Hwy 183 & FM 3405 C-Store

Georgetown, Texas

Contributing Zone Plan

February 23

TBPE #F-4512

MHE 3215.03.03

MATKINHOOVER
ENGINEERING
& SURVEYING

July 17, 2023

Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
Austin Regional Office
12100 Park 35 Circle
Austin, TX 78753

Re: Hwy 183 & FM 3405 C-Store
Liberty Hill, Texas
Contributing Zone Plan

To Whom It May Concern:

This Contributing Zone Plan has been prepared in accordance with the Texas Commission on Environmental Quality (30 TAC 213) and current policies for development over the Edwards Aquifer Contributing Zone.

This Contributing Zone Plan applies to a 22.09-acre tract of land, 2.05-acres of which is being developed, the remaining 20.04-acre tract will remain agricultural use. The 22.09 Acre tract is part of the John McDivitt Survey, Abstract No. 415, in Williamson County, Texas is located at the southeast corner of the intersection of FM3405 and HWY183; currently within the ETJ of Liberty Hill, TX.

Please review the attached Contributing Zone Plan information for the items it is intended to address, and if acceptable, provide a written approval of the plan in order that construction may begin at the earliest opportunity.

Appropriate review fees ($6,500) and fee application are included. If you have any questions regarding this information, please call our office.

Respectfully Submitted,
Matkin Hoover Engineering & Surveying
TBPE #4152

Garrett D. Keller, P.E.
President & COO
Attachments

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: Hwy 183 & FM 3405 C-Store						**2. Regulated Entity No.:**			
3. Customer Name: FM 3405 Xpress, LLC.						**4. Customer No.:**			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**			22.09
9. Application Fee:	$6,500		**10. Permanent BMP(s):**			(2) – Jellyfish Filters			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			(3) – UST-Fuel Storage			
13. County:	Williamson		**14. Watershed:**			North Fork San Gabriel 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.)	___	___	___
Region (1 req.)	___	___	___
County(ies)	___	___	1
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander 1 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.
Garrett Keller Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent — Date: 7/27/23

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

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.

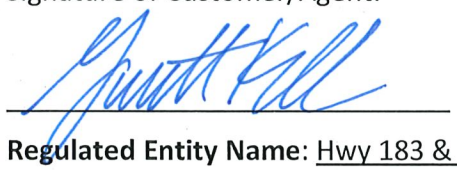
Signature

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: Garrett D.Keller, P.E.

Date: 7/27/23

Signature of Customer/Agent:



Regulated Entity Name: Hwy 183 & FM 3405 C-Store

Project Information

1. County: Williamson
2. Stream Basin: North Fork San Gabriel River
3. Groundwater Conservation District (if applicable): NA
4. Customer (Applicant):

   Contact Person: Shakil Prasla
   Entity: FM 3405 Xpress, LLC
   Mailing Address: 2108 Starlit Terrace
   City, State: Leander, Texas Zip: 78641
   Telephone: 512-577-0090 Fax: NA
   Email Address: shakilprasla@gmail.com

5. Agent/Representative (If any):

   Contact Person: Garrett D. Keller
   Entity: Matkin Hoover Engineering and Surveying
   Mailing Address: 8 Spencer Rd Ste 100
   City, State: Boerne, TX Zip: 78006
   Telephone: (830)-249-0600 Fax: NA
   Email Address: (830)-249-0600

6. Project Location:

   ☐ The project site is located inside the city limits of _____.
   ☒ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of Liberty Hill.
   ☐ 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 the southeast corner of FM 3405 and Highway 183

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: _____

12. The type of project is:

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

13. Total project area (size of site): 22.09 Acres

Total disturbed area: 4.31 Acres

14. Estimated projected population: NA

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	5,985	÷ 43,560 =	0.14
Parking	97,258	÷ 43,560 =	2.22
Other paved surfaces	1,523	÷ 43,560 =	0.04
Total Impervious Cover	104,766	÷ 43,560 =	2.40

Total Impervious Cover 2.4 **÷ Total Acreage** 22.09 **X 100 =** 10.86**% 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 _____ (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			
2			
3			
4			
5			

Total x 1.5 = _____ 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: _____.

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" = 60'.

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): FEMA FIRM map # 48491C0235F dated 12/20/2019 and #48491C0275F dated 9/26/2008.

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.

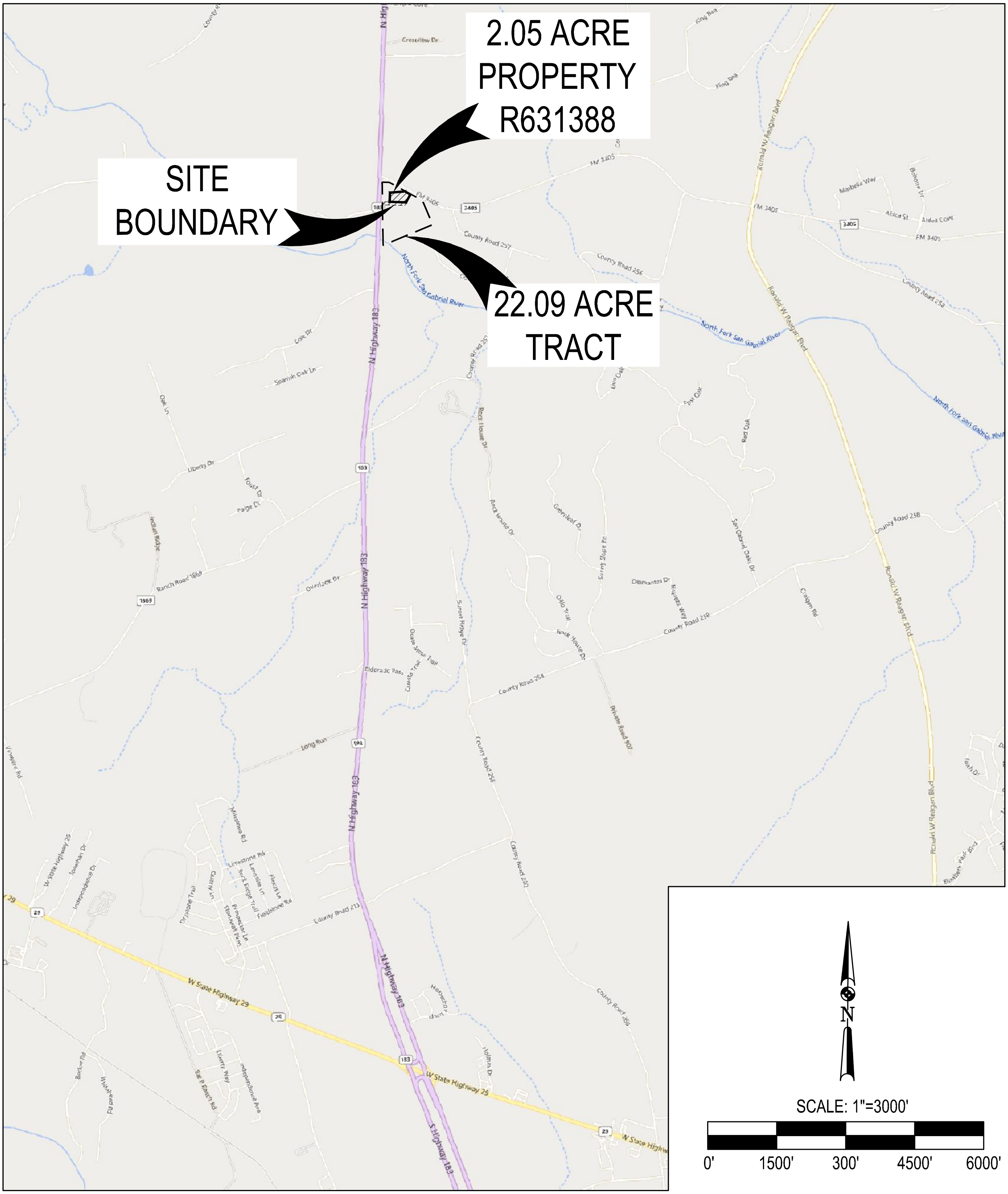
Administrative Information

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.



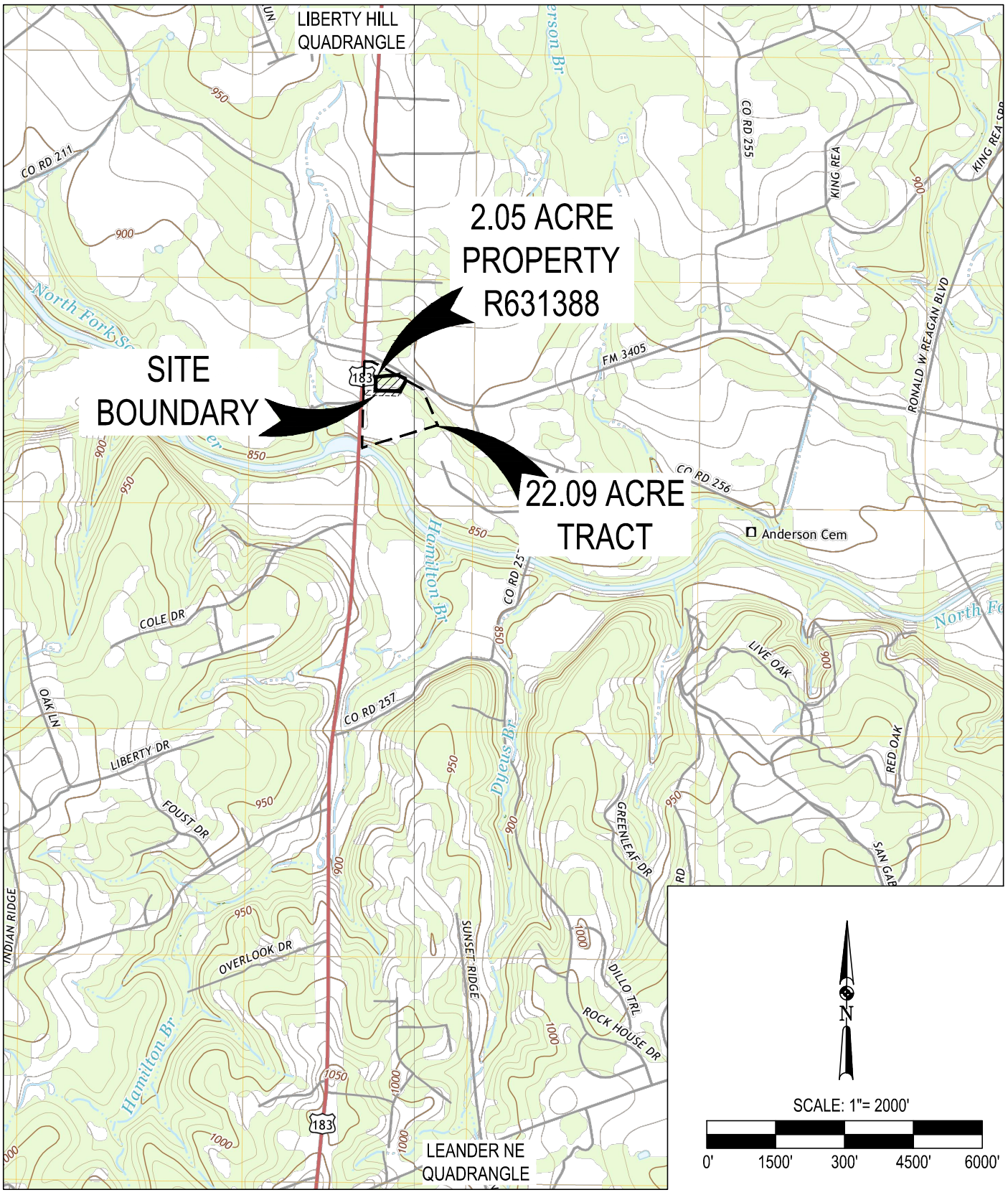
Date: Jun 26, 2023, 4:35pm User ID: ahoward

Z:\PROJECTS\3215 - 03 C-Store Strm Permit\Submittals\Contributing Zone Plan\02 - CZP Application (TCEQ-10257)\02.1 - Attachment A - Road Map.dwg

MATKINHOOVER
ENGINEERING
& SURVEYING
8 SPENCER ROAD SUITE 100
BOERNE, TEXAS 78006
OFFICE: 830.249.0600
CONTACT@MATKINHOOVER.COM
3303 SHELL ROAD SUITE 3
GEORGETOWN, TEXAS 78628
OFFICE: 512.868.2244
TEXAS REGISTERED ENGINEERING FIRM F-004512 SURVEYING FIRM F-10024000

ROAD MAP
FOR
US 183 & FM 3405
LIBERTY HILL, TEXAS

JOB NO.	3215.03
DATE	MAR. 2023
DESIGNED	ALH
CHECKED	GDK
SHEET ID	ATCH "A"
SHEET #	1 OF 1



Date: Jun 27, 2023, 3:12pm User ID: ahoward

Z:\PROJECTS\3215 - 03 C-Store Strm Permit\Submittals\Contributing Zone Plan\02 - CZP Application (TCEQ-10257)\02.2 - Attachment B - USGS QUADRANGLE

MATKINHOOVER ENGINEERING & SURVEYING
8 SPENCER ROAD SUITE 100
BOERNE, TEXAS 78006
OFFICE: 830.249.0600
3303 SHELL ROAD SUITE 3
GEORGETOWN, TEXAS 78628
OFFICE: 512.868.2244
CONTACT@MATKINHOOVER.COM
TEXAS REGISTERED ENGINEERING FIRM F-004512 SURVEYING FIRM F-10024000

USGS QUADRANGLE MAP
FOR
US 183 & FM 3405
LIBERTY HILL, TEXAS

JOB NO.	3215.03
DATE	MAR. 2023
DESIGNED	ALH
CHECKED	GDK
SHEET ID	ATCH "B"
SHEET #	1 OF 1

1. Area of the Site

The project area is 22.09 acres of land, part of the John McDivitt Survey, Abstract No. 415, in Williamson County, Texas, located within the Edwards Aquifer Contributing Zone and drains to North Fork San Gabriel River. Of the 22.09-acre site, 2.05 acres has been platted for a proposed development, and the remaining 20.04 Acres is anticipated to remain agricultural use. Some additional development will still occur outside of the 2.05-acre lot, within the 20.04-acre tract and TxDOT ROW to provide access to the 2.05-acre site and potential future development within the 20.04-acre tract from HWY 183 and FM 3405. The subject property is encroached by FEMA-mapped floodplain with a Zone A classification as shown on the U.S. Federal Emergency Management Agency boundary map #48491C0235F for Williamson County dated effective December 20th, 2019. The on-site property is located within the State of Texas, Williamson County, lying within the ETJ of the City of Liberty Hill and being 3.7 miles North of the intersection of US HWY 183 and SH 29; also having a global position of 30°42’23.9” N., -97°52’37.3” W. The property is sided by undeveloped land to the south & east, FM3405 to the north and US 183 to the west. According to the Williamson County appraisal district (WCAD), the property is located on parcel R631388, owned by 3405 XPRESS, LLC and parcel R022438, owned by HC ELLISON FAMILY INV LTD its address is 3660 N Highway 183, Liberty Hill, Williamson County, Texas 78642-4723.

2. Impervious cover

The total acreage of impervious cover will include pavement, sidewalks, and the building footprint with a total on-site impervious cover estimated at 104,766 square feet or 2.40 acres (10.86%) of impervious cover.

3. Permanent BMPs

The proposed development does not disturb more than 5 acres and thus permanent BMPs are not required for the 22.09-acre tract. However, it is anticipated this site will be part of a future common development that will ultimately require permanent BMPs. Anticipating the requirement of permanent BMPs in the future, the site has been designed with the necessary stormwater infrastructure and permanent BMPs to handle the treatment of the site. However, these necessary measures will be implemented during future development.

4. Proposed site use

FM 3405 XPRESS, LLC is proposing to develop the 2.05-acre site as a convenience store with gas pumps. The site will be developed with a single building for retail gas sales and convenience store, a canopy area to cover the tank dispensers, trash enclosure, and paved parking and driving lanes. On-site Sewage Collection Facilities are proposed.

HC ELLISON FAMILY INV LTD is proposing to keep the remainder of the 22.09-acre tract, 20.04-acres, to be used for agriculture purposes. Development of this property is not proposed at this time.

5. Site history and previous development

According to topographic maps and satellite imagery, the site remained undeveloped since 1993 or earlier and there are no existing improvements located on the property. The surrounding area consists of low-density residential and undeveloped land.

6. Area to be demolished

There are no structures on the subject tract that require demolition as part of the development.

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

- Soil erosion due to the clearing of the site
- Oil, grease, fuel, and hydraulic fluid contamination from construction equipment and vehicle drippings
- Hydrocarbons from asphalt paving operations
- Miscellaneous trash and litter from construction operations and material wrappings

Potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the site after construction include:

- Fertilizers, herbicides, and pesticides from agricultural operations
- Oil, grease, fuel and hydraulic fluid contamination from vehicle drippings
- Dirt and dust that may fall off vehicles
- Miscellaneous trash and litter

The total project acreage of this site is 22.09 acres, 2.05-acres of which have been platted for the proposed development, the remaining 20.04-acre tract is anticipated to be developed at a later date. In pre-developed conditions the site slopes from North to South generally towards the North Fork of the San Gabriel River. The site in pre-developed conditions is undeveloped land generally used for agricultural purposes. A composite runoff coefficient was calculated for each watershed.

The rational method with City of Austin Precipitation Values was utilized. Time of concentration values and runoff coefficients used for these calculations are from the City of Round Rock Drainage Criteria Manual. Microsoft Excel was used to calculate the storm water runoff for the 100-year storm event.

CP-1C

Pre-Development Runoff:

	C	Area (acres)	Runoff (cfs)
Q_{100}	0.42	3.43	**9.76**

Post-Development Runoff:

	C	Area (acres)	Runoff (cfs)
Q_{100}	0.42	3.43	**9.76**

CP-1B

Pre-Development Runoff:

	C	Area (acres)	Runoff (cfs)
Q_{100}	0.47	55.56	**164.17**

Post-Development Runoff:

	C	Area (acres)	Runoff (cfs)
Q_{100}	0.47	55.56	**164.17**

CP-1A

Pre-Development Runoff:

	C	Area (acres)	Runoff (cfs)
Q_{100}	0.45	61.68	**137.81**

Post-Development Runoff:

	C	Area (acres)	Runoff (cfs)
Q_{100}	0.77	61.68	**235.81**

CP-1

Pre-Development Runoff:

	C	Area (acres)	Runoff (cfs)
Q_{100}	0.47	83.45	**175.26**

Post-Development Runoff:

	C	Area (acres)	Runoff (cfs)
Q_{100}	0.56	83.45	**235.81**

See Attached Letter on next page

Department of Infrastructure
County Engineer's Office
3151 SE Inner Loop, Ste B
Georgetown, TX 78626
T: 512.943.3330
F: 512.943.3335

J. Terron Evertson, PE, DR, CFM

WILLIAMSON COUNTY
1848

March 15, 2023

RE: AW0415 AW0415 - Mcdevitt, J. Sur., ACRES 2.05

The above referenced property is located within the Edwards Aquifer Comtributing Zone.

Based on the surrounding subdivisions and the soil survey for Williamson County and planning material received, this office is able to determine that the soil and site conditions of this lot is suitable to allow the use of on-site sewage facilities (OSSF). It should be noted that this office has not actually studied the physical properties of this site. Site specific conditions such as OSSF setbacks, recharge features, drainage, soil conditions, etc…, will need taken into account in planning any OSSF.

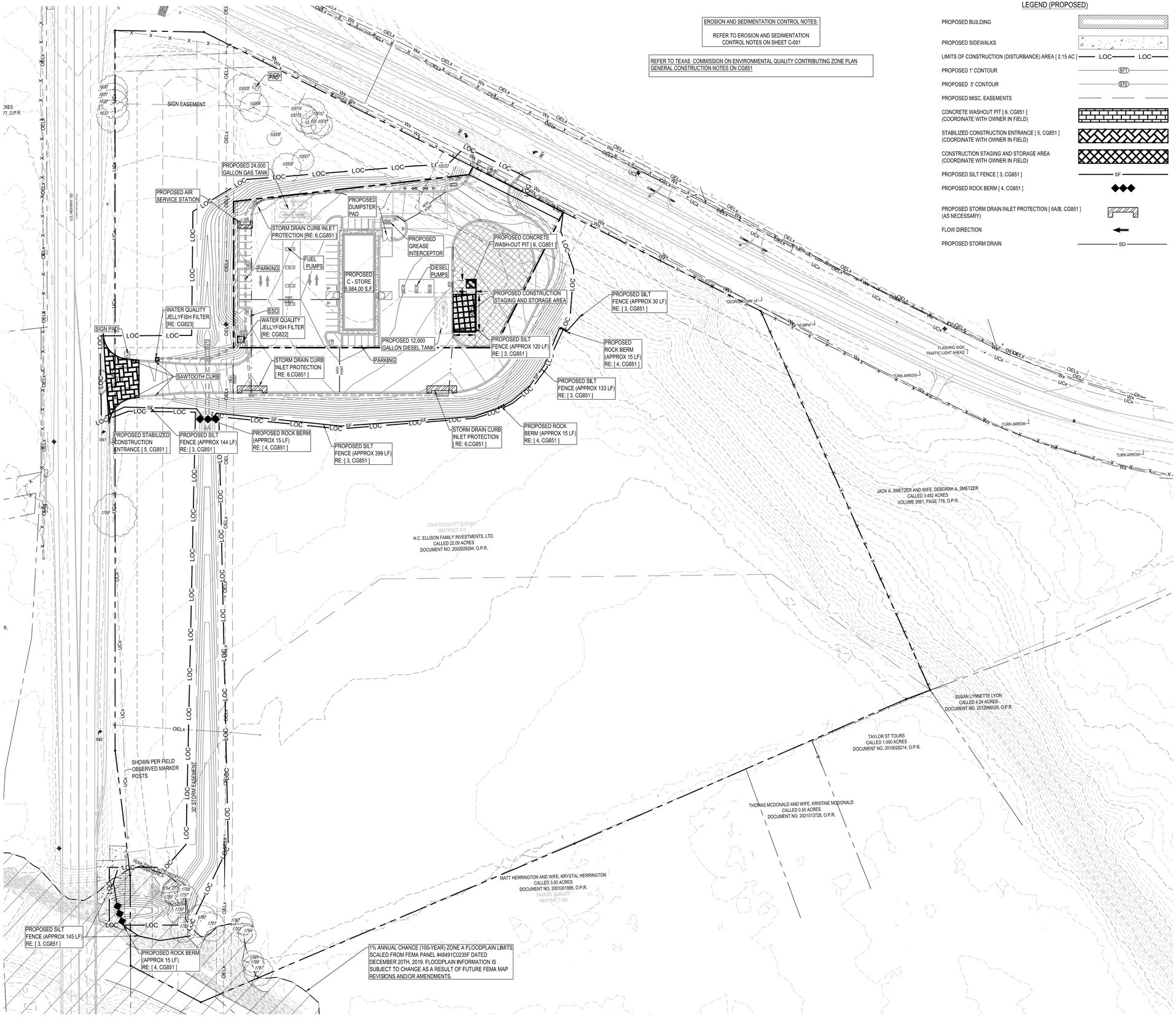
These OSSF's will have to be designed by a professional engineer or a registered sanitarian. An Edwards Aquifer protection plan shall be approved by the appropriate TCEQ regional office before an authorization to construct an OSSF may be issued. The owner will be required to inform each prospective buyer, lessee or renter of the following in writing:

- That an authorization to construct shall be required before an OSSF can be constructed in the subdivision;
- That a notice of approval shall be required for the operation of an OSSF;
- Whether an application for a water pollution abatement plan as defined in Chapter 213 has been made, whether it has been approved and if any restrictions or conditions have been placed on the approval.

If this office can be of further assistance, please do not hesitate to call.

Sincerely,

James L. Lancaster, OS 32397
Williamson County - OSSF



LEGEND (PROPOSED)

- PROPOSED BUILDING
- PROPOSED SIDEWALKS
- LIMITS OF CONSTRUCTION (DISTURBANCE) AREA [2.15 AC]
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- PROPOSED MISC. EASEMENTS
- CONCRETE WASHOUT PIT [6, CG851] (COORDINATE WITH OWNER IN FIELD)
- STABILIZED CONSTRUCTION ENTRANCE [5, CG851] (COORDINATE WITH OWNER IN FIELD)
- CONSTRUCTION STAGING AND STORAGE AREA (COORDINATE WITH OWNER IN FIELD)
- PROPOSED SILT FENCE [3, CG851]
- PROPOSED ROCK BERM [4, CG851]
- PROPOSED STORM DRAIN INLET PROTECTION [6A/B, CG851] (AS NECESSARY)
- FLOW DIRECTION
- PROPOSED STORM DRAIN

LEGEND (EXISTING)

- PROPERTY BOUNDARY
- EXISTING 1 FT CONTOURS
- EXISTING 5 FT CONTOURS
- SITE CONTROL REF: [TABLE, THIS SHEET]
- MEASURED DATA
- RECORD DATA
- FOUND 1/2" IRON ROD WITH AN ORANGE "RPLS 5784" PLASTIC CAP
- FOUND 3/4" IRON PIPE
- FOUND 1/2" IRON ROD
- FOUND MONUMENT
- FOUND 1/2" IRON ROD STAMPED "RPLS 5784"
- SET 1/2" IRON ROD WITH A RED "MATKIN-HOOVER ENG & SURVEY" PLASTIC CAP
- EXISTING TRAFFIC SIGN
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING SANITARY SEWER CLEANOUT
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM DRAIN MANHOLE
- EXISTING MAILBOX
- EXISTING WIRE FENCE
- EXISTING CHAIN-LINK FENCE
- EXISTING ELECTRIC (OVERHEAD)
- EXISTING GAS
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING STORM DRAIN
- EXISTING TREE

SMALL CONSTRUCTION ACTIVITIES
DISTURBED AREA LESS THAN FIVE (5) ACRES, NOT PART OF COMMON DEVELOPMENT
OPERATORS OF THIS SITE MUST:
(A) DEVELOP A SWP3 ACCORDING TO THE PROVISIONS OF TPDES TXR150000 PERMIT, THAT COVERS EITHER THE ENTIRE SITE OR ALL PORTIONS OF THE SITE FOR WHICH THE APPLICANT IS THE OPERATOR, AND IMPLEMENT THAT PLAN PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES;
(B) SIGN AND CERTIFY A COMPLETED CONSTRUCTION SITE NOTICE, POST THE NOTICE 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, PRIOR TO COMMENCING CONSTRUCTION, AND MAINTAIN THE NOTICE IN THAT LOCATION UNTIL COMPLETION OF THE CONSTRUCTION ACTIVITY ; AND
(C) PROVIDE A COPY OF THE SIGNED AND CERTIFIED CONSTRUCTION SITE NOTICE TO THE OPERATOR OF ANY MUNICIPAL SEPARATE STORM SEWER SYSTEM RECEIVING THE DISCHARGE AT LEAST TWO DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

OPERATORS OF SMALL CONSTRUCTION ACTIVITIES AS DEFINED IN PART I OF THIS GENERAL PERMIT SHALL NOT SUBMIT AN NOI FOR COVERAGE UNLESS OTHERWISE REQUIRED BY THE EXECUTIVE DIRECTOR.

SWPPP MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION

CONTRIBUTING ZONE SITE PLAN

N

SCALE: 1"=60'
0 30' 60' 90' 120'

FOR TCEQ REVIEW ONLY - NOT FOR CONSTRUCTION

Rev.	Date	Description	Apv.

7/28/2023
STATE OF TEXAS
CODY LEE MORRIS
131472
LICENSED
PROFESSIONAL ENGINEER

MATKIN HOOVER ENGINEERING & SURVEYING
8 SPENCER ROAD SUITE 100
BOERNE, TEXAS 78006
OFFICE: 830.249.0600
CONTACT@MATKINHOOVER.COM
3303 SHELL ROAD SUITE 100
GEORGETOWN, TEXAS 78628
OFFICE: 512.868.2244
TEXAS REGISTERED ENGINEERING FIRM F-00451/ SURVEYING FIRM F-10024000

EROSION AND SEDIMENTATION CONTROL PLAN
FOR
C-STORE HWY 183 & FM 3405
WILLIAMSON COUNTY, TEXAS 78642

CG801

JOB NO.	3215.03
DESIGNED BY:	TK
CHECKED BY:	GDK
SHEET NO:	06 OF 24

Z:\PROJECTS\3215 - 03 C-Store Stm Permit\Submittals\Contributing Zone Plan\02 - CZP Application (TCEQ-10257)\02.07 - EROSION AND SEDIMENTATION CONTROL PLAN CG801.dwg

Date: Jul 28, 2023, 11:52am User ID: ahoward

1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL TREES TO BE PRESERVED FROM HIS ACTIVITIES.
2. ALL TREES SHOWN TO BE RETAINED WITHIN THE LIMITS OF CONSTRUCTION ON THE PLANS, SHALL BE PROTECTED DURING CONSTRUCTION WITH FENCING. SEE: TREE PROTECTION TREE WELLS (EC-02), TREE PROTECTION TREE LOCATION (EC-03) AND TREE PROTECTION FENCE-CHAIN LINK (EC-04).
3. TREE PROTECTION FENCES SHALL BE ERECTED ACCORDING TO CITY STANDARDS FOR TREE PROTECTION, INCLUDING TYPES OF FENCING AND SIGNAGE.
4. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR GRADING) AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
5. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIPLINES.
6. FENCES SHALL COMPLETELY SURROUND THE TREE OR CLUSTERS OF TREES, LOCATED AT THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIPLINE) OR CRITICAL ROOT ZONE (CRZ), WHICHEVER IS GREATER; AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   - 6A. SOIL COMPACTION IN CRZ AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIAL.
   - 6B. CRZ DISTURBANCES DUE TO GRADE CHANGES OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE FORESTRY MANAGER.
   - 6C. WOUNDS TO EXPOSED ROOTS, TRUNK, OR LIMBS BY MECHANICAL EQUIPMENT
   - 6D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CONCRETE TRUCK CLEANING, AND FIRES.
7. EXCEPTIONS TO INSTALLING TREE FENCES AT THE TREE DRIPLINES OR CRZ, WHICHEVER IS GREATER, MAY BE PERMITTED IN THE FOLLOWING CASES:
   - 7A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, OR TREE WELL;
   - 7B. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   - 7C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING.
   - 7D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE FORESTRY MANAGER TO DISCUSS ALTERNATIVES.
8. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE THAT IS CLOSER THAN 5 FEET TO A TREE TRUNK, THE TRUNK SHALL BE PROTECTED BY STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
9. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES UNDER THE DRIPLINE OR CRZ, WHICHEVER IS GREATER, THOSE AREAS SHOULD BE COVERED WITH 4 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION.
10. ALL GRADING WITHIN CRZ AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCING TO 2 FEET BEHIND THE GRADE CHANGE AREA.
11. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL AND BACKFILLED WITH GOOD QUALITY TOP SOIL WITHIN TWO DAYS. IF EXPOSED ROOT AREAS CANNOT BE BACKFILLED WITHIN 2 DAYS, AN ORGANIC MATERIAL WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION SHALL BE PLACED TO COVER THE ROOTS UNTIL BACKFILL CAN OCCUR.
12. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, A CLEAN CUT SHALL BE MADE WITH A ROCK SAW OR SIMILAR EQUIPMENT, IN A LOCATION AND TO A DEPTH APPROVED BY THE FORESTRY MANAGER, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
13. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES WILL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS ARE TO BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON LEAVES.
14. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, A PLASTIC VAPOR BARRIER SHALL BE PLACED BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE CRZ.
15. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
16. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR (4) INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OR CRZ OF TREES, WHICHEVER IS GREATER. NO TOPSOIL IS PERMITTED ON ROOT FLARES OF ANY TREE.
17. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND CONSTRUCTION EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. ALL PRUNING MUST BE DONE ACCORDING TO CITY STANDARDS AND AS OUTLINED IN LITERATURE PROVIDED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA PRUNING TECHNIQUES).
18. ALL OAK TREE CUTS, INTENTIONAL OR UNINTENTIONAL, SHALL BE SEALED WITH AN APPROVED PRUNING SEALER IMMEDIATELY (WITHIN 10 MINUTES). TREE PAINT MUST BE KEPT ON SITE AT ALL TIMES.
19. THE FORESTRY MANAGER HAS THE AUTHORITY TO REQUIRE ADDITIONAL TREE PROTECTION BEFORE OR DURING CONSTRUCTION.
20. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED. REFER TO THE CITY OF ROUND ROUND ROCK TREE TECHNICAL MANUAL FOR APPROPRIATE REMOVAL METHODS.
21. PRIOR TO CONSTRUCTION, ALL LOWER TREE LIMBS OVER ROADWAYS MUST BE PRUNED TO A HEIGHT OF 14 FEET USING THE TECHNIQUES DESCRIBED IN THE CITY OF ROUND ROCK TREE TECHNICAL MANUAL.
22. DEVIATIONS FROM THE ABOVE REQUIREMENTS AND NEGLIGENT DAMAGE TO TREES MAY BE CONSIDERED AS ORDINANCE VIOLATIONS.

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

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED	CITY OF ROUND ROCK	DRAWING NO: EC-01
03-25-11 DATE	TREE PROTECTION NOTES	ROUND ROCK, TEXAS PURPOSE. PASSION. PROSPERITY.
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		

1 TREE PROTECTION NOTES
N.T.S.

1.4.3 Silt Fence

A silt fence is a barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site. When properly used, silt fences can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond, allowing heavier solids to settle out. If not properly installed, silt fences are not likely to be effective. A schematic illustration of a silt fence is shown in Figure 1-26.

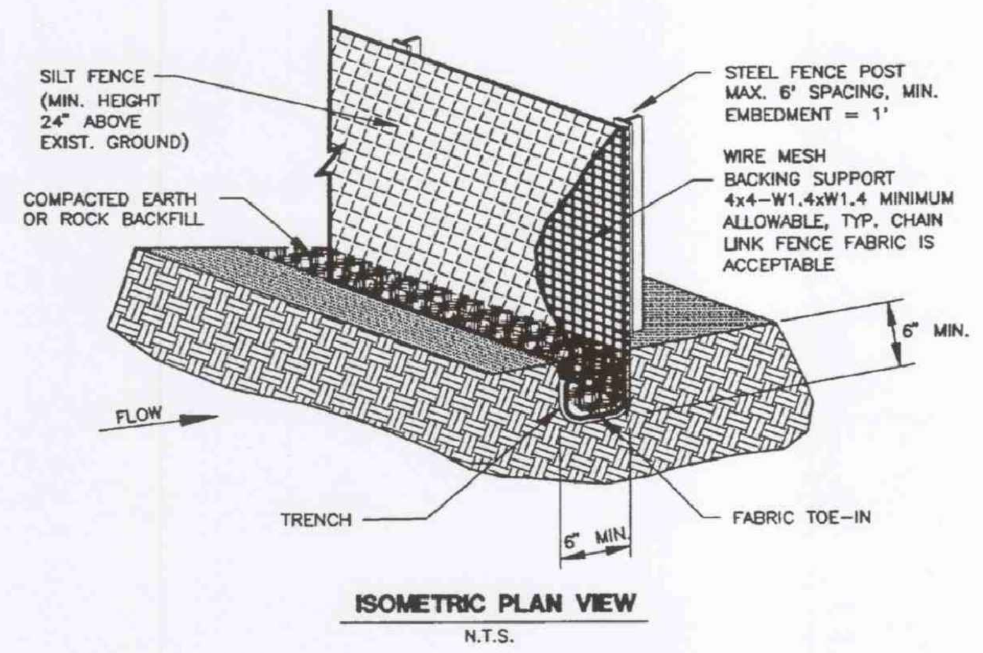


Figure 1-26 Schematic of a Silt Fence Installation (NCTCOG, 1993b)

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

1-66

2 SILT FENCE DETAIL
N.T.S.

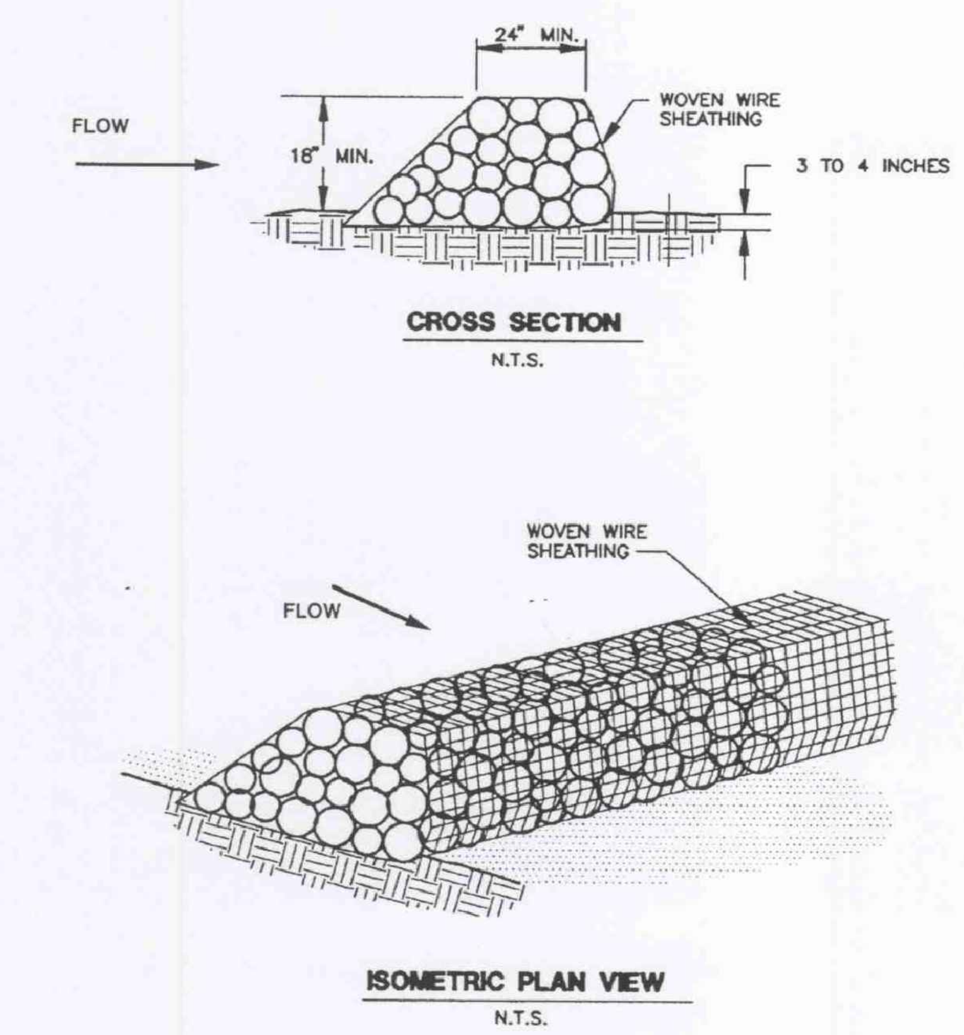


Figure 1-28 Schematic Diagram of a Rock Berm (NCTCOG, 1993)

1-73

3 ROCK BERM DETAIL
N.T.S.

1.4.2 Temporary Construction Entrance/Exit

The purpose of a temporary gravel construction entrance is to provide a stable entrance/exit condition from the construction site and keep mud and sediment off public roads. A stabilized construction entrance is a stabilized pad of crushed stone located at any point traffic will be entering or leaving the construction site from a public right-of-way, street, alley, sidewalk or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking or flowing of sediment onto public rights-of-way. This practice should be used at all points of construction ingress and egress. Schematic diagrams of a construction entrance/exit are shown in Figure 1-24 and Figure 1-25.

Excessive amounts of mud can also present a safety hazard to roadway users. To minimize the amount of sediment loss to nearby roads, access to the construction site should be limited to as few points as possible and vegetation around the perimeter should be protected were access is not necessary. A rock stabilized construction entrance should be used at all designated access points.

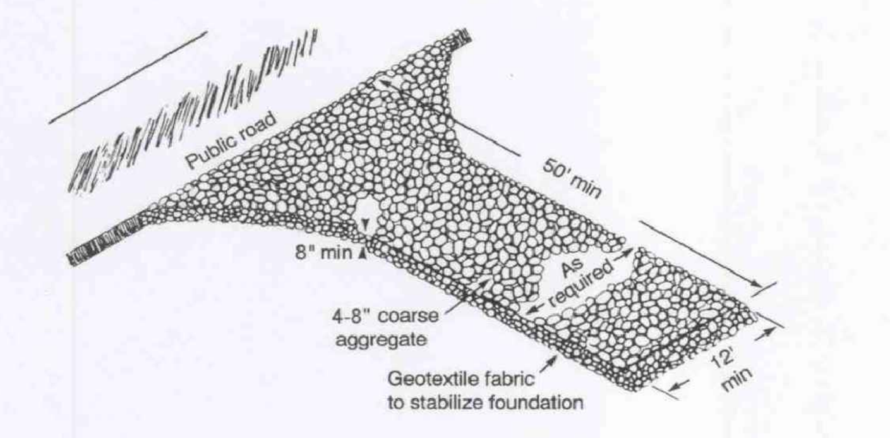


Figure 1-24 Schematic of Temporary Construction Entrance/Exit (after NC, 1993)

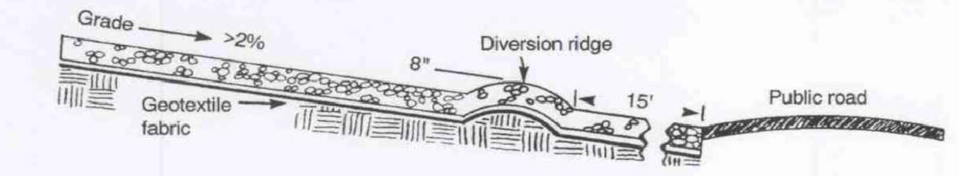


Figure 1-25 Cross-section of a Construction Entrance/Exit (NC, 1993)

1-63

4 TEMPORARY CONSTRUCTION ENTRANCE DETAIL
N.T.S.

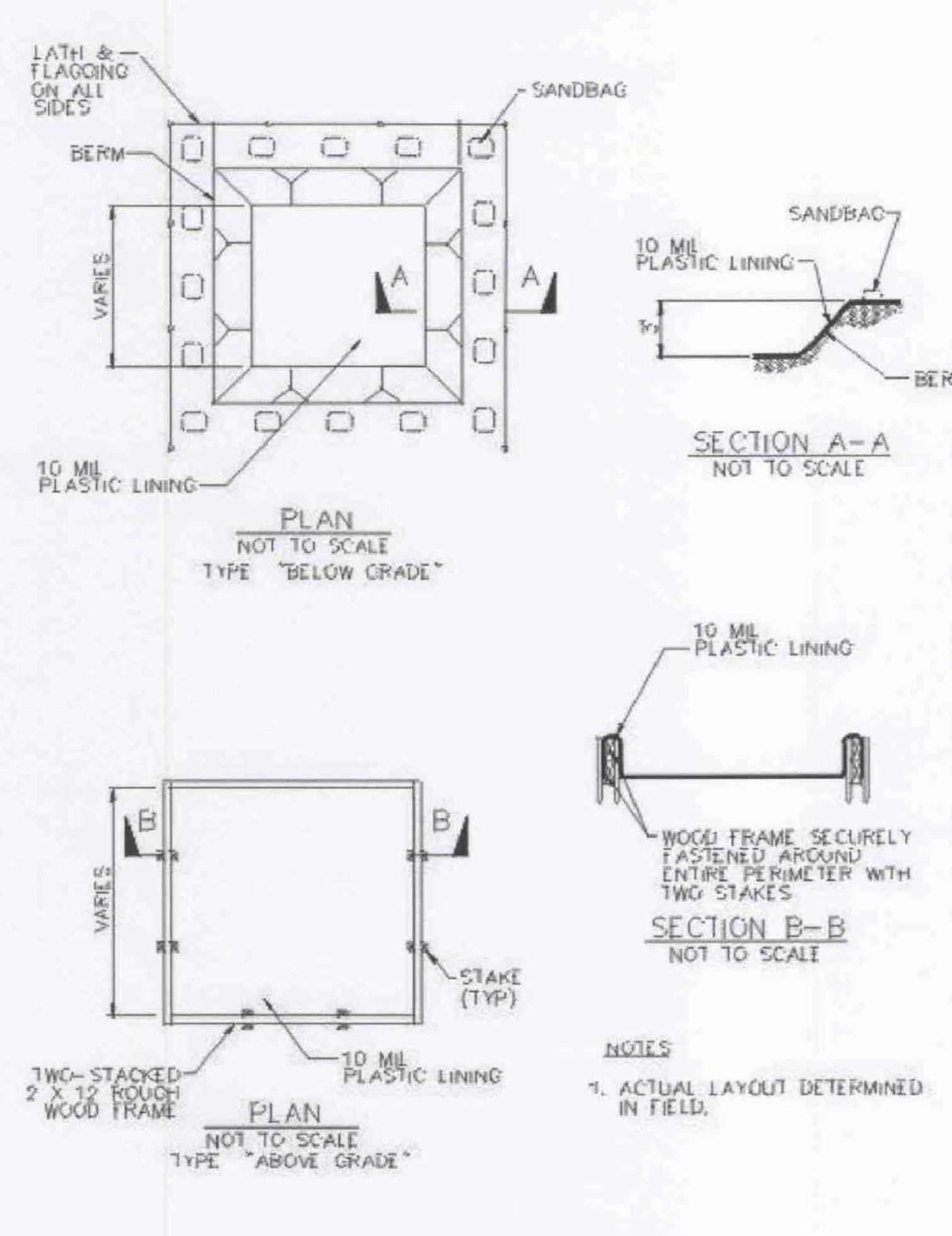


Figure 1-43 Schematics of Concrete Washout Areas

1-125

5 CONCRETE WASHOUT PIT LAYOUT DETAIL
N.T.S.

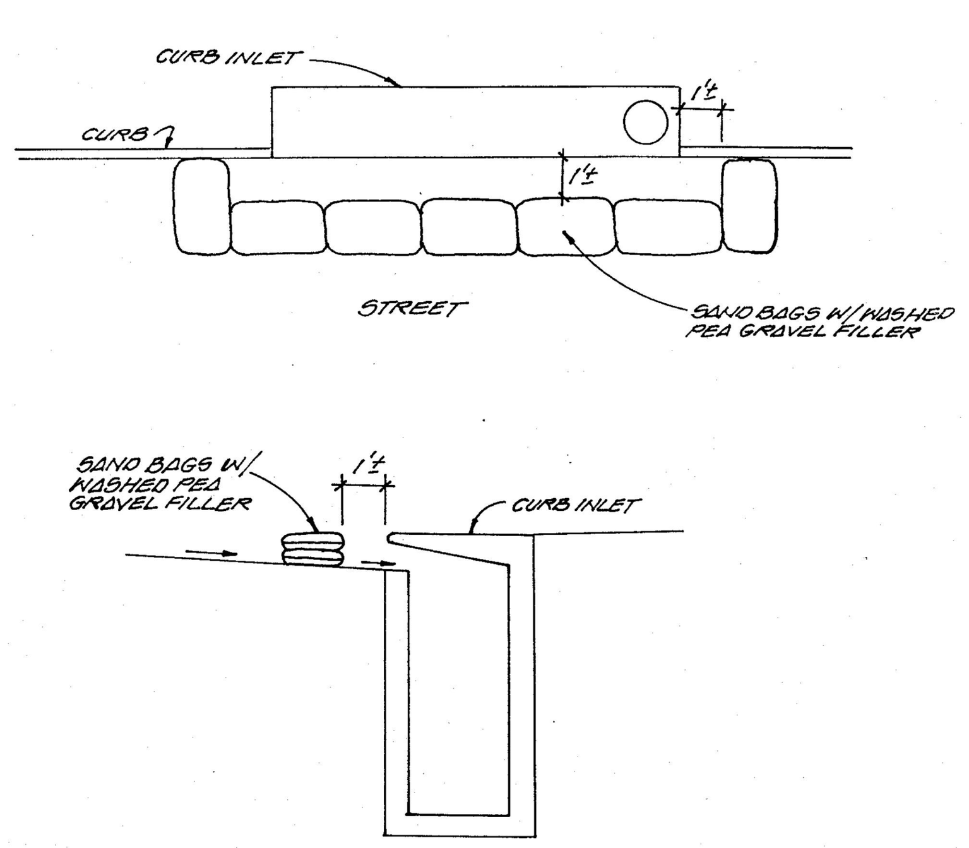


Figure 1-39 Diagram of Bagged Gravel Curb Inlet Protection (Pape-Dawson).

Inspection and Maintenance Guidelines:

(1) Inspection should be made weekly and after each rainfall. Repair or replacement should be made promptly as needed by the contractor.

(2) Remove sediment when buildup reaches a depth of 3 inches. Removed sediment should be deposited in a suitable area and in such a manner that it will not erode.

(3) Check placement of device to prevent gaps between device and curb.

(4) Inspect filter fabric and patch or replace if torn or missing.

(5) Structures should be removed and the area stabilized only after the remaining drainage area has been properly stabilized.

1-99

6 INLET PROTECTION DETAIL
N.T.S.

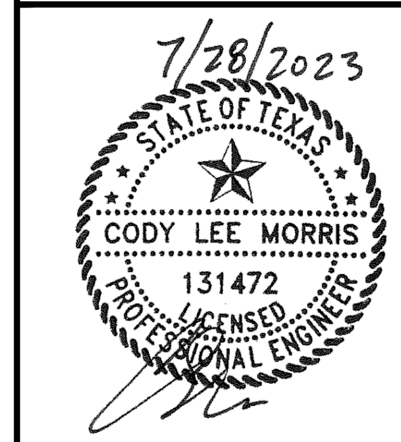
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CONTRIBUTING ZONE PLAN
GENERAL CONSTRUCTION NOTES

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY 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 ONSITE.
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.

7 TCEQ CZP GENERAL CONSTRUCTION NOTES
N.T.S.

FOR TCEQ REVIEW ONLY - NOT FOR CONSTRUCTION

Rev.	Date	Description	Apv.



MATKINHOOVER ENGINEERING & SURVEYING
8 SPENCER ROAD SUITE 100, BOERNE, TEXAS 78006, OFFICE: 830.249.0600
3303 SHELL ROAD SUITE 100, GEORGETOWN, TEXAS 78628, OFFICE: 512.868.2244
CONTACT@MATKINHOOVER.COM
TEXAS REGISTERED ENGINEERING FIRM F-004512 SURVEYING FIRM F-10024000

EROSION AND SEDIMENTATION CONTROL DETAILS
FOR
C-STORE HWY 183 & FM 3405
WILLIAMSON COUNTY, TEXAS

CG851

JOB NO.	3215.03
DESIGNED BY:	TK
CHECKED BY:	GDK
SHEET NO:	07 OF 16

Z:\PROJECTS\3215 - 03 C-Store Strm Permit\Submittals\Contributing Zone Plan\02 - CZP Application (TCEQ-10257)\07.08 - EROSION AND SEDIMENTATION CONTROL DETAILS CG851.dwg
Date: Jul 28, 2023, 12:15pm User ID: ahoward

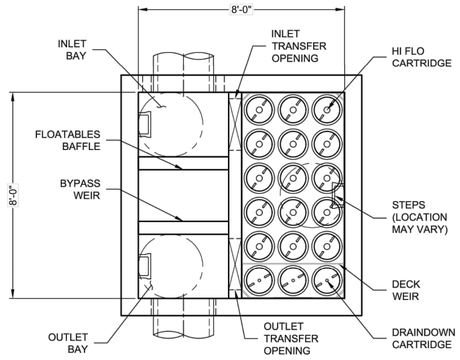
HWY 183 & FM 3405 C-STORE
BMPs FOR UPGRADIENT STORMWATER

Upgradient stormwater flows primarily North to South with much of the upgradient runoff being intercepted by FM 3405 and US Hwy 183 via roadside ditches and drainage channels. A culvert crossing FM 3405 near the intersection of FM 3405 and Hwy 183 conveys runoff upgradient of FM 3405 downstream. Runoff flowing upgradient and near our site will be intercepted and diverted downstream via surface swales, culverts, and drainage channels. Any upgradient stormwater will be treated by rock berms, silt fence, and vegetative filter strips by reducing the amount of sediment, organic matter, and harmful substances in the runoff and before the runoff enters the offsite surface water.

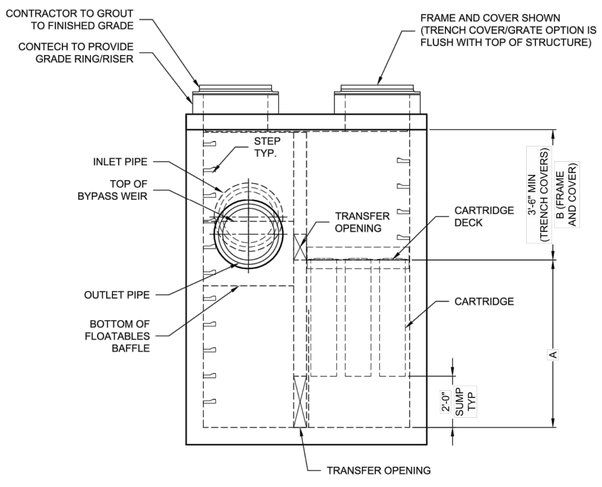
The on-site BMPs for this site will consist of rock berms, silt fence, vegetative filter strips, and a Jellyfish® Filter. The on-site runoff will be treated by the Jellyfish® Filter. These BMPs will provide water quality protection by reducing the amount of sediment, organic matter, and harmful substances in the runoff and before the runoff enters the offsite surface water.

The BMPs proposed for this site will consist of rock berms, silt fence, and vegetative filter strips. These BMPs will provide water quality protection by reducing the amount of sediment, organic matter, and harmful substances, in the runoff and before the runoff enters the offsite surface water.

See Construction Plans Attached



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)



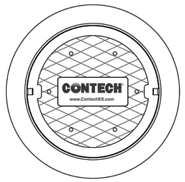
ELEVATION VIEW

JELLYFISH DESIGN NOTES

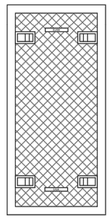
JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

CARTRIDGE SELECTION

CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	2.94	2.21	1.47	0.81
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



24" TRENCH COVER
(LENGTH VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	*
WATER QUALITY FLOW RATE (cfs)	*
PEAK FLOW RATE (cfs)	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
# OF CARTRIDGES REQUIRED (HF / DD)	*
CARTRIDGE LENGTH	*

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	*	*	*	*	*
INLET #2	*	*	*	*	*
OUTLET	*	*	*	*	*

SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

Jellyfish® Filter

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JFPD0808
STANDARD DETAIL
PEAK DIVERSION CONFIGURATION

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: OPTION 1b JF-1
Date Prepared: 7/26/2023

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

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

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

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	22.09	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	2.40	acres
Total post-development impervious cover fraction * =	0.11	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	2089	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 2

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

Drainage Basin/Outfall Area No. = A1

Total drainage basin/outfall area =	2.56	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	2.20	acres
Post-development impervious fraction within drainage basin/outfall area =	0.86	
$L_{M\ THIS\ BASIN}$ =	1915	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Jellyfish
Removal efficiency = 86 percent

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

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	2.56	acres
A_I =	2.20	acres
A_P =	0.36	acres
L_R =	2100	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 1915 lbs.

F = 0.91

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

Rainfall Depth =	1.80	inches
Post Development Runoff Coefficient =	0.70	
On-site Water Quality Volume =	11739	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 =	2348	
Total Capture Volume (required water quality volume(s) x 1.20) =	14087	cubic feet

Rev.	Date	Description	Apv.

7/28/2023
STATE OF TEXAS
CODY LEE MORRIS
131472
LICENSED PROFESSIONAL ENGINEER

MATKINHOOVER ENGINEERING & SURVEYING
3303 SHELL ROAD SUITE 100
GEORGETOWN, TEXAS 78628
OFFICE: 512.868.2244
8 SPENCER ROAD SUITE 100
BOERNE, TEXAS 78006
OFFICE: 830.816.9500
CONTACT@MATKINHOOVER.COM
TEXAS REGISTERED ENGINEERING FIRM F-00452 SURVEYING FIRM LS-10024000

FOR TCEQ REVIEW ONLY - NOT FOR CONSTRUCTION

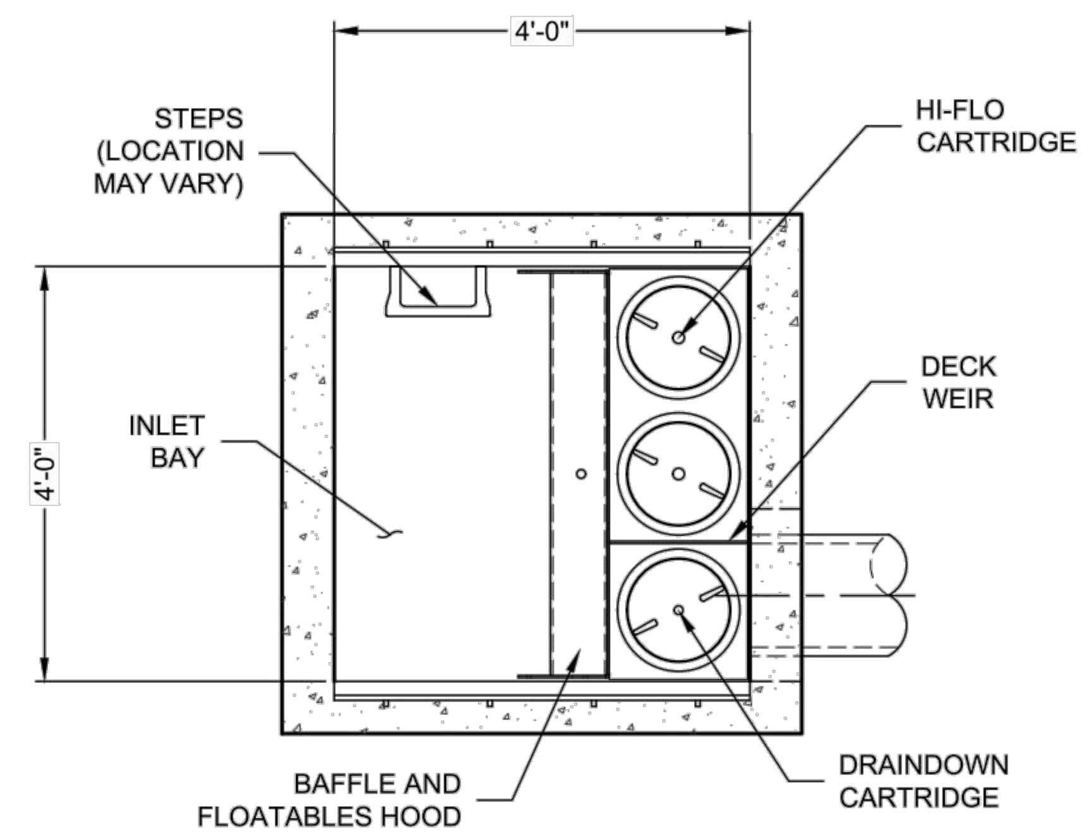
WATER QUALITY DETAIL (SHEET 1)
FOR
C-STORE HWY 183 & FM 3405
WILLIAMSON COUNTY, TEXAS 78642

CG822

JOB NO.	3215.03
DESIGNED BY:	TK
CHECKED BY:	GDK
SHEET NO:	13 OF 24

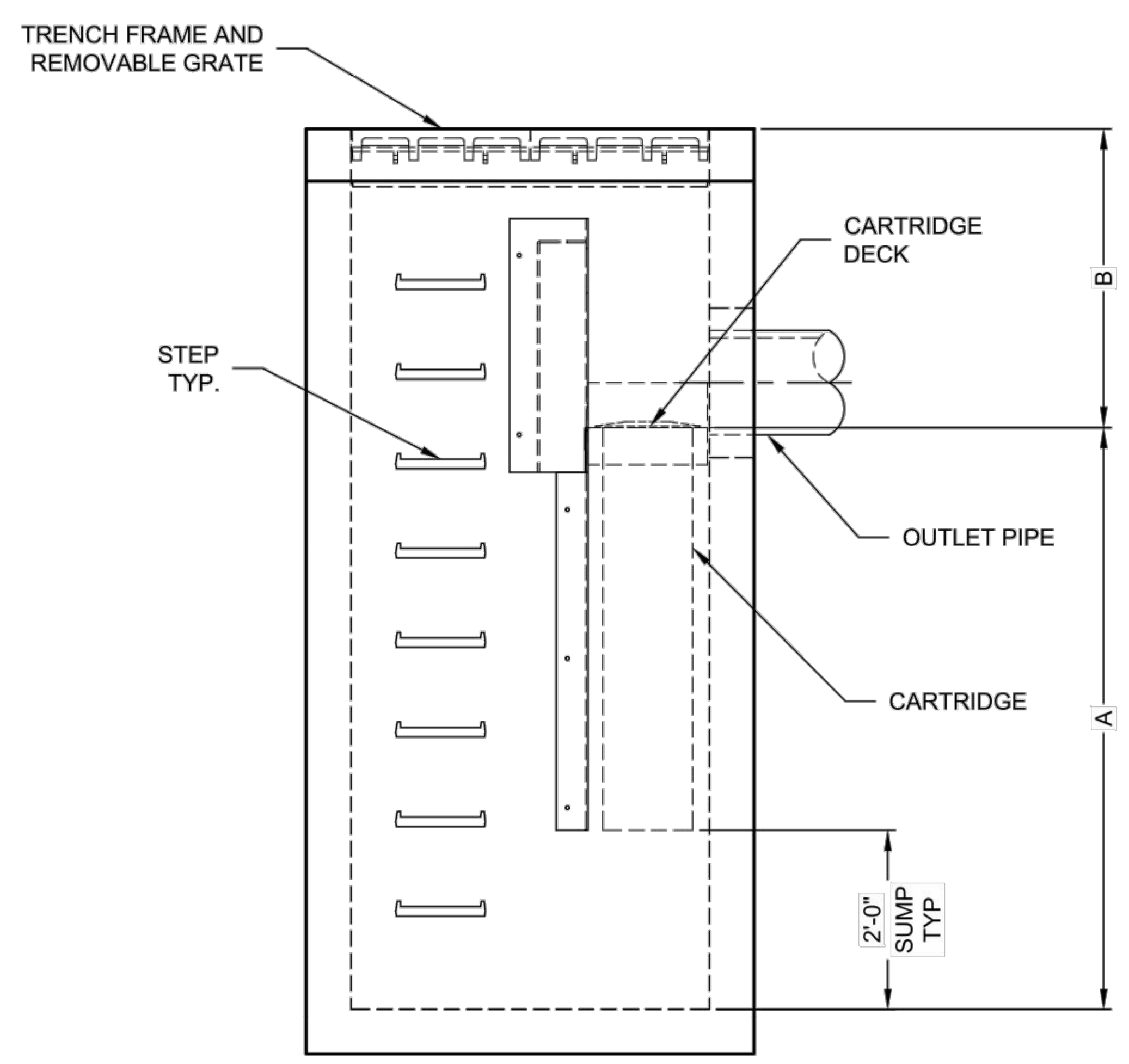
Z:\PROJECTS\3215 - 03 C-Store Stm Permit\C13 321503 - WATER QUALITY DETAIL CG822 (SHEET 1).dwg

Date: Jul 28, 2023, 11:59am User ID: dhoward



PLAN VIEW

(TOP SLAB NOT SHOWN FOR CLARITY)



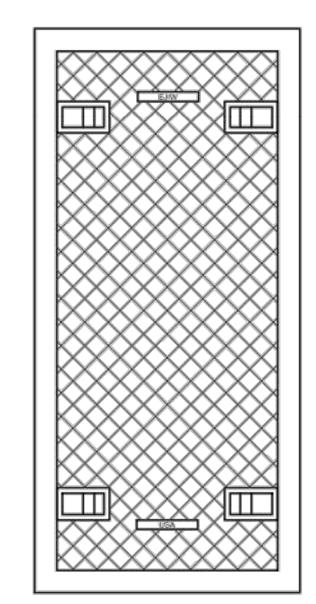
ELEVATION VIEW

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD SURFACE INLET STYLE WITH TRENCH GRATE AND COVER IS SHOWN. ALTERNATE CURB INLET OR PIPE INLET OPTIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.

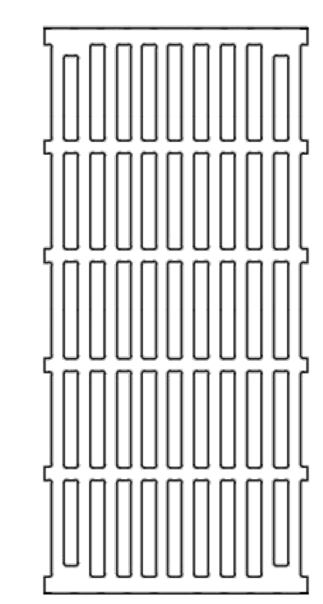
CARTRIDGE SELECTION

CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	5'-4"	4'-3"	3'-3"
FLOW RATE HIGH-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	0.45	0.33	0.22	0.12
OUTLET INVERT TO RIM (MIN) (B)	3'-4"	3'-4"	3'-4"	3'-4"



24" TRENCH COVER

N.T.S.



24" TRENCH GRATE

N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	*
WATER QUALITY FLOW RATE (cfs)	*
PEAK FLOW RATE (cfs)	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
# OF CARTRIDGES REQUIRED (HF / DD)	*
CARTRIDGE LENGTH	*

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	*	*	*	*	*
INLET #2	*	*	*	*	*
OUTLET	*	*	*	*	*

SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES:

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
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3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE (WHERE APPLICABLE) AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

Jellyfish® Filter

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JFSI0404
STANDARD DETAIL
SURFACE INLET CONFIGURATION

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: OPTION 1b JF-2
Date Prepared: 7/26/2023

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

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

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

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
County = Williamson
Total project area included in plan * = 22.09 acres
Predevelopment impervious area within the limits of the plan * = 0.00 acres
Total post-development impervious area within the limits of the plan* = 2.40 acres
Total post-development impervious cover fraction * = 0.11
P = 32 inches

$L_{M\ TOTAL\ PROJECT}$ = **2089** lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 2

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

Drainage Basin/Outfall Area No. = A2

Total drainage basin/outfall area = 0.20 acres
Predevelopment impervious area within drainage basin/outfall area = 0.00 acres
Post-development impervious area within drainage basin/outfall area = 0.20 acres
Post-development impervious fraction within drainage basin/outfall area = **1.00**
$L_{M\ THIS\ BASIN}$ = **174** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Jellyfish
Removal efficiency = **86** percent

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

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

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

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

A_C = 0.20 acres
A_I = 0.20 acres
A_P = **0.00** acres
L_R = **190** lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 174 lbs.

F = **0.91**

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

Rainfall Depth = **1.80** inches
Post Development Runoff Coefficient = **0.82**
On-site Water Quality Volume = **1067** 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 = **213**
Total Capture Volume (required water quality volume(s) x 1.20) = 1280 cubic feet

---

FOR TCEQ REVIEW ONLY - NOT FOR CONSTRUCTION

Rev.	Date	Description	Apv.

7/28/2023
STATE OF TEXAS
CODY LEE MORRIS
131472
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TEXAS REGISTERED ENGINEERING FIRM F-004512 SURVEYING FIRM F-10024000

WATER QUALITY DETAIL (SHEET 2)
FOR
C-STORE HWY 183 & FM 3405
WILLIAMSON COUNTY, TEXAS 78642

CG823

JOB NO.	3215.03
DESIGNED BY:	TK
CHECKED BY:	GDK
SHEET NO:	14 OF 24

Permanent BMPs will be inspected, maintained, repaired or retrofitted per manufacturer maintenance and inspection schedule. See Attachment M - Construction Plans.

HWY 183 & FM 3405 C-STORE
MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Contamination of surface streams will be kept at a minimum during construction by implementing temporary BMPs such as silt fencing and rock berms. A NOI will be filed 48 hours prior to the start of any construction and temporary BMPs will be installed as shown on the Contributing Zone Site Plan within this submittal. After construction, the natural vegetation will be used to treat storm water runoff and minimize surface stream contamination.

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

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

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

Signature

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

Print Name of Customer/Agent: Garrett Keller

Date: 7/27/23

Signature of Customer/Agent:

Regulated Entity Name: FM 3405 Xpress, LLC

Project Information

Potential Sources of Contamination

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

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

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

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

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

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

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

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

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

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

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

Sequence of Construction

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

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

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

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

Temporary Best Management Practices (TBMPs)

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

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

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

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

☐ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

☐ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. ☒ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

   ☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

   ☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. ☒ **Attachment F - Structural Practices**. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.

10. ☒ **Attachment G - Drainage Area Map**. A drainage area map supporting the following requirements is attached:

    ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

    ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

    ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

    ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

☒ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.

11. ☐ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations**. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.

    ☒ N/A

12. ☒ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.

13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

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

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

18. ☒ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

HWY 183 & FM 3405 C-STORE
SPILL RESPONSE ACTIONS

General Response Actions

1. All leaks and spills should be cleaned immediately.
2. Rags, mops, and absorbent material may all be used to cleanup a spill.
3. If these materials are used to clean a hazardous material, then they must be disposed of as hazardous waste.
4. Never hose down or bury dry material spills.

Minor Spills

If a minor spill occurs (typically small quantities of oil, gasoline, etc.) the following actions should be taken.

1. Contain the spread of the spill
2. Recover spilled materials
3. Clean the contaminated area and properly dispose of contaminated materials

Semi-Significant Spills

If a semi-significant spill occurs the following actions should be taken.

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

Significant/Hazardous Spills

If a significant or hazardous spill occurs in reportable quantities, the following actions should be taken. For reportable quantities of various substances reference this link to the TCEQ RQ webpage: https://www.tceq.texas.gov/response/spills/spill_rq.html

1. Notify the TCEQ by telephone as soon as possible and within 24 hours at (512) 339-2929 (Austin) or (210) 490-3096 (San Antonio) between 8 am and 5 pm. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119, and 302, the contactor should notify the National Response Center at 1-800-424-8802.
3. Notification should first be made by telephone and followed up with a written report.
4. The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
5. Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

HWY 183 & FM 3405 C-STORE
POTENTIAL SOURCES OF CONTAMINATION

Potential sources of contamination that may occur are:

- Oil, grease, fuel, and hydraulic fluid from construction equipment and vehicle drippings
- Miscellaneous trash and litter from construction workers and material wrappings
- Construction debris
- Excess application of fertilizers, herbicides, and pesticides

Preventative measures that will be taken to reduce contamination are:

- Vehicle maintenance will be performed within the construction staging area
- Trash containers will be placed throughout the site to encourage proper trash disposal if necessary
- Construction debris will be monitored daily by the contractor. Debris will be collected weekly and placed in disposal bins. Situations requiring immediate attention will be addressed on a case by case basis
- Fertilizers, herbicides, and pesticides will be applied only when necessary and in accordance with manufacturer's directions

HWY 183 & FM 3405 C-STORE
SEQUENCE OF MAJOR ACTIVITIES

Commercial Site Construction

1. Mobilization of the contractor's equipment. (.5 acres disturbed)
2. Installation of temporary best management practices as described in attachment "D" of this section (Stabilized Construction Entrance, Natural Vegetative Filter Strips, Rock Berm, Construction Staging Area, and Concrete Truck Washout Pit)
3. Rough grade site.
4. Trenching and installation of utilities.
5. Construction of permanent best management practices (Jellyfish® Filter) and storm utilities.
6. Install proposed site improvements.
7. Establishment of permanent soil stabilization on disturbed areas.
8. Removal of Temporary BMP's.

** Total disturbed area – 4.31 Acres

a. All upgradient stormwater entering the site will be treated by the BMPs that will prevent pollution of surface water or groundwater that originates on-site or flows off site. See a list of these BMPs in section "b."

b. The BMPs that will prevent pollution of surface water or groundwater that originates on-site or flows off site are:

i. **Temporary Construction Entrance/Exit** – The installation of a stabilized construction entrance/exit will reduce the dispersion of sediment from the site. See CG 851 of the CZP Site Plan which contains a copy of Section 1.4.2 from the Edwards Aquifer Rules: Technical Guidance on Best Management Practices for materials, installation, common trouble points, inspection and maintenance.

ii. **Inlet Protection –** The installation of inlet protection consisting of permeable barriers will provide removal of sediment prior to it entering storm drain inlets. Install protection at storm sewer inlets that are operable during construction. Inlet protection materials should be approved by local jurisdiction prior to installation and should ensure that flows are treated and able to enter the storm drain without causing local flooding.

iii. **Silt Fence** – The erection of silt fence along the boundary of construction activities will provide temporary erosion and sedimentation control. See Sheet 2 of the WPAP Site Plan which contains a copy of Section 1.4.3 from the Edwards Aquifer Rules: Technical Guidance on Best Management Practices for materials, installation, common trouble points, inspection and maintenance.

iv. **Rock Berm** – The use of rock berms throughout the site will provide temporary erosion and sedimentation control. See CG 851 of the CZP Site Plan which contains a copy of Section 1.4.5 from the Edwards Aquifer Rules: Technical Guidance on Best Management Practices for materials, installation, common trouble points, inspection and maintenance.

v. **Construction Staging Area** – The construction staging area will provide on-site pollution prevention.

vi. **Concrete Truck Washout Pit** – A concrete truck washout pit aids in the final cleanup and prevents unnecessary discharge of concrete residue from contaminating the storm water runoff. See CG 851 of the CZP Site Plan which contains a copy of Section 1.4.18 from the Edwards Aquifer Rules: Technical Guidance on Best Management Practices for materials, installation, common trouble points, inspection and maintenance.

c. Silt fence, and rock berms (see section "b") will be used to prevent sediment-laden runoff from entering sensitive features on this site and surface streams off the site.

d. The flow to the natural sensitive features on this site, to a maximum practical extent, will not be disturbed. No clearing, excavation or grading will occur within

the buffer zone of the sensitive feature. If another naturally occurring sensitive feature is identified during construction all activity will be stopped and the contractor should notify TCEQ.

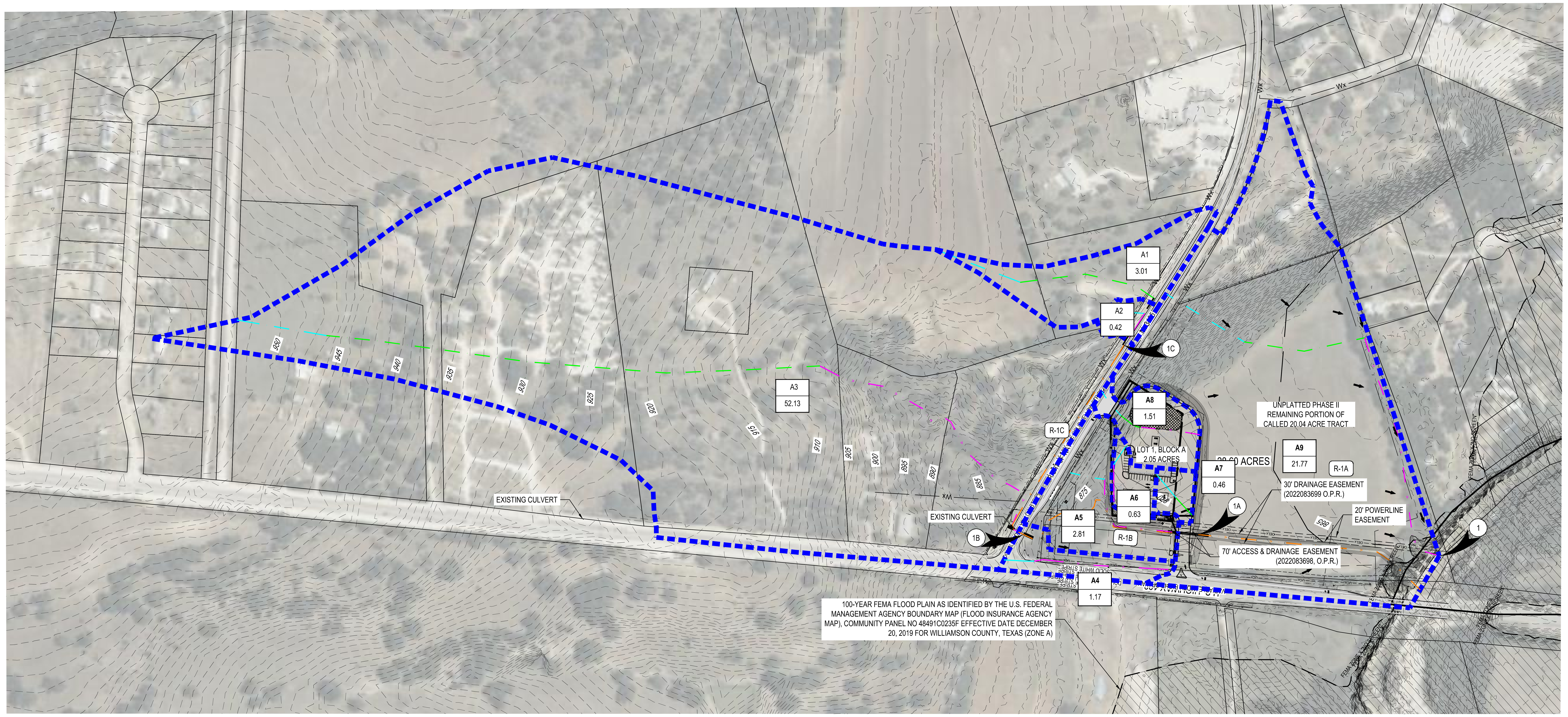
HWY 183 & FM 3405 C-STORE
STRUCTURAL PRACTICES

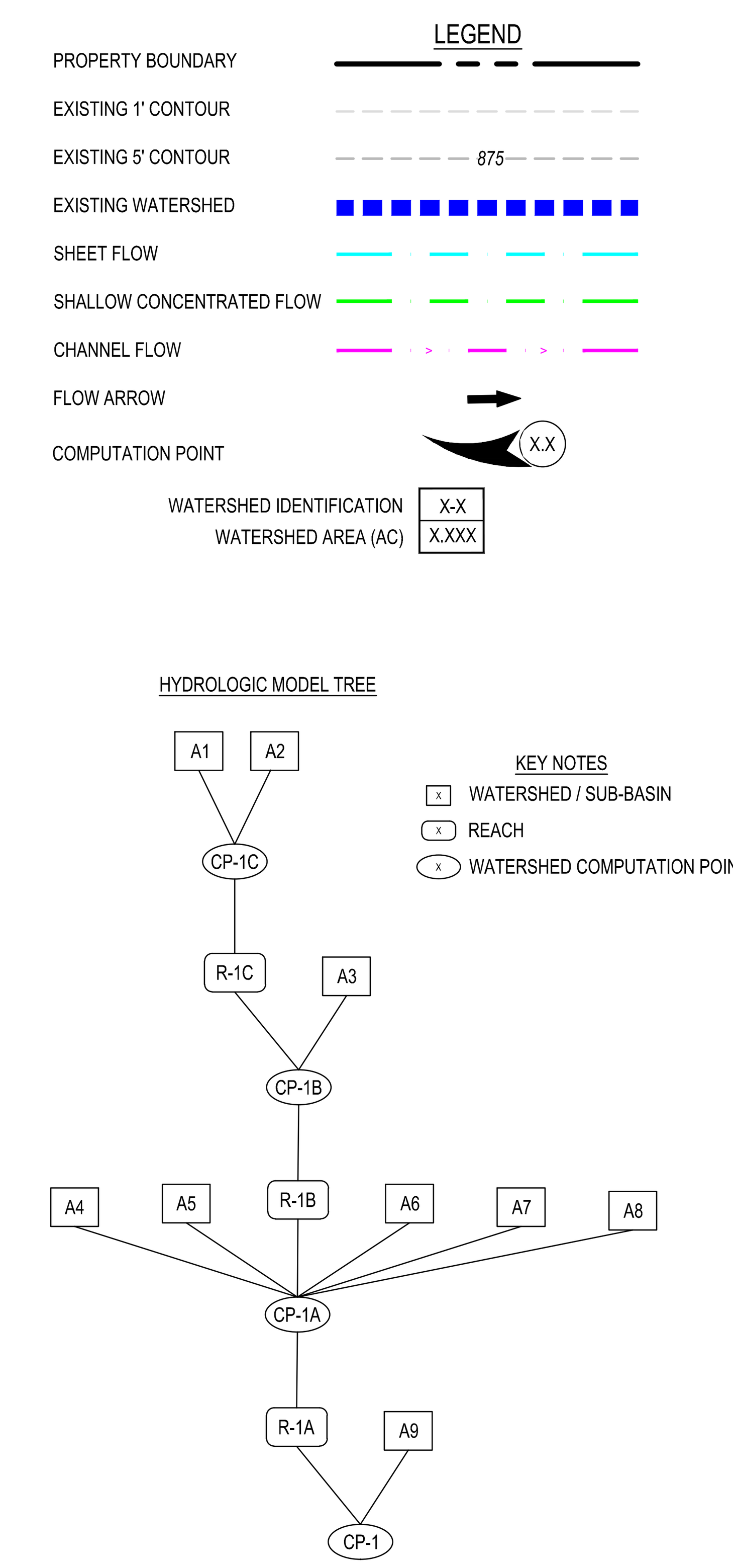
Structural practices installed to prevent the runoff of pollutants from exposed areas of the site are:

- Temporary Stabilized Construction Entrance/Exit
- Inlet Protection
- Silt Fence
- Rock Berm
- Construction Staging Area
- Concrete Truck Washout Pit

For the majority of the disturbed soil within the limits of this project, silt fence will capture and hold sediment laden runoff.

Since part of this site is located within the floodplain, placement of these structure practices within the floodplain should be avoided.





WATERSHED A1								
Watershed Area:	**3.010**		**Ac.**				**0.42**	
Runoff Coefficient (C) / Slope (%)	≤2% (C)	(%)	<2% to ≤7% (C)	(%)	>7% (C)		Composite C	Character of Area
	0.41	88	0.49	12	0.53	0	0.42	Pasture or Range

WATERSHED A2								
Watershed Area:	**0.420**		**Ac.**				**0.49**	
Runoff Coefficient (C) / Slope (%)	≤2% (C)	(%)	<2% to ≤7% (C)	(%)	>7% (C)		Composite C	Character of Area
	0.41	0	0.49	100	0.53	0	0.49	Pasture or Range

WATERSHED A3								
Watershed Area:	**52.130**		**Ac.**				**0.47**	
Runoff Coefficient (C) / Slope (%)	≤2% (C)	(%)	<2% to ≤7% (C)	(%)	>7% (C)		Composite C	Character of Area
	0.41	32	0.49	63	0.53	5	0.47	Pasture or Range

WATERSHED A4								
Watershed Area:	**1.170**		**Ac.**				**0.62**	
Runoff Coefficient (C) / Slope (%)	≤2% (C)	(%)	<2% to ≤7% (C)	(%)	>7% (C)		Composite C	Character of Area
	0.88	100	0.88	0	0.88	0	0.88	Concrete or Roof
	0.86	100	0.86	0	0.86	0	0.86	Asphaltic
	0.29	21	0.39	13	0.44	66	0.40	Grassy Area (Good Cond.)

WATERSHED A5								
Watershed Area:	**2.810**		**Ac.**				**0.40**	
Runoff Coefficient (C) / Slope (%)	≤2% (C)	(%)	<2% to ≤7% (C)	(%)	>7% (C)		Composite C	Character of Area
	0.88	100	0.88	0	0.88	0	0.88	Concrete or Roof
	0.86	100	0.86	0	0.86	0	0.86	Asphaltic
	0.29	68	0.39	32	0.44	0	0.32	Grassy Area (Good Cond.)

WATERSHED A6								
Watershed Area:	**0.630**		**Ac.**				**0.87**	
Runoff Coefficient (C) / Slope (%)	≤2% (C)	(%)	<2% to ≤7% (C)	(%)	>7% (C)		Composite C	Character of Area
	0.88	0	0.88	100	0.88	0	0.88	Concrete or Roof
	0.29	0	0.39	100	0.44	0	0.39	Grassy Area (Good Cond.)

WATERSHED A7								
Watershed Area:	**0.460**		**Ac.**				**0.86**	
Runoff Coefficient (C) / Slope (%)	≤2% (C)	(%)	<2% to ≤7% (C)	(%)	>7% (C)		Composite C	Character of Area
	0.88	0	0.88	100	0.88	0	0.88	Concrete or Roof
	0.29	0	0.39	100	0.44	0	0.39	Grassy Area (Good Cond.)

WATERSHED A8								
Watershed Area:	**1.510**		**Ac.**				**0.77**	
Runoff Coefficient (C) / Slope (%)	≤2% (C)	(%)	<2% to ≤7% (C)	(%)	>7% (C)		Composite C	Character of Area
	0.88	39	0.88	28	0.88	32	0.88	Concrete or Roof
	0.29	0	0.39	73	0.44	27	0.40	Grassy Area (Good Cond.)

WATERSHED A9								
Watershed Area:	**21.770**		**Ac.**				**0.47**	
Runoff Coefficient (C) / Slope (%)	≤2% (C)	(%)	<2% to ≤7% (C)	(%)	>7% (C)		Composite C	Character of Area
	0.41	53	0.49	17	0.53	30	0.46	Pasture or Range
	0.86	46	0.86	34	0.86	20	0.86	Asphaltic

ON-SITE MASTER DRAINAGE CALCULATIONS - POST-DEVELOPED CONDITIONS (Rational Method) - City of Round Rock

Governing References:				Manning's: Table 2-3	City of Round Rock Atlas 14, Bushy Creek P_2	3.92	Travel Time: eq. 2-2					Travel Time: eq. 2-3				Travel Time: eq. 2-4	$T_C = T_S + T_{SC} + T_{CH}$							
WATERSHEDS				SHEET FLOW				SHALLOW CONCENTRATED FLOW					CHANNEL / REACH											
COMP. POINT	CONTRIBUTING AREAS	AREA ACREAGE (Ac.)	SQUARE MILES (mi^2)	n	L (ft)	s (%)	T_S (Min)	n	L (ft)	s (%)	vel. (ft/s)	T_{SC} (Min)	L (ft)	s (%)	vel. (ft/s)	T_{CH} (Min)	T_C (Min)	RUNOFF COEFFICIENT	Q(cfs) 2	10	25	50	100	CFS/ACRE (100YR)
	A1	3.01	0.0047	0.15	300	1.32%	25.17	N	466	1.1%	1.7	4.7					29.8	0.42	4.11	5.86	6.92	7.76	8.57	2.85
																		INTENSITY	*3.249*	*4.633*	*5.474*	*6.136*	*6.776*	
	A2	0.42	0.0007	0.13	129	3.90%	7.41						95	1.6%	2.10	0.75	8.2	0.49	1.18	1.59	1.82	2.03	2.21	5.27
																		INTENSITY	*5.730*	*7.725*	*8.868*	*9.860*	*10.761*	
1C	A1, A2	3.43	0.0054	0.15	300	1.32%	25.17	N	466	1.1%	1.7	4.7					29.8	0.42	4.68	6.67	7.89	8.84	9.76	2.85
																		INTENSITY	*3.249*	*4.633*	*5.474*	*6.136*	*6.776*	
	A3	52.13	0.0815	0.13	300	1.58%	20.89	N	1,639	2.5%	2.6	10.6	995	2.5%	5.80	2.86	34.4	0.47	73.16	105.27	124.79	140.04	154.88	2.97
																		INTENSITY	*2.986*	*4.297*	*5.093*	*5.716*	*6.321*	
1B	A1, A2, A3	55.56	0.0868	0.13	300	1.58%	20.89	N	1,639	2.5%	2.6	10.6	995	2.5%	5.80	2.86	34.4	0.47	77.55	111.59	132.28	148.44	164.17	2.95
																		INTENSITY	*2.986*	*4.297*	*5.093*	*5.716*	*6.321*	
	A4	1.17	0.0018	0.016	132	3.26%	1.52						445	1.3%	3.57	2.08	5.0	0.62	4.70	6.27	7.14	7.92	8.62	7.37
																		INTENSITY	*6.479*	*8.642*	*9.839*	*10.920*	*11.880*	
	A5	2.81	0.0044	0.40	116	5.56%	14.51						353	1.0%	3.50	1.68	16.2	0.40	5.00	6.90	8.04	8.97	9.85	3.51
																		INTENSITY	*4.449*	*6.143*	*7.154*	*7.984*	*8.764*	
	A6	0.63	0.0010	0.016	79	2.41%	1.14						121	1.9%	3.00	0.67	5.0	0.87	3.55	4.74	5.39	5.99	6.51	10.34
																		INTENSITY	*6.479*	*8.642*	*9.839*	*10.920*	*11.880*	
	A7	0.46	0.0007	0.016	100	2.10%	1.45	N	78	2.3%	2.4	0.5					5.0	0.87	2.59	3.46	3.94	4.37	4.75	10.34
																		INTENSITY	*6.479*	*8.642*	*9.839*	*10.920*	*11.880*	
	A8	1.51	0.0024	0.016	100	7.00%	0.90	N	79	7.0%	4.3	0.3	196	1.7%	4.06	0.80	5.0	0.77	7.53	10.05	11.44	12.70	13.81	9.15
																		INTENSITY	*6.479*	*8.642*	*9.839*	*10.920*	*11.880*	
1A	A1-A8	61.68	0.0964	0.13	300	1.58%	20.89	N	1,639	2.5%	2.6	10.6	1,647	2.0%	1.23	22.32	53.9	0.77	105.88	157.32	188.40	212.24	235.81	3.82
																		INTENSITY	*2.229*	*3.312*	*3.967*	*4.469*	*4.965*	
	A9	21.77	0.0340	0.15	300	1.17%	26.42	N	294	1.0%	1.6	3.0	798	1.0%	1.23	10.81	40.3	0.47	27.69	40.27	47.91	53.83	59.63	2.74
																		INTENSITY	*2.706*	*3.935*	*4.682*	*5.261*	*5.828*	
1	A1-A9	83.45	0.1304	0.13	300	1.58%	20.89	N	1,639	2.5%	2.6	10.6	2,431	2.0%	1.23	32.94	64.5	0.56	91.74	138.29	166.26	187.61	208.83	2.50
																		INTENSITY	*1.963*	*2.959*	*3.558*	*4.015*	*4.469*	

NOTES:

1. NO PORTION OF THIS SUBDIVISION IS WITHIN THE BOUNDARIES OF THE 100-YEAR FLOODPLAIN AS DEFINED BY FIRM MAP NUMBER 48491C0635F, EFFECTIVE DATE OF DECEMBER 20, 2019 AND BY FIRM MAP NUMBER 48491C0275E, EFFECTIVE DATE OF SEPTEMBER 26, 2008.
2. THE RATIONAL METHOD AND THE HYDRAFLOW HYGROGRAPH SOFTWARE PACKAGE WERE USED FOR CALCULATING PEAK FLOW RATE AND SIZING STORM DRAINS PER THE CITY OF ROUND ROCK DRAINAGE SPECIFICATIONS.
3. REFERENCE THIS SHEET FOR RATIONAL METHOD CALCULATIONS FOR ALL WATERSHEDS AND STORM DRAINS.
4. PRECIPITATION DATA WAS TAKEN FROM TABLE 4 AND 5 FOR THE BRUSHY CREEK WATERSHED FROM THE CITY OF ROUND ROCK RAINFALL APPLICATION INSTRUCTIONS FOR HYDROLOGIC ANALYSES AND DESIGN (RAIn) MANUAL DATED AUGUST 2020.
5. THE RATIONAL METHOD RUNOFF COEFFICIENTS WERE CALCULATED FROM TABLE 2-1 OF THE CORR DRAINAGE SPECIFICATIONS.
6. RUNOFF TIME OF CONCENTRATION (T_C) WAS CALCULATED USING EQUATIONS 2-2 THROUGH 2-6 OF SECTION 2.4.2 OF THE CORR DRAINAGE SPECIFICATIONS.
7. DRAINAGE FOR THIS DEVELOPMENT DISCHARGES INTO THE NORTH FORK OF THE SAN GABRIEL RIVER, A DETENTION EXEMPT RIVER. RUNOFF IS CONVEYED TO THE NORTH FORK OF THE SAN GABRIEL RIVER VIA DRAINAGE INFRASTRUCTURE. NO DETENTION IS PROPOSED FOR THIS SITE.

FOR TCEQ REVIEW ONLY - NOT FOR CONSTRUCTION

SCALE: 1"=200'

0 100' 200' 300' 400'

Rev.	Date	Description	Apv.

7/28/2023
STATE OF TEXAS
CODY LEE MORRIS
131472
LICENSED
PROFESSIONAL ENGINEER

MATKINHOOVER ENGINEERING & SURVEYING
8 SPENCER ROAD SUITE 100
BOERNE, TEXAS 78006
OFFICE: 830.249.0600
CONTACT@MATKINHOOVER.COM
3303 SHELL ROAD SUITE 100
GEORGETOWN, TEXAS 78628
OFFICE: 512.868.2244
TEXAS REGISTERED ENGINEERING FIRM F-004512 SURVEYING FIRM F-10024000

MASTER DRAINAGE PLAN
FOR
C-STORE HWY 183 & FM 3405
WILLIAMSON COUNTY, TEXAS 78642

CG701

JOB NO.	3215.03
DESIGNED BY:	TK
CHECKED BY:	GDK
SHEET NO:	11 OF 24

HWY 183 & FM 3405 C-STORE
INSPECTION, MAINTENANCE, REPAIR AND RETTROFIT PLAN FOR BMPs

Designated and qualified person(s) shall inspect Pollution Control Measures every seven days and within 24 hours after a storm event. An inspection report that summarized the scope of the inspection, names and qualifications of personnel conducting the inspection, date of inspection, major observations, and actions taken as a result of the inspection shall be recorded and maintained as part of the Storm Water T.P.D.E.S. Plan. A copy of the inspection report form is provided as page 3 of this attachment. Inspection and Maintenance Guidelines are as follows:

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

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

Silt Fence:
(1) Inspect all fencing weekly, and after any rainfall.
(2) Remove sediment when buildup reaches 6 inches.
(3) Replace any torn fabric or install a second line of fencing parallel to the torn section.
(4) Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.

(5) When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

Temporary/Permanent Vegetation:

(1) Permanent vegetation should be inspected weekly and after each rain event to locate and repair any erosion.
(2) Erosion from storms or other damage should be repaired as soon as practical by regrading the area and applying new seed.
(3) If the vegetated cover is less than 80%, the area should be reseeded.

Rock Berm:

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

INSPECTION REPORT

Approved Inspection intervals:

i. Conducted once every 7 days AND within 24 hours after rainfall event greater than 0.5 inch

PROJECT NAME _____

REPORT # _____ DATE _____

INSPECTOR _____ TITLE _____

REASON FOR INSPECTION (CHECK ONE) Weekly ____ Or ½" Rain ____

DATE OF LAST RAINFALL _____ AMOUNT _____

SITE CONDITIONS:

EROSION AND SEDIMENTATION CONTROLS	IN CONFORMANCE		EFFECTIVE	
Concrete Washout Area		Yes/No/Na		Yes/No
Construction Entrance		Yes/No/Na		Yes/No
Permanent Vegetation		Yes/No/Na		Yes/No
Silt Fence		Yes/No/Na		Yes/No
Rock Berm		Yes/No/Na		Yes/No

RECOMMENDED REMEDIAL ACTIONS:

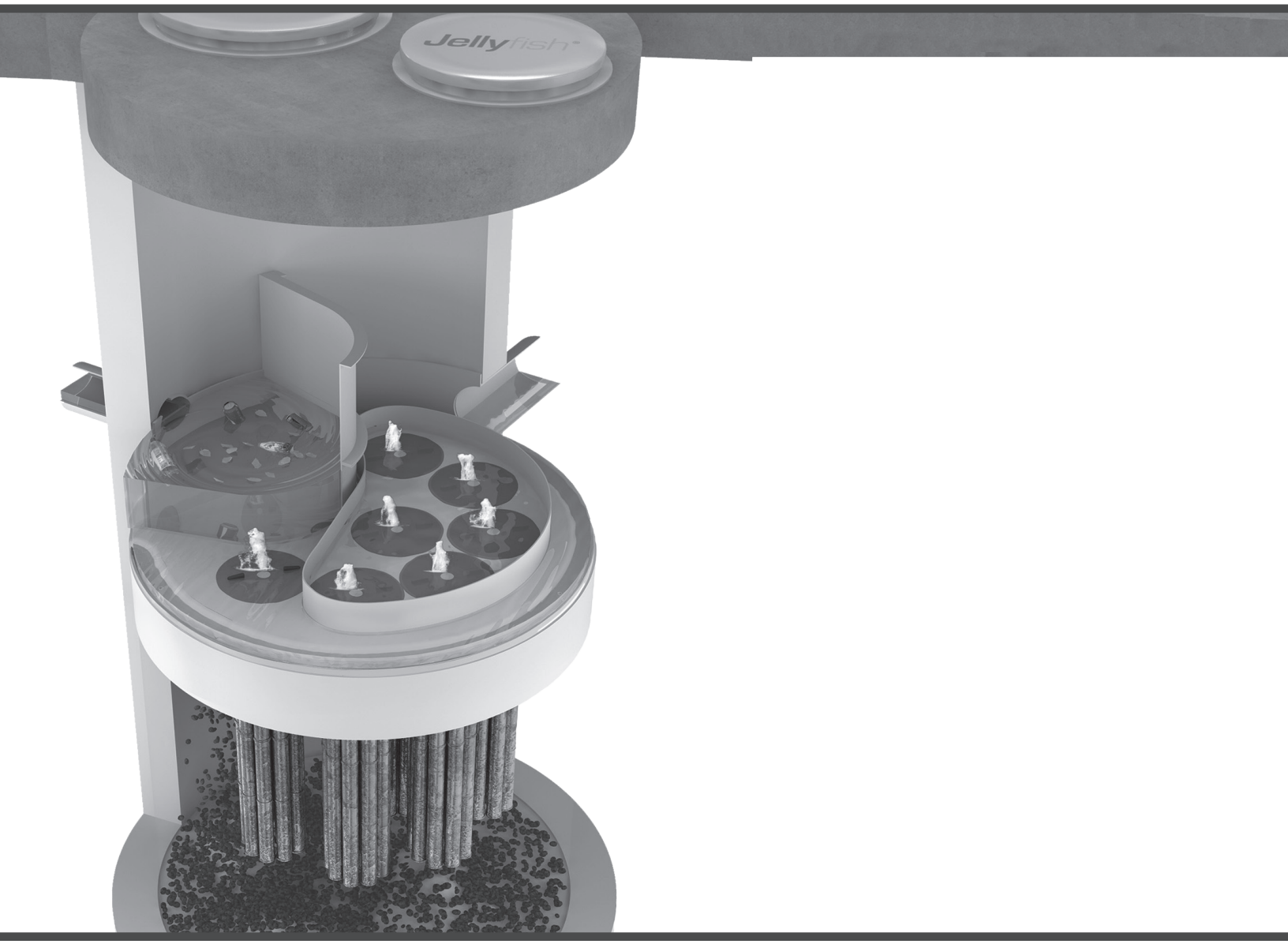
COMMENTS:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision 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."

INSPECTOR: _____ DATE: _____

CONTECH®
ENGINEERED SOLUTIONS

Jellyfish® Filter Maintenance Guide



Jellyfish®

JELLYFISH® FILTER
INSPECTION & MAINTENANCE GUIDE

Jellyfish units are often just one of many structures in a more comprehensive stormwater drainage and treatment system.

In order for maintenance of the Jellyfish filter to be successful, it is imperative that all other components be properly maintained. The maintenance and repair of upstream facilities should be carried out prior to Jellyfish maintenance activities.

In addition to considering upstream facilities, it is also important to correct any problems identified in the drainage area. Drainage area concerns may include: erosion problems, heavy oil loading, and discharges of inappropriate materials.

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1.0 Inspection and Maintenance Overview

The primary purpose of the Jellyfish® Filter is to capture and remove pollutants from stormwater runoff. As with any filtration system, these pollutants must be removed to maintain the filter's maximum treatment performance. Regular inspection and maintenance are required to insure proper functioning of the system.

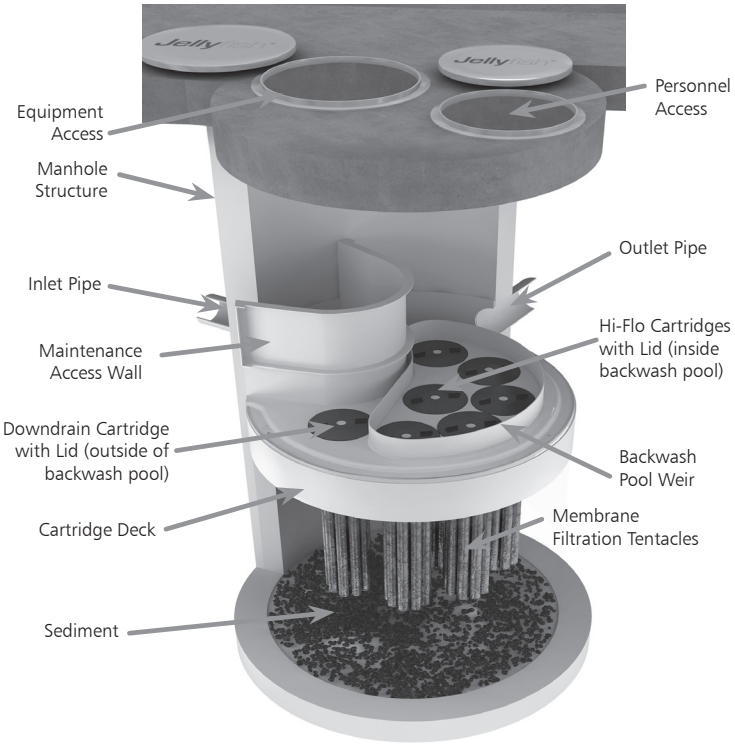
Maintenance frequencies and requirements are site specific and vary depending on pollutant loading. Additional maintenance activities may be required in the event of non-storm event runoff, such as base-flow or seasonal flow, an upstream chemical spill or due to excessive sediment loading from site erosion or extreme runoff events. It is a good practice to inspect the system after major storm events.

Inspection activities are typically conducted from surface observations and include:

- Observe if standing water is present
- Observe if there is any physical damage to the deck or cartridge lids
- Observe the amount of debris in the Maintenance Access Wall (MAW) or inlet bay for vault systems

Maintenance activities include:

- Removal of oil, floatable trash and debris
- Removal of collected sediments
- Rinsing and re-installing the filter cartridges
- Replace filter cartridge tentacles, as needed



Note: Separator Skirt not shown

2.0 Inspection Timing

Inspection of the Jellyfish Filter is key in determining the maintenance requirements for, and to develop a history of, the site's pollutant loading characteristics. In general, inspections should be performed at the times indicated below; *or per the approved project stormwater quality documents (if applicable), whichever is more frequent*.

1. A minimum of quarterly inspections during the first year of operation to assess the sediment and floatable pollutant accumulation, and to ensure proper functioning of the system.
2. Inspection frequency in subsequent years is based on the inspection and maintenance plan developed in the first year of operation. Minimum frequency should be once per year.
3. Inspection is recommended after each major storm event.
4. Inspection is required immediately after an upstream oil, fuel or other chemical spill.

3.0 Inspection Procedure

The following procedure is recommended when performing inspections:

1. Provide traffic control measures as necessary.
2. Inspect the MAW or inlet bay for floatable pollutants such as trash, debris, and oil sheen.
3. Measure oil and sediment depth in several locations, by lowering a sediment probe until contact is made with the floor of the structure. Record sediment depth, and presences of any oil layers.
4. Inspect cartridge lids. Missing or damaged cartridge lids to be replaced.
5. Inspect the MAW (where appropriate), cartridge deck and receptacles, and backwash pool weir, for damaged or broken components.

3.1 Dry weather inspections

- Inspect the cartridge deck for standing water, and/or sediment on the deck.
- No standing water under normal operating conditions.
- Standing water inside the backwash pool, but not outside the backwash pool indicates, that the filter cartridges need to be rinsed.

Inspection Utilizing Sediment Probe

- Standing water outside the backwash pool is not anticipated and may indicate a backwater condition caused by high water elevation in the receiving water body, or possibly a blockage in downstream infrastructure.
- Any appreciable sediment (≥1/16") accumulated on the deck surface should be removed.

3.2 Wet weather inspections

- Observe the rate and movement of water in the unit. Note the depth of water above deck elevation within the MAW or inlet bay.
- Less than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges (i.e. cartridges located outside the backwash pool).
- Greater than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges and each of the hi-flo cartridges (i.e. cartridges located inside the backwash pool), and water should be overflowing the backwash pool weir.
- 18 inches or greater and relatively little flow is exiting the cartridge lids and outlet pipe, this condition indicates that the filter cartridges need to be rinsed.

4.0 Maintenance Requirements

Required maintenance for the Jellyfish Filter is based upon results of the most recent inspection, historical maintenance records, or the site specific water quality management plan; whichever is more frequent. In general, maintenance requires some combination of the following:

1. Sediment removal for depths reaching 12 inches or greater, or within 3 years of the most recent sediment cleaning, whichever occurs sooner.
2. Floatable trash, debris, and oil removal.
3. Deck cleaned and free from sediment.
4. Filter cartridges rinsed and re-installed as required by the most recent inspection results, or within 12 months of the most recent filter rinsing, whichever occurs sooner.
5. Replace tentacles if rinsing does not restore adequate hydraulic capacity, remove accumulated sediment, or if damaged or missing. It is recommended that tentacles should remain in service no longer than 5 years before replacement.
6. Damaged or missing cartridge deck components must be repaired or replaced as indicated by results of the most recent inspection.
7. The unit must be cleaned out and filter cartridges inspected immediately after an upstream oil, fuel, or chemical spill. Filter cartridge tentacles should be replaced if damaged or compromised by the spill.

5.0 Maintenance Procedure

The following procedures are recommended when maintaining the Jellyfish Filter:

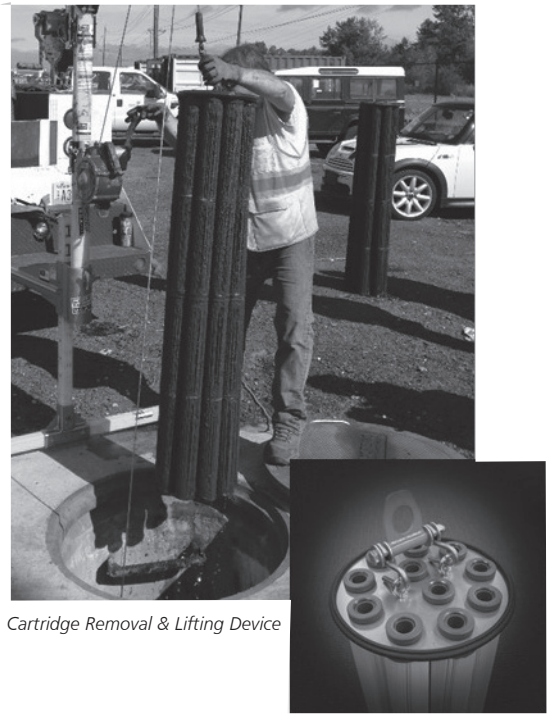
1. Provide traffic control measures as necessary.
2. Open all covers and hatches. Use ventilation equipment as required, according to confined space entry procedures. *Caution: Dropping objects onto the cartridge deck may cause damage*.
3. Perform Inspection Procedure prior to maintenance activity.
4. To access the cartridge deck for filter cartridge service, descend into the structure and step directly onto the deck. Caution: Do not step onto the maintenance access wall (MAW) or backwash pool weir, as damage may result. Note that the cartridge deck may be slippery.
5. Maximum weight of maintenance crew and equipment on the cartridge deck not to exceed 450 lbs.

5.1 Filter Cartridge Removal

1. Remove a cartridge lid.
2. Remove cartridges from the deck using the lifting loops in the cartridge head plate. Rope or a lifting device (available from Contech) should be used. *Caution: Should a snag occur, do not force the cartridge upward as damage to the tentacles may result. Wet cartridges typically weigh between 100 and 125 lbs*.
3. Replace and secure the cartridge lid on the exposed empty receptacle as a safety precaution. Contech does not recommend exposing more than one empty cartridge receptacle at a time.

5.2 Filter Cartridge Rinsing

1. Remove all 11 tentacles from the cartridge head plate. Take care not to lose or damage the O-ring seal as well as the plastic threaded nut and connector.



Cartridge Removal & Lifting Device

2. Position tentacles in a container (or over the MAW), with the threaded connector (open end) facing down, so rinse water is flushed through the membrane and captured in the container.
3. Using the Jellyfish rinse tool (available from Contech) or a low-pressure garden hose sprayer, direct water spray onto the tentacle membrane, sweeping from top to bottom along the length of the tentacle. Rinse until all sediment is removed from the membrane. *Caution: Do not use a high pressure sprayer or focused stream of water on the membrane. Excessive water pressure may damage the membrane*.

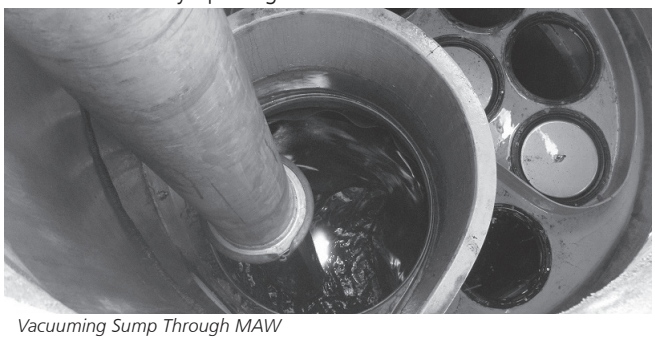
4. Collected rinse water is typically removed by vacuum hose.
5. Reassemble cartridges as detailed later in this document. Reuse O-rings and nuts, ensuring proper placement on each tentacle.

5.3 Sediment and Flotables Extraction

1. Perform vacuum cleaning of the Jellyfish Filter only after filter cartridges have been removed from the system. Access the lower chamber for vacuum cleaning only through the maintenance access wall (MAW) opening. Be careful not to damage the flexible plastic separator skirt that is attached to the underside of the deck on manhole systems. Do not lower the vacuum wand through a cartridge receptacle, as damage to the receptacle will result.
2. Vacuum floatable trash, debris, and oil, from the MAW opening or inlet bay. Alternatively, floatable solids may be removed by a net or skimmer.

Vacuuming Sump Through MAW

3. Pressure wash cartridge deck and receptacles to remove all sediment and debris. Sediment should be rinsed into the sump area. Take care not to flush rinse water into the outlet pipe.
4. Remove water from the sump area. Vacuum or pump equipment should only be introduced through the MAW or inlet bay.
5. Remove the sediment from the bottom of the unit through the MAW or inlet bay opening.



Vacuuming Sump Through MAW

6. For larger diameter Jellyfish Filter manholes (≥8-ft) and some vaults complete sediment removal may be facilitated by removing a cartridge lid from an empty receptacle and inserting a jetting wand (not a vacuum wand) through the receptacle. Use the sprayer to rinse loosened sediment toward the vacuum hose in the MAW opening, being careful not to damage the receptacle.

5.4 Filter Cartridge Reinstallation and Replacement

1. Cartridges should be installed after the deck has been cleaned. It is important that the receptacle surfaces be free from grit and debris.
2. Remove cartridge lid from deck and carefully lower the filter cartridge into the receptacle until head plate gasket is seated squarely in receptacle. ***Caution: Do not force the cartridge downward; damage may occur.***
3. Replace the cartridge lid and check to see that both male threads are properly seated before rotating approximately 1/3 of a full rotation until firmly seated. Use of an approved rim gasket lubricant may facilitate installation. See next page for additional details.
4. If rinsing is ineffective in removing sediment from the tentacles, or if tentacles are damaged, provisions must be made to replace the spent or damaged tentacles with new tentacles. Contact Contech to order replacement tentacles.

5.5 Chemical Spills

Caution: If a chemical spill has been captured, do not attempt maintenance. Immediately contact the local hazard response agency and contact Contech.

5.6 Material Disposal

The accumulated sediment found in stormwater treatment and conveyance systems must be handled and disposed of in accordance with regulatory protocols. It is possible for sediments to contain measurable concentrations of heavy metals and organic chemicals (such as pesticides and petroleum products). Areas with the greatest potential for high pollutant loading include industrial areas and heavily traveled roads. Sediments and water must be disposed of in accordance with all applicable waste disposal regulations. When scheduling maintenance, consideration must be made for the disposal of solid and liquid wastes. This typically requires coordination with a local landfill for solid waste disposal. For liquid waste disposal a number of options are available including a municipal vacuum truck decant facility, local waste water treatment plant or on-site treatment and discharge.

Jellyfish Filter Components & Filter Cartridge Assembly and Installation

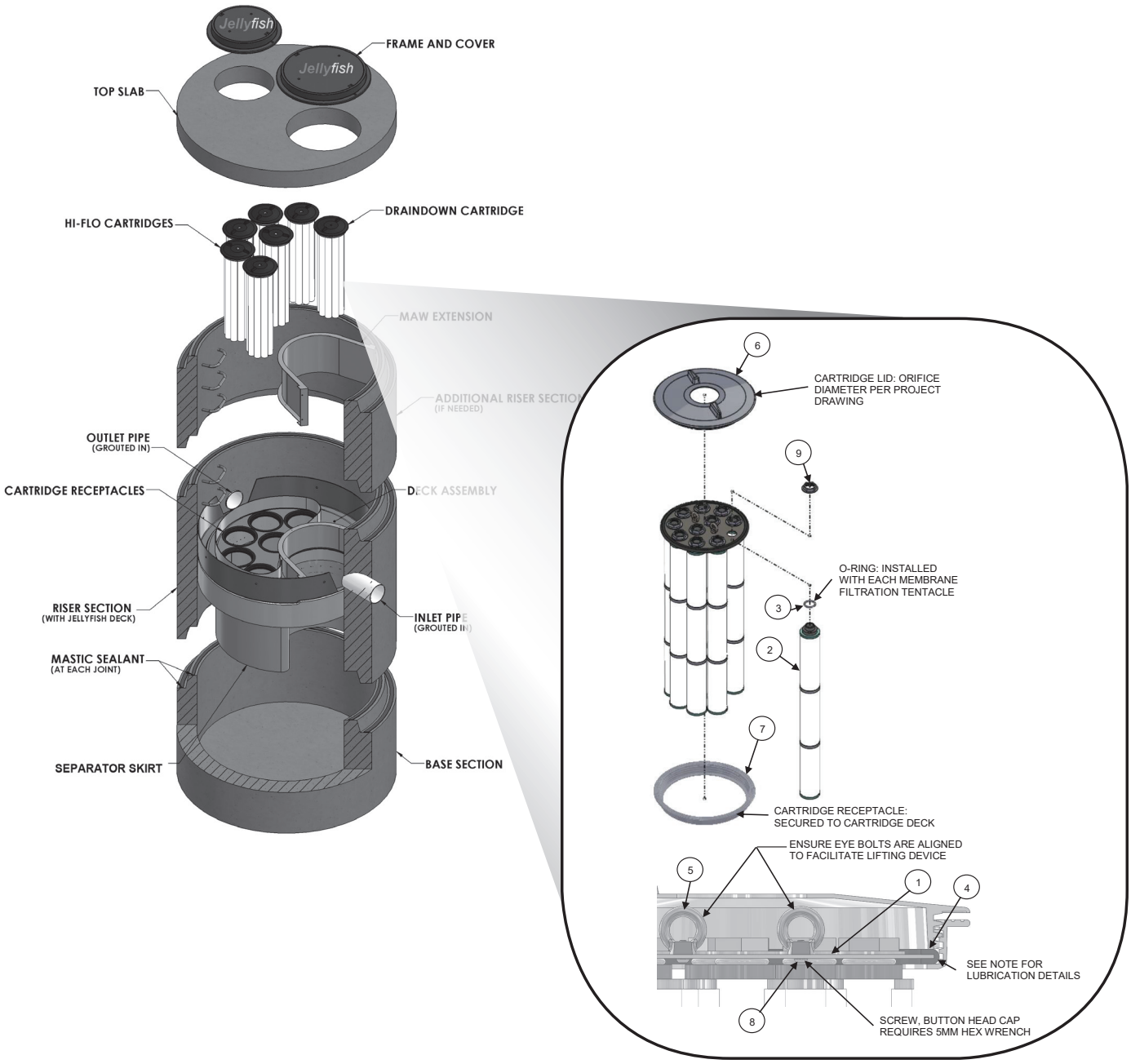


TABLE 1: BOM

ITEM NO.	DESCRIPTION
1	JF HEAD PLATE
2	JF TENTACLE
3	JF O-RING
4	JF HEAD PLATE GASKET
5	JF CARTRIDGE EYELET
6	JF 14IN COVER
7	JF RECEPTACLE
8	BUTTON HEAD CAP SCREW M6X14MM SS
9	JF CARTRIDGE NUT

TABLE 2: APPROVED GASKET LUBRICANTS

PART NO.	MFR	DESCRIPTION
78713	LA-CO	LUBRI-JOINT
40501	HERCULES	DUCK BUTTER
30600	OATEY	PIPE LUBRICANT
PSLUBXL1Q	PROSELECT	PIPE JOINT LUBRICANT

NOTES:

Head Plate Gasket Installation:
Install Head Plate Gasket (Item 4) onto the Head Plate (Item 1) and liberally apply a lubricant from Table 2: Approved Gasket Lubricants onto the gasket where it contacts the Receptacle (Item 7) and Cartridge Lide (ITem 6). Follow Lubricant manufacturer's instructions.

Lid Assembly:
Rotate Cartridge Lid counter-clockwise until both male threads drop down and properly seat. Then rotate Cartridge Lid clock-wise approximately one-third of a full rotation until Cartridge Lid is firmly secured, creating a watertight seal.

Jellyfish Filter Inspection and Maintenance Log

Owner:				Jellyfish Model No:		
Location:				GPS Coordinates:		
Land Use:	Commercial:		Industrial:		Service Station:	
	Roadway/Highway:		Airport:		Residential:	

Date/Time:						
Inspector:						
Maintenance Contractor:						
Visible Oil Present: (Y/N)						
Oil Quantity Removed:						
Floatable Debris Present: (Y/N)						
Floatable Debris Removed: (Y/N)						
Water Depth in Backwash Pool						
Draindown Cartridges externally rinsed and recommissioned: (Y/N)						
New tentacles put on Draindown Cartridges: (Y/N)						
Hi-Flo Cartridges externally rinsed and recommissioned: (Y/N)						
New tentacles put on Hi-Flo Cartridges: (Y/N)						
Sediment Depth Measured: (Y/N)						
Sediment Depth (inches or mm):						
Sediment Removed: (Y/N)						
Cartridge Lids intact: (Y/N)						
Observed Damage:						
Comments:						

Jellyfish®

CONTECH ENGINEERED SOLUTIONS

800.338.1122
www.ContechES.com

Support

- Drawings and specifications are available at www.conteches.com/jellyfish.
- Site-specific design support is available from Contech Engineered Solutions.
- Find a Certified Maintenance Provider at www.conteches.com/ccmp

Contech Engineered Solutions LLC provides site solutions for the civil engineering industry. Contech's portfolio includes bridges, drainage, sanitary sewer, stormwater, wastewater treatment and earth stabilization products. For information on other Contech segment offerings, visit ContechES.com or call 800.338.1122

The product(s) described may be protected by one or more of the following US patents: 5,322,629; 5,624,576; 5,707,527; 5,759,415; 5,788,848; 5,985,157; 6,027,639; 6,350,374; 6,406,218; 6,641,720; 6,511,595; 6,649,048; 6,991,114; 6,998,038; 7,186,058; related foreign patents or other patents pending.

HWY 183 & FM 3405 C-STORE
SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Soil stabilization practices will be used to reduce the amount of erosion from the site. Only the areas essential for immediate construction should be cleared. This will keep a buffer zone around the area of construction as these areas will remain undisturbed until construction begins there.

Interim soil stabilization areas are determined in the field. Temporary vegetation will be used as an aid to control erosion on critical sites during establishment period of protective vegetation when construction is temporarily ceased.

Stabilization practices should be installed according to the following rules:

- Stabilization measures shall be initiated as soon as practical in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

- Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by weather conditions, stabilization measures shall be initiated as soon as practical.

- In areas experiencing droughts where the initiation of stabilization measure by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practical.

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

I SHAKIL PRASLA,
Print Name

Manager,
Title - Owner/President/Other

of 3405 Xpress LLC,
Corporation/Partnership/Entity Name

have authorized Garrett Keller
Print Name of Agent/Engineer

of Matkin Hoover Engineering and Surveying
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:

Shakil Prasla

Applicant's Signature

1/28/23

Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Shakil Prasla 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 28th day of January, 2023.

KARIM SAYANI
Notary Public, State of Texas
Comm. Expires 05-14-2023
Notary ID 132011856

NOTARY PUBLIC

Karim Sayani

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: May 14, 2023

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

I MICHAEL D. ELLISON,
Print Name

MANAGER / PARTNER,
Title - Owner/President/Other

of H.C. ELLISON MANAGEMENT, LLC, TEXAS LIMITED LIABILITY, CO.,
Corporation/Partnership/Entity Name

have authorized Garrett Keller
Print Name of Agent/Engineer

of Matkin Hoover Engineering and Surveying
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.

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SIGNATURE PAGE:

Michael D. Ellison — Manager
Applicant's Signature

7-16-2023
Date

THE STATE OF Texas §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Michael D. Ellison 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 16th day of July, 2023.

HECTOR LIMA
My Notary ID # 132325349
Expires January 23, 2024

NOTARY PUBLIC

Hector Lima
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 01/23/2024

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Hwy 183 & FM 3405 C-Store
Regulated Entity Location: 183 & FM 3405
Name of Customer: Garrett Keller
Contact Person: Shakil Prasla Phone: 512-577-0090
Customer Reference Number (if issued):CN _____
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

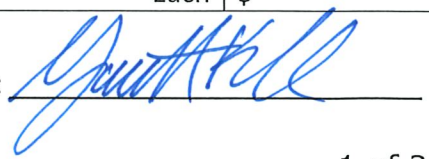
☒ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	*Size*	*Fee Due*
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	22.09 Acres	$ 6,500
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: 

Date: 7/27/23

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN		RN

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	2/10/2023

☒ 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:*
FM 3405 Xpress, LLC	

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
804712767	32086140798	88-4046621	N/A

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:	2108 Starlit Terrace						
	City	Leander	**State**	TX	**ZIP**	78641	**ZIP + 4**	3886

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

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 577-0090		( ) -

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.*)

Hwy 183 & FM 3405 C-Store

23. Street Address of the Regulated Entity: *(No PO Boxes)*	3660 N Highway 183							
	City	Liberty Hill	State	TX	ZIP	78642	ZIP + 4	4723
24. County	Williamson							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:					
26. Nearest City			State	Nearest ZIP Code	
Liberty Hill			Tx	78642	
27. Latitude (N) In Decimal:	30.705732		28. Longitude (W) In Decimal:	97.876600	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	42	20.6	97	52	35.8

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)
5411		447110	

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

Convience Store with Gas Pumps

34. Mailing Address:	2108 Starlite Terrace							
	City	Leander	State	TX	ZIP	78641	ZIP + 4	3886
35. E-Mail Address:	SHAKILPRASLA@GMAIL.COM							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(512) 577-90		( ) -

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:	Garrett Keller	41. Title:	President/ Project Manager

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(830) 249-0600	NA	(830) 249-0099	GKeller@MatkinHoover.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:	Matkin Hoover Surveying and Engineering	Job Title:	President/ Project Manager
Name *(In Print)*:	Garrett Keller	Phone:	(830) 249- 0600
Signature:		Date:	1/27/23