOR REQUIRED TO REDUCE SURFACE COORDINATES TO GRID COORDINATES IN US SURVEY FEET

STREET AND DRAINAGE NOTES

1. ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CITY OF BEE CAVE HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, OR ANY OTHER ACCESSIBILITY LEGISLATION, AND DOES NOT WARRANTY OR APPROVE THESE PLANS FOR ANY ACCESSIBILITY STANDARDS.
2. PRIOR TO ACCEPTANCE THE ENGINEER SHALL SUBMIT DOCUMENTATION THAT THE IMPROVEMENTS WERE INSPECTED BY TDLR OR A REGISTERED ACCESSIBLITY SPECIALIST (RAS) AND ARE IN COMPLIANCE WITH THE REQUIREMENTS OF THE TABA.
3. CONTRACTOR SHALL PROVIDE QUALITY TESTING FOR ALL INFRASTRUCTURES TO BE ACCEPTED AND MAINTAINED BY THE CITY OF BEE CAVE AFTER COMPLETION. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AT 512-7697-6675 NO LESS THAN 48 HOURS PRIOR TO ANY TESTING.
4. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 6" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR
5. WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 6" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE
6. A MINIMUM OF 6" OF TOPSOIL SHALL BE PLACED BETWEEN THE CURB AND RIGHT-OF-WAY
AND IN ALL DRAINAGE CHANNELS EXCEPT CHANNELS CUT IN STABLE ROCK.
7. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT, INCLUDING GAS, ELECTRIC TELEPHONE, CABLE TV, ETC., SHALL BE A MINIMUM OF 36" BELOW SUBGRADE.
8. STREET RIGHT-OF-WAY SHALL BE GRADED AT A SLOPE OF ¼" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF- WAY AT ¼" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY OF BEE CAVE ENGINEERING STAFF.
9. BARRICADES BUILT TO THE CITY OF BEE CAVE STANDARDS SHALL BE ERECTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.
10. ALL REINFORCED CONCRETE PIPE SHALL BE MINIMUM CLASS III OF TONGUE AND GROOVE OR O-RING JOINT DESIGN.
11. THE CONTRACTOR IS TO NOTIFY THE ENGINEERING STAFF 48 HOURS PRIOR TO THE FOLLOWING TESTING: PROOF ROLLING SUB-GRADE AND EVERY LIFT OF ROADWAY EMBANKMENT, IN-PLACE DENSITY TESTING OF EVERY BASE COURSE, AND ASPHALT CORES. ALL OF THIS TESTING MUST BE WITNESSED BY A CITY OF BEE CAVE REPRESENTATIVE UNLESS OTHERWISE INSTRUCTED BY THE CITY ENGINEER.
12. THE CONTRACTOR MUST PROVIDE A PNEUMATIC TRUCK PER TXDOT SPEC FOR PROOF ROLLING.
13. ALL STRIPING, WITH THE EXCEPTION OF STOP BARS, CROSS WALKS, WORDS AND ARROWS, IS TO BE TYPE II (WATER BASED). STOP BARS, CROSS WALKS, WORDS AND ARROWS REQUIRE TYPE I THERMOPLASTIC.
14. MANHOLE FRAMES, COVERS, VALVES, CLEAN-OUTS, ETC. SHALL BE RAISED TO GRADE PRIOR TO FINAL PAVEMENT CONSTRUCTION.
15. CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AT LEAST 48 HOURS PRIOR TO THE INSTALLATION OF ANY DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET ROW.
16. A STOP BAR SHALL BE PLACED AT ALL STOP SIGN LOCATIONS.
17. A MINIMUM OF SEVEN DAYS OF CURE TIME IS REQUIRED FOR HMAC PRIOR TO THE INTRODUCTION OF PUBLIC VEHICULAR TRAFFIC TO ANY STREETS.
18. THE GEOTECHNICAL ENGINEER SHALL INSPECT THE SUBGRADE FOR COMPLIANCE WITH THE DESIGN ASSUMPTIONS MADE DURING PREPARATION OF THE SOILS REPORT. ANY ADJUSTMENTS THAT ARE REQUIRED SHALL BE MADE THROUGH REVISIONS OF THE CONSTRUCTION PLANS.

TRENCH SAFETY NOTES

1. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT ARE DESCRIBED IN ITEM 509S "TRENCH SAFETY SYSTEMS" OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND SHALL BE IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATION SAFETY AND HEALTH ADMINISTRATION REGULATIONS.

GRADING NOTES

1. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
2. THE CONTRACTOR SHALL CONSTRUCT EARTHEN EMBANKMENTS WITH SLOPES NO STEEPER THAN 3:1 AND COMPACT SOIL TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD SPECIFICATIONS.
3. AREAS OF SOIL DISTURBANCE ARE LIMITED TO GRADING AND IMPROVEMENTS SHOWN. ALL OTHER AREAS WILL NOT BE DISTURBED.

BENCHMARK NOTES

TEMPORARY BENCHMARKS (TBM'S) WERE SET BY SURVEY AND MAPPING, LLC.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CONTRIBUTING ZONE PLAN GENERAL CONSTRUCTION NOTES

EDWARDS AQUIFER PROTECTION PROGRAM CONSTRUCTION NOTES - LEGAL DISCLAIMER

THE FOLLOWING/LISTED "CONSTRUCTION NOTES" ARE INTENDED TO BE ADVISORY IN NATURE ONLY AND DO NOT CONSTITUTE AN APPROVAL OR CONDITIONAL APPROVAL BY THE EXECUTIVE DIRECTOR (ED), NOR DO THEY CONSTITUTE A COMPREHENSIVE LISTING OF RULES OR CONDITIONS TO BE FOLLOWED DURING CONSTRUCTION. FURTHER ACTIONS MAY BE REQUIRED TO ACHIEVE COMPLIANCE WITH TCEQ REGULATIONS FOUND IN TITLE 30, TEXAS ADMINISTRATIVE CODE (TAC), CHAPTERS 213 AND 217, AS WELL AS LOCAL ORDINANCES AND REGULATIONS PROVIDING FOR THE PROTECTION OF WATER QUALITY. ADDITIONALLY, NOTHING CONTAINED IN THE FOLLOWING/LISTED "CONSTRUCTION NOTES" RESTRICTS THE POWERS OF THE ED, THE COMMISSION OR ANY OTHER GOVERNMENTAL ENTITY TO PREVENT, CORRECT, OR CURTAIL ACTIVITIES THAT RESULT OR MAY RESULT IN POLLUTION OF THE EDWARDS AQUIFER OR HYDROLOGICALLY CONNECTED SURFACE WATERS. THE HOLDER OF ANY EDWARDS AQUIFER PROTECTION PLAN CONTAINING "CONSTRUCTION NOTES" IS STILL RESPONSIBLE FOR COMPLIANCE WITH TITLE 30, TAC, CHAPTERS 213 OR ANY OTHER APPLICABLE TCEQ REGULATION, AS WELL AS ALL CONDITIONS OF AN EDWARDS AQUIFER PROTECTION PLAN THROUGH ALL PHASES OF PLAN IMPLEMENTATION. FAILURE TO COMPLY WITH ANY CONDITION OF THE ED'S APPROVAL, WHETHER OR NOT IN CONTRADICTION OF ANY "CONSTRUCTION NOTES," IS A VIOLATION OF TCEQ REGULATIONS AND ANY VIOLATION IS SUBJECT TO ADMINISTRATIVE RULES, ORDERS, AND PENALTIES AS PROVIDED UNDER TITLE 30, TAC § 213.10 (RELATING TO ENFORCEMENT). SUCH VIOLATIONS MAY ALSO BE SUBJECT TO CIVIL PENALTIES AND INJUNCTION. THE FOLLOWING/LISTED "CONSTRUCTION NOTES" IN NO WAY REPRESENT AN APPROVED EXCEPTION BY THE ED TO ANY PART OF TITLE 30 TAC, CHAPTERS 213 AND 217, OR ANY OTHER TCEQ APPLICABLE REGULATION

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - THE NAME OF THE APPROVED PROJECT;
   - THE ACTIVITY START DATE; AND
   - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN (CZP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ON-SITE.
3. NO HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
4. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
5. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
6. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
7. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
8. ALL EXCAVATED MATERIAL THAT WILL BE STORED ON-SITE MUST HAVE PROPER E&S CONTROLS.
9. IF PORTIONS OF THE SITE WILL HAVE A 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.
10. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
    - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
    - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
    - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
11. THE HOLDER OF ANY APPROVED CZP MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:

A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES (BMPS) OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;

B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;

C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; OR

D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE APPROVED CONTRIBUTING ZONE PLAN.

AUSTIN REGIONAL OFFICE
12100 PARK 35 CIRCLE, BUILDING A
AUSTIN, TEXAS 78753-1808
PHONE (512) 339-2929
FAX (512) 339-3795SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

TRAVIS COUNTY EMERGENCY SERVICES DISTRICT NO.6 FIRE DEPARTMENT - SITE PLAN NOTES

1. DESIGNS FOR SITE IMPROVEMENTS SHALL MEET THE CURRENT DESIGN CRITERIA AS REQUIRED BY TCESD NO. 6.
2. ALL PLANS (SITE, BUILDING, FIRE ALARM, FIRE SPRINKLER) SHALL BE SUBMITTED TO LTFR FOR REVIEW. TWO FULL-SIZE SETS ARE REQUIRED. A REVIEW LETTER WILL BE GENERATED. REVIEWS WILL NOT BE PERFORMED UNTIL THE APPLICABLE REVIEW FEES ARE PAID.
3. UPON PLAN APPROVAL, A PERMIT WILL BE ISSUED. THE PERMIT MUST BE CONSPICUOUSLY POSTED.
4. AN ALL-WEATHER DRIVING SURFACE (FIRE APPARATUS ACCESS) MUST BE INSTALLED IN LOCATIONS SHOWN ON THE SITE PLAN, PRIOR TO ANY BUILDING CONSTRUCTION BEYOND THE FOUNDATION.
5. ALL PERVIOUS/DECORATIVE PAVING SHALL BE ENGINEERED AND INSTALLED FOR 80,000 POUNDS LIVE-VEHICLE LOADS. ANY PERVIOUS/DECORATIVE PAVING WITHIN 100 FEET OF ANY BUILDING MUST BE APPROVED BY THE FIRE DEPARTMENT.
6. VERTICAL CLEARANCE REQUIRED FOR FIRE APPARATUS IS 13 FEET, SIX INCHES FOR THE FULL 25 FEET WIDTH OF ACCESS DRIVES AND ROUTES FOR INTERNAL CIRCULATION. DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH APPROVED PROVISIONS FOR THE TURNING AROUND OF FIRE APPARATUS, PER FIGURE B-4 OF THIS MANUAL.
7. THE MAXIMUM ALLOWABLE DRIVEWAY, DRIVE AISLE OR FIRE LANE GRADE IS 15 PERCENT.
8. THE MARKINGS OF FIRE LANES MUST BE RED WITH WHITE STENCILING OR WHITE WITH RED STENCILING READING "FIRE LANE - TOW AWAY ZONE" IN LETTERING NO LESS THAN THREE INCHES IN HEIGHT. THE STENCILING SHALL BE AT INTERVALS OF 35 FEET OR LESS. ALTERNATIVE MARKING OF FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, OR HIS/HER DESIGNATED AGENT, PROVIDED FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. EXISTING FIRE LANE MARKINGS SHALL BE GRANDFATHERED PROVIDED THAT THEY MEET THE WORDING AND INTERVAL REQUIREMENTS THAT WERE ACCEPTED ON APPROVED SITE PLANS AND OTHER TYPE FIRE LANE SUBMITTALS APPROVED BY THE FIRE DEPARTMENT. EXISTING FIRE LANES THAT ARE IN NEED OF RE-PAINTING SHALL MEET THE REQUIREMENTS OF THIS SECTION.
9. THE FIRE DEPARTMENT CONNECTION (FDC) CONNECTION SHALL BE INSTALLED WHERE SHOWN ON THE SITE PLAN.
10. HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE FOUR AND ONE-HALF INCH STEAMER OPENING AT LEAST 18 INCHES ABOVE FINISHED GRADE. THE FOUR AND ONE-HALF INCH STEAMER OPENING MUST FACE THE DRIVEWAY OR STREET WITH THREE- TO SIX-FOOT SETBACKS FROM THE CURB LINE(S). NO OBSTRUCTION IS ALLOWED WITHIN THREE FEET OF ANY HYDRANT, AND THE FOUR AND ONE-HALF INCH OPENING MUST BE TOTALLY UNOBSTRUCTED FROM THE STREET/DRIVEWAY.
11. CONTRACTOR SHALL INSTALL BLUE REFLECTIVE MARKERS IN THE PAVEMENT PER TCESD NO. 6 SPECIFICATIONS. NO IMPROVEMENTS MAY BE OCCUPIED UNTIL THE MARKERS ARE INSTALLED.
12. FIRE HYDRANTS SHALL HAVE NATIONAL HOSE THREADS.
13. STATIC WATER TANK HARD SUCTION CONNECTOR SHALL HAVE SIX-INCH NATIONAL HOSE THREADS.
14. A CERTIFIED OR WITNESSED PRESSURE TEST IS REQUIRED FOR ALL WATER MODELS, REQUIRED HYDRANT FLOW TESTS OR SPRINKLER SYSTEM DESIGNS.
15. HYDRANTS SHALL BE PAINTED SILVER AND THE BONNET AND CAPS SHALL BE PAINTED THE DESIGNATED COLOR PER THE GALLONS PER MINUTE (GPM) AS FOLLOWS:
    CLASS AA LIGHT BLUE 1500 OR HIGHER GPM
    CLASS A GREEN 1000-1499 GPM
    CLASS B ORANGE 500-1499 GPM
    CLASS C RED LESS THAN 500 GPM
    CLASS D BLACK OUT OF SERVICE
16. COMMERCIAL DUMPSTERS AND CONTAINERS WITH AN INDIVIDUAL CAPACITY OF ONE- AND ONE-HALF CUBIC YARDS OR GREATER SHALL NOT BE STORED OR PLACED WITHIN 10 FEET OF OPENINGS, COMBUSTIBLE WALLS OR COMBUSTIBLE EAVE LINES.
17. "KEY BOXES"/"KEY SWITCHES" (KNOX-BOX® RAPID ENTRY SYSTEM) SHALL BE INSTALLED IN THE LOCATION(S) SHOWN ON THE SITE/BUILDING PLANS AS APPROVED BY TCESD NO. 6. CONTACT LTFR FOR ORDERING INFORMATION. NO IMPROVEMENTS MAY BE OCCUPIED UNTIL THE KEY BOX/KEY SWITCH IS INSTALLED.

NO.	DESCRIPTION	BY	DATE	APPROVED	APP'D DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

GENERAL NOTES 2

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-393
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-CV.dwg LAYOUT: GENERAL NOTES 2
JOB NO.	
SHEET NO.	3 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-CV.dwg \ LAYOUT: GENERAL NOTES 2

N

0 50 100
25 75

SCALE: 1"=50'

1. PROPERTY ID: 422720
GEOGRAPHIC ID: 0119580302
LOCATION: 12000UPLANDS RIDGE DR TX 78738
OWNER: MEYER-BRAUNS PHILIPP & JENNIFER HOF
MAILING ADDRESS: 12000 UPLANDS RIDGE DR BEE CAVE, TX 78738-5016
LEGAL DESC: LOT 2 BLK G UPLANDS PHS 1 THE

2. PROPERTY ID: 422721
GEOGRAPHIC ID: 0119580303
LOCATION: 12002 UPLANDS RIDGE DR TX 78738
OWNER: DUHADWAY CHARLES & DESIREE FOX DUHADWAY
MAILING ADDRESS: 12002 UPLANDS RIDGE DR AUSTIN, TX 78738-5016
LEGAL DESC: LOT 3 BLK G UPLANDS PHS 1 THE

3. PROPERTY ID: 422722
GEOGRAPHIC ID: 0119580304
LOCATION: 12004 UPLANDS RIDGE DR BEE CAVE, TX 78738
OWNER: AMBROSE DWIGHT & LYNN
MAILING ADDRESS: 12004 UPLANDS RIDGE DR BEE CAVE, TX 78738-5016
LEGAL DESC: LOT 3 BLK G UPLANDS PHS 1 THE

4. PROPERTY ID: 422723
GEOGRAPHIC ID: 0119580305
LOCATION: 12006 UPLANDS RIDGE DR TX 78738
OWNER: SWAMINATHANNARAYANAN & SOWMITA NARAYANAN
MAILING ADDRESS: 12006 UPLANDS RIDGE DR BEE CAVE, TX 78738-5016
LEGAL DESC: LOT 5 BLK G UPLANDS PHS 1 THE

5. PROPERTY ID: 422724
GEOGRAPHIC ID: 0119580306
LOCATION: 12008 UPLANDS RIDGE DR BEE CAVE, TX 78738
OWNER: SUCHERMAN TODD & TAYLOR MILLS
MAILING ADDRESS: 12008 UPLANDS RIDGE DR BEE CAVE, TX 78738-5016
LEGAL DESC: LOT 6 BLK G UPLANDS PHS 1 THE

6. PROPERTY ID: 422725
GEOGRAPHIC ID: 0119580307
LOCATION: 12010 UPLANDS RIDGE DR BEE CAVE, TX 78738
OWNER: WILSON STEPHEN H & MARY H
MAILING ADDRESS: 12010 UPLANDS RIDGE DR BEE CAVE, TX 78738-5016
LEGAL DESC: LOT 7 BLK G UPLANDS PHS 1 THE

7. PROPERTY ID: 422730
GEOGRAPHIC ID: 0119580312
LOCATION: 12215 BEE CAVE RD TX 78746
OWNER: WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY
MAILING ADDRESS: %LLOYD GOSSELINK ROCHELLE & TOWNSEND, PC 816 CONGRESS AVE STE 1900 AUSTIN, TX 78018-2478
LEGAL DESC: ABS 757 SUR 656 SEIFERT F ABS 692 SUR 152 SWISHER J ACR 11.157

8. PROPERTY ID: 422731
GEOGRAPHIC ID: 0119580313
LOCATION: TENNISON HILL DR TX 78733
OWNER: SOUTHWESTERN BELL TELEPHONE
MAILING ADDRESS: 1010 PINE, 9E-L-01 SAINT LOUIS, MO 63101
LEGAL DESC: .070 ACR OF LOT 1 BLK G UPLANDS PHS 1 THE

9. PROPERTY ID: 455395
GEOGRAPHIC ID: 0119580317
LOCATION: 3700 TENNISON HILL DR BEE CAVE, TX 78733
OWNER: CHEN XIAOMING
MAILING ADDRESS: 3700 TENNISON HILL DR BEE CAVE, TX 78738-5012
LEGAL DESC: LOT 1B BLK G UPLANDS PHS 1 THE RESUB OF LOT 1

10. PROPERTY ID: 563816
GEOGRAPHIC ID: 0119580319
LOCATION: 12221 F M RD 2244 TX 78738
OWNER: ST GERMAIN/MOORE PARTNERSHIP
MAILING ADDRESS: 2951 RANCH RD 620 S STE 216 AUSTIN, TX 78738-5631
LEGAL DESC: LOT 2B HEB/BEE CASE SUBD NO 2 REPLAT OF BLK A LOT 2

11. PROPERTY ID: 754185
GEOGRAPHIC ID: 0119580320
LOCATION: 12117 BEE CAVE RD 2 TX 78738
OWNER: ARCHER BENJAMIN LEE
MAILING ADDRESS: 12117 FM 2244 BLDG 2 BEE CAVE, TX 78738-5556
LEGAL DESC: LOT 1 UPLANDS PHS 1 THE RESUB OF LOT 1A BLK G OF RESUB OF LOT 1

12. PROPERTY ID: 754186
GEOGRAPHIC ID: 0119580321
LOCATION: 12117 BEE CAVE RD TX 78738
OWNER: HARHOS BEE CAVES LLC
MAILING ADDRESS: 12117 BEE CAVE RD STE 190 AUSTIN, TX 78738-5349
LEGAL DESC: LOT 3 UPLANDS PHS 1 THE RESUB OF LOT 1A BLK G OF RESUB OF LOT 1

13. PROPERTY ID: 754187
GEOGRAPHIC ID: 0119580322
LOCATION: 12117 BEE CAVE RD 1 TX 78738
OWNER: COUSTEAUS EDGE LLC
MAILING ADDRESS: PO BOX 161507 AUSTIN, TX 78716-1507
LEGAL DESC: LOT 2 UPLANDS PHS 1 THE RESUB OF LOT 1A BLK G OF RESUB OF LOT 1

14. PROPERTY ID: 822969
GEOGRAPHIC ID: 0119580304
LOCATION: 12400 W STATE HY 71 TX 78669
OWNER: SPC BEE CAVE PARTNERS LTD
MAILING ADDRESS: % BANK OF AMERICA NC1-001-03-81 101 N TRYON ST CHARLOTTE, NC 28246-0100
LEGAL DESC: 23.2072 AC OF LOT 1 BLK A HEB/BEE CAVE SUBD NO 3

15. PROPERTY ID: 808329
GEOGRAPHIC ID: 0119580323
LOCATION: 12012 UPLANDS RIDGE DR BEE CAVE, TX 78738
OWNER: GRIMM DARRYL & STACI N
MAILING ADDRESS: 12012 UPLANDS RIDGE DR BEE CAVE, TX 78738-5016
LEGAL DESC: LOT 8-A BLK G UPLANDS PHS 1 THE REPLAT OF LOTS 8&9

16. PROPERTY ID: 563815
GEOGRAPHIC ID: 0119580318
LOCATION: 12225 FM RD 2244, TX 78738
OWNER: UDS ONE LLC
MAILING ADDRESS: 1160 E COMMERCE ST STE 200 SAN ANTONIO, TX 78205-3342
LEGAL DESC: LOT 2A HEB/BEE CAVE SUBD NO 2 REPLAT OF BLK A LOT 2

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APP'D DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

EXISTING CONDITIONS - ADJACENT PROPERTY OWNERS AND EASEMENTS

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144259
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

MURFEE ENGINEERING COMPANY
Texas Registered Engineering Firm F-353
1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-EX.dwg LAYOUT: EXISTING CONDITIONS
JOB NO.	
SHEET NO.	4 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-EX.dwg | LAYOUT: EXISTING CONDITIONS

LEGEND

- PROPERTY BOUNDARY
- EXISTING FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING VEGETATIVE FILTER STRIP
- TREES TO REMAIN
- TREES TO REMOVE
- STRUCTURE TO BE DEMOLISHED

N

0 50 100
25 75
SCALE: 1"=50'

TREE TABLE

Point #	Northing	Easting	Elevation	Description
5529	10083421.3200	3055076.9550	887.797	12" Live Oak 1115
5659	10083223.8610	3055188.8220	884.012	5" 5" Live Oak 1184
5595	10083432.4740	3055116.7690	886.363	7" 8" Live Oak 1127
5531	10083419.2780	3055089.5440	887.578	10" 9" Live Oak 1142
5661	10083325.4740	3055191.8060	883.735	6" Cedar 1111
5533	10083428.2900	3055091.6450	887.820	13" 7" Live Oak 1144
5535	10083434.5960	3055092.9630	887.605	14" Live Oak 1159
5674	10083347.9070	3055179.0690	884.690	8" 8" Live Oak 1178
5646	10083410.1380	3055080.9795	887.335	6" Cedar 1117
5538	10083401.1040	3055062.0590	888.540	10" Live Oak 1106
5602	10083416.2580	3055113.0030	886.375	8" Live Oak 1198
5666	10083315.6650	3055196.0740	883.852	7" Live Oak 1176
5540	10083406.6830	3055050.9330	889.440	20" 11" Live Oak 1148
5604	10083417.2880	3055119.6880	886.144	7" 6" Live Oak 1175
5668	10083314.2600	3055193.5400	883.890	5" 3" Live Oak 1146
5542	10083396.3900	3055066.7080	888.145	10" Live Oak 1147
5606	10083433.3000	3055135.2680	885.192	5" 3" 2" Cedar 1168
5670	10083321.2300	3055201.6820	883.301	7" Live Oak 1123
5544	10083400.9000	3055040.0960	889.471	16" Live Oak 1163
5608	10083408.4320	3055133.2690	885.672	12" Live Oak 1130
5548	10083400.4390	3055087.2410	887.221	6" Live Oak 1126
5676	10083415.9810	3055189.6250	883.353	13" Live Oak 1125
5550	10083393.0120	3055092.4250	885.849	6" Live Oak 1109
5614	10083402.3030	3055130.3370	885.761	7" Live Oak 1113
5552	10083391.9500	3055100.8160	886.413	6" 3" Cedar 1171
5616	10083395.3510	3055118.6870	886.063	19" Live Oak 1179
5554	10083421.4230	3055105.2170	885.584	6" Live Oak 1158
5618	10083418.1110	3055136.4640	885.466	8" 8" 6" Live Oak 1129
5673	10083349.9810	3055179.8640	883.939	7" Live Oak 1165
5613	10083397.1100	3055132.9390	885.812	8" 8" Live Oak 1124
5619	10083387.7050	3055129.4020	885.584	6" Cedar 1156
5621	10083376.7490	3055133.8220	885.718	22" Live Oak 1118
5623	10083370.1280	3055139.8380	885.731	14" Live Oak 1132
5624	10083375.8430	3055146.3380	885.207	9" Live Oak 1151
5628	10083356.8110	3055150.5360	885.117	7" Cedar 1122
5630	10083355.4980	3055144.5000	885.936	8" Cedar 1172
5632	10083364.2170	3055129.6190	886.195	11" Live Oak 1200
5633	10083372.2780	3055129.0550	885.596	6" Cedar 1105
5635	10083378.0580	3055088.7790	887.187	6" Live Oak 1138
5636	10083376.9080	3055085.7620	886.748	8" Live Oak 1192
5638	10083378.2440	3055079.8630	887.599	11" Live Oak 1180
5640	10083371.9520	3055091.8260	887.321	8" 7" Live Oak 1107
5641	10083364.2580	3055095.8120	887.468	10" Live Oak 1103
5643	10083359.5920	3055108.5300	887.071	10" Live Oak 1135
5644	10083358.9160	3055100.0830	887.226	8" Live Oak 1134
5645	10083351.0250	3055106.2930	887.772	12" Live Oak 1167
5647	10083351.8380	3055110.9440	887.016	8" Live Oak 1166
5649	10083337.2930	3055094.4720	887.429	8" Live Oak 1128
5650	10083337.2720	3055091.7320	887.383	7" Live Oak 1181
5651	10083335.4190	3055096.4410	887.362	7" 5" 3" Cedar 1153
5652	10083343.9040	3055165.0580	884.218	7" Cedar 1161
5654	10083339.4040	3055165.6210	884.782	7" Cedar 1196
5655	10083335.4760	3055173.3580	884.525	7" Live Oak 1149
5656	10083335.9090	3055177.3480	884.448	6" Live Oak 1193
5658	10083331.2970	3055182.2710	884.210	7" Live Oak 1186
5665	10083318.9300	3055197.4850	883.902	6" Live Oak 1190
5667	10083316.9990	3055199.9730	883.607	7" Live Oak 1121
5671	10083304.3430	3055181.3750	883.720	6" 3" 3" 3" 2" 2" 2" 2" Cedar 1162
5675	10083409.8190	3055190.6610	883.218	11" 10" 7" Live Oak 1180
5679	10083379.1890	3055215.3530	882.455	7" 7" Live Oak 1139
5680	10083373.3760	3055220.4500	882.784	8" Live Oak 1164
5682	10083372.2850	3055217.6040	882.652	7" Live Oak 1187
5683	10083368.1500	3055218.2430	882.554	8" Live Oak 1120
5684	10083355.6740	3055191.7260	883.408	8" Cedar 1137
5688	10083338.9990	3055239.6630	882.014	9" Live Oak 1143
5689	10083331.7600	3055239.0020	882.169	7" 6" Live Oak 1114
5690	10083328.3160	3055238.7380	882.200	8" Live Oak 1157
5694	10083305.3020	3055214.4860	883.347	7" Live Oak 1140
5695	10083293.8400	3055218.8230	883.280	7" 5" Live Oak 1174
5697	10083289.7000	3055219.7340	883.642	7" 7" 5" Live Oak 1177
5698	10083287.4560	3055221.3260	883.308	6" 4" Live Oak 1131
5699	10083300.1900	3055229.2060	883.148	8" Live Oak 1141
5700	10083305.8310	3055230.4140	882.858	6" Live Oak 1119
5701	10083313.1550	3055230.3400	882.751	15" Live Oak 1136
5702	10083315.2790	3055239.1940	882.422	8" 5" Live Oak 1112
5704	10083307.7940	3055242.1350	882.317	6" 6" 5" Live Oak 1197
5710	10083291.2980	3055237.7100	883.159	9" 6" Live Oak 1191

TREE TABLE

Point #	Northing	Easting	Elevation	Description
5720	10083289.4000	3055187.7070	884.474	5" 5" Cedar 1195
5721	10083294.6850	3055186.8610	884.409	8" Live Oak 1150
5723	10083302.9020	3055170.9740	884.870	8" Live Oak 1185
5724	10083306.5380	3055171.0720	885.083	8" Live Oak 1102
5726	10083303.3090	3055162.1700	885.353	9" Live Oak 1108
5727	10083304.8350	3055158.6210	885.673	6" Cedar 1170
5729	10083310.7290	3055162.1770	885.367	6" Live Oak 1155
5731	10083314.0000	3055168.0830	884.856	8" Live Oak 1189
5734	10083320.8770	3055180.0960	884.291	6" Cedar 1104
5736	10083319.7740	3055160.2880	885.218	12" Live Oak 1173
5738	10083309.2920	3055150.1090	885.776	8" Live Oak 1194
5739	10083309.3100	3055145.7620	886.206	7" Cedar 1182
5741	10083320.9200	3055144.7900	885.861	6" Live Oak 1159
5742	10083323.5510	3055148.4810	885.705	6" 5" 5" 4" Cedar 1145
5744	10083320.9450	3055138.5030	886.122	9" Cedar 1154
5745	10083323.9065	3055135.0640	886.639	6" 6" Cedar 1110
5746	10083309.4300	3055115.7670	887.180	12" Live Oak 1116
5748	10083313.2460	3055128.7740	886.493	8" Live Oak 1131
5749	10083311.7950	3055130.8920	886.491	7" Live Oak 2769
5752	10083298.8180	3055115.6700	885.714	9" 6" 5" 3" 3" 3" 2" 2" Cedar 2735
5754	10083288.7800	3055153.9590	885.901	21" Live Oak 2731
5755	10083282.3820	3055152.9410	885.805	15" Live Oak 2765
5759	10083257.0430	3055183.3780	885.041	17" 16" Live Oak 2790
5761	10083253.4810	3055188.1250	884.593	7" Cedar 2800
5763	10083262.4830	3055194.2140	884.692	11" 7" Cedar 2774
5765	10083273.0670	3055183.7730	884.983	7" Cedar 2719
5766	10083278.7320	3055180.5760	885.194	8" 7" Cedar 2732
5767	10083268.0850	3055183.1330	884.886	7" Cedar 2780
5768	10083327.1980	3055335.0710	877.988	8" 7" LIVEOAK 2750
5769	10083336.1720	3055335.7240	877.756	7" 6" LIVEOAK 2754
5770	10083338.7510	3055332.8300	877.822	6" 5" LIVEOAK 2727
5771	10083318.2990	3055311.9110	879.016	7" LIVEOAK 2763
5772	10083317.1800	3055307.8270	879.589	7" LIVEOAK 2720
5773	10083319.2240	3055304.9680	879.619	7" LIVEOAK 2708
5774	10083322.3170	3055306.2930	879.103	7" 4" LIVEOAK 2792
5775	10083328.0690	3055308.1490	879.170	7" LIVEOAK 2714
5776	10083331.1120	3055308.2270	879.048	8" LIVEOAK 2764
5777	10083335.9530	3055306.5440	879.191	8" LIVEOAK 2761
5778	10083334.5580	3055302.9050	879.470	8" 7" LIVEOAK 2722
5779	10083341.9630	3055298.5250	879.180	6" LIVEOAK 2740
5780	10083338.2390	3055297.4300	879.256	8" LIVEOAK 2771
5781	10083341.2730	3055307.7320	878.954	7" LIVEOAK 2787
5782	10083341.6120	3055296.5700	880.294	11" LIVEOAK 2709
5783	10083338.2410	3055283.9640	880.388	9" LIVEOAK 2762
5784	10083334.9490	3055285.3680	880.253	8" LIVEOAK 2786
5785	10083334.8275	3055281.3430	879.756	7" LIVEOAK 2701
5786	10083337.5740	3055293.2540	879.577	6" LIVEOAK 2715
5787	10083330.3700	3055303.1190	879.442	6" LIVEOAK 2760
5788	10083323.9330	3055301.2590	879.846	8" LIVEOAK 2713
5789	10083320.0980	3055302.3110	879.606	7" LIVEOAK 2739
5790	10083315.3300	3055302.5480	879.651	6" LIVEOAK 2702
5791	10083317.7350	3055303.1590	879.790	8" LIVEOAK 2706
5792	10083313.0220	3055298.2470	879.839	8" 5" LIVEOAK 2784
5793	10083311.7520	3055287.0900	880.336	8" 3" LIVEOAK 2723
5794	10083319.0730	3055277.6420	880.078	11" LIVEOAK 2755
5795	10083323.8640	3055280.2370	880.901	9" LIVEOAK 2710
5796	10083323.1050	3055284.1990	880.572	8" LIVEOAK 2725
5797	10083312.0210	3055283.9390	880.756	8" LIVEOAK 2782
5798	10083302.9220	3055276.9960	881.037	6" 6" 5" LIVEOAK 2707
5799	10083311.7950	3055300.1950	879.781	6" 5" LIVEOAK 2748
5800	10083334.8860	3055278.6310	880.829	9" LIVEOAK 2716
5801	10083317.7210	3055291.1980	880.228	7" LIVEOAK 2717
5802	10083336.6900	3055354.8630	877.392	20" LIVEOAK 2749
5803	10083304.9470	3055353.5540	877.873	7" LIVEOAK 2776
5804	10083302.5520	3055354.8200	877.753	6" LIVEOAK 2768
5805	10083298.5890	3055355.5540	878.072	9" LIVEOAK 2742
5806	10083305.6790	3055357.7530	877.817	6" LIVEOAK 2795
5807	10083309.3330	3055358.9690	877.556	7" LIVEOAK 2728
5808	10083292.8740	3055356.1490	878.053	7" LIVEOAK 2711
5988	10083244.5050	3055021.8930	885.220	14" LIVEOAK 2767
5989	10083252.9700	3055025.4570	885.298	11" LIVEOAK 2757
5990	10083248.7920	3055032.0760	885.402	10" LIVEOAK 2704
5991	10083257.1700	3055037.0920	885.464	11" LIVEOAK 2746
5992	10083252.3550	3055040.1230	885.486	13" LIVEOAK 2737
5993	10083255.9030	3055042.1610	885.545	10" LIVEOAK 2705
5994	10083264.6480	3055038.5880	885.541	8" LIVEOAK 2796
5995	10083260.2940	3055046.5700	885.883	12" LIVEOAK 2779
5996	10083271.3990	3055041.1550	885.994	12" LIVEOAK 2747
5997	10083267.3360	3055044.9600	885.775	6" LIVEOAK 2753
5998	10083317.7250	3054993.8710	883.489	10" 5" CEDAR 2734
5999	10083268.2480	3055155.5440	886.397	11" LIVEOAK 2724

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APP'D DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

EXISTING CONDITIONS - TREE REMOVAL AND DEMOLITION PLAN

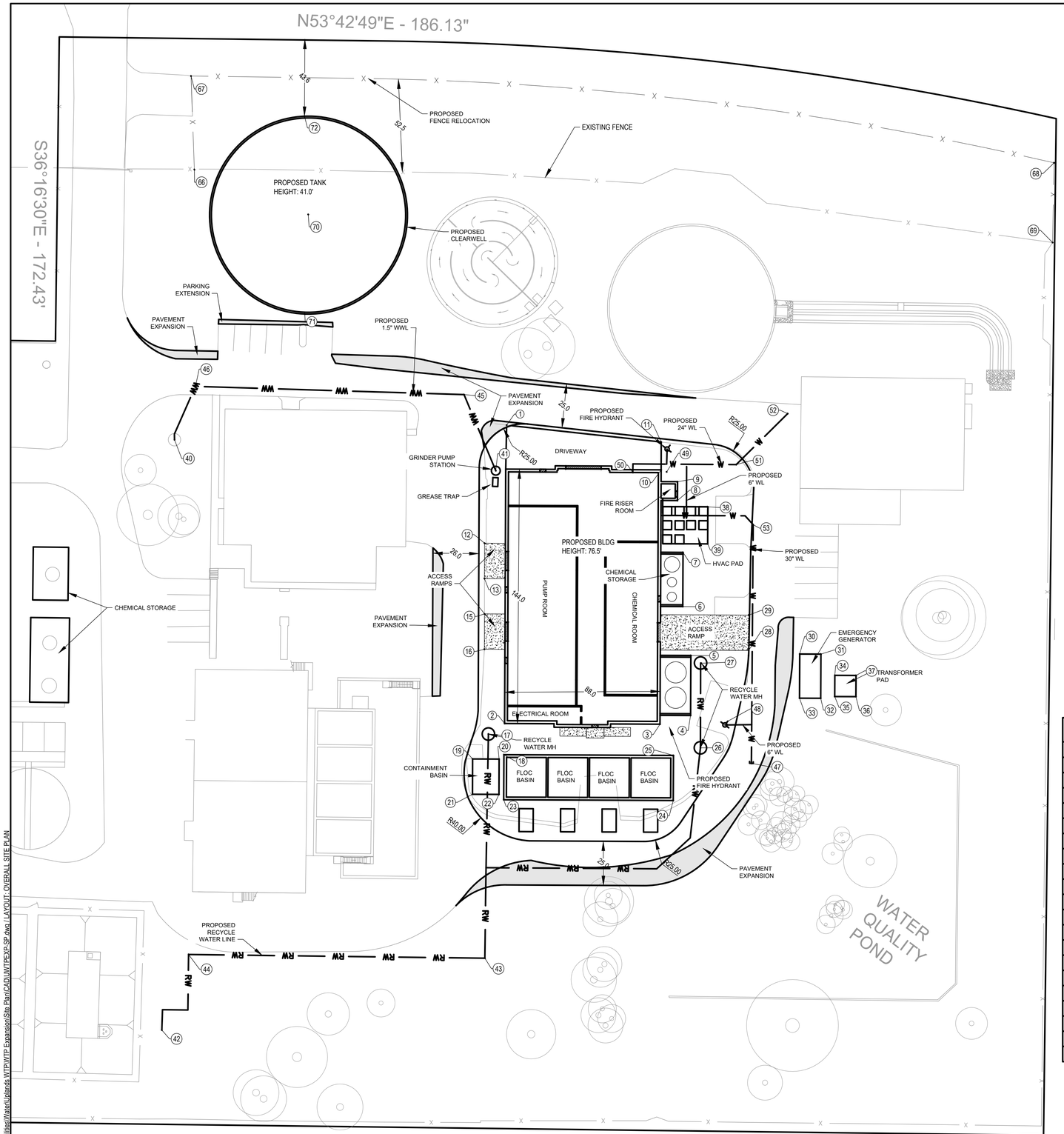
Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144253
REGISTERED PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY: CES
DRAWN BY: BRD
CHECKED BY: JKB
APPROVED BY: CES
DATE: 10/2/2023

FILE NO. UWTPEXP-EX.dwg
LAYOUT: EXISTING CONDITIONS (2)
JOB NO.
SHEET NO. 5 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-EX.dwg LAYOUT: EXISTING CONDITIONS (2)



LEGEND

- PROPERTY BOUNDARY
- EXISTING FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- W — PROPOSED WATERLINE
- WW — PROPOSED WASTEWATER LINE
- RW — PROPOSED RECYCLE WATER LINE
- PROPOSED FIRE HYDRANT
- ASPHALT PAVEMENT EXPANSION
- TREES

0 15 30 45 60

SCALE: 1"=30'

NOTE:
1. PAVING AND FIRE LANE DETAILS SEE SHEET 11.

Existing Structures	Imp. Cover (Sq. Ft.)	Imp. Cover (Ac)
Roads	71,567	1.64
Buildings	23,198	0.53
Open Tanks	23,025	0.53
Closed Tanks	17,968	0.41
Equipment Pads	8,822	0.20
Total Existing IC	144,580	3.32
Proposed Structures	**Imp. Cover (Sq. Ft.)**	**Imp. Cover (Ac)**
Roads	6,336	0.15
Buildings	13,871	0.32
Open Tanks	2,748	0.06
Closed Tanks	9,853	0.23
Equipment Pads	751	0.02
Total Proposed IC	33,559	0.77
Total Structures to be Demolished	6,209	0.14
Total Overall IC	171,930	3.95
Total Site Area		11.16
Percent Impervious Cover		35.4%

NORTHING AND EASTING TABLE			NORTHING AND EASTING TABLE			NORTHING AND EASTING TABLE		
POINT #	NORTHING	EASTING	POINT #	NORTHING	EASTING	POINT #	NORTHING	EASTING
1	10083409.8082	3055041.6783	22	10083240.2319	3055164.0168	42	10083018.8222	3055091.8611
2	10083274.2197	3055142.4018	23	10083239.4424	3055167.9777	43	10083161.3687	3055213.4542
3	10083326.8589	3055212.9178	24	10083296.8692	3055244.9073	44	10083062.0976	3055078.2082
4	10083341.2308	3055223.7602	25	10083317.3036	3055229.6533	45	10083409.1048	3055012.0147
5	10083368.4255	3055203.4597	26	10083329.9456	3055239.2516	46	10083321.3037	3054887.7540
6	10083387.8164	3055183.1354	27	10083368.4857	3055210.7661	47	10083340.2801	3055267.5900
7	10083412.3902	3055164.7915	28	10083390.3845	3055227.8848	48	10083348.6363	3055241.3520
8	10083433.9140	3055144.5908	29	10083406.4311	3055215.8721	49	10083443.2043	3055129.9472
9	10083442.4614	3055138.2103	30	10083406.1897	3055252.1894	50	10083431.3677	3055114.8341
10	10083442.2487	3055126.7811	31	10083413.3680	3055261.8056	51	10083470.1993	3055158.9444
11	10083454.8646	3055117.3090	32	10083393.3343	3055276.7605	52	10083510.7919	3055164.8195
12	10083348.9050	3055071.9437	33	10083386.1559	3055267.1443	53	10083448.8017	3055187.0763
13	10083332.8775	3055083.9071	34	10083408.5015	3055275.3277	66	10083418.9625	3054813.4022
15	10083316.9420	3055095.9961	35	10083398.8853	3055282.5060	67	10083460.0999	3054780.0075
16	10083300.9172	3055107.9584	36	10083406.0637	3055292.1222	68	10083714.9380	3055199.8396
17	10083263.9443	3055138.6886	37	10083415.6799	3055284.9439	69	10083678.4094	3055226.3206
18	10083259.8768	3055152.7237	38	10083441.4345	3055160.4877	70	10083437.4453	3054880.1826
19	10083247.2860	3055140.0327	39	10083424.6061	3055173.0498	71	10083391.2739	3054912.5135
20	10083256.2589	3055152.0529	40	10083290.0300	3054896.4540	72	10083480.5820	3054845.0305
21	10083231.2590	3055151.9966	41	10083385.5102	3055052.3128			

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APP'D DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

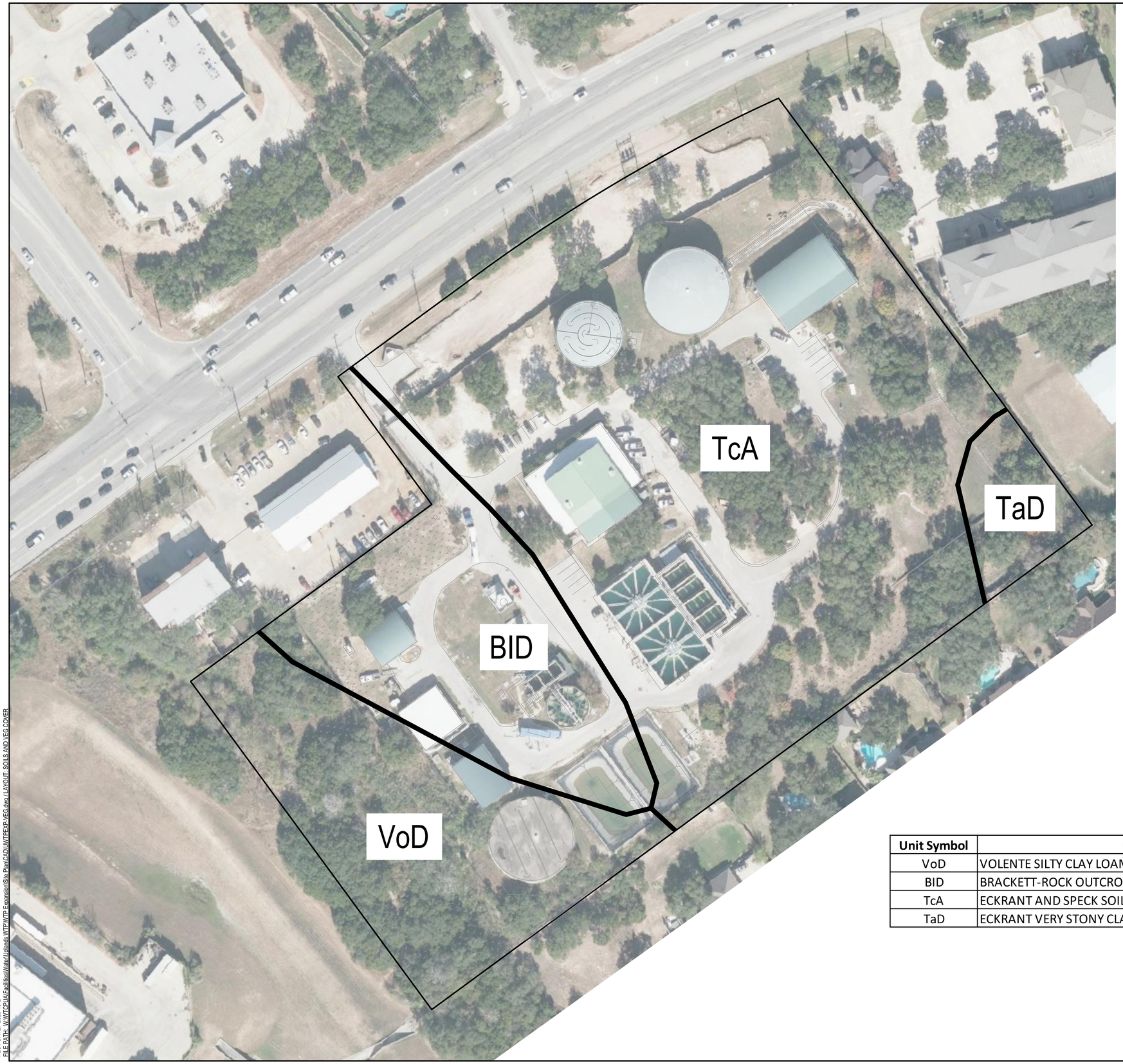
OVERALL SITE PLAN

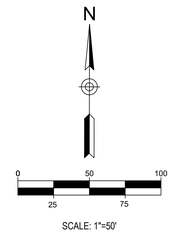
Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-SP.dwg LAYOUT: OVERALL SITE PLAN
JOB NO.	
SHEET NO.	6 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPU\AllFacilities\WaterUplands\WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-SP.dwg | LAYOUT: OVERALL SITE PLAN





LEGEND

PROPERTY BOUNDARY

FENCE

Unit Symbol	Unit Name	Acres	Percent
VoD	VOLENTE SILTY CLAY LOAM, 1-8 PERCENT SLOPES	2.0	18%
BID	BRACKETT-ROCK OUTCROP COMPLEX, 1-12 PERCENT SLOPES	1.9	17%
TcA	ECKRANT AND SPECK SOILS, 0-2 PERCENT SLOPES	7.0	62%
TaD	ECKRANT VERY STONY CLAY, 5-18 PERCENT SLOPES	0.4	3%

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APPD DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

SOILS AND VEGETATIVE COVER

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

MURFEE ENGINEERING COMPANY
1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353

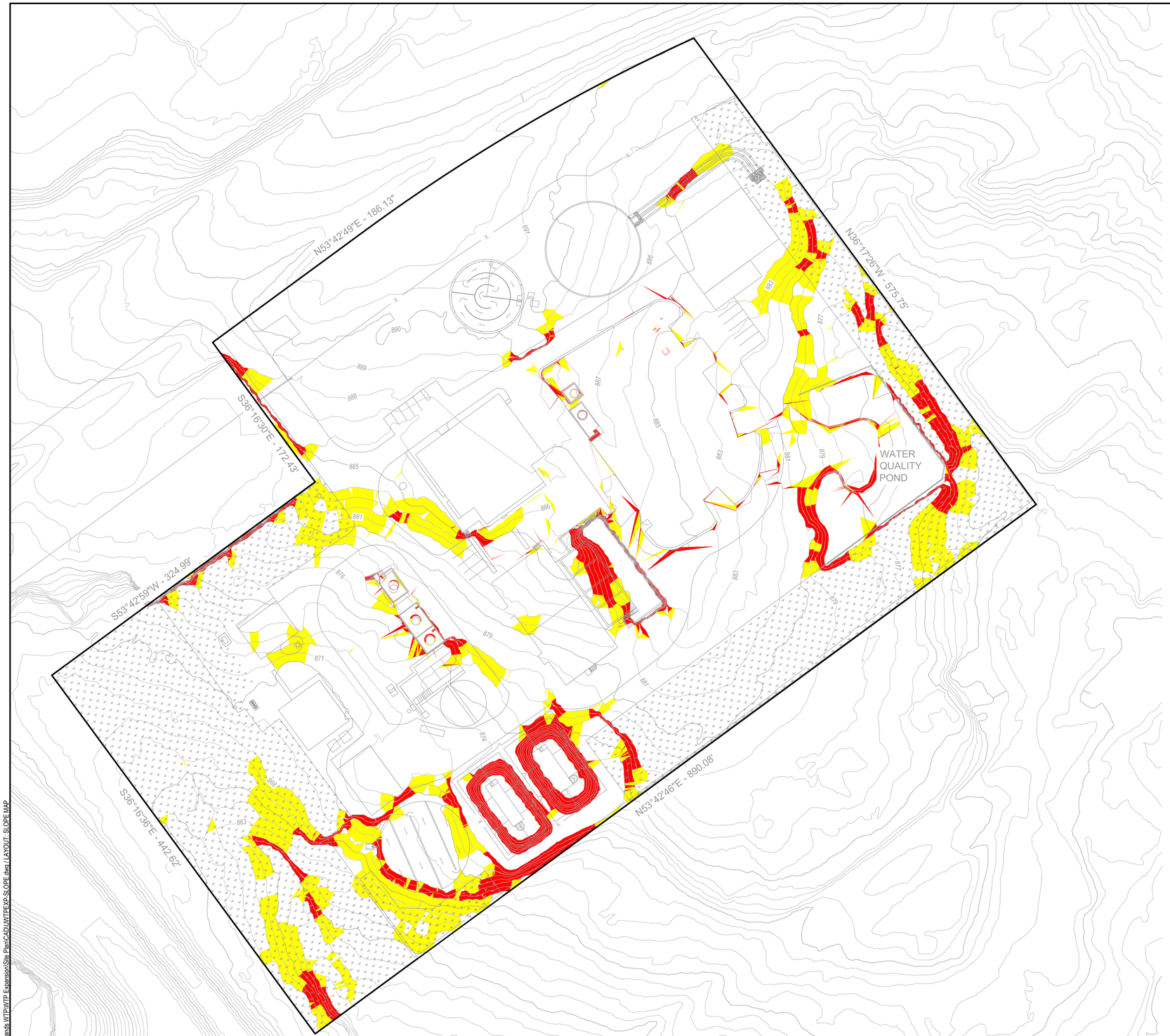
DESIGNED BY: CES
DRAWN BY: BRD
CHECKED BY: JKB
APPROVED BY: CES
DATE: 10/2/2023

FILE NO. UWTPEXP-VEG.dwg
LAYOUT: SOILS AND VEG COVER

JOB NO.

SHEET NO.
7 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-VEG.dwg / LAYOUT: SOILS AND VEG COVER



N

0 50 100
25 75

SCALE: 1"=50'

LEGEND

- PROPERTY BOUNDARY
- FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

SLOPE TABLE				
Number	Minimum Slope	Maximum Slope	Area	Color
1	0.00%	10.00%	9.53	
2	10.00%	20.00%	1.07	
3	20.00%	Vertical	0.56	

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APPD DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

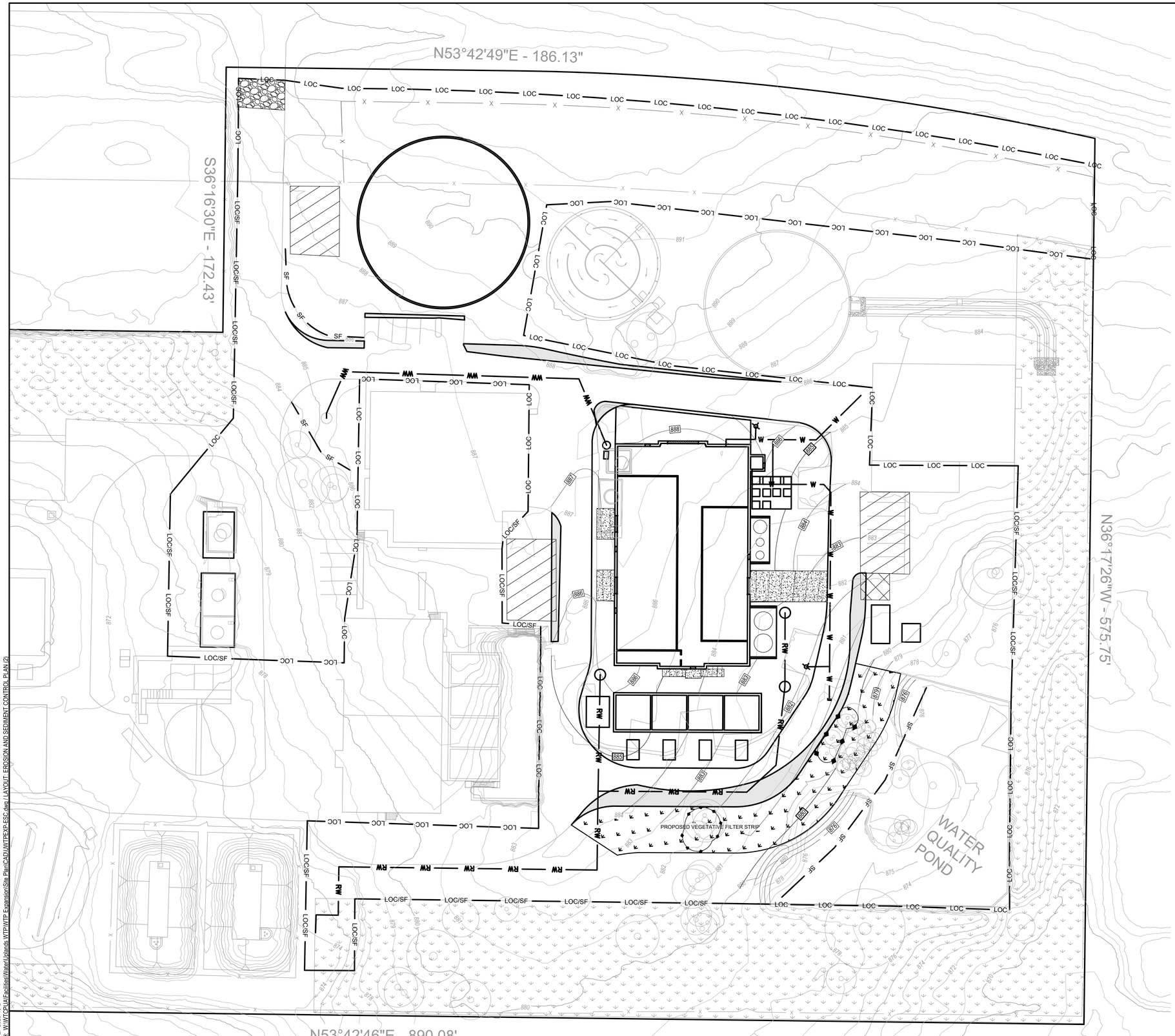
SLOPE MAP

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144259
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-SLOPE.dwg LAYOUT: SLOPE MAP
JOB NO.	
SHEET NO.	8 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-SLOPE.dwg / LAYOUT: SLOPE MAP



N

0 30 60
15 45

SCALE: 1"=30'

LEGEND

- PROPERTY BOUNDARY
- FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- LOC — LOC — LIMITS OF CONSTRUCTION
- SF — SF — SILT FENCE
- LOC/SF — LIMITS OF CONSTRUCTION/SILT FENCE
- PROPOSED VEGETATIVE FILTER STRIP
- EXISTING VEGETATIVE FILTER STRIP
- TREES
- TREE PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY SPOILS SITE/STAGING AREA
- CONCRETE WASHOUT AREA
- W — W — PROPOSED WATERLINE
- WW — PROPOSED WASTEWATER LINE
- PROPOSED FIRE HYDRANT

NOTES:
1. SILT FENCE TO BE PLACED ON UP-GRADIENT SIDE OF DISTURBANCE TO DIRECT RUNOFF AWAY FROM DISTURBANCE.
2. SILT FENCE PLACED DOWN GRADIENT OF DISTURBANCE TO HAVE J-HOOKS AT 100 FOOT INTERVALS.
3. MULCH PROCESSED ON SITE MAY BE USED FOR TEMPORARY STABILIZATION.
4. CONTRACTOR SHALL PROVIDE MEANS OF WATERING FOR DUST CONTROL.
5. NO TREES TO BE REMOVED IN CONSTRUCTION STAGING AREA.
6. NO TREES SHALL BE REMOVED IN LAYING OF PIPE WITHOUT PRIOR APPROVAL FROM ENGINEER OR OWNER UNLESS NOTED ON THE PLANS.
7. INSTALL ORANGE CONSTRUCTION FENCING AT LIMITS OF CONSTRUCTION UNLESS SILT FENCE IS CALLED FOR IN THE PLANS.

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APPD DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

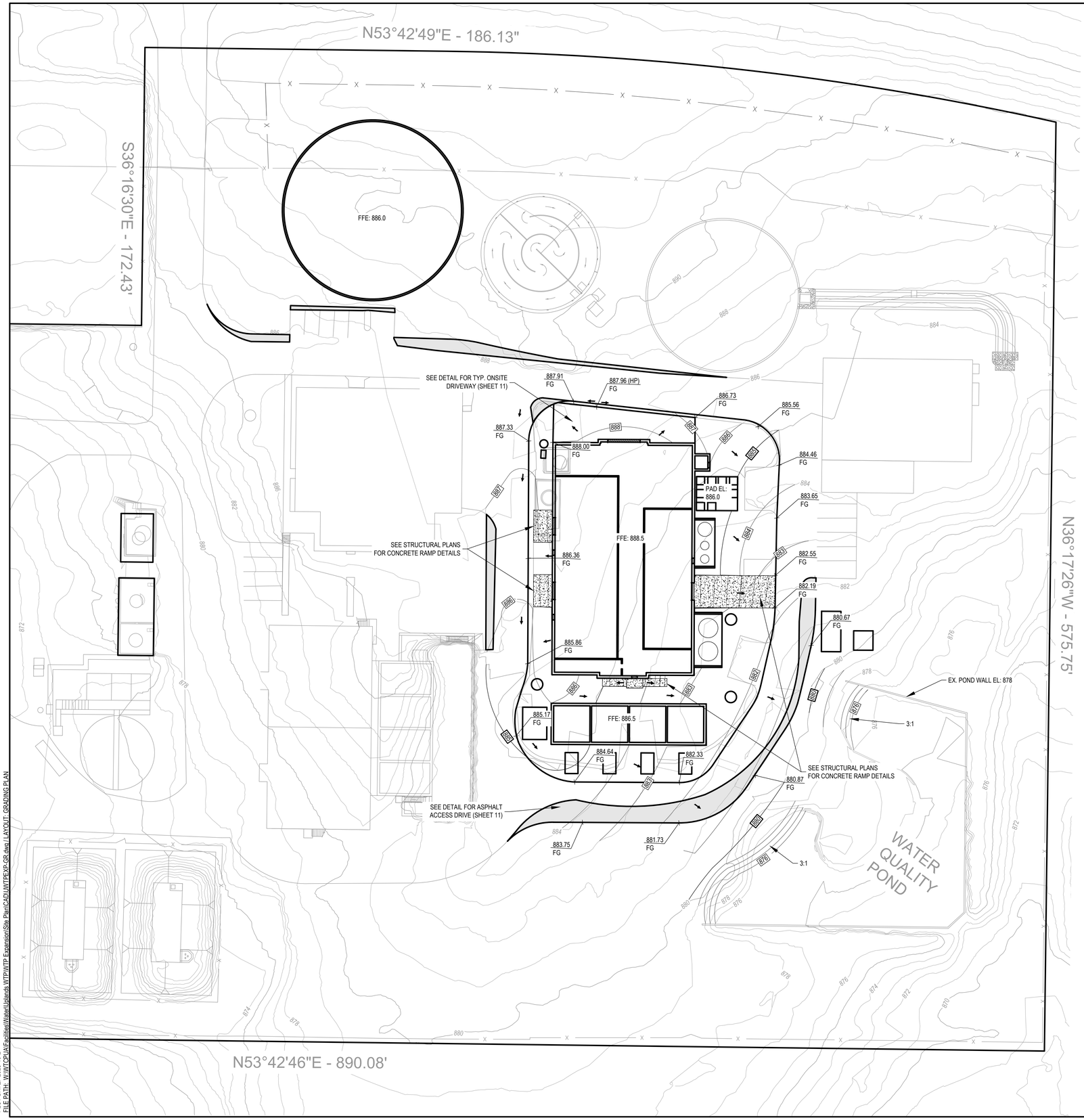
EROSION AND SEDIMENTATION CONTROL PLAN

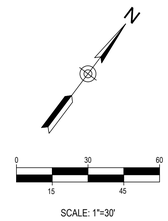
Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-ESC.dwg (LAYOUT: EROSION AND SEDIMENT CONTROL PLAN (2))
JOB NO.	
SHEET NO.	9 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-ESC.dwg (LAYOUT: EROSION AND SEDIMENT CONTROL PLAN (2))





SCALE: 1"=30'

LEGEND

- PROPERTY BOUNDARY
- FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR

NOTES:
1. GRADE 2% AWAY FROM ALL BUILDINGS AND SLABS.
2. CLEARWELL TANK WILL HAVE FFE BELOW GRADE. REGRADE TO EXISTING AROUND TANK.

NO.	DESCRIPTION	DATE	BY	APPD DATE
1	MODIFY XXX SURFACE AND XXX ELEMENT	XXX		01/XX/XX

UPLANDS WATER TREATMENT PLANT EXPANSION SITE PLAN

BEE CAVE, TEXAS

GRADING PLAN

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED PROFESSIONAL ENGINEER
10-02-23

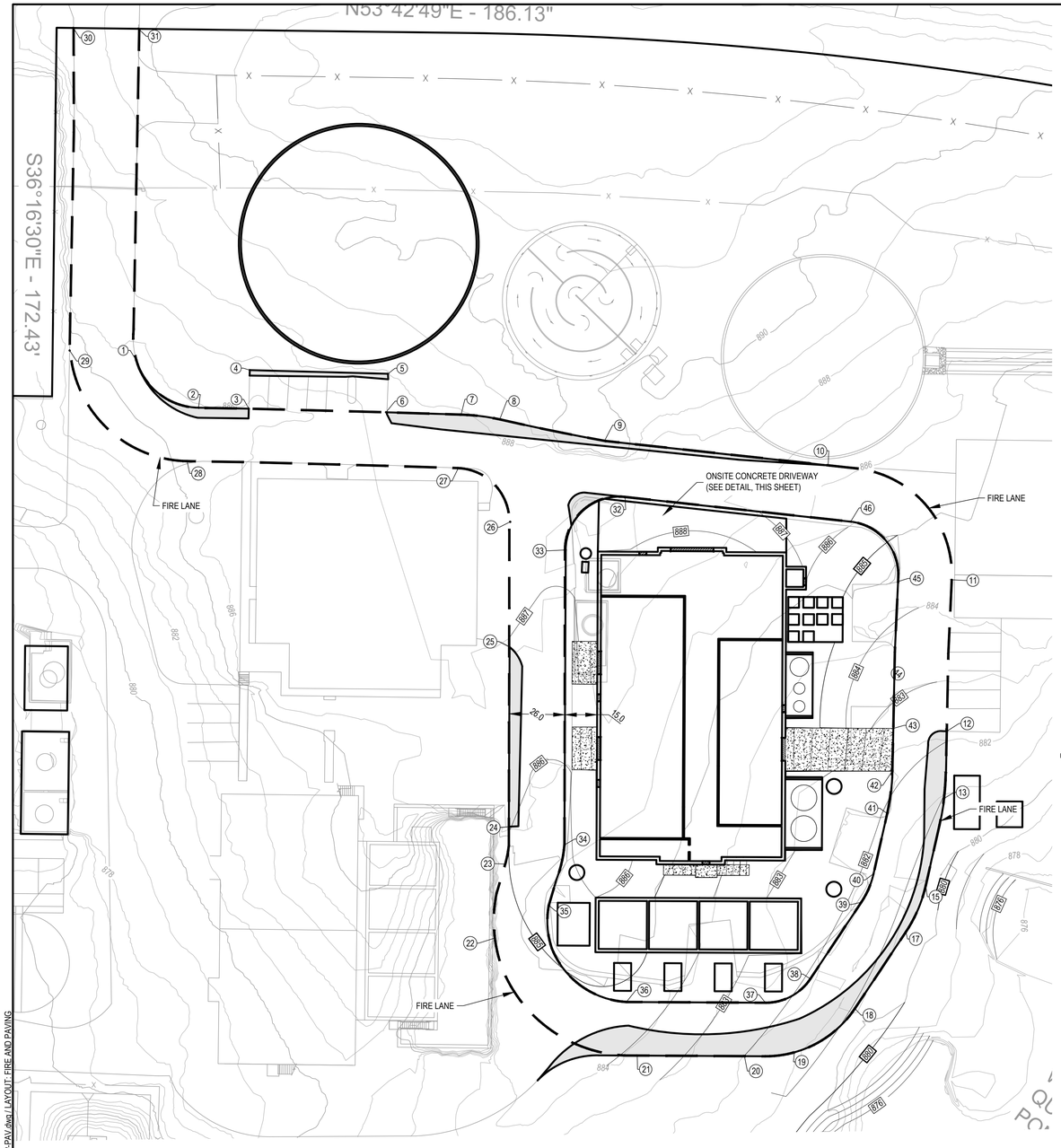
MURFEE ENGINEERING COMPANY
Texas Registered Engineering Firm F-353
1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-GR.dwg LAYOUT: GRADING PLAN
JOB NO.	
SHEET NO.	10 OF 18

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

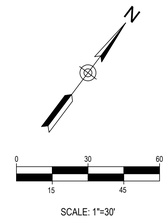
PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Papillies\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-GR.dwg | LAYOUT: GRADING PLAN



Point Table		
Point #	Northing	Easting
1	10083331.3487	3054830.0482
2	10083331.0297	3054866.8756
3	10083344.8132	3054885.8846
4	10083359.4714	3054875.4377
5	10083396.9292	3054927.9948
6	10083382.0184	3054938.0838
7	10083402.2567	3054966.7613
8	10083411.3468	3054982.5090
9	10083432.7756	3055027.6365
10	10083486.5002	3055117.9467
11	10083478.5397	3055196.2289
12	10083420.6488	3055236.9517
13	10083394.9508	3055254.8502
15	10083357.1502	3055272.4940
16	20165708.1772	6103954.3933
17	10083334.2816	3055278.1073
18	10083291.3394	3055280.6250
19	10083257.9808	3055270.3802
20	10083242.5156	3055252.8384
21	10083212.6156	3055212.6507

Point Table		
Point #	Northing	Easting
22	10083216.4543	3055126.5176
23	10083246.9249	3055109.5903
24	10083261.9240	3055100.4167
25	10083329.1483	3055050.2348
26	10083376.0790	3055015.2017
27	10083381.5419	3054980.7418
28	10083307.8967	3054877.5604
29	10083316.1410	3054802.7324
30	10083437.5368	3054713.4226
31	10083455.5374	3054737.9477
32	10083417.6336	3055051.0816
33	10083381.1931	3055043.8294
34	10083270.7501	3055126.2734
35	10083243.7921	3055137.4218
36	10083229.5781	3055193.5724
37	10083268.3760	3055245.6612
38	10083289.8762	3055255.6678
39	10083332.8184	3055253.1502
40	10083346.8914	3055249.6959
41	10083373.1759	3055237.8671

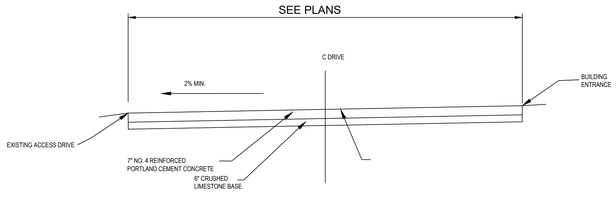
Point Table		
Point #	Northing	Easting
42	10083390.4040	3055227.8360
43	10083406.6813	3055216.2043
44	10083435.6760	3055195.2380
45	10083462.8207	3055176.6908
46	10083471.8175	3055142.1640



SCALE: 1"=30'

LEGEND

- PROPERTY BOUNDARY
- FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- FIRE LANE STRIPING
- ASPHALT PAVEMENT EXPANSION (SEE DETAIL, THIS SHEET)

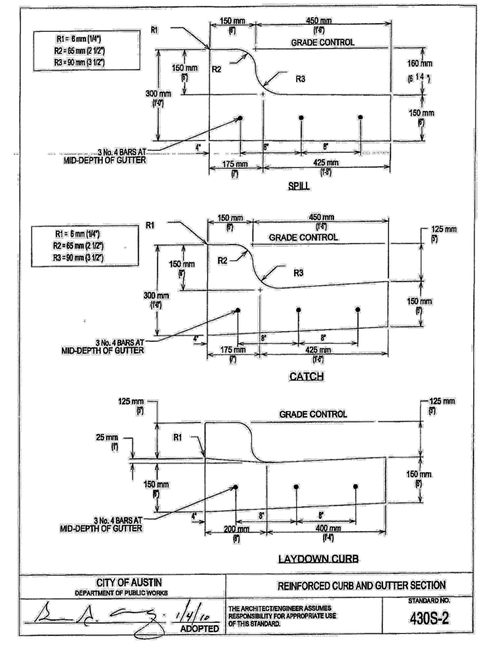


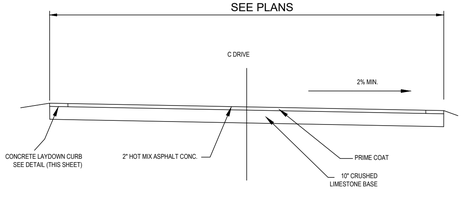
NOTES:

1. CONSTRUCT IN ACCORDANCE WITH BEE CAVE STANDARD SPECIFICATIONS AND GEOTECHNICAL RECOMMENDATIONS FOR RIGID PAVEMENT.
2. SLOPE PER GRADING PLAN.

TYPICAL ONSITE DRIVEWAY SECTION

SCALE: N.T.S.



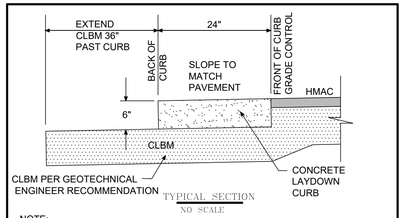


NOTES:

1. STRIP OFF AT LEAST 6" OF THE SURFICIAL SOILS AND ALL ORGANICS.
2. SCARIFY AND COMPACT SUBGRADE TO AT LEAST 95% MAX. DRY DENSITY.
3. COMPACT BASE TO 100% OF MAX. DRY DENSITY. (MINIMUM 2 LIFTS)
4. GRADE TO DRAIN.
5. CONSTRUCT IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS FOR FLEXIBLE PAVEMENT.

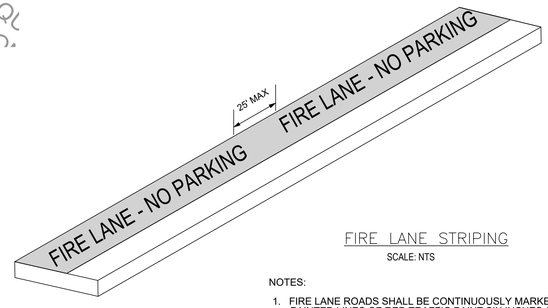
ASPHALT ACCESS DRIVE

SCALE: N.T.S.



NOTE:
INSTALL CURB EXPANSION JOINT DOWEL 40' ON CENTER AND CONTROL JOINTS 10' ON CENTER

CONCRETE LAYDOWN CURB DETAIL



FIRE LANE STRIPING

SCALE: NTS

NOTES:

1. FIRE LANE ROADS SHALL BE CONTINUOUSLY MARKED BY PAINTED LINES OF RED TRAFFIC PAINT SIX INCHES (6") IN WIDTH TO SHOW THE BOUNDARIES OF THE LANE. THE WORDS "FIRE LANE - NO PARKING" SHALL APPEAR IN FOUR INCH (4") WHITE LETTERS AT 25 FEET INTERVALS ON THE RED BORDER MARKINGS. THE STRIPING SHALL BE ON THE VERTICAL FACE OF THE CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN NOT.

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APPD DATE
1	MODIFY XXX SURFACE AND XXX ELEMENT	XXX	01/XX/XX		

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

FIRE AND PAVING

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-PAV.dwg LAYOUT: FIRE AND PAVING
JOB NO.	
SHEET NO.	11 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-PAV.dwg / LAYOUT: FIRE AND PAVING

N

0 50 100
25 75

SCALE: 1"=50'

LEGEND

- PROPERTY BOUNDARY
- FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- VEGETATIVE FILTER STRIP
- EXISTING DRAINAGE BOUNDARY
- EX / XX — DRAINAGE AREA W/ ACREAGE
- FLOW ARROW / DISCHARGE POINTS
- OPEN AIR BASIN (NO STORM WATER DISCHARGE)

NOTES:
1. THE FOOTPRINT OF OPEN TANKS ARE REMOVED FROM DRAINAGE AREA TOTALS. RESULTING IN TOTAL DRAINAGE AREA ACREAGE LESS THAN TOTAL SITE AREA.

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APPD DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

EXISTING DRAINAGE ARE MAP

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

MURFEE ENGINEERING COMPANY
1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-DAM EX.dwg LAYOUT: EX DAM
JOB NO.	
SHEET NO.	12 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-DAM EX.dwg LAYOUT: EX DAM

N

0 50 100
25 75

SCALE: 1"=50'

LEGEND

- PROPERTY BOUNDARY
- FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING VEGETATIVE FILTER STRIP
- PROPOSED VEGETATIVE FILTER STRIP
- PROPOSED DRAINAGE BOUNDARY
- PR / XX — DRAINAGE AREA W/ ACREAGE
- FLOW ARROW / DISCHARGE POINTS
- OPEN AIR BASIN (NO STORM WATER DISCHARGE)
- 100-YR RAINWATER CAPTURE (NO STORM WATER DISCHARGE)

NOTES:
1. THE FOOTPRINT OF BUILDINGS WITH 100-YR RAINFALL CAPTURE AND OPEN TANKS ARE REMOVED FROM DRAINAGE AREA TOTALS. RESULTING IN TOTAL DRAINAGE AREA ACREAGE LESS THAN TOTAL SITE AREA.

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APPD DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

PROPOSED DRAINAGE AREA MAP

STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
Cheyenne Stowers
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-DAM PR.dwg
LAYOUT:	DRAINAGE AREA MAP PROPOSED
JOB NO.	
SHEET NO.	13 OF 18

PLOT DATE: 2023-10-2
FILE PATH: V:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-DAM PR.dwg | LAYOUT: DRAINAGE AREA MAP PROPOSED

PROJECT: WTPCUA UPWTPEXP

CALCULATION OF IMPERVIOUS COVER FOR RUNOFF

Condition	Area	SF	Acres	Imperv. Cover (sf)	Imperv. Cover (%)
PROPOSED	PR1	74333	1.71	11,453	15.4%
	PR2	63650	1.46	23,217	36.5%
	PR3	31368	0.72	1,528	4.9%
	PR4	277350	6.37	102,297	36.9%
	TOTAL	446701	10.25	138,495	31.0%

Condition	Area	SF	Acres	Imperv. Cover (sf)	Imperv. Cover (%)
EXISTING	EX1	74333	1.71	11,309	15.2%
	EX2	83085	1.91	19,922	24.0%
	EX3	31368	0.72	1,320	4.2%
	EX4	274532	6.30	89,004	32.4%
	TOTAL	463318	10.64	121,555	26.2%

*Note: The footprint of buildings with 100-YR rainfall capture and open tanks are removed from drainage area totals. Resulting in total drainage area acreage less than total site area.

RUNOFF COEFFICIENT CALCULATIONS									
AREA	TOTAL (SF)	TOTAL (ACRES)	% IMP. COVER	IMPERV. (ACRES)	PERVIOUS (ACRES)	2 YEAR	10 YEAR	25 YEAR	100 YEAR
PR1	74,333	1.71	15.4%	0.26	1.44	0.36	0.42	0.46	0.54
PR2	63,650	1.46	36.5%	0.53	0.93	0.45	0.52	0.57	0.64
PR3	31,368	0.72	4.9%	0.04	0.69	0.31	0.37	0.41	0.48
PR4	277,350	6.37	36.9%	2.35	4.02	0.46	0.52	0.57	0.64

RUNOFF COEFFICIENT CALCULATIONS									
AREA	TOTAL (SF)	TOTAL (ACRES)	% IMP. COVER	IMPERV. (ACRES)	PERVIOUS (ACRES)	2 YEAR	10 YEAR	25 YEAR	100 YEAR
EX1	74,333	1.71	15.2%	0.26	1.45	0.36	0.42	0.46	0.54
EX2	83,085	1.91	24.0%	0.46	1.45	0.40	0.46	0.51	0.58
EX3	31,368	0.72	4.2%	0.03	0.69	0.31	0.37	0.41	0.48
EX4	274,532	6.30	32.4%	2.04	4.26	0.44	0.50	0.55	0.62

TIME OF CONCENTRATION - EXISTING								
Drng Area	Elev1	Elev2	L (ft)	S (ft/ft)	Flow Type	n	Vel (fps)	t(c)
EX1	892.3	890.5	50	0.036	Sheet	0.200	-	4.9
	890.5	882	233	0.036	SCF-P	-	3.9	1.0
	882	872.5	163	0.058	SCF-U	-	3.9	0.7
							Total (min):	6.6
EX2	892.1	891.3	50	0.016	Sheet	0.200	-	6.8
	891.3	881.6	365	0.027	SCF-P	-	3.3	1.8
	881.6	870.8	190	0.057	SCF-U	-	3.8	0.8
							Total (min):	9.5
EX3	885.6	882.8	50	0.056	Sheet	0.016	-	0.5
	882.8	874.5	246	0.034	SCF-U	-	3.0	1.4
							Total (min):	1.9
EX4	892	889.8	100	0.022	Sheet	0.200	-	10.4
	889.8	869.7	461	0.044	SCF-P	-	4.2	1.8
	869.7	856	258	0.053	SCF-U	-	3.7	1.2
							Total (min):	13.4

TIME OF CONCENTRATION - PROPOSED								
Drng Area	Elev1	Elev2	L (ft)	S (ft/ft)	Flow Type	n	Vel (fps)	t(c)
PR1	892.3	890.5	50	0.036	Sheet	0.200	-	4.9
	890.5	882	233	0.036	SCF-P	-	3.9	1.0
	882	872.5	163	0.058	SCF-U	-	3.9	0.7
							Total (min):	6.6
PR2	892.1	891.3	50	0.016	Sheet	0.200	-	6.8
	891.3	881.6	412	0.024	SCF-P	-	3.1	2.2
	881.6	870.8	190	0.057	SCF-U	-	3.8	0.8
							Total (min):	9.8
PR3	885.6	882.8	50	0.056	Sheet	0.016	-	0.5
	882.8	874.5	246	0.034	SCF-U	-	3.0	1.4
							Total (min):	1.9
PR4	892	889.8	100	0.022	Sheet	0.200	-	10.4
	889.8	869.7	461	0.044	SCF-P	-	4.2	1.8
	869.7	856	258	0.053	SCF-U	-	3.7	1.2
							Total (min):	13.4

CALCULATION OF STORMWATER RUNOFF														
AREA	AC	t(c) (min.)	C(2)	I(2)	Q(2)	C(10)	I(10)	Q(10)	C(25)	I(25)	Q(25)	C(100)	I(100)	Q(100)
PR1	1.7	6.6	0.36	5.83	4	0.42	8.85	6	0.46	10.86	9	0.54	14.18	13
PR2	1.5	9.8	0.45	5.09	3	0.52	7.71	6	0.57	9.46	8	0.64	12.33	12
PR3	0.7	5.0	0.31	6.31	1	0.37	9.61	3	0.41	11.79	4	0.48	15.42	5
PR4	6.4	13.4	0.46	4.48	13	0.52	6.78	23	0.57	8.33	30	0.64	10.87	45
AREA	AC	t(c) (min.)	C(2)	I(2)	Q(2)	C(10)	I(10)	Q(10)	C(25)	I(25)	Q(25)	C(100)	I(100)	Q(100)
EX1	1.7	6.6	0.36	5.83	4	0.42	8.85	6	0.46	10.86	9	0.54	14.18	13
EX2	1.9	9.5	0.40	5.16	4	0.46	7.82	7	0.51	9.59	9	0.58	12.51	14
EX3	0.7	5.0	0.31	6.31	1	0.37	9.61	3	0.41	11.79	3	0.48	15.42	5
EX4	6.3	13.4	0.44	4.48	12	0.50	6.78	21	0.55	8.33	29	0.62	10.87	43

TOTAL RUNOFF				
	2 YR	10 YR	25 YR	100 YR
Proposed Q (cfs)	21	37	50	75
Existing Q (cfs)	21	37	50	75

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO. | DESCRIPTION | BY | DATE | APPROVED | APP'D DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

DRAINAGE CALCULATIONS

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-3204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

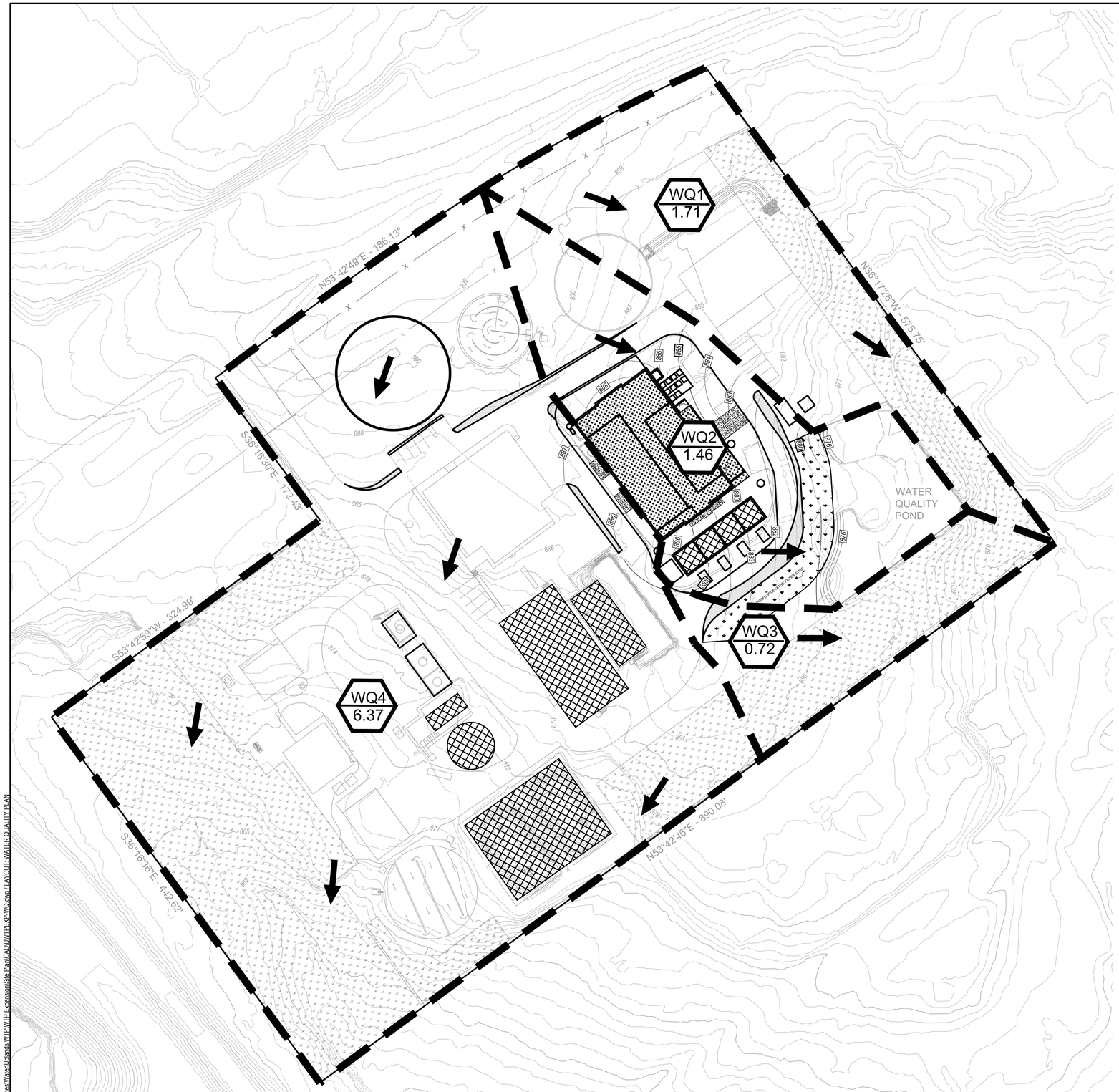
DESIGNED BY: CES
DRAWN BY: BRD
CHECKED BY: JKB
APPROVED BY: CES
DATE: 10/2/2023

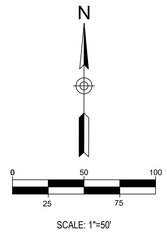
FILE NO. UWTPEXP-DAM PR.dwg
LAYOUT: DRAINAGE CALCULATIONS

JOB NO.

SHEET NO.
14 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-DAM PR.dwg | LAYOUT: DRAINAGE CALCULATIONS





LEGEND

- PROPERTY BOUNDARY
- FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING VEGETATIVE FILTER STRIP
- PROPOSED VEGETATIVE FILTER STRIP
- PROPOSED DRAINAGE BOUNDARY
- WQ XX — DRAINAGE AREA W/ ACREAGE
- FLOW ARROW / DISCHARGE POINTS
- OPEN AIR BASIN (NO STORM WATER DISCHARGE)
- 100-YR RAINWATER CAPTURE (NO STORM WATER DISCHARGE)

NOTES:
1. THE FOOTPRINT OF BUILDINGS WITH 100-YR RAINFALL CAPTURE AND OPEN TANKS ARE REMOVED FROM DRAINAGE AREA TOTALS. RESULTING IN TOTAL DRAINAGE AREA ACREAGE LESS THAN TOTAL SITE AREA.

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APPD DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

WATER QUALITY PLAN

STATE OF TEXAS
CHEYENNE E. STOWERS
144259
REGISTERED
PROFESSIONAL ENGINEER
Cheyenne Stowers
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BRD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-WQ.dwg LAYOUT: WATER QUALITY PLAN
JOB NO.	
SHEET NO.	15 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-WQ.dwg | LAYOUT: WATER QUALITY PLAN

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: WTCPUA UPLANDS WTP EXPANSION
Date Prepared: 05/01/0223

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 =	**Travis**	
Total project area included in plan * =	**10.25**	acres
Predevelopment impervious area within the limits of the plan * =	**0.00**	acres
Total post-development impervious area within the limits of the plan* =	**3.18**	acres
Total post-development impervious cover fraction * =	**0.31**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**2767**	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = **4**

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

Drainage Basin/Outfall Area No. = **WQ1**

Total drainage basin/outfall area =	**1.71**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.26**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.15**	
$L_{M\ THIS\ BASIN}$ =	**229**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Vegetated Filter Strips**
Removal efficiency = **85** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	**1.71**	acres
A_I =	**0.26**	acres
A_P =	**1.44**	acres
L_R =	**269**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = **250** lbs.
F = **0.93**

16. Vegetated Filter Strips Designed as Required in RG-348, pages 3-55 to 3-57

There are no calculations required for determining the load or size of vegetative filter strips.
The 80% removal is provided when the contributing drainage area does not exceed 72 feet (direction of flow) and the sheet flow leaving the impervious cover is directed across 15 feet of engineered filter strips with maximum slope of 20% or across 50 feet of natural vegetation with a maximum slope of 10%. There can be a break in grade as long as no slope exceeds 20%.

If vegetative filter strips are proposed for an interim permanent BMP, they may be sized as described on Page 3-56 of RG-348.

PROJECT: WTCPUA UPLANDS WTP EXPANSION
CALCULATION OF IMPERVIOUS COVER

AREA	SF	ACRES	Imperv. SF	Imperv. Acres	Imperv. Cover
WQ1	74,333	1.71	11,453	0.26	15.4%
WQ2	63,650	1.46	23,217	0.53	36.5%
WQ3	31,368	0.72	1,528	0.04	4.9%
WQ4	277,350	6.37	102,297	2.35	36.9%
TOTAL	446701	10.25	138,495	3.18	31.0%

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: WTCPUA UPLANDS WTP EXPANSION
Date Prepared: 03/01/23

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 =	**Travis**	
Total project area included in plan * =	**10.25**	acres
Predevelopment impervious area within the limits of the plan * =	**0.00**	acres
Total post-development impervious area within the limits of the plan* =	**3.18**	acres
Total post-development impervious cover fraction * =	**0.31**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**2767**	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = **4**

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

Drainage Basin/Outfall Area No. = **WQ2**

Total drainage basin/outfall area =	**1.46**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.53**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.36**	
$L_{M\ THIS\ BASIN}$ =	**464**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Extended Detention**
Removal efficiency = **75** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	**1.46**	acres
A_I =	**0.53**	acres
A_P =	**0.93**	acres
L_R =	**455**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = **410** lbs.
F = **0.90**

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

Rainfall Depth =	**1.70**	inches
Post Development Runoff Coefficient =	**0.29**	
On-site Water Quality Volume =	**2615**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**523**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**3138**	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.

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

Required Water Quality Volume for extended detention basin = **3138** cubic feet

16. Vegetated Filter Strips Designed as Required in RG-348, pages 3-55 to 3-57

There are no calculations required for determining the load or size of vegetative filter strips.
The 80% removal is provided when the contributing drainage area does not exceed 72 feet (direction of flow) and the sheet flow leaving the impervious cover is directed across 15 feet of engineered filter strips with maximum slope of 20% or across 50 feet of natural vegetation with a maximum slope of 10%. There can be a break in grade as long as no slope exceeds 20%.

If vegetative filter strips are proposed for an interim permanent BMP, they may be sized as described on Page 3-56 of RG-348.

19. BMPs Installed in a Series Designed as Required in RG-348, page 3-32

Michael E. Barrett, Ph.D.. P.E. recommended that the coefficient for E_2 be changed from 0.5 to 0.65 on May 3, 2006

NET EFFICIENCY OF THE BMPs IN THE SERIES

$E_{TOT} = [1 - ((1 - E_1) \times (1 - 0.65E_2) \times (1 - 0.25E_3))] \times 100$ = 93.95 percent

EFFICIENCY OF FIRST BMP IN THE SERIES = E_1 = 85.00 percent

EFFICIENCY OF THE SECOND BMP IN THE SERIES = E_2 = 75.00 percent

EFFICIENCY OF THE THIRD BMP IN THE SERIES = E_3 = 85.00 percent

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
(A_I AND A_P VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT} \times P \times (A_I \times 34.6 \times A_P \times 0.54)$ = 569.47 lbs

Desired $L_{M\ THIS\ BASIN}$ = **515**
F= 0.90

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: WTCPUA UPLANDS WTP EXPANSION
Date Prepared: 03/01/23

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 =	**Travis**	
Total project area included in plan * =	**10.25**	acres
Predevelopment impervious area within the limits of the plan * =	**0.00**	acres
Total post-development impervious area within the limits of the plan* =	**3.18**	acres
Total post-development impervious cover fraction * =	**0.31**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**2767**	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = **4**

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

Drainage Basin/Outfall Area No. = **WQ3**

Total drainage basin/outfall area =	**0.72**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.04**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.05**	
$L_{M\ THIS\ BASIN}$ =	**31**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Vegetated Filter Strips**
Removal efficiency = **85** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	**0.72**	acres
A_I =	**0.04**	acres
A_P =	**0.69**	acres
L_R =	**43**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = **39** lbs.
F = **0.91**

16. Vegetated Filter Strips Designed as Required in RG-348, pages 3-55 to 3-57

There are no calculations required for determining the load or size of vegetative filter strips.
The 80% removal is provided when the contributing drainage area does not exceed 72 feet (direction of flow) and the sheet flow leaving the impervious cover is directed across 15 feet of engineered filter strips with maximum slope of 20% or across 50 feet of natural vegetation with a maximum slope of 10%. There can be a break in grade as long as no slope exceeds 20%.

If vegetative filter strips are proposed for an interim permanent BMP, they may be sized as described on Page 3-56 of RG-348.

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APP. DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

WQ CALCULATIONS 1

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144258
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY: CES
DRAWN BY: BRD
CHECKED BY: JKB
APPROVED BY: CES
DATE: 10/2/2023
FILE NO. UWTPEXP-WQ.dwg
LAYOUT: WQ CALCULATIONS 1
JOB NO.
SHEET NO. 16 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-WQ.dwg | LAYOUT: WQ CALCULATIONS 1

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: WTCPUA UPLANDS WTP EXPANSION
Date Prepared: 03/01/23

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 =	**Travis**	
Total project area included in plan * =	**10.25**	acres
Predevelopment impervious area within the limits of the plan * =	**0.00**	acres
Total post-development impervious area within the limits of the plan* =	**3.18**	acres
Total post-development impervious cover fraction * =	**0.31**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**2767**	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = **4**

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

Drainage Basin/Outfall Area No. = **WQ4**

Total drainage basin/outfall area =	**6.37**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**2.35**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.37**	
$L_{M\ THIS\ BASIN}$ =	**2044**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Vegetated Filter Strips**
Removal efficiency = **85** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area

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

A_C =	**6.37**	acres
A_I =	**2.35**	acres
A_P =	**4.02**	acres
L_R =	**2269**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**2050**	lbs.
F =	**0.90**	

16. Vegetated Filter Strips Designed as Required in RG-348, pages 3-55 to 3-57

There are no calculations required for determining the load or size of vegetative filter strips.
The 80% removal is provided when the contributing drainage area does not exceed 72 feet (direction of flow) and the sheet flow leaving the impervious cover is directed across 15 feet of engineered filter strips with maximum slope of 20% or across 50 feet of natural vegetation with a maximum slope of 10%. There can be a break in grade as long as no slope exceeds 20%.

If vegetative filter strips are proposed for an interim permanent BMP, they may be sized as described on Page 3-56 of RG-348.

UPLANDS WTP EXPANSION
TCEQ EDWARDS WATER QUALITY PLAN SUMMARY
(RG-348, JULY, 2005)

COUNTY: TRAVIS
RAIN: 32 inches
TSS : 80 mg/l (undeveloped)
170 mg/l (developed)
RUNOFF COEFF. 0.03 R_V (Pervious)
0.9 R_V (Impervious)

AREA	ACRES	IMPERV.	IMPERV. ACRES	PERV. ACRES	REQ'D REMOVAL (Eq. 3.2)	BMP TYPE	TSS REDUC-TION (Table 3-3)	ACTUAL LOAD REMOVED	RAINFALL DEPTH FOR FRACTION OF RUNOFF TO TREAT (Table 3-4)	CAP. VOL. (Rainfall x Eq. 3.11)	1.2^WQV (cf), 1.2 x Eq. 3.10	VOL. PROVIDED (CF)
WQ1	1.71	15%	0.26	1.44	229	VFS	85%	250	NA	NA	NA	NA
WQ2	1.46	36%	0.53	0.93	464	VFS,ED,VFS	93%	515	1.70	0.49	3,138	6274[1]
WQ3	0.72	5%	0.04	0.69	31	VFS	85%	39	NA	NA	NA	NA
WQ4	6.37	37%	2.35	4.02	2044	VFS	85%	2050	NA	NA	NA	NA
TOTAL	**10.25**	**31.0%**	**3.2**	**7.1**	**2,767**			**2,854**				

BMP CODE
ED = EXTENDED DETENTION
VFS = VEGETATIVE FILTER STRIP
1. Design WQV per the original 2003 approved plans.

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCPUA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-WQ.dwg LAYOUT: WQ CALCULATIONS 2

City of Bee Cave
Pollutant Load Calculations

STEP 1. ENTER SITE DATA

Project Name:	WTCPUA UPLANDS WTP EXP
Drainage Area ID:	WQ1
Drainage Area (ac.):	1.71
Existing Condition Impervious Cover (%):	0.0
Proposed Condition Impervious Cover (%):	15.4

STEP 2. DETERMINE POLLUTANT LOADING

Pollutant	Pre-Developed Loading, Lpre (lb/yr)	Developed Loading, Ldev (lb/yr)
Total Suspended Solids (TSS)	75.9	238.3
Total Phosphorus (TP)	0.1	0.6
Oil and Grease (O&G)	0.0	7.2

**Pollutant loading: Equation 1 from COA ECM 1.6.9.3.B*
$L = C * V * A_n * CF$
Where:
L = Pollutant load (lb/yr)
C = Pollutant concentration (mg/L), see 'Lookup' tab
V = Annual runoff volume (in/yr), see 'Lookup' tab
A_n = Area of drainage area (acres), see COA ECM Section 1.6.9.3.B.2
CF = Conversion factor CF (pollutant in mg/L) = 0.2267 (lb-L/mg-Ac-in)

* Zinc is not included in the analysis because it's not a common pollutant linked to development. However, zinc will need to be mitigated for if using crumb rubber for artificial turf installations.

STEP 3. DETERMINE BMP POLLUTANT LOAD REMOVAL EFFICIENCIES

BMP Order in Series	BMP Type	Removal Efficiency (%)		
		TSS	TP	O&G
1	Vegetative Filter Strip	85.0	70.0	85.0
2	None	0.0	0.0	0.0
3	None	0.0	0.0	0.0
	TOTAL EFFICIENCY	**85.0**	**70.0**	**85.0**

*TSS removal efficiency and O&G (not explicity stated, but related to TSS) are from TCEQ RG-348 Table 3-1, page 3-4
**TP removal is from LCRA Technical Manual Table 2-6, page 2-11
****Removal Efficiency Equation from COBC ECM Section 1.6.2.G: Water Quality Facilities In Series*

$$E_{TOT} = \left[1 - \left(1 - \frac{E_1}{100}\right)\left(1 - 0.65\frac{E_2}{100}\right)\left(1 - 0.25 * \frac{E_3}{100}\right)\right] * 100$$

Where
E_{TOT} = Total efficiency (%)
E_1 = Efficiency of first BMP in series (%)
E_2 = Efficiency of second BMP in series (%)
E_3 = Efficiency of third BMP in series (%)

STEP 4. CALCULATE TOTAL POLLUTANT LOAD REMOVAL

Pollutant	Required Removal*		Total BMP Removal**		Meets Criteria?
	(%)	(lb/yr)	(%)	(lb/yr)	
Total Suspended Solids (TSS)	90.0	146.2	85.0	202.6	YES
Total Phosphorus (TP)	90.0	0.5	70.0	0.4	NO
Oil and Grease (O&G)	90.0	6.5	85.0	6.1	NO

Removal requirements per Article 7, Section 7.3.2.C of City of Bee Cave UDC (% removal of **increased loading from development)*
***Amount removed by BMP per year equation: $R = L_{dev} * (E_{TOT}/100)$*

City of Bee Cave
Pollutant Load Calculations

STEP 1. ENTER SITE DATA

Project Name:	WTCPUA UPLANDS WTP EXP
Drainage Area ID:	WQ2
Drainage Area (ac.):	1.46
Existing Condition Impervious Cover (%):	0.0
Proposed Condition Impervious Cover (%):	36.5

STEP 2. DETERMINE POLLUTANT LOADING

Pollutant	Pre-Developed Loading, Lpre (lb/yr)	Developed Loading, Ldev (lb/yr)
Total Suspended Solids (TSS)	64.8	434.8
Total Phosphorus (TP)	0.0	1.0
Oil and Grease (O&G)	0.0	13.1

**Pollutant loading: Equation 1 from COA ECM 1.6.9.3.B*
$L = C * V * A_n * CF$
Where:
L = Pollutant load (lb/yr)
C = Pollutant concentration (mg/L), see 'Lookup' tab
V = Annual runoff volume (in/yr), see 'Lookup' tab
A_n = Area of drainage area (acres), see COA ECM Section 1.6.9.3.B.2
CF = Conversion factor CF (pollutant in mg/L) = 0.2267 (lb-L/mg-Ac-in)

* Zinc is not included in the analysis because it's not a common pollutant linked to development. However, zinc will need to be mitigated for if using crumb rubber for artificial turf installations.

STEP 3. DETERMINE BMP POLLUTANT LOAD REMOVAL EFFICIENCIES

BMP Order in Series	BMP Type	Removal Efficiency (%)		
		TSS	TP	O&G
1	Vegetative Filter Strip	85.0	70.0	85.0
2	Extended Detention	75.0	45.0	75.0
3	Vegetative Filter Strip	85.0	70.0	85.0
	TOTAL EFFICIENCY	**93.9**	**82.5**	**93.9**

*TSS removal efficiency and O&G (not explicity stated, but related to TSS) are from TCEQ RG-348 Table 3-1, page 3-4
**TP removal is from LCRA Technical Manual Table 2-6, page 2-11
****Removal Efficiency Equation from COBC ECM Section 1.6.2.G: Water Quality Facilities In Series*

$$E_{TOT} = \left[1 - \left(1 - \frac{E_1}{100}\right)\left(1 - 0.65\frac{E_2}{100}\right)\left(1 - 0.25 * \frac{E_3}{100}\right)\right] * 100$$

Where
E_{TOT} = Total efficiency (%)
E_1 = Efficiency of first BMP in series (%)
E_2 = Efficiency of second BMP in series (%)
E_3 = Efficiency of third BMP in series (%)

STEP 4. CALCULATE TOTAL POLLUTANT LOAD REMOVAL

Pollutant	Required Removal*		Total BMP Removal**		Meets Criteria?
	(%)	(lb/yr)	(%)	(lb/yr)	
Total Suspended Solids (TSS)	90.0	333.0	93.9	408.5	YES
Total Phosphorus (TP)	90.0	0.9	82.5	0.9	YES
Oil and Grease (O&G)	90.0	11.8	93.9	12.3	YES

Removal requirements per Article 7, Section 7.3.2.C of City of Bee Cave UDC (% removal of **increased loading from development)*
***Amount removed by BMP per year equation: $R = L_{dev} * (E_{TOT}/100)$*

COBC Water Quality Volume (cf) = 3524

City of Bee Cave
Pollutant Load Calculations

STEP 1. ENTER SITE DATA

Project Name:	WTCPUA UPLANDS WTP EXP
Drainage Area ID:	WQ3
Drainage Area (ac.):	0.72
Existing Condition Impervious Cover (%):	0.0
Proposed Condition Impervious Cover (%):	4.9

STEP 2. DETERMINE POLLUTANT LOADING

Pollutant	Pre-Developed Loading, Lpre (lb/yr)	Developed Loading, Ldev (lb/yr)
Total Suspended Solids (TSS)	32.0	52.2
Total Phosphorus (TP)	0.0	0.1
Oil and Grease (O&G)	0.0	1.6

**Pollutant loading: Equation 1 from COA ECM 1.6.9.3.B*
$L = C * V * A_n * CF$
Where:
L = Pollutant load (lb/yr)
C = Pollutant concentration (mg/L), see 'Lookup' tab
V = Annual runoff volume (in/yr), see 'Lookup' tab
A_n = Area of drainage area (acres), see COA ECM Section 1.6.9.3.B.2
CF = Conversion factor CF (pollutant in mg/L) = 0.2267 (lb-L/mg-Ac-in)

* Zinc is not included in the analysis because it's not a common pollutant linked to development. However, zinc will need to be mitigated for if using crumb rubber for artificial turf installations.

STEP 3. DETERMINE BMP POLLUTANT LOAD REMOVAL EFFICIENCIES

BMP Order in Series	BMP Type	Removal Efficiency (%)		
		TSS	TP	O&G
1	Vegetative Filter Strip	85.0	70.0	85.0
2	None	0.0	0.0	0.0
3	None	0.0	0.0	0.0
	TOTAL EFFICIENCY	**85.0**	**70.0**	**85.0**

*TSS removal efficiency and O&G (not explicity stated, but related to TSS) are from TCEQ RG-348 Table 3-1, page 3-4
**TP removal is from LCRA Technical Manual Table 2-6, page 2-11
****Removal Efficiency Equation from COBC ECM Section 1.6.2.G: Water Quality Facilities In Series*

$$E_{TOT} = \left[1 - \left(1 - \frac{E_1}{100}\right)\left(1 - 0.65\frac{E_2}{100}\right)\left(1 - 0.25 * \frac{E_3}{100}\right)\right] * 100$$

Where
E_{TOT} = Total efficiency (%)
E_1 = Efficiency of first BMP in series (%)
E_2 = Efficiency of second BMP in series (%)
E_3 = Efficiency of third BMP in series (%)

STEP 4. CALCULATE TOTAL POLLUTANT LOAD REMOVAL

Pollutant	Required Removal*		Total BMP Removal**		Meets Criteria?
	(%)	(lb/yr)	(%)	(lb/yr)	
Total Suspended Solids (TSS)	90.0	18.2	85.0	44.3	YES
Total Phosphorus (TP)	90.0	0.1	85.0	0.1	YES
Oil and Grease (O&G)	90.0	1.4	85.0	1.3	NO

Removal requirements per Article 7, Section 7.3.2.C of City of Bee Cave UDC (% removal of **increased loading from development)*
***Amount removed by BMP per year equation: $R = L_{dev} * (E_{TOT}/100)$*

City of Bee Cave
Pollutant Load Calculations

STEP 1. ENTER SITE DATA

Project Name:	WTCPUA UPLANDS WTP EXP
Drainage Area ID:	WQ4
Drainage Area (ac.):	6.37
Existing Condition Impervious Cover (%):	0.0
Proposed Condition Impervious Cover (%):	36.9

STEP 2. DETERMINE POLLUTANT LOADING

Pollutant	Pre-Developed Loading, Lpre (lb/yr)	Developed Loading, Ldev (lb/yr)
Total Suspended Solids (TSS)	282.9	1917.8
Total Phosphorus (TP)	0.2	4.6
Oil and Grease (O&G)	0.0	57.8

**Pollutant loading: Equation 1 from COA ECM 1.6.9.3.B*
$L = C * V * A_n * CF$
Where:
L = Pollutant load (lb/yr)
C = Pollutant concentration (mg/L), see 'Lookup' tab
V = Annual runoff volume (in/yr), see 'Lookup' tab
A_n = Area of drainage area (acres), see COA ECM Section 1.6.9.3.B.2
CF = Conversion factor CF (pollutant in mg/L) = 0.2267 (lb-L/mg-Ac-in)

* Zinc is not included in the analysis because it's not a common pollutant linked to development. However, zinc will need to be mitigated for if using crumb rubber for artificial turf installations.

STEP 3. DETERMINE BMP POLLUTANT LOAD REMOVAL EFFICIENCIES

BMP Order in Series	BMP Type	Removal Efficiency (%)		
		TSS	TP	O&G
1	Vegetative Filter Strip	85.0	70.0	85.0
2	None	0.0	0.0	0.0
3	None	0.0	0.0	0.0
	TOTAL EFFICIENCY	**85.0**	**70.0**	**85.0**

*TSS removal efficiency and O&G (not explicity stated, but related to TSS) are from TCEQ RG-348 Table 3-1, page 3-4
**TP removal is from LCRA Technical Manual Table 2-6, page 2-11
****Removal Efficiency Equation from COBC ECM Section 1.6.2.G: Water Quality Facilities In Series*

$$E_{TOT} = \left[1 - \left(1 - \frac{E_1}{100}\right)\left(1 - 0.65\frac{E_2}{100}\right)\left(1 - 0.25 * \frac{E_3}{100}\right)\right] * 100$$

Where
E_{TOT} = Total efficiency (%)
E_1 = Efficiency of first BMP in series (%)
E_2 = Efficiency of second BMP in series (%)
E_3 = Efficiency of third BMP in series (%)

STEP 4. CALCULATE TOTAL POLLUTANT LOAD REMOVAL

Pollutant	Required Removal*		Total BMP Removal**		Meets Criteria?
	(%)	(lb/yr)	(%)	(lb/yr)	
Total Suspended Solids (TSS)	90.0	1471.5	85.0	1630.2	YES
Total Phosphorus (TP)	90.0	3.9	70.0	3.2	NO
Oil and Grease (O&G)	90.0	52.0	85.0	49.1	NO

Removal requirements per Article 7, Section 7.3.2.C of City of Bee Cave UDC (% removal of **increased loading from development)*
***Amount removed by BMP per year equation: $R = L_{dev} * (E_{TOT}/100)$*

A WAIVER FROM CITY OF BEE CAVE IS BEING REQUESTED FOR WQ AREAS 1, 3, & 4.

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS THE CITY OF BEE CAVE AND WTCPUA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

NO.	DESCRIPTION	BY	DATE	APPROVED	APPD DATE

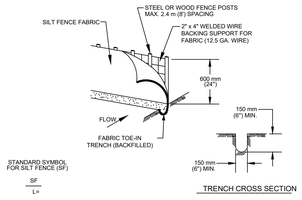
UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

WQ CALCULATIONS 2

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

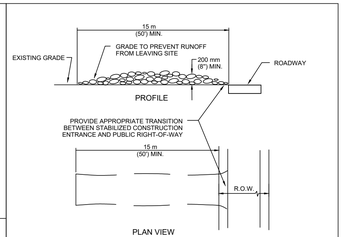
DESIGNED BY: CES
DRAWN BY: BRD
CHECKED BY: JKB
APPROVED BY: CES
DATE: 10/2/2023
FILE NO. UWTPEXP-WQ.dwg
LAYOUT: WQ CALCULATIONS 2
JOB NO.
SHEET NO. 17 OF 18



NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 inches) DEPTH, USE STEEL POSTS.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 inches) DEEP AND 150 mm (6 inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

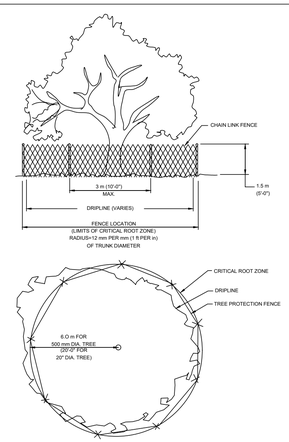
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SILT FENCE	
RECORD COPY SIGNED BY MORGAN BYARS 09/01/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 642S-1



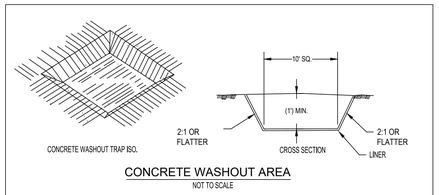
NOTES:

1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE	
RECORD COPY SIGNED BY J. PATRICK MURPHY 5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROPTECTION FENCE TYPE A - CHAIN LINK	
RECORD COPY SIGNED BY J. PATRICK MURPHY 11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-2



CONCRETE WASHOUT AREA

NOT TO SCALE

NO.	DESCRIPTION	BY	DATE	APPROVED	APP'D DATE

UPLANDS WATER TREATMENT PLANT EXPANSION
SITE PLAN
BEE CAVE, TEXAS

DETAILS

Cheyenne Stowers
STATE OF TEXAS
CHEYENNE E. STOWERS
144255
REGISTERED
PROFESSIONAL ENGINEER
10-02-23

1101 CAPITAL OF TEXAS HIGHWAY SOUTH
BUILDING D, SUITE 110
AUSTIN, TEXAS 78746
(512) 327-9204
Texas Registered Engineering Firm F-353
MURFEE ENGINEERING COMPANY

DESIGNED BY:	CES
DRAWN BY:	BD
CHECKED BY:	JKB
APPROVED BY:	CES
DATE:	10/2/2023
FILE NO.	UWTPEXP-DT.dwg LAYOUT: DETAILS
JOB NO.	
SHEET NO.	18 OF 18

PLOT DATE: 2023-10-2
FILE PATH: W:\WTCP\AIA\Facilities\Water\Uplands WTP\WTP Expansion\Site Plan\CAD\UWTPEXP-DT.dwg / LAYOUT: DETAILS